FEDERAL HIGHWAY ADMINISTRATION
REGION 4

FINAL
~~PRELIMINARY~~ ENGINEERING REPORT

I-275 FROM ROOSEVELT BOULEVARD TO 4TH STREET NORTH PINELLAS COUNTY, FLORIDA

State Project Number: 15190-1426
WPA Number: 7147848
FA Number: IR-275-7(218)22

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SEVEN OFFICE
TAMPA, FLORIDA

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November, 1990

Roy Chapman
4/29/91

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November 2, 1990

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REF: I-275 From Roosevelt Boulevard to Kennedy Boulevard, Pinellas County, Florida
WPI No. 7147848
SP No. 15190-1426
FAP No. IR-275-7(218)22

Dear Mr. Skelton:

This is in response to your facsimile dated October 25, 1990 and the Federal Highway Administration letter dated October 16, 1990 regarding comments on the draft preliminary engineering report prepared for the subject study.

The Federal Highway Administration provided comments regarding the draft preliminary engineering report. The report has been revised to address the following comments:

1. **Typical Section** - Weaving LOS analyses were done for each ramp rather than a ramp terminal merge/diverge analysis. The weaving analysis is inappropriate. Please include ramp terminal LOS analyses in the report (appendix E) instead.

   Response: Merge/diverge analyses for all ramp improvements have been completed using the 1985 Highway Capacity Manual (HCM). All ramps with proposed geometry improvements will perform at LOS D or better in the 2010 design year.

   In the case of the Ulmerton Road ramps, and the Roosevelt Boulevard southbound on-ramp, the 1985 HCM does not provide for a specific methodology to analyze two lane entrance or exit ramps with certain freeway/ramp configurations. Therefore, the configuration for purposes of analysis had to be modified to conform to the 1985 HCM procedures. The Ulmerton Road (northbound) on-ramp provides for a two-lane entrance to I-275 providing a lane addition to the freeway. For purposes of analysis, the available number of freeway lanes was set at four lanes with the lane addition being considered the fourth freeway lane. In addition, 45% of the ramp volume was assigned to the lane addition. The remaining 55% of the ramp volume was assigned to the ramp lane required to merge into the lane addition. The assignment of 55% of the ramp volume to the merge lane is considered to be worse case. It should also be noted that freeway volumes in the analysis were determined by adding the ramp volume in the lane addition to the freeway volume found upstream of the on-ramp at 9th Street North. Based upon this approach to the analysis, it was determined that the ramp would operate at LOS D in the AM peak hour and at LOS C in the PM peak hour. The same methodology was used to analyze the

Roosevelt Boulevard southbound on-ramp. However, this ramp was analyzed as an isolated ramp system with no adjacent upstream or downstream ramps. The results of the analysis for this ramp system indicated that the ramp will operate at LOS C in both the AM and PM peak hours.

At the Ulmerton Road southbound off-ramp diverge area, five freeway lanes are provided with the outside (fifth) lane used exclusively for vehicles exiting onto the ramp while the fourth outside lane can be utilized for through traffic or vehicles exiting onto the ramp. For purposes of the analysis, the fourth and fifth freeway lanes, downstream of this diverge area, were considered the inside and outside exit ramp lanes, respectively.

In addition, it was determined that the fourth freeway lane/inside ramp lane was the critical lane for diverging vehicles. Using this assumption, this ramp system was analyzed as a single lane ramp with 55% of the ramp volume assigned to the fourth freeway lane/inside ramp lane. The remaining 45% of the ramp volume, as assigned to the fifth freeway lane (or outside ramp lane), was excluded from the analysis and deducted from the upstream freeway volume used in the analysis. The results of this analysis indicated that the ramp system will operate at LOS C in both the AM and PM peak hours.

2. Typical Section - The TIS showed an HOV/transit envelope from the Howard Frankland bridge eastward. Shouldn't an envelope be provided for the west end of the bridge also?

Response: A study to determine the feasibility of providing for HOV lanes within Pinellas County has not been conducted at this time. Without this type of information, justification for providing HOV lanes is not possible. However, as we have discussed, FDOT is aware of the need to consider the feasibility of providing this service along the I-275 corridor within Pinellas County. When it becomes time to replace the existing northbound Howard Frankland Bridge, the Department will at that time evaluate the feasibility of providing HOV lanes along the I-275 corridor.

3. Superstructure - Figures 8-10 and 8-12 show two lane bridges for the 4th and 9th Street southbound ramps. Traffic does not warrant two lanes. Evaluate providing the width for a 1-lane ramp with the provision for passing a stalled vehicle.

Response: During the analysis phase of the study, it was determined that projected traffic volumes for the respective ramps required only 1-lane to provide sufficient capacity. The recommendations to replace the bridges with 2-lanes was based upon existing conditions. the existing bridge structures provide for 2-travel lanes. Both structures were re-evaluated to determine the required bridge width necessary to provide 1-lane with an acceptable clear zone. The proposed degree of curvature from the 9th Street ramp is 5° 45'. The required clear zone to provide safe operating conditions is 19 feet. Although the 9th Street bridge is located within the 80 percent transition of the superelevation, it is recommended to assure safe operating conditions that the 19 feet of clear zone be carried across the length of the bridge. This will result in an outside to outside bridge typical section of 40 feet 1 inch for the 9th Street bridge. A net reduction of three feet will occur from the originally proposed typical section.

For the 4th Street bridge, the degree of curvature is 2°. The desireable clear zone is 16 feet. The 4th Street bridge is also located within the 80% transition for the superelevation and it is recommended that the clear zone width be carried across the length of the bridge to assure safe operating conditions. The outside to outside width of the 4th Street bridge will now be 37 feet 1 inch resulting in a net reduction of 6 feet and a cost reduction of $90,000.

Both bridge typical sections have been revised to show the appropriate bridge width. The cost for the 4th Street bridge has been reduced accordingly.

4. The Location Hydraulic Report says that a portion of the study is 2' below the 100 year floodplain. Where is this area? The report needs to indicate the elevation of the 50 year flood and its relation to the roadway elevation.

   Response: Based on FDOT construction plans, the profile grade line for I-275 lies below the 100 year floodplain elevation (10 ft. MSL) from the north end of the Roosevelt Boulevard interchange to the west approach of the Big Island Gap bridge; from the east approach to the Big Island Gap bridge to a point on I-275 adjacent to Big Island. This amounts to approximately 27,200 linear feet of roadway is below the 100 year flood elevation.

The draft Preliminary Engineering Report has been revised to address FHWA comments. In addition, the report has been revised to include a Comments and Coordination section which summarizes the public involvement program which was implemented. This includes comments received from the Advanced Notification, Permit Coordination Report and Public Hearing. A commitment and recommendation section has also been included. Two copies of the Final Engineering Report are included for your revision.

The Categorical Exclusion has been revised to show completion of the pubic hearing. A bridge project questionnaire for the Big Island Gap bridge has been provided per comments from FHWA. A comments and coordination section including the public hearing transcript has been provided for enclosure with the Categorical Exclusion. Four copies of each of the above documents have been included for your use.

Sincerly,

Teresa S Estes

Teresa S. Estes
Project Manager

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1.0 ABSTRACT

Interstate 275 (I-275) is a major north/south freeway which runs from I-75 in north Hillsborough County through Pinellas County and connects with I-75 in Manatee County. The tremendous growth in the Tampa Bay area in both Pinellas and Hillsborough Counties has caused traffic volumes to exceed the capacity of I-275. A section of I-275 from Roosevelt Boulevard to 4th Street North, a distance of 2.0 miles, is being evaluated for the purpose of providing additional capacity improvements.

I-275 was constructed as a rural freeway in 1959. The existing roadway cross section from Roosevelt Boulevard to Ulmerton Road consists of two 12-foot wide traffic lanes in each direction, paved 4-foot wide inside shoulders, and paved 10-foot wide outside shoulders. The median width varies throughout the project length. From north of Ulmerton Road to 4th Street North, the existing cross section provides two 12-foot wide travel lanes in each direction, an 18-foot wide paved median consisting of 8-foot wide inside shoulders and a 2-foot wide concrete barrier, and 10-foot wide paved outside shoulders. The entrance and exit ramps for 9th Street North, Ulmerton Road, and 4th Street North have single-lane entrances and exits from I-275 which widen to two lanes on the ramps.

Based on the freeway capacity analysis conducted, a majority of I-275 segments within the project limits will operate at LOS E or worse by 2010 if no improvements are made. To obtain acceptable operating conditions (LOS D or better), link improvements will be required from north of 4th Street North to the Roosevelt Boulevard South ramps. I-275 from north of 4th Street North to Ulmerton Road will require four lanes in each direction while the segment from Ulmerton Road to the Roosevelt Boulevard South ramps will require three lanes in each direction. Even though I-275 between Roosevelt Boulevard North and South ramps is expected to operate at an acceptable LOS with existing laneage, improvements are recommended to provide appropriate lane balance between links. In addition to freeway link improvements, freeway ramp improvements have also been identified for the 2010 design year traffic conditions. The existing I-275 on and off ramps at Ulmerton Road will need to be improved to two lanes in order to maintain acceptable operating conditions.

With the above recommended improvements, all freeway segments and ramps within the project study area are estimated to operate at acceptable levels of service through the 2010 design year.

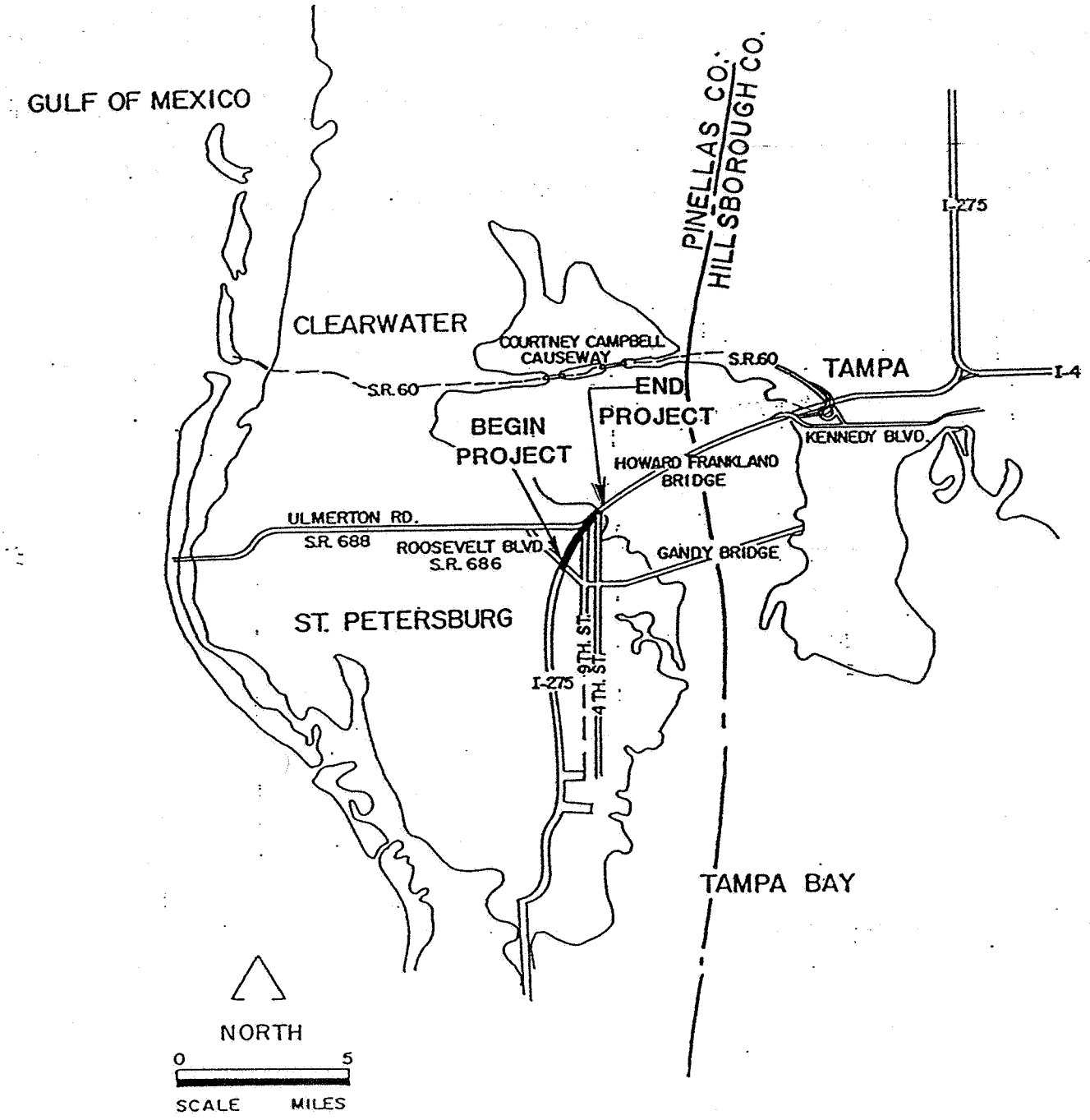


Figure 2-1

PROJECT VICINITY MAP

SOURCE: RS&H, 1990.

I-275
ROOSEVELT BOULEVARD
TO 4th. St. NORTH

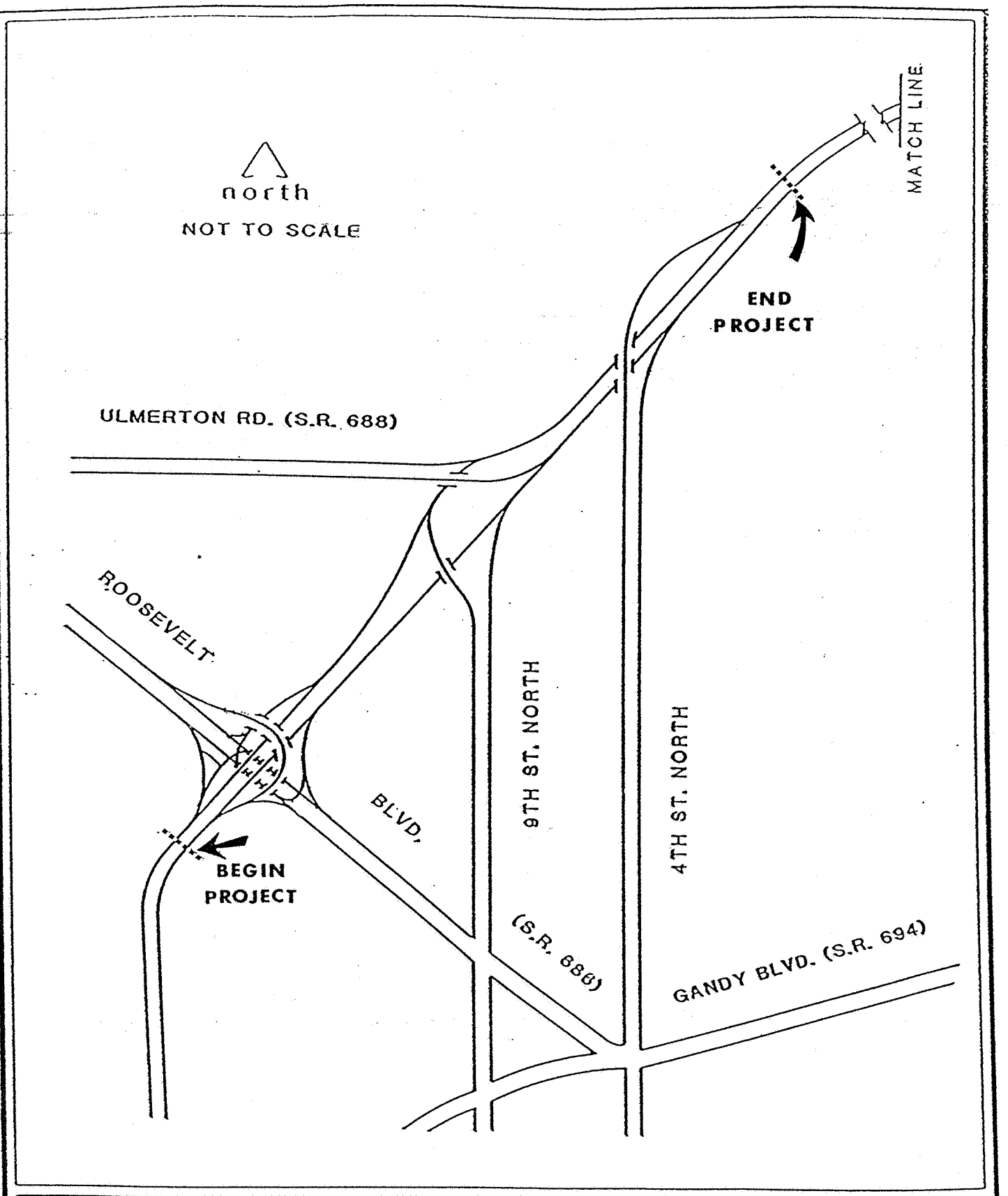


Figure 2-2

PROJECT LOCATION MAP

SOURCE: RS&H, 1990.

I-275

ROOSEVELT BOULEVARD TO FOURTH ST. NORTH

3.0 EXISTING CONDITIONS

3.1 EXISTING ROADWAY CHARACTERISTICS

3.1.1 Functional Classification

I-275 is a limited access freeway and is on the Federal Aid Primary System.

3.1.2 Typical Sections

I-275 was constructed as a rural freeway in 1959. The existing roadway cross section from Roosevelt Boulevard to Ulmerton Road consists of two 12-foot wide traffic lanes in each direction, paved 4-foot wide inside shoulders, and paved 10-foot wide outside shoulders. The median width varies from 64' to 550' for this segment of the project (see Figure 3-1). From north of Ulmerton Road to 4th Street North, the existing cross section provides two 12-foot wide travel lanes in each direction, an 18-foot wide paved median consisting of 8-foot wide inside shoulders and a 2-foot wide concrete barrier, and 10-foot wide paved outside shoulders (see Figure 3-2). The entrance and exit ramps for 9th Street North, Ulmerton Road, and 4th Street North have single-lane entrances and exits from I-275 which widen to two lanes on the ramps.

3.1.3 Pedestrian and Bicycle Facilities

Because I-275 is a limited access facility, pedestrian and bicycle facilities are prohibited.

3.1.4 Right-of-Way

Existing right-of-way varies throughout the study limits. A minimum of 300 feet of right-of-way is available from Roosevelt Boulevard to Ulmerton Road. From Ulmerton Road to 4th Street North, the right-of-way expands to 1000 feet which includes the causeway and water surface. The available land right-of-way is approximately 210 feet wide.

3.1.5 Horizontal Alignment

I-275 within the study limits runs in a north-northeast direction. From Roosevelt Boulevard to north of 4th Street, the northbound travel lanes have been constructed along a tangent section. The southbound travel lanes within the Ulmerton Road/9th Street ramps were constructed along a curve of 1°30'00". From north of 4th Street North to the southern end of the Howard Frankland Bridge, the alignment follows along a curve of 0°15'00".

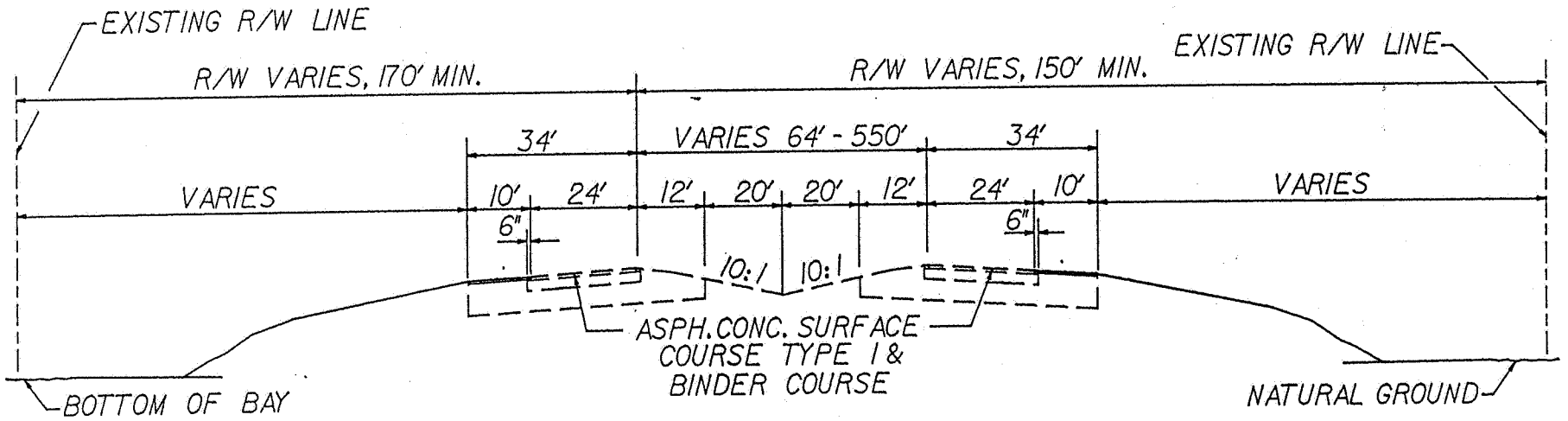


FIGURE 3 - 1

EXISTING TYPICAL SECTION

I - 275 FROM ROOSEVELT BLVD. TO ULMERTON ROAD

SOURCE: R,S&H, 1990

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH

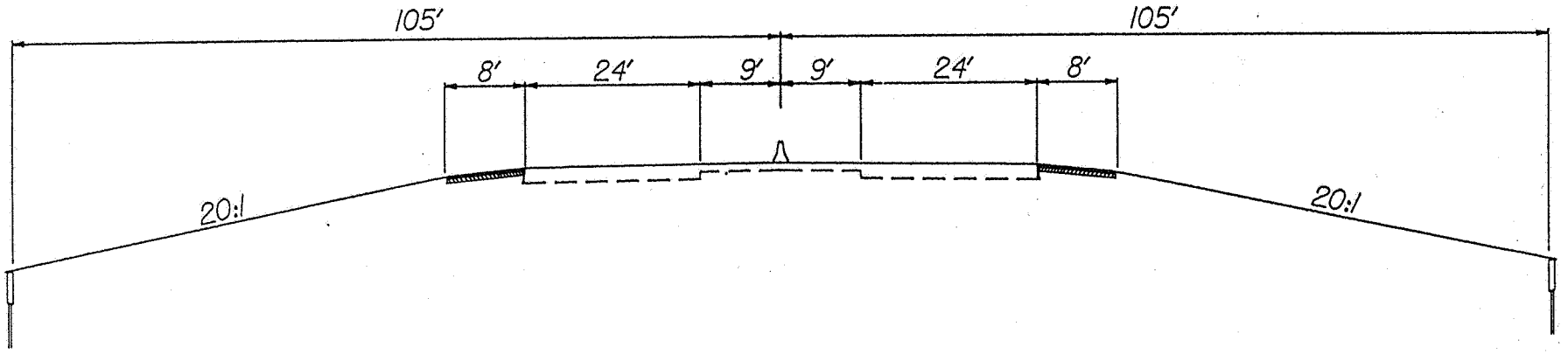


FIGURE 3 - 2

EXISTING TYPICAL SECTION

I - 275 FROM ULMERTON ROAD TO 4th STREET

SOURCE: R,S&H, 1990

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH

3.1.6 Vertical Alignment

The vertical alignment for I-275 within the study limits is flat (0.00% grade). There are two exceptions - Roosevelt Boulevard and Big Island Gap. The I-275 main highway is elevated and crosses over Roosevelt Boulevard at a grade of ±2.75%. At the Big Island Gap Bridge, a 1% grade is used to provide sufficient clearance over the waterway.

3.1.7 Drainage

I-275 is a rural divided highway within the limits of this study. Provision for treatment of stormwater runoff for the existing facility is limited and is confined to the areas located between the 9th Street and Ulmerton Road ramps. No ditches for stormwater treatment were provided along the main highway or the ramps.

A Location Hydraulics Report has been prepared and is included in Appendix A of this report. The report contains an inventory of the existing drainage structures and an assessment of the functions.

3.1.8 Geotechnical Data

Existing soil types within the project limits have been heavily influenced by adjacent urbanization. The Soil Survey of Pinellas County (U.S. Soil Conservation Service, September 1972), indicates that "Made land" soil is the most abundant of the five soil types occupying the project area. Made land soil occupies the I-275 causeway in Pinellas County and the land underlying Ulmerton Road, I-275 south of its intersection with Ulmerton Road, 9th Street, and 4th Street. Made land consists of mixed sand, clay, hard rock, and seashell fragments, that have been transported and reworked. Many areas in Pinellas County currently occupied by Made land soil consist of material dredged from Tampa Bay, according to the soil survey. This soil typically includes sand, rocks 0.5 inch to 12 inches in diameter, silicified oyster shells, and some animal fossils.

The second most prevalent soil type in the project area is "Elred fine sand" which in its native condition is a nearly level, poorly drained sandy soil. This soil is found at the Roosevelt Boulevard/I-275 intersection, and appears to have undergone drainage as a result of adjacent urbanization. Typically, this soil consists of these layers in order of descent from the soil surface: 0 to 25 inches - fine white to pale brown sand; 25 to 35 inches - yellowish-brown fine sand over fine sandy loam (mixture of clay, silt, and sand); 35 to 62 inches - pale yellow fine sand mixed with shell fragments.

The third most prevalent soil type in the project area is "Tidal swamp". Tidal swamp borders the outer edges of the "Made land" soil along the I-275 segment south of the Ulmerton Road/I-275 intersection. Tidal swamp soil consists mainly of sand, peaty sand, few organic soils, and seashell fragments. The tidal swamp soil in the project area is traversed by mosquito ditches and vegetated by coastal species including mangrove trees. Native tidal swamp soil often consists of fibrous peat 6 to 18 inches thick, over gray to pale brown sand mixed with shell fragments.
Variations in tidal swamp soil may include a surface layer of sandy clay and subsurface of loam.

The fourth prominent soil in the project area is "Immokalee fine sand" which is a nearly level, poorly drained soil. The Immokalee fine sand soil forms a band crossing the I-275 corridor approximately 2000 feet north of the I-275/Roosevelt Boulevard intersection. Typically, the surface layer is fine black sand about 5 inches thick. This is underlain by gray to white fine sand to about 36 inches depth. The lowest layer usually consists of very pale brown fine sand extending to a depth of more than 80 inches. Immokalee fine sand soil is typically acidic.

The fifth and least abundant soil in the project area is "Felda fine sand, ponded", a poorly drained soil found in depressions and grassy sloughs. This soil is inundated during wet periods and the lowest areas are covered with water most of the tiome, according to the soil survey. In order of descent, Felda fine sand soil often consists of: 0 to 26 inches - gray sand with some organic matter and acidic pH; 26 to 34 inches - grayish brown fine sandy loam, slightly acidic; 34 to 38 inches - grayish brown loamy fine sand mixed with shells, neutral pH; 38 to 62 inches - loamy sand mixed with shells.

3.1.9 Accident Data

Accident reports for I-275 from Roosevelt Boulevard to 4th Street North for the 5-year period from 1985 to 1989 were obtained from FDOT records and analyzed . Since there is a left-hand entrance at Ulmerton Road for northbound traffic and a left-hand exit at 9th Street North for southbound traffic, the accident data was separated by several segments to isolate potential problem areas.

Table 3-1 identifies the number of accidents that have occurred on these various freeway segments and on the total length between Roosevelt Boulevard and 4th Street North for the years 1985 through 1989. Table 3-1 reports the most frequent types of accidents that have occurred--rear-end, sideswipe, and

Table 3-1. Accident Data for I-275--Roosevelt Boulevard to 4th Street North

Segment	Year	Number of Accidents: Rear-End	Sideswipe	Fixed Object	Total	Fatal	Inj.	Econ. Loss ($)
Roosevelt-9th St. North	1985	2	0	3	11	0	10	$306,900
	1986	2	2	3	10	0	8	$279,000
	1987	1	0	1	3	0	3	$83,700
	1988	1	0	2	4	0	1	$111,600
	1989	1	1	2	6	0	5	$167,400
1985-89 Average	85-89	1	1	2	7	0	5	$189,700
9th Street North-Ulmerton	1985	1	0	1	3	0	3	$83,700
	1986	2	2	3	7	0	1	$195,300
	1987	1	0	2	3	0	1	$83,700
	1988	3	0	0	4	0	6	$111,600
	1989	0	0	1	2	0	2	$55,800
1985-89 Average	85-89	1	0	1	4	0	3	$106,000
Ulmerton-Big Island Gap	1985	4	0	1	5	0	2	$139,500
	1986	0	1	2	3	0	2	$111,600
	1987	1	0	1	3	0	2	$83,700
	1988	1	1	0	5	0	5	$139,500
	1989	1	2	0	4	0	1	$111,600
1985-89 Average	85-89	1	1	1	4	0	2	$117,200
Big Island Gap - 4th Street North	1985	8	2	5	18	0	10	$502,200
	1986	3	0	4	8	0	3	$223,200
	1987	4	0	4	11	0	15	$306,900
	1988	2	3	5	18	0	13	$502,200
	1989	2	1	4	11	0	16	$306,900
1985-89 Average	85-89	4	1	4	13	0	11	$368,300
Roosevelt-4th Street North	1985	15	2	10	37	0	25	$1,032,300
	1986	7	5	12	28	0	14	$809,100
	1987	7	0	8	20	0	21	$558,000
	1988	7	4	7	31	0	25	$864,900
	1989	4	4	7	23	0	24	$641,700
1985-89 Average	85-89	8	3	9	28	0	22	$781,200

Source: RS&H, 1990

fixed-object--as well as the total. In most cases, the total exceeds the sum of the three types listed because there are several other types of accidents not listed. Also listed in this table are the number of fatalities and injuries and the economic loss.

The accidents reported do not show a marked increase in the section north of the Ulmerton Road entrance or the one leading to the 9th Street North exit. Therefore, the left-hand entrance and exit ramps provided on this section of I-275 have not experienced a significant accident problem.

As shown in Table 3-1, fixed-object accidents are the most prevalent, with an average of 10 per year. This is 33 percent of all the accidents occurring along this section of I-275. The reason for this large number of fixed-object accidents might be the limited clear area provided near approaches to structures and grade separations. Many of the bridges only provide a 2-foot separation between the edge of the travel lane and the raised curb. The bridge ends are protected by lengths of guard rail. Side clearances underneath the overpasses are also restricted due to the placement of guardrails which are used to protect the pier columns which support the overpasses. The restricted recovery area provided may be a major factor in the number of fixed-object accidents reported.

The proposed improvements, which include widening clear recovery areas under several overpass bridges, should decrease the number of fixed-object accidents. Additionally, the increase in level of service (higher capacity, less vehicle saturation) by implementation of the proposed project should result in increased safety for the motoring public.

3.1.10 Traffic Signals, Locations and Intersection Design

I-275 is a limited access highway. Intersection with major arterial highways on local streets is achieved by the use of interchanges. Four highways intersect I-275 within the study limits. They are Roosevelt Boulevard (SR 688), 9th Street North, Ulmerton Road (SR 686) and 4th Street North. There are no signalized intersections along this highway.

3.1.11 Lighting

The existing I-275 freeway has lighting facilities within the project limits. The lighting system consists of overhead lights spaced approximately 210 feet apart and located near the outside shoulders on both sides of the roadway. Highway lighting is maintained by Florida Power Corporation (FPC).

3.1.12 Utilities

Utilities companies and agencies were contacted to determine existing utility systems within the I-275 right-of-way. The results of this coordination effort are described below.

3.1.12.1 Electric

Electric service in the project area is provided by FPC. FPC maintains an underground distribution system for roadway lighting within the I-275 right-of-way on both sides of this roadway. No other electric facilities exist within the project area.

3.1.12.2 Water and Sewer

Pinellas County and the City of St. Petersburg provide water and sewer service to areas adjacent to the I-275 corridor. However, no water or sewer facilities exist within the project area.

3.1.12.3 Telephone

General Telephone Company currently maintains an underground, 12-way conduit system which crosses I-275 at Roosevelt Boulevard. This buried conduit system runs along the south side of and parallel to Roosevelt Boulevard. This system is located approximately 75 feet off the edge of pavement and within the existing right-of-way.

3.1.12.4 Gas

Gas service in the project area is provided by Peoples Gas System, Inc. Peoples Gas System, Inc. maintains one underground, 6-inch steel gas main line along Roosevelt Boulevard that crosses the I-275 corridor. This line runs along the south side of and parallel to Roosevelt Boulevard. The gas line is located approximately 20 feet off the edge of pavement and within the existing right-of-way.

3.1.12.5 Cable Television

Cable television service is provided by Paragon Cable, which maintains one underground, 6-fiber optical cable along Roosevelt Boulevard which crosses I-275. This cable runs on the south side of and parallel to Roosevelt Boulevard and is located within the existing right-of-way.

3.2 EXISTING INTERCHANGES

3.2.1 Roosevelt Boulevard

A full access diamond interchange is provided at Roosevelt Boulevard. At this interchange, I-275 is elevated above Roosevelt Boulevard. Two single span 2-lane bridges carry mainline traffic over Roosevelt Boulevard (Bridge Nos. 150102 and 150103). All access ramps have been constructed at grade. Only the I-275 (northbound) to Roosevelt Boulevard (westbound) ramp (Ramp A) is elevated and crosses over I-275 (Bridge No. 150104). This interchange has four 2-lane bridges with each bridge providing a 40-foot width between the raised concrete curbs. This width allows striping for two 12-foot wide travel lanes, a 5-foot wide inside shoulder and a 10-foot wide outside shoulder. Vertical clearance on all bridges varies between 15 and 16 feet. See Table 3-2 for existing structure specification and Appendix D for the Structure Inventory and Appraisal sheet for additional information.

3.2.2 Ulmerton Road (SR 688), 9th Street North, and 4th Street North

Partial access to and from I-275 is provided at Ulmerton Road (SR 688), 9th Street North, and 4th Street North. Ramps for these interchanges provide single-lane entrances to or exits from I-275, and widen to two lanes on each ramp.

Ulmerton Road (eastbound) ramp is elevated and provides a single right-hand lane entrance to I-275 (northbound). The bridge structure (Bridge No. 150003) carries Ulmerton Road traffic over I-275 and was constructed to provide two 12-foot wide travel lanes and 2-foot separations from the travel lane to the raised curb on each side of the structure. The vertical clearance is approximately 15 feet. The Ulmerton Road (westbound) ramp has been constructed at grade and provides a single-right hand exit from I-275. The ramp widens to provide two 12-foot wide travel lanes.

An elevated exit ramp is provided for 9th Street North (southbound). This single lane, left-hand exit widens to two 12-foot wide travel lanes and 2-foot wide shoulders to the raised curb on each side of the bridge structure (Bridge No. 150004). The vertical clearance is approximately 15 feet. The 9th Street North (northbound) ramp is constructed at grade with two 12-foot wide travel lanes which merge to provide a single-lane entrance ramp to I-275. The exit ramp for 4th Street North (southbound) is elevated. The bridge structure (Bridge No. 150015) carries 4th Street North traffic over I-275. The structure has a 28-foot wide roadway which provides two 12-foot wide travel lanes with a 2-foot wide shoulder to the raised curb on each side. Vertical clearance is approximately 15 feet. See Table 3-2 for existing structure specifications and conditions for all of the above described ramps and Appendix D for

Table 3.2 Existing Structure Specifications and Conditions for Bridges on I-275 from Roosevelt Boulevard to 4th Street North

Structure	Roadway Width (feet)	Structure Length (feet)	Vertical Underclearance (feet/inches)	Operating Rating	Inventory Rating	Year Constructed	Estimated Remaining Life (years)
I-275 Northbound over Roosevelt Boulevard (150103)	40	247	15' 10"	HS 32	HS 25	1970	30
I-275 Southbound over Roosevelt Boulevard (150102)	40	247	15' 05"	HS 29	HS 24	1970	30
I-275 Northbound Off Ramp over Roosevelt Boulevard (150075)	40	283	15' 03"	HS 29	HS 22	1970	30
I-275 Northbound Off Ramp over I-275 (150104)	40	479	16' 03"	HS 25	HS 21	1970	30
9th Street North over Northbound I-275(150004)	28	197	15' 01"	HS 30	HS 27	1959	19
Ulmerton Road over Southbound I-27 (150003)	28	190	15' 02"	HS 36	HS 32	1959	19
I-275 Big Island Gap Northbound (150106)	44	240	-- --	HS 34	HS 31	1959	19
I-275 Big Island Gap Southbound (150105)	28	240	-- --	HS 34	HS 31	1959	19
4th Street North over I-275 (150015)	28	306	15' 03"	HS 33	HS 28	1959	19

Source: RS&H, 1990.

Table 3.2, Continued. Existing Structure Specifications and Conditions for Bridges on I-275 from Roosevelt Boulevard to 4th Street North

Structure	Type of Structure	Sufficiency Rating	Length of Span	Number of Spans
I-275 Northbound Over Roosevelt Boulevard (150103)	Prestressed Concrete (STR/MB GR.)	89.9	87	4
I-275 Southbound Over Roosevelt Boulevard (150102)	Prestressed Concrete (STR/MB GR.)	90.7	87	4
I-275 Northbound Off Ramp Over Roosevelt Boulevard (150075)	Prestressed Concrete (STR/MB GR.)	93.0	89	4
I-275 Northbound Off Ramp Over I-275 (150104)	Prestressed Concrete (STR/MB GR.)	100.0	86	6
9th Street North Over Northbound I-275 (150004)	Prestressed Concrete (STR/MB GR.)	84.2	72	3
Ulmerton Road Over Southbound I-275 (150003)	Prestressed Concrete (STR/MB GR.)	74.2	72	3
I-275 Big Island Gap (NB) (150106)	Prestressed Concrete (STR/MB GR.)	90.5	48	5
I-275 Big Island Gap (SB) (150105)	Prestressed Concrete (STR/MB GR.)	78.1	48	5
4th Street North Over I-275 (150015)	Prestressed Concrete (STR/MB GR.)	81.0	81	4

Source: RS&H, 1990.

the Structure Inventory and Appraisal sheet for each bridge structure.

3.3 EXISTING BRIDGES

South of the existing Howard Frankland Bridge, I-275 crosses over Big Island Gap, a narrow waterway which provides small boat access to the north and south sides of the causeway. There are two single span bridges located at Big Island Gap. I-275 (northbound) bridge structure (Bridge No. 150106) has three 12-foot wide through lanes with 4-foot wide shoulders on each side. The I-275 (southbound) bridge structure (Bridge No. 150105) has two 12-foot wide travel lanes with 2-foot wide shoulders on each side. See Table 3-2 for existing structure specifications and Appendix D for the Structure Inventory and Appraisal sheet for additional information.

3.3.1 Type of Structure

The northbound and southbound bridges (Bridge Nos. 150106 and 150105, respectively) were constructed as prestressed concrete structures. Each bridge has a concrete wearing surface with a design load of HS-20.

3.3.2 Condition (Structural Rating) and Year of Construction

The northbound bridge currently has a sufficiency (structural) rating of 90.5 while the southbound bridge has a sufficiency rating of 78.1.

The northbound and southbound bridges were both built in 1959. The estimated remaining life of each structure is 19 years.

3.3.3 Horizontal and Vertical Alignment

The northbound bridge was constructed along a tangent section while the southbound bridge was constructed along a horizontal curve of 1°30'00". The vertical alignment for both bridges consists of a 1% grade. This grade was used to provide sufficient clearance over the waterway.

3.3.4 Span Arrangement-Number and Length of Span

The northbound and southbound bridges each have a total structure length of 240 feet, consisting of five spans with a maximum span length of 48 feet. The northbound structure has a width of 48.3 feet and a horizontal clearance of 44 feet between supports. The southbound structure has a width of 34.3 feet and

a horizontal clearance of 32 feet between supports.

3.3.5 Channel Data

The width of the Big Island Gap waterway is approximately 200 feet and was constructed as a relief channel during the construction of the interstate system. Navigation is limited to small boats due to the vertical and horizontal clearance restrictions of the existing bridge. The FDOT Bridge Inspection Reports were reviewed to determine the vertical clearance. The information was not available. The vertical clearance based upon field inspection is estimated to be 12-15 feet. Existing bridge spans limit horizontal clearance to 48'. Big Island Gap is used by small fishing boats. No ship impact treatments are present.

3.3.6 Bridge Openings - Number Per Day

Since both bridges are fixed-span structures, bridge openings do not occur.

3.3.7 Ship Impact Data and Navigation

This section provides available navigation data for the two existing bridges spanning navigable waters at Big Island Gap. The existing bridge structures span approximately 197' measured in an east-west orientation, of navigable waters at Big Island Gap. The existing bridges at Big Island Gap provide an estimated 10' vertical navigational clearance, subject to tidal variation. The waterway at Big Island Gap is quite shallow. Although the waters in Old Tampa Bay are generally tranquil, moderate currents may occur at Big Island Gap during tidal flow.

Due to the low under clearance and the fixed position of both bridges, the types of boats passing under the bridges are limited to small, recreational vessels. Therefore, no information regarding larger ships or boating accidents is available.

The only waterway-related business in the project vicinity is the Belcher Oil Company which operates barges supplying fuel to the Oldsmar Power Plant north of the project vicinity. This barge traffic will be unaffected by modifications to the Big Island Gap bridges since the barges utilize the navigational waterway under the Howard Frankland Bridge, which is projected to provide vertical and horizontal navigation clearance at least equal to existing conditions. Documented compliance with U.S. Coast Guard requirements is provided in Appendix B. The U.S. Coast Guard is a cooperating agency with

FDOT on this project. The Department will work closely with the Coast Guard to ensure that all navigational requirements are met and that the bridge improvements at Big Island Gap are constructed in a manner that will meet the needs of waterway users.

3.4 EXISTING ENVIRONMENTAL CHARACTERISTICS

3.4.1 Land Use Data

The proposed improvements of I-275 from Roosevelt Boulevard to 4th Street North, and of the Big Island Gap Bridges and Ulmerton Road Bridge, will provide essential upgrading of a critical transportation link between the rapidly expanding economic centers in Pinellas and Hillsborough Counties. These centers are a combination of mixed-use development, residential, commercial, office, and industrial areas (Tampa Bay Regional Planning Council (TBRPC), 1984).

Existing land use along the project boundary is predominantly undeveloped land, consisting of woodlands and wetlands (See Figure 3-3). The nearest developed land is the Florida Federal Center, an office/service complex located at the eastern corner of the Roosevelt Boulevard/I-275 interchange. The nearest residential area is in Feather Sound, approximately 4000 feet west of the western project terminus. Vacant land fronting the I-275 right-of-way is zoned A-E (Agricultural Estate Residential), M-1 (Light Manufacturing and Industry), and IPD (Industrial Planned Development). The project area includes land designated for high technology businesses such as General Telephone Corporation, Honeywell, and Sperry Univac. Developments that have been recently built within two miles of the project include Carillon and Feather Sound Commerce Center, consisting of 3,800,000 square feet (sf) of office, 1,100,000 sf of retail commercial, 1,700,000 sf of industrial space, and 1,750 hotel rooms. This increase in economic activity is consistent with the general comprehensive planning goals of Pinellas County, and compatible with interstate highway activity.

The expansion of I-275 will also improve traffic flow between Pinellas County and other rapidly growing economic centers including the Westshore/Tampa International Airport area and downtown Tampa. Downtown Tampa has been scheduled for a major commercial expansion upon approval of the Downtown Tampa Development of Regional Impact (DRI) application. The development order guiding the DRI specifies commitment to upgrading I-275 as a necessary condition to accommodate later downtown development.

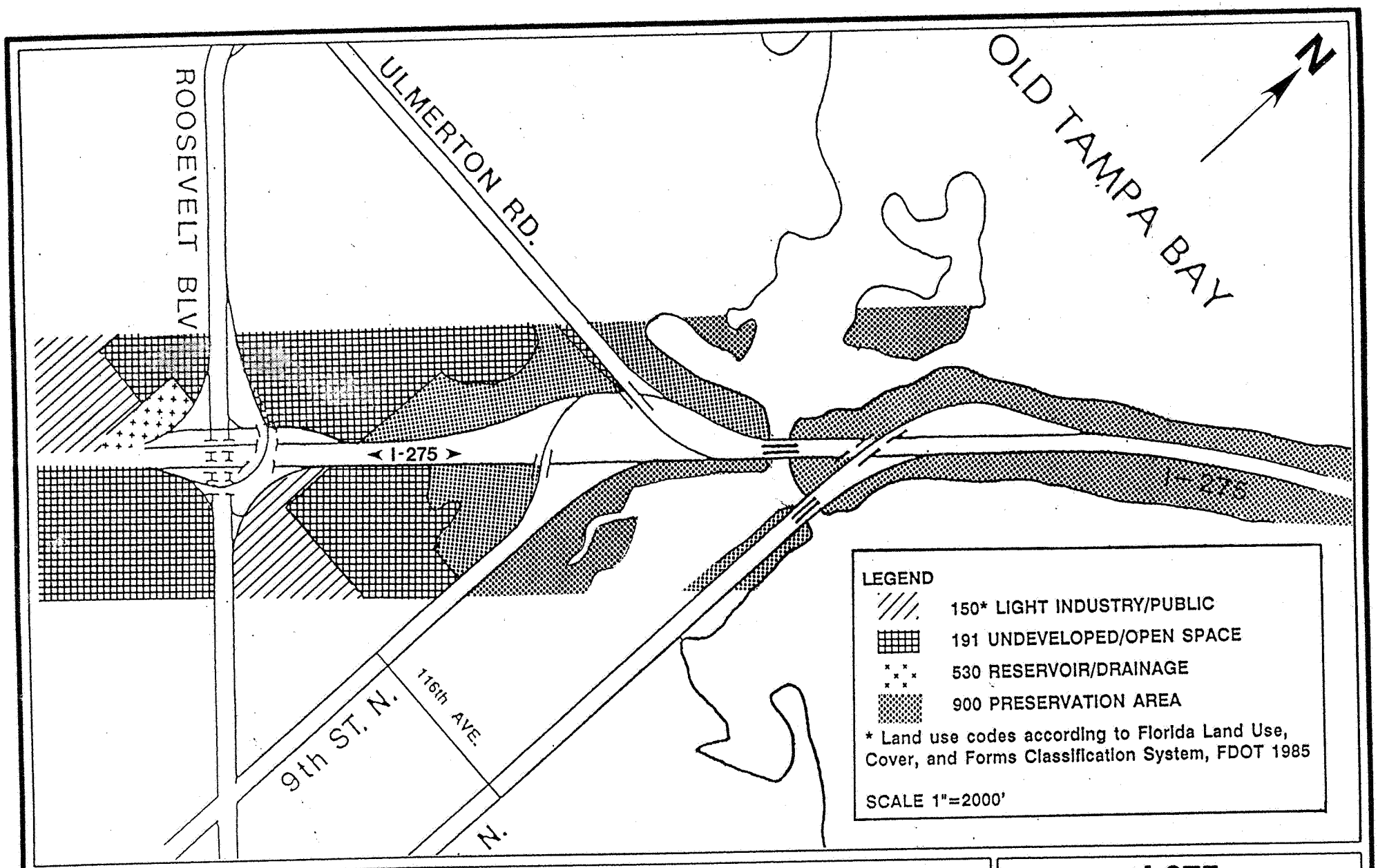


Figure 3-3

EXISTING LAND USE WITHIN I-275 CORRIDOR

Sources: Pinellas County Planning Department, 1989; RS&H, 1990

I-275

Roosevelt Blvd. to 4th Street

The proposed I-275 improvements will result in minimal direct land use impacts. Existing land uses will not be disturbed by the construction, and no additional right-of-way will be required to implement the recommended improvements to I-275.

The proposed I-275 improvements are compatible with the future land use planning goals of Pinellas County, TBRPC, and the City of St. Petersburg. The primary future land use within the I-275 corridor from Roosevelt Boulevard to 4th Street North is designated by the Pinellas County Planning Council to consist of light industrial or business development (see Figure 3-4). Accordingly, much of this segment of the I-275 corridor is planned under the Gateway DRI (TBRPC, April 1989) for office, industrial, and commercial development. This future development plan is consistent with the general planning goals of Pinellas County, TBRPC, and the City of St. Petersburg, and is compatible with interstate highway activity. The secondary future land use within the I-275 corridor is preservation area, which surrounds the Ulmerton Road/I-275 intersection and occupies the I-275 causeway extending north from Big Island Gap. Because the I-275 improvements are proposed to occur entirely within the DOT right-of-way, no deviation from the future designation of these areas for preservation will occur. Therefore, the proposed I-275 improvements will also be consistent with the comprehensive planning goal of Pinellas County in reserving preservation area.

3.4.2 Cultural Features and Community Services

The I-275 corridor from Roosevelt Boulevard to 4th Street North offers no designated cultural attractions or community services but is a regionally important thoroughfare providing access to cities in the Tampa Bay area. Since service facilities are adjacent to the highway, further construction within the existing right-of-way will involve no impacts to cultural features. Expansion of the roadway will improve traffic flow to residential, commercial, cultural, and recreational attractions in the area.

3.4.3 Natural and Biological Features

The portion of I-275 from Roosevelt Boulevard to 4th Street North is adjacent to important terrestrial and aquatic wildlife habitats. The aquatic preserve in Tampa Bay provides a travel corridor for sea turtles and manatees, supports oyster and mussel beds, and provides fish hatcheries and excellent foraging habitat for shorebirds. The shoreline is potentially suitable as nesting habitat for species such as the oystercatcher and black skimmer. The shoreline also supports healthy stands of red, black and white mangroves.

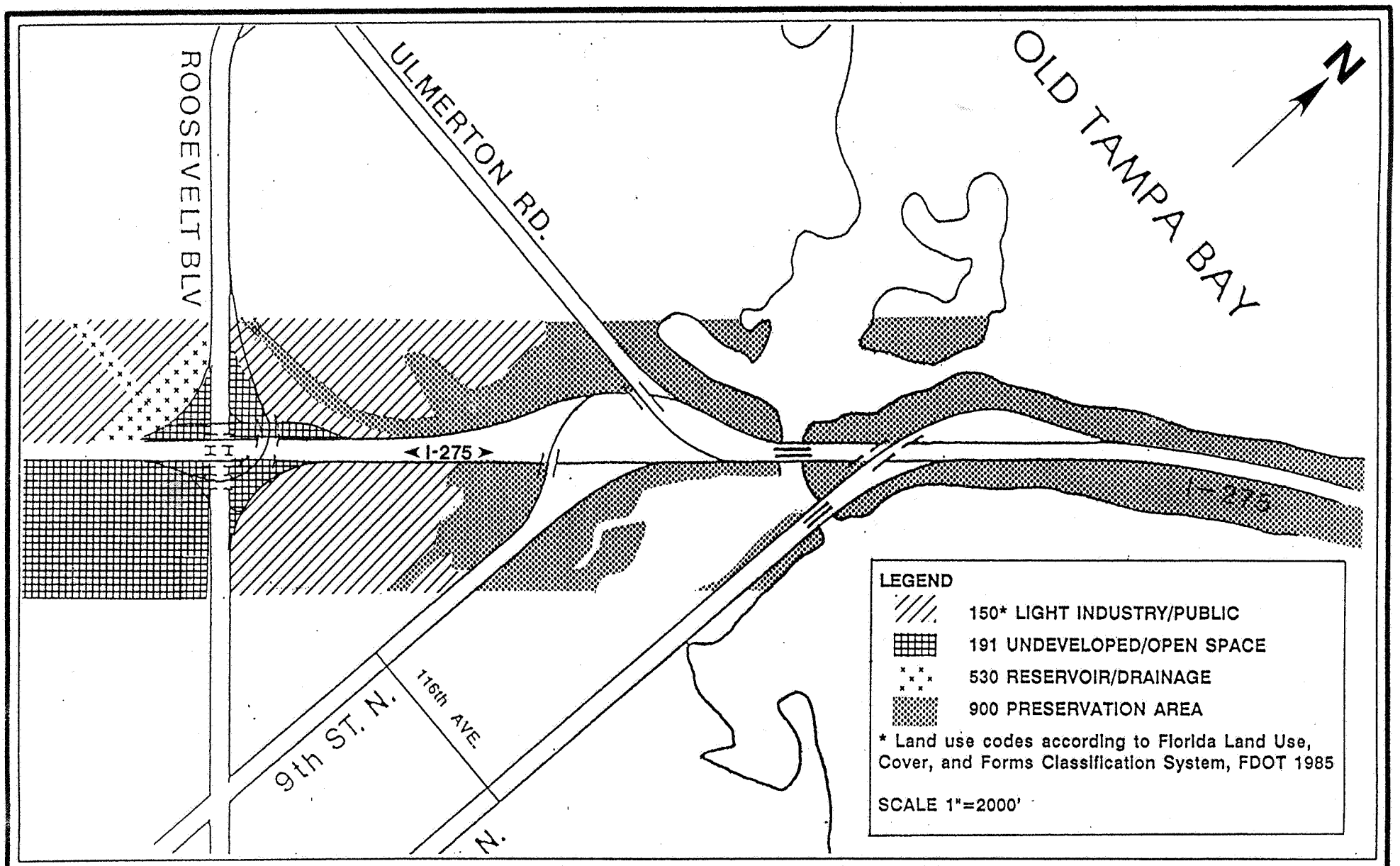


Figure 3-4

FUTURE LAND USE WITHIN I-275 CORRIDOR

Sources: Pinellas County Planning Department, 1989; RS&H, 1990

I-275

Roosevelt Blvd. to 4th Street

4.0 NEED FOR IMPROVEMENTS

The following section identifies the need for the proposed improvements. The projected capacity deficiencies and improvements for the proposed project are discussed with respect to local and regional planning efforts.

4.1 CAPACITY

I-275 is a major north/south freeway facility which runs from I-75 in north Hillsborough County through Pinellas County and connects back with I-75 in Manatee County. The anticipated growth for Pinellas and Hillsborough counties is similar to the growth trends in many of the urban areas in Florida. The projected population within the study area is expected to double by the year 2010 which will increase the existing travel demand along I-275 dramatically. The projected increase in traffic within the two county area necessitates improvements to the existing I-275 corridor.

I-275 connects Pinellas and Hillsborough counties over Tampa Bay via the Howard Frankland Bridge. The Howard Frankland Bridge along with Gandy Bridge and the Courtney Campbell Causeway provide a combined total of twelve lanes across Tampa Bay. These twelve lanes have been serving the Bay Area since the early 1960's. Since that time, the tremendous growth in the study area has caused traffic voulmes to exceed the capacity of the existing Howard Frankland Bridge. FDOT is currently constructing a new four-lane bridge structure for southbound traffic. A design change re-evaluation is currently being prepared to document recommended improvements to the existing Howard Frankland Bridge to a four-lane bridge for northbound traffic. When construction is completed, the Howard Franklin Bridge will provide eight-lanes of capacity.

A traffic analysis was conducted along I-275 from south of Roosevelt Boulevard (Pinellas County) to Kennedy Boulevard (Hillsborough County) to determine 2010 design year conditions. This analysis estimated future traffic volumes for I-275 and all major intersecting roads within the project limits. Figures 4-1 through 4-4 identify the existing and projected traffic volumes within the study area.

A detailed freeway link analysis was performed on all sections of I-275 within the project limits. This analysis was performed using the Transportation Research Board's 1985 Highway Capacity Manual (HCM) procedures for freeway segments. The results of this analysis indicated that most freeway links

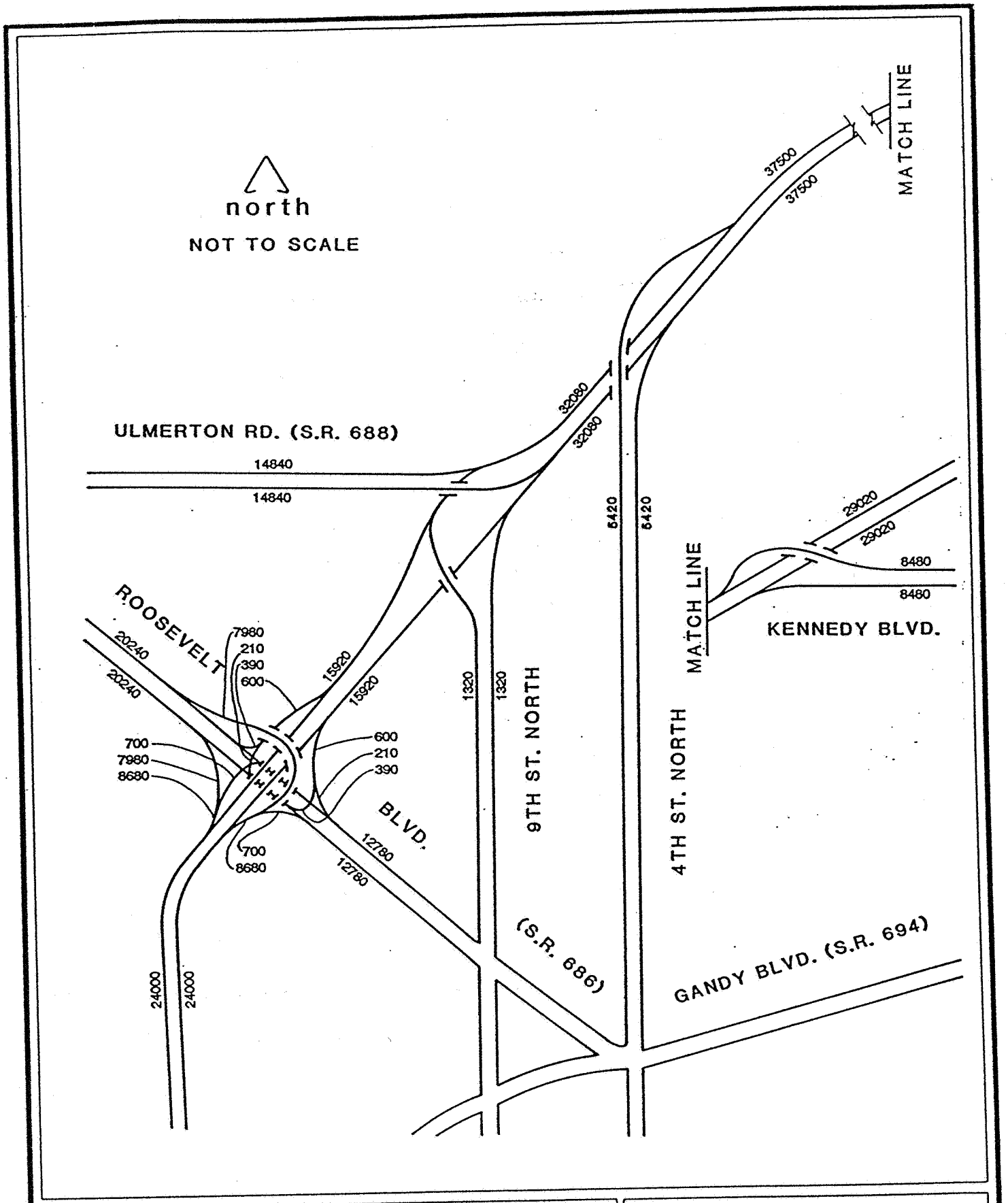


Figure 4-1
EXISTING 1988 DAILY TRAFFIC VOLUMES

SOURCE: RS&H, 1990.

I-275
ROOSEVELT BOULEVARD
TO KENNEDY BOULEVARD

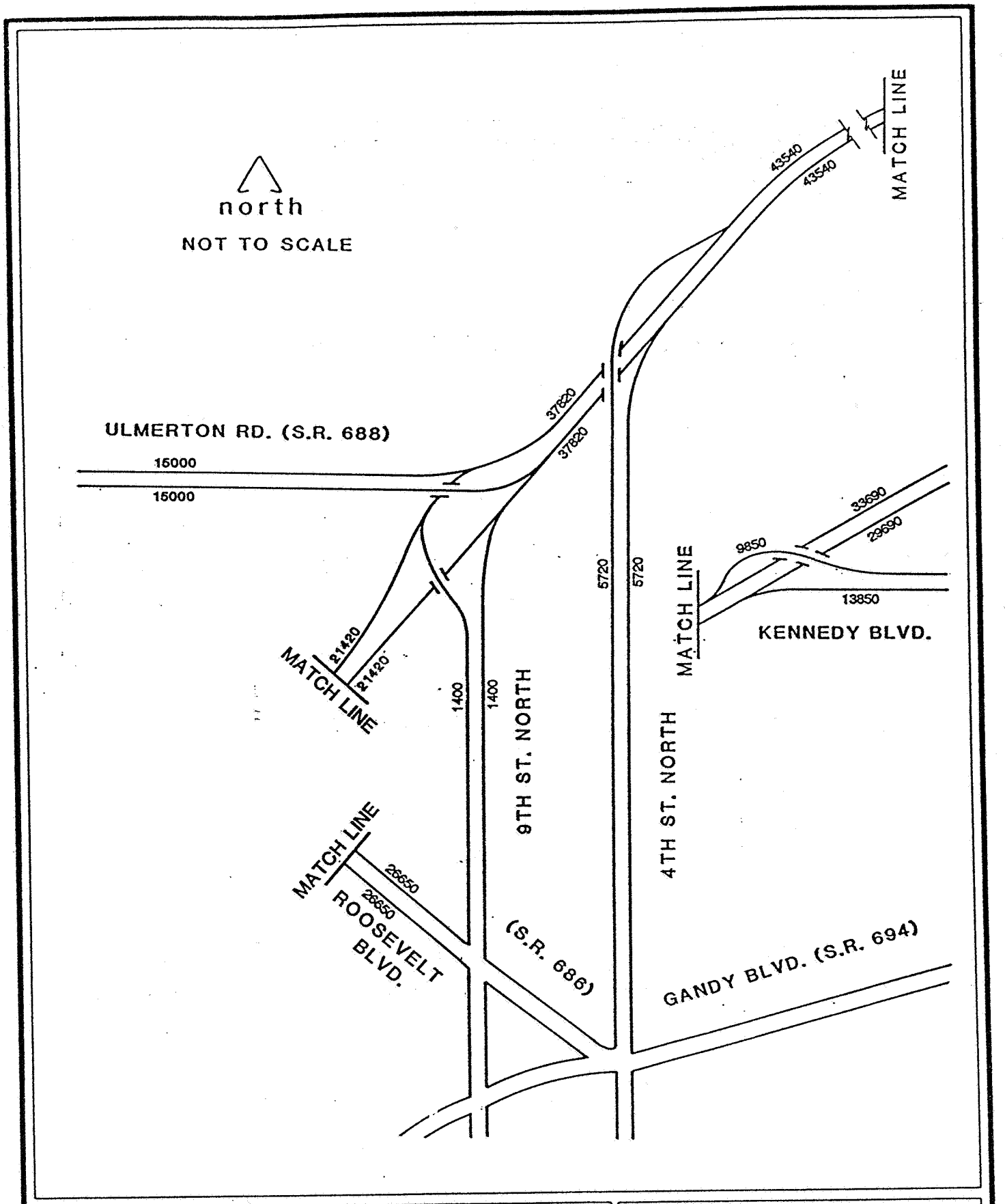


Figure 4-2
1995 DAILY TRAFFIC VOLUMES

SOURCE: RS&H, 1990.

I-275
ROOSEVELT BOULEVARD
TO KENNEDY BOULEVARD

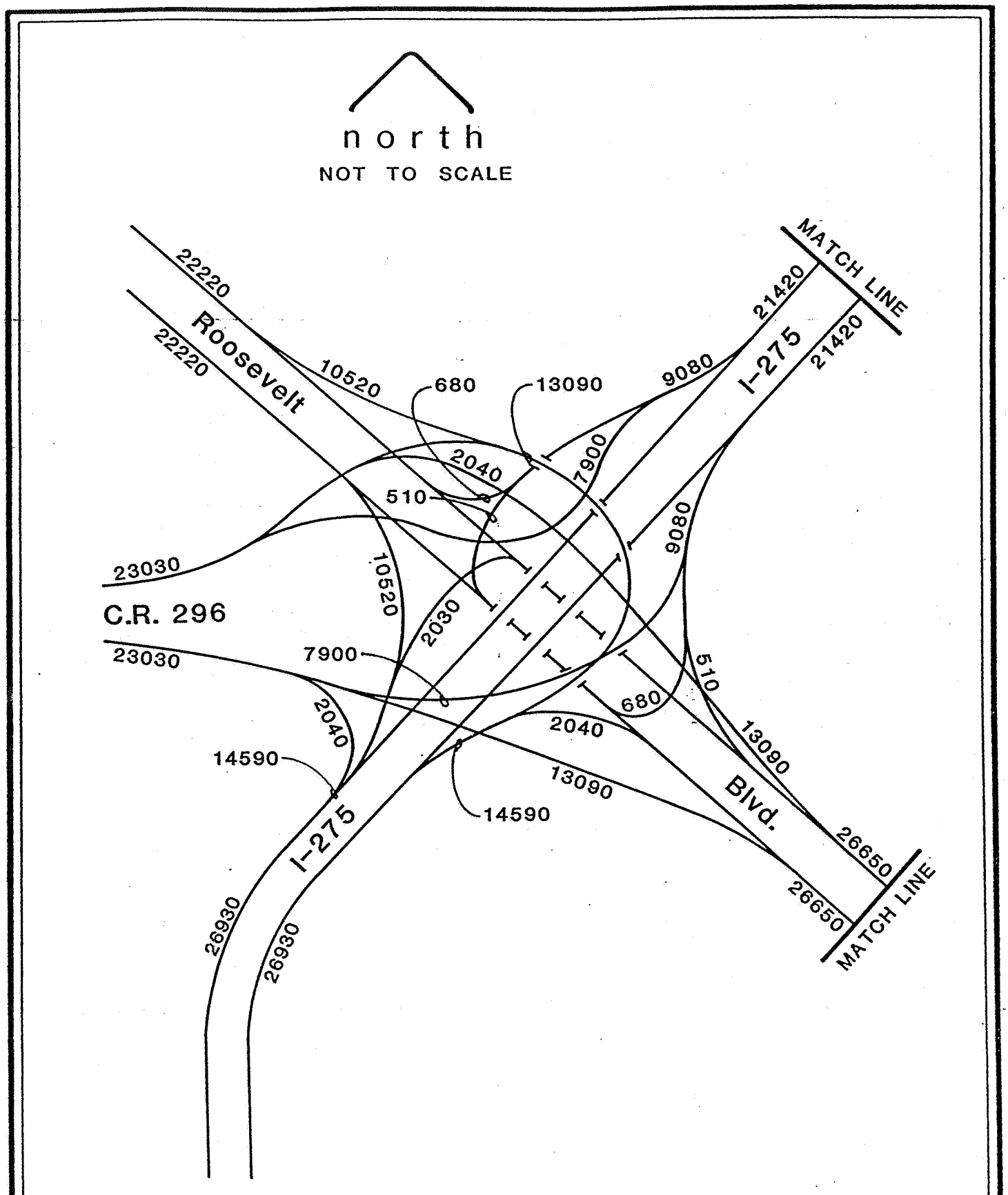


Figure 4-2 (CONT.)
1995 DAILY TRAFFIC VOLUMES

SOURCE: RS&H, 1990.

I-275
ROOSEVELT BOULEVARD
TO KENNEDY BOULEVARD

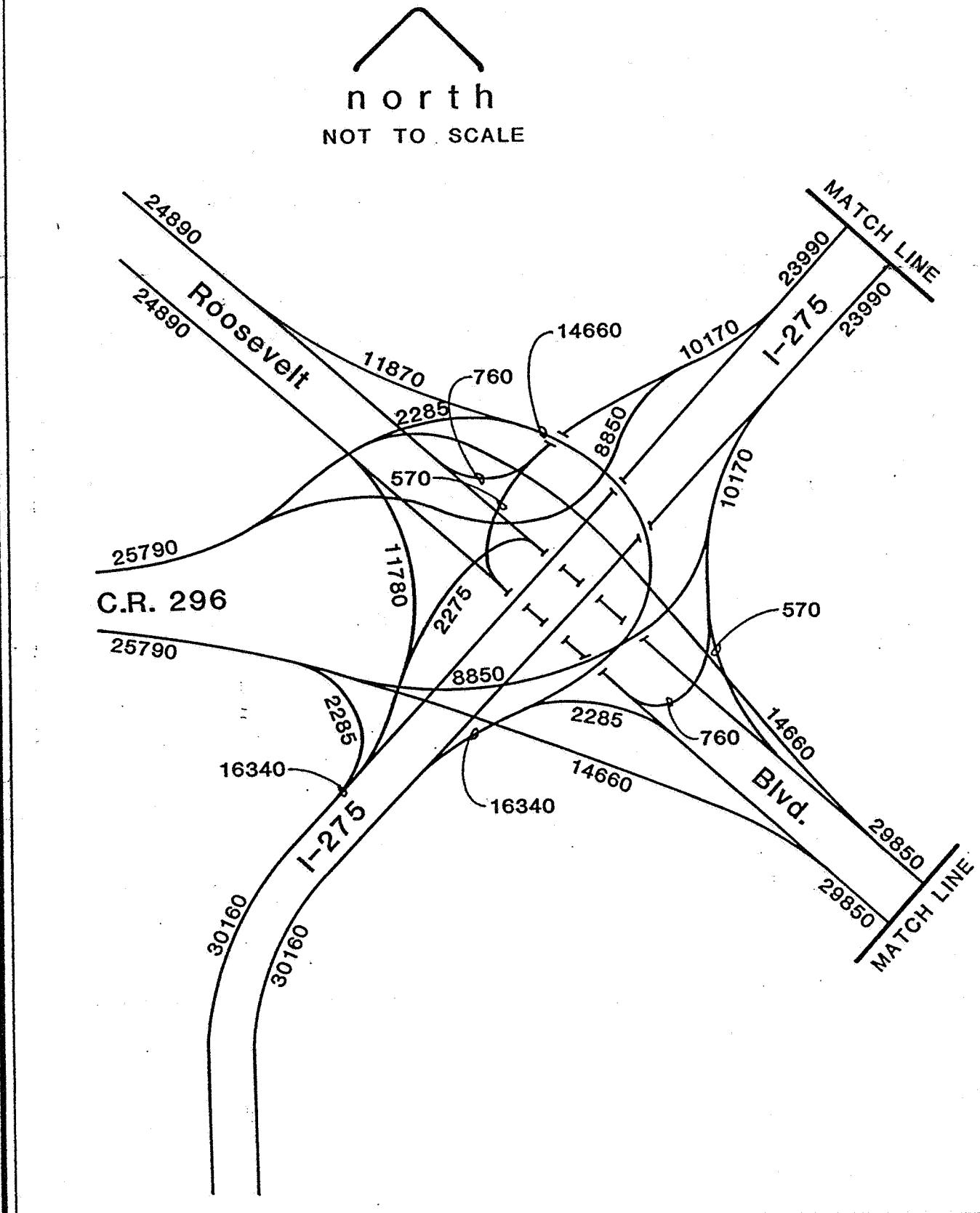


Figure 4-3 (CONT.)
2000 DAILY TRAFFIC VOLUMES

SOURCE: RS&H, 1990.

I-275
ROOSEVELT BOULEVARD
TO KENNEDY BOULEVARD

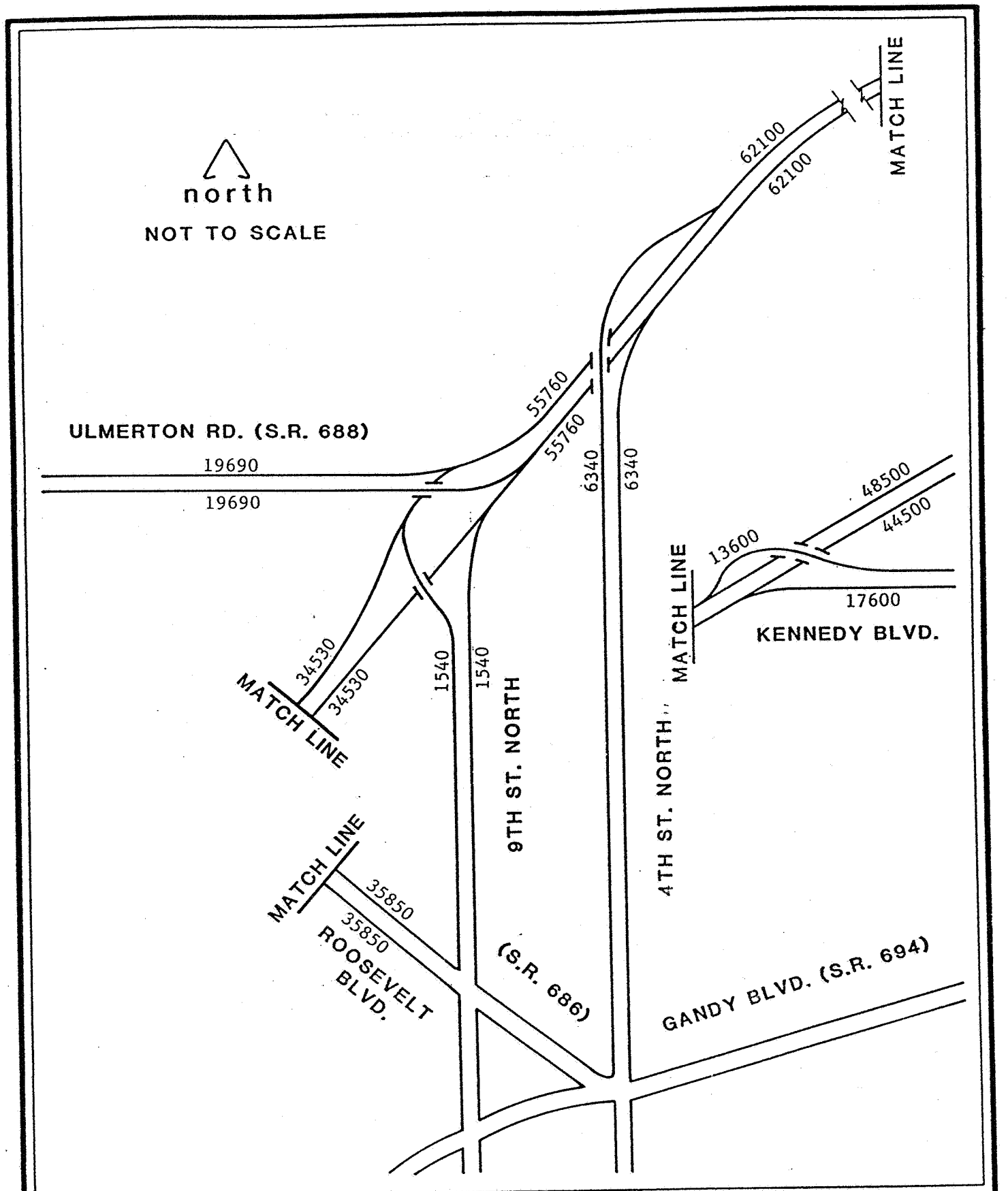


Figure 4-4

DESIGN YEAR (2010)
DAILY TRAFFIC VOLUMES

SOURCE: RS&H, 1990

I-275
ROOSEVELT BOULEVARD TO KENNEDY BOULEVARD

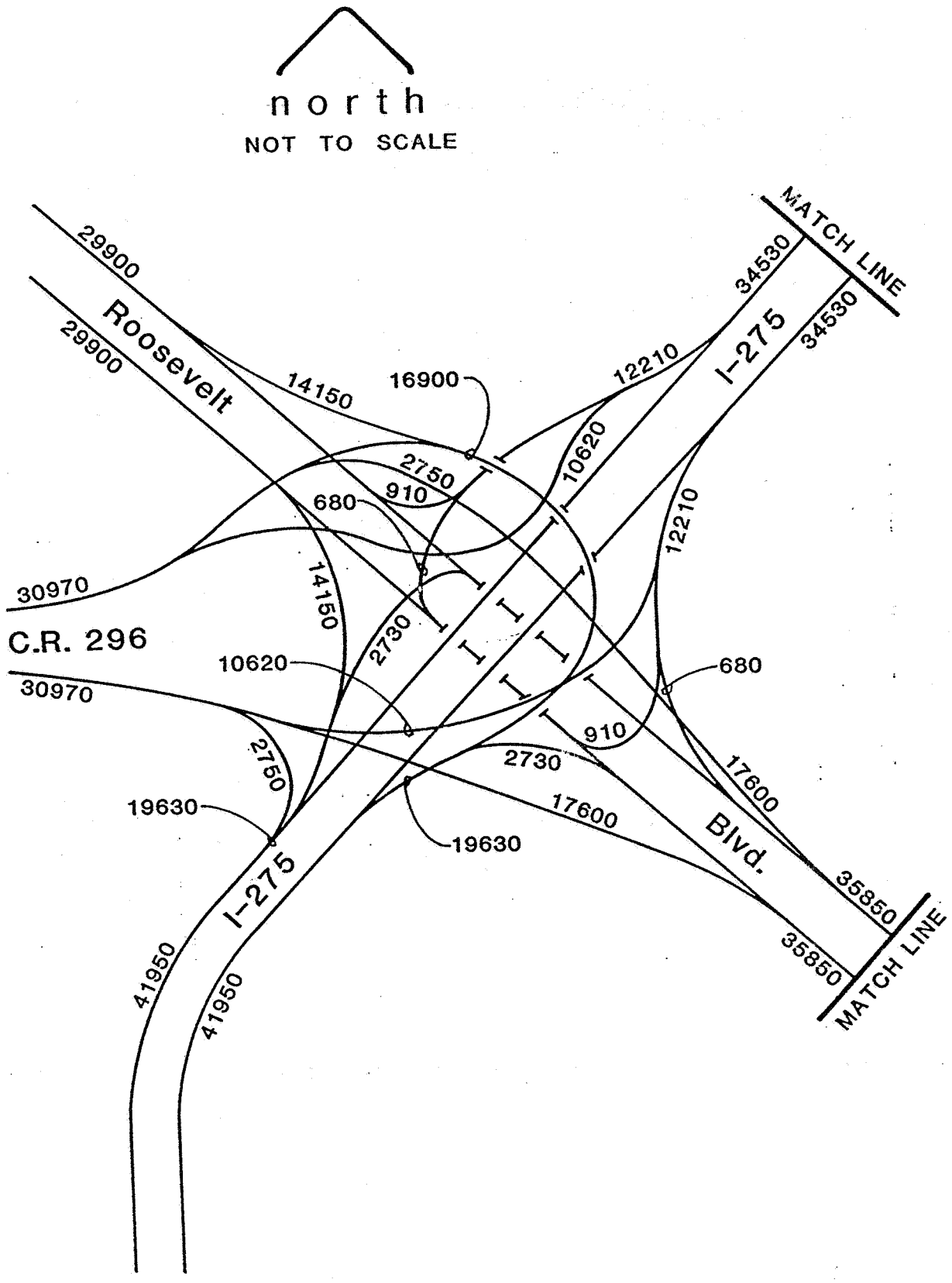


Figure 4-4 (CONT.)

DESIGN YEAR (2010)
DAILY TRAFFIC VOLUMES

SOURCE: RS&H, 1990.

I-275

ROOSEVELT BOULEVARD
TO KENNEDY BOULEVARD

on I-275 are projected to operate at LOS E (or worse) by the 2010 design year. I-275 will need to be improved to a 6- to 8-lane freeway in order to avoid deterioration to LOS E. Table 4-1 identifies projected 2010 traffic volumes and required laneage for I-275.

A detailed freeway ramp analysis was performed for all interchange ramp locations along I-275 using 1985 HCM procedures. The results of this analysis indicated that all but two existing freeway ramps will operate at LOS D or better by the 2010 design year. The Ulmerton Road (eastbound) on-ramp to I-275 (northbound) and I-275 (southbound) off-ramp to Ulmerton Road (westbound), are expected to operate at LOS F. These ramps will require an additional travel lane in order to maintain an acceptable level of service. Table 4-2 indicates the projected 2010 traffic volumes and required laneage for the freeway ramps. A Traffic Report for I-275 from Roosevelt Boulevard to Kennedy Boulevard (May, 1990) by Reynolds, Smith and Hills, Inc. has been prepared for this study and provides additional detailed information regarding the methodology used in developing traffic projections.

4.2 SAFETY

Safety, in terms of operational factors, can be evaluated using accident data described in Section 3.1.9. Based on the review of historic accident data along I-275, it has been determined that this segment of I-275 from Roosevelt Boulevard to 4th Street North has a lower accident rate than the state accident rate(s) for similar types of roadway segments. These results indicate that traffic accidents have had a minimal impact on traffic flow conditions along I-275 and, therefore, safety concerns are negligible. Based on accident data alone, no roadway improvements would currently be required on I-275.

However, future traffic estimates are projected to significantly exceed existing volumes. This increase in traffic volumes will cause a deterioration in traffic flow conditions (lower level of service, higher vehicle saturation level) if no improvements are implemented. In addition, the accident rate for I-275 may increase due to these higher volumes.

The proposed improvements, which include lane additions, will improve traffic flow conditions along I-275. These improvements will increase the level of service (higher capacity, less vehicle saturation) and will result in increased safety for the motoring public.

Table 4-2. 2010 Design Year Freeway Ramp Conditions

Facility/Ramp	Volume	Peak-Hour Laneage	Existing LOS	Recommended Laneage	LOS
4th St. N. NB On-Ramp to I-275 NB	560	1L	B	--	--
I-275 SB Off-Ramp to 4th St. N. SB	560	1L	B	--	--
Ulmerton Rd. EB On-Ramp to I-275 NB	1,730	1L	F	2L	C
I-275 SB Off-Ramp to Ulmerton Rd. WB	1,730	1L	F	2L	C
9th St. N. NB On-Ramp to I-275 NB	140	1L	B	--	--
I-275 SB Off-Ramp to 9th St. N. SB	140	IL	B	--	--
I-275 SB Off-Ramp to Roosevelt Blvd.	1,070	1L	C	--	--
Roosevelt Blvd. On-Ramp to I-275 NB	1,070	1L	C	--	--
I-275 NB Off-Ramp to Roosevelt Blvd.	1,720	2L	C	--	--
Roosevelt Blvd. On-Ramp to I-275 SB	1,720	2L	C	--	--

Source: 1985, HCM, Chapter 5, Table 5-5.
Assumptions include:
(1) ramp design = 41-50 MPH
(2) 5% trucks
(3) 0.95 peak-hour factor

RS&H, Inc., 1990

4.3 CONSISTENCY WITH TRANSPORTATION PLAN

The proposed alternatives, consisting of improving the existing 4-lane freeway to a 6- to 8-lane facility and the implementation of ramp interchange improvements, have been determined to be consistent with the State and County transportation plans and with the local comprehensive plans. Implementation of the proposed improvements would have minimal impacts on land use and zoning within the project limits.

4.4 SOCIAL/ECONOMIC DEMAND

Central Pinellas County has recently experienced rapid suburban expansion, and this growth is expected to continue as vacant land is developed and existing land use is improved for the highest and best use. The existing amount of land that is either vacant or undeveloped, will provide areas for future residential, commercial, institutional, and industrial growth. The projected annual growth of 2.3 percent in population will continue to cause traffic volumes to increase on I-275. This increase in traffic will cause additional delays for motorists using the existing facility. Due to the anticipated development of land near I-275, there is a need for a 6- or 8-lane facility to carry projected traffic volumes. The proposed improvements will decrease motorist delays and increase the capacity of I-275.

5.0 CORRIDOR ANALYSIS

I-275 provides a freeway crossing of Old Tampa Bay connecting Pinellas County with Hillsborough County. Location of any alternative other than the existing corridor would have high right-of-way acquisition costs and would have extensive negative environmental impacts to Tampa Bay. The Florida Department of Transportation is currently constructing a new 4-lane high-level fixed-span bridge north of the existing Howard Frankland Bridge. Relocation of the approaches to this facility would have major impacts to the current improvements. For these reasons, an alternative corridor was not evaluated.

6.0 TRAFFIC

6.1 EXISTING CONDITIONS

I-275 from south of Roosevelt Boulevard to north of 4th Street North was constructed using a rural-typical cross section and provides two through lanes in each direction. Roosevelt Boulevard, 9th Street North, Ulmerton Road, and 4th Street North are all 4-lane divided roadways which intersect I-275. Under existing traffic conditions, I-275 from the Howard Frankland Bridge to 4th Street North is operating at LOS E. All remaining I-275 freeway links are currently operating at LOS D or better. See Table 6-1 for existing 1988 traffic conditions for the mainline and intersecting roadways.

6.2 MULTIMODAL TRANSPORTATION SYSTEMS CONSIDERATIONS

The only mass transit system operating on I-275 consists of commercial buses. Several rail transit and high occupancy vehicle (HOV) studies have either been or are being completed for Pinellas and Hillsborough Counties. FDOT has completed a master plan for I-275 from Kennedy Boulevard (SR 60) to I-75 in Hillsborough County. The Tampa Interstate Study recommends the addition of HOV lanes to be located within a 54' envelope adjacent to the inside travel lanes along the freeway. Pinellas County to date has not conducted a similar study to determine the feasibility of HOV lanes for this corridor. The State High Speed Rail Commission may consider a high speed facility for this corridor. In order to provide for future multimodal transportation systems (HOV or transit) within the study limits, the median area between Ulmerton Road and 4th Street North would have to be expanded to approximately 54'. The existing causeway would need to be reconstructed requiring considerable fill materials to be placed within Tampa Bay. The existing 64' median width from south of Roosevelt Boulevard to Ulmerton Road could provide sufficient width to accommodate a multimodal transportation system (HOV or transit). Since there are no detailed or approved engineering plans for a future rail system or HOV facility available at this time, no provisions are provided for HOV or transit improvements. The need for providing HOV or transit improvements along the I-275 corridor within Pinellas County will be examined when it becomes time to replace the existing Howard Frankland Bridge (northbound).

6.3 TRAFFIC ANALYSIS ASSUMPTIONS

Existing 1988 traffic counts were collected for all major facilities within the study area. The a.m. and p.m. peak-hour volumes were determined by applying K (design hour factor) and D (directional distribution) factors to the Average Annual Daily Traffic (AADT) volumes. The K factor, the percentage of daily traffic in the peak hour, was estimated to be 8.0 percent for the project. The D

Table 6-1. Existing 1988 Traffic Conditions

I-275 Freeway Link	Design-Hour Volume	Number of Lanes	LOS
North of Kennedy Blvd.	2580	2	D
Kennedy Blvd. to 4th Street North	3340	2	E
4th Street North to Ulmerton Road	2860	2	D
Ulmerton Road to 9th Street North	1530	2	B
9th Street North to Roosevelt Blvd. N. Ramps	1420	2	B
Roosevelt Blvd. N. Ramps to Roosevelt Blvd. S. Ramps	1385	2	B
South of Roosevelt Blvd.	3000	3	C

Source: RS&H, Inc. 1990

factor, the directional distribution factor in the peak hour, was estimated to be a 56/44 split for the project. These factors were based on existing traffic flow characteristics within the study area. These peak-hour volumes were then compared to hourly level-of-service (LOS) criteria in order to determine the existing traffic conditions along I-275. The LOS criteria used for this analysis were based on the methodology identified in the 1985 Highway Capacity Manual (HCM), Chapter 3, Basic Freeway Segments. The highest hourly volumes for various LOS standards which can be carried by the facility in the peak direction in the peak hour were calculated and are indicated in Table 6-2. These calculations were based on the following assumptions: 60 mph design speed, no restricted lane widths or lateral clearance problems, 5 percent heavy vehicles in the peak hour, commuter-type driver population, and a 95-percent peak hour factor.

6.4 EXISTING TRAFFIC VOLUMES

Existing 1988 traffic counts were collected for all major facilities within the study area including I-275, Roosevelt Boulevard, 9th Street North, Ulmerton Road, 4th Street North, and various entrance and exit ramps connecting I-275 to these roadways. These counts were obtained from FDOT and Pinellas County and were compiled as AADT volumes. Table 6-3 provides a summary of both mainline and ramp 1988 Daily Two-Way Traffic Volumes for the study area.

6.5 TRAFFIC VOLUME PROJECTIONS

A traffic analysis was conducted to determine future traffic projections along I-275 for the study area. Figures 4-1 through 4-4 identify the existing and projected traffic volumes. In addition, the Traffic Report (May 1990) prepared by Reynolds, Smith and Hills, Inc. contains additional information regarding traffic volumes.

6.6 LEVEL OF SERVICE

Using peak-hour volumes, an analysis was conducted to determine the improvements necessary to maintain acceptable operating conditions in the peak hour for the various study years. Table 6-4 indicates the results of the analysis for 1995 and 2000 traffic conditions for I-275 freeway links. Table 6-5 identifies the results for the 2010 design year traffic conditions for I-275 freeway links. Table 6-6 identifies the results for the 2010 design year traffic conditions for the respective ramps.

Table 6-2. Level-of-Service Criteria for I-275

Level of Service	V/C Ratio	Highest Hourly Volume for Number of Lanes in each Direction		
		2 lanes	3 lanes	4 lanes
A	-	-	-	-
B	0.49	1,769	2,653	3,538
C	0.69	2,491	3,736	4,982
D	0.84	3,032	4,549	6,065
E	1.00	3,610	5,415	7,220

Calculation: V = MSF x N x fw x fhv x fp x PHF
= 2000 x N x 1 x 0.95 x 1 x 0.95

where: V = Highest hourly volume
C = Capacity, vph
MSF = Maximum Service Flow
N = Number of lanes
fw = Adjustment factor for restricted lane widths
fhv = Adjustment factor for heavy vehicles (5% trucks)
fp = Adjustment factor for driver population
Assumes 60 MPH design speed
PHF = Peak Hour Factor = 0.95

Sources: Highway Capacity Manual. Special Report 209. Transportation Research Board. 1985.

Source: RS&H, 1990

Table 6-3. Existing 1988 Daily Two-Way Traffic Volumes

Links	1988
Mainline:	AADT
I-275 South of Roosevelt Blvd.	48,000
I-275 North of Roosevelt Blvd.	31,840
I-275 from 9th Street to 4th Street	64,160
I-275 from 4th Street to Howard Franklin Bridge	75,000
Ramps:	
Ulmerton Road	29,680
9th Street North	2,640
4th Street North	10,840

Source: RS&H, Inc., 1990

Table 6-4. 1995 and 2000 Traffic Conditions

I-275 Freeway Link	1995 Project Traffic					2000 Project Traffic				
	Design-Hour Volume	Existing Laneage	LOS	Recommended Laneage	LOS	Design-Hour Volume	Existing Laneage	LOS	Recommended Laneage	LOS
North of Kennedy Blvd.	3,270	2	E	3	C	3,800	2	F	3	D
Kennedy Blvd. to 4th Street North	4,250	2	F	3	D	4,820	2	F	4	C
4th Street North to Ulmerton Road	3,750	2	F	3	D	4,250	2	F	3	D
Ulmerton Road to 9th Street North	2,700	2	D	--	--	2,750	2	D	--	--
9th Street North to Roosevelt Blvd. N. Ramps	2,580	2	D	--	--	2,610	2	D	--	--
Roosevelt Blvd. N. Ramps to Roosevelt Blvd. S. Ramps	1,680	2	B	--	--	1,700	2	B	--	--
South of Roosevelt Blvd.	3,060	3	C	--	--	3,160	3	C	--	--

Source: RS&H, Inc., 1990.

Table 6-5. 2010 Design Year Traffic Conditions

I-275 Freeway Link	2010 Project Traffic				
	Design-Hour Volume	Existing Laneage	LOS	Recommended Laneage	LOS
North of Kennedy Blvd.	4,270	2	F	4	C
Kennedy Blvd. to 4th Street North	5,470	2	F	4	D
4th Street North to Ulmerton Road	4,910	2	F	4	C
Ulmerton Road to 9th Street North	2,180	2	E	3	C
9th Street North to Roosevelt Blvd. N. Ramps	3,040	2	E	3	C
Roosevelt Blvd. N. Ramps to Roosevelt Blvd. S. Ramps	1,970	2	C	3*	B
South of Roosevelt Blvd.	3,690	3	C	--	--

* Improvement required to provide appropriate lane balance between links.

Source: RS&H, Inc., 1990.

Table 6-6. 2010 Design Year Freeway Ramp Conditions

	Volume	Existing Laneage	Existing LOS	Recommended Laneage	LOS
4th St. N. NB On-Ramp to I-275 NB	560	1L	B	--	--
I-275 SB Off-Ramp to 4th St. N. SB	560	1L	B	--	--
Ulmerton Rd. EB On-Ramp to I-275 NB	1,730	1L	F	2L	C
I-275 SB Off-Ramp to Ulmerton Rd. WB	1,730	1L	F	2L	C
9th St. N. NB On-Ramp to I-275 NB	140	1L	B	--	--
I-275 SB Off-Ramp to 9th St. N. SB	140	IL	B	--	--
I-275 SB Off-Ramp to Roosevelt Blvd.	1,070	1L	C	--	--
Roosevelt Blvd. On-Ramp to I-275 NB	1,070	1L	C	--	--
I-275 NB Off-Ramp to Roosevelt Blvd.	1,720	2L	C	--	--
Roosevelt Blvd. On-Ramp to I-275 SB	1,720	2L	C	--	--

Source: 1985, HCM, Chapter 5, Table 5-5.
Assumptions include:
(1) ramp design = 41-50 MPH
(2) 5% trucks
(3) 0.95 peak-hour factor

Source: RS&H, Inc., 1990

Based on the freeway capacity analysis conducted, a majority of I-275 segments within the project limits will operate at LOS E or worse by 2010 if no improvements are made. To obtain acceptable operating conditions (LOS D or better), link improvements will be required from north of 4th Street North to the Roosevelt Boulevard South ramps. The required improvements are indicated in Table 6-5. I-275 from north of 4th Street North to Ulmerton Road will require four lanes in each direction while the segment from Ulmerton Road to the Roosevelt Boulevard South ramps will require three lanes in each direction. Even though I-275 between the Roosevelt Boulevard North and South ramps is expected to operate at an acceptable LOS with existing laneage, improvements are recommended to provide appropriate lane balance between links.

In addition to freeway link improvements, freeway ramp improvements have also been identified for the 2010 design year traffic conditions (see Table 6-6). The existing I-275 on- and off-ramps at Ulmerton Road will need to be improved to two lanes in order to maintain acceptable operating conditions. Weave analyses were performed using the 1985 HCM for all entrance and exit ramps for the 2010 design year a.m. and p.m. peak hour conditions. Results of that analysis indicate that each ramp with the proposed improvements will work at a LOS D or better. Appendix E contains summary sheets for each ramp.

With the above recommended improvements, all freeway segments and ramps within the project study area are estimated to operate at acceptable levels of service through the 2010 design year.

7.0 ALTERNATIVE ALIGNMENT ANALYSIS

7.1 NO PROJECT ALTERNATIVE

The possibility of not improving this section of I-275 was considered. This alternative would save the cost of constructing improvements, eliminate any short-term disruption to the community that would be experienced during construction, and would not have any additional environmental impacts. The motorist will experience increased delays due to the volumn of traffic projected to use the existing facility by the 2010 design year. This will be an inconvenience to the motorist due to increased travel time needed to reach their destination. Accident rate for the facility is projected to increase as a result of the increase in traffic volumes resulting in even greater delays to the motorist.

This alternative would not, however, provide the needed capacity on the facility for existing and projected traffic demands. Also, it would not provide improvements in the operation of the facility, and would not provide shoulders on the existing ramp structures to accommodate disabled vehicles. The "no project" alternative will continue to be a valid alternative until after the public hearing when a final recommendation can be made.

7.2 STUDY ALTERNATIVES

For the purposes of evaluating alternatives, the I-275 study area was divided into three segments. The following provides a description of the limits of each segment:

1. Segment 1 - I-275/Roosevelt Boulevard interchange which includes approximately 2000' south to 2000' north of I-275 from the centerline of Roosevelt Boulevard (see Figure 7-1),
2. Segment 2 - I-275 from approximately 2000' north of the I-275/Roosevelt interchange to Big Island Gap including 9th Street North and Ulmerton Road (see Figure 7-2), and
3. Segment 3 - I-275 from Big Island Gap to approximately 1500' north of 4th Street North (see Figure 7-3).

As indicated in Section 4.1, I-275 needs to be improved to provide additional capacity by the 2010 design year. I-275 from Roosevelt Boulevard to Ulmerton Road needs to be upgraded from 4 lanes to 6 lanes. I-275 from Ulmerton Road to 4th Street North needs to be upgraded from 4 lanes to 8 lanes. The following provides a discussion of the alternatives developed to provide the additional capacity for each

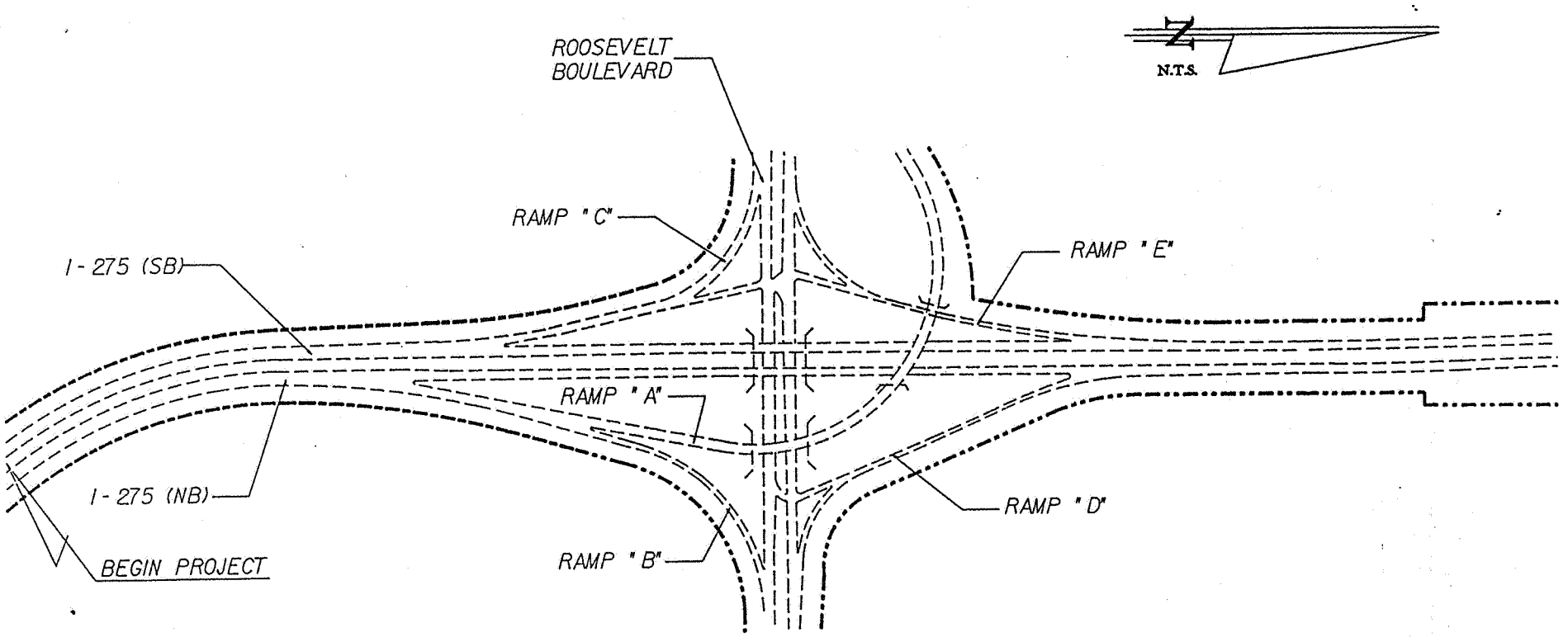
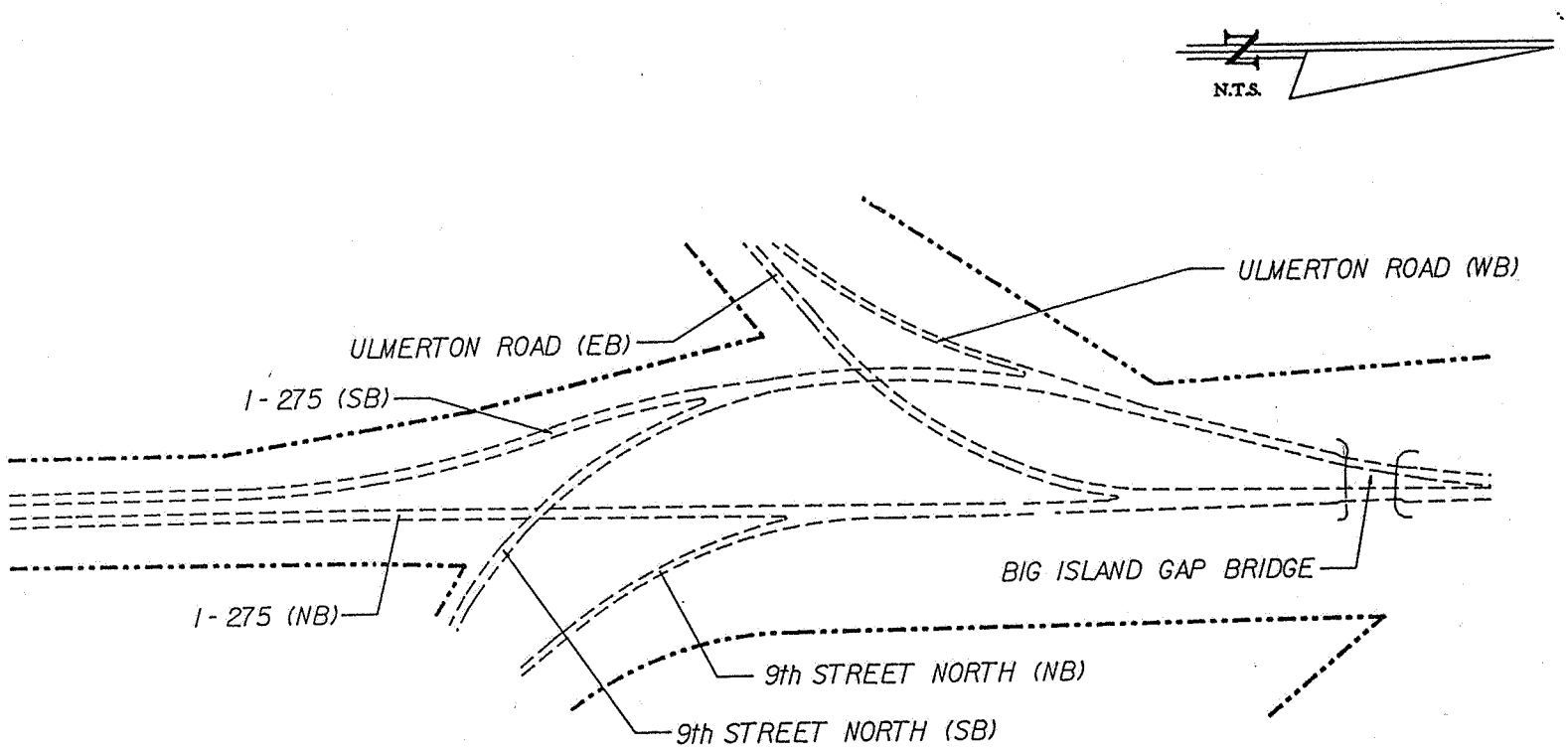


FIGURE 7 - 1

SOURCE: R.S&H. 1990

SEGMENT 1 - ROOSEVELT BOULEVARD INTERCHANGE
EXISTING ALIGNMENT FOR I-275

I-275
ROOSEVELT BLVD.
TO
4th STREET NORTH



LEGEND

EXISTING

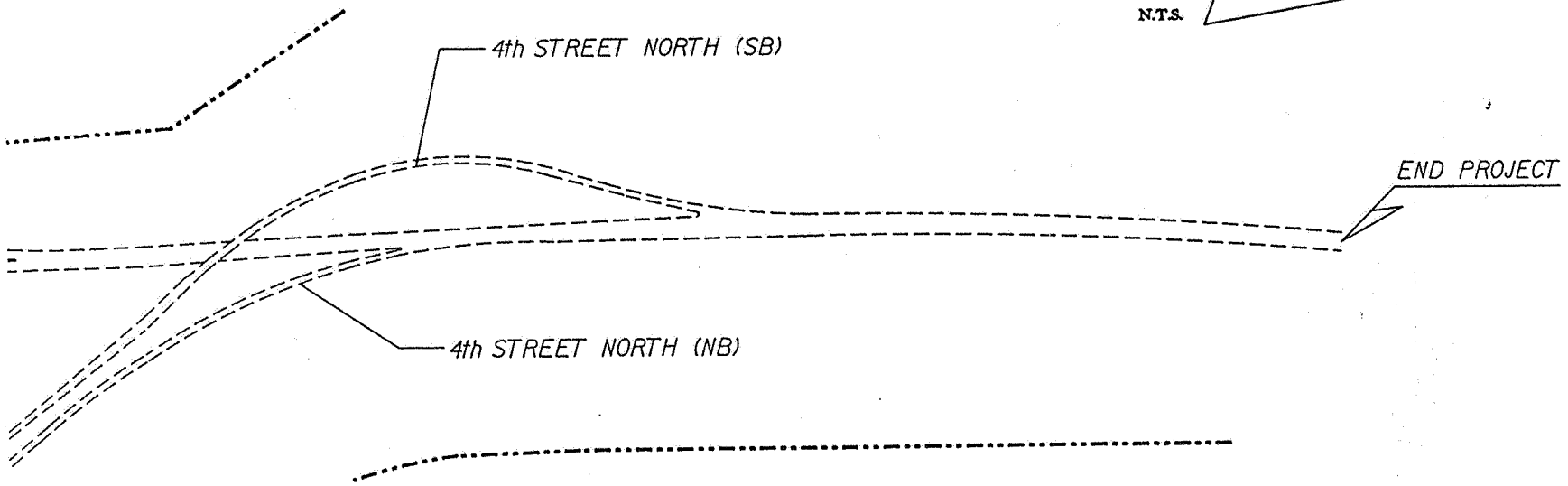
LIMITED ACCESS RIGHT OF WAY

FIGURE 7 - 2

SOURCE: R.S&H. 1990

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP BRIDGE
EXISTING ALIGNMENT FOR I-275

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH



LEGEND

EXISTING

LIMITED ACCESS RIGHT OF WAY

FIGURE 7 - 3

SOURCE: R.S&H, 1990

SEGMENT 3 - 4th STREET NORTH
EXISTING ALIGNMENT FOR I-275

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH

segment. All ramps along the corridor were improved to obtain desirable geometric design standards for entrance and exit ramps using A Policy on Geometric Design of Highways and Streets by the American Association of State Highway Transportation Officials (1984), Chapter X (hereafter referred to as AASHTO design guidelines).

7.2.1 Segment 1 - Roosevelt Boulevard Interchange

For this segment of I-275, two options were evaluated: Widening to the inside or widening to the outside along I-275.

7.2.1.1 Widening to the Inside

The first option evaluated was to add two 12-foot wide travel lanes to the inside (See Figure 7-4). The existing median width (edge-of-pavement to edge-of-pavement) for this segment of I-275 is 64 feet. The addition of two travel lanes to the inside would result in a 40-foot median. In accordance with FDOT Roadway and Traffic Design Standards (January 1990), Index 700, a 40-foot median width is the minimum acceptable design when lanes are added to a freeway with an existing 64-foot median. In accordance with FDOT's Manual of Uniform Minimum Standards for Design, Construction, and Maintenance For Streets And Highways, a 40 foot median width is minimum permitted design resulting in a design speed of under 60 mph.

The addition of two travel lanes to the inside requires that the two bridge structures (Bridge Nos. 150102 and 150103) for the mainline over Roosevelt Boulevard be either widened or replaced. Based upon bridge information provided by FDOT, it is recommended that the two structures be widened to provide the additional travel lanes.

South of Roosevelt Boulevard, the existing roadway typical section provides for three travel lanes in each direction. At Roosevelt Boulevard, a travel lane is added to the southbound lanes of I-275 and dropped from the northbound lanes. In order to maintain appropriate lane alignment, a twelve foot transition is required when adding the additional travel lane to the inside. The existing travel lanes along I-275 for this segment were constructed using concrete pavement. Motorists in the inside high speed travel lane would be required to cross over concrete joints during the transition. Reconstruction of this segment of I-275 to eliminate the concrete joints is not recommended. Improvements will be limited to resurfacing and appropriate pavement marking will be used to assist the motorist in this transition. All four ramps

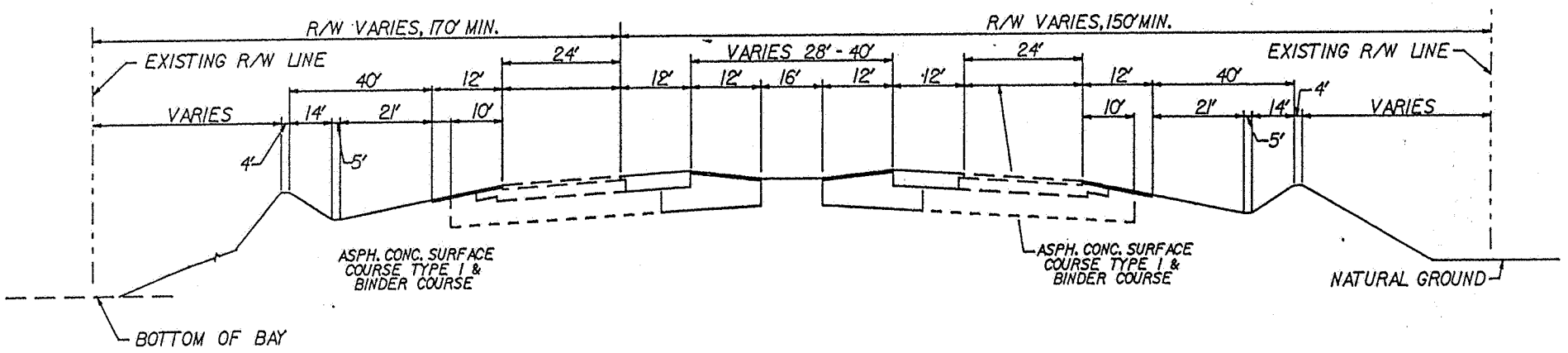


FIGURE 7 - 4

PROPOSED TYPICAL SECTION

FROM ROOSEVELT BLVD. TO ULMERTON ROAD

(WIDENING TO INSIDE)

SOURCE: R,S&H, 1990

REYNOLDS, SMITH & HILLS, INC.
1715 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL. 33607

were evaluated to determine if additional capacity was needed by the 2010 design year. Ramp A provides an exit from I-275 to Roosevelt Boulevard (westbound). Ramp A will require a two-lane exit ramp to provide additional capacity. The remaining three ramps require only improvements necessary to provide desirable geometric design. The recommended improvements are to provide appropriate acceleration and deceleration lanes with a 50:1 taper. Single-lane entrance ramps were developed in accordance with Figure X-68B of Chapter X, Grade Separations and Interchanges AASHTO Standard Design Guide. Single-lane exit ramps were developed in accordance with Figure X-69C of AASHTO Standard Design Guide. Two-lane entrance ramps were developed based upon Figure X-75B of AASHTO Standard Design Guide. Two-lane exit ramps were developed based upon Figure X-76B.

In summary, widening to the inside requires the following improvements:

1. Add two 12-foot wide travel lanes (one in each direction) to the inside resulting in a 40-foot median,
2. Widen the I-275 bridge overpasses, and
3. Improve all ramps to provide acceptable geometric design.

7.2.1.2 Widening to the Outside

The second option evaluated was to add one 12-foot wide travel lane to the outside of the existing northbound and southbound travel lanes of I-275 (See Figure 7-5). With this alternative, the existing 64-foot wide median would remain.

The addition of two travel lanes to the outside requires that the two bridge structures (Bridge Nos. 150102 and 150103) for the mainline over Roosevelt Boulevard be widened. The recommendation for widening was based upon FDOT bridge inspection report information. The existing bridge structure (150104) for Ramp A [I-275 (northbound) exit to Roosevelt Boulevard (westbound)] will be replaced. Under existing conditions, there is not sufficient distance between the edge-of-pavement and the bridge-end bents to construct an additional travel lane along I-275 on the outside. The existing horizontal distance between the outside edge of pavement and the face of the pier structure is 14 feet. A minimum distance of 28 feet is needed to construct a 12 foot travel lane, a 12 foot shoulder and provide a 2 foot clearance between the guardrail and bridge pier. The remaining 2 feet is provided to construct the required guardrail. Replacement would be limited to the bridge structure and modification to the

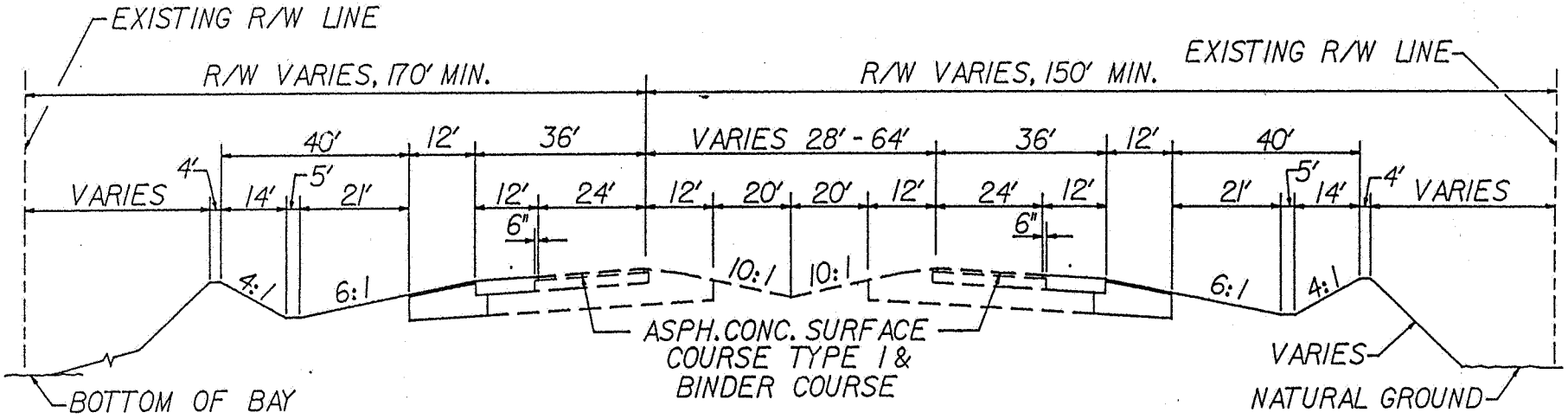


FIGURE 7 - 5

TYPICAL SECTION

I - 275 FROM ROOSEVELT BLVD. TO ULMERTON ROAD

(WIDENING TO OUTSIDE)

SOURCE: R,S&H, 1990

REYNOLDS, SMITH & HILLS, INC.
1715 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL. 33607

roadway approaches.

Unlike the option to widen to the inside, no lane transition across the existing concrete pavement south of the interchange is necessary. Motorist in the inside high speed travel lane would remain in the same lane and would not be subject to a lane transition. Under this option, uniformity in lane alignment is maintained and does not introduce an element of change. This is considered to be a non-monitary benefit to the motorist.

Improvements to the existing ramps are the same as described for widening to the inside.

In summary, widening to the outside requires the following improvements:

1. Add two 12-foot wide travel lanes (one in each direction) to the outside, thereby retaining the existing 64 foot median,
2. Widen the I-275 bridge overpasses, and
3. Replace Ramp A bridge over I-275.

7.2.2 Segment 2--9th Street North to Ulmerton Road Including Big Island Gap Bridge

Within this segment, I-275 southbound travel lanes diverge and converge from the northbound travel lanes. It is recommended that the existing alignment shift be eliminated and I-275 southbound travel lanes be constructed adjacent to and parallel with the existing northbound travel lanes (see Figure 7-2). This would eliminate two curves which exist along the I-275 (southbound) alignment. This would provide better roadway geometry and provide higher operating safety for long-distance drivers. All three options developed for this segment of I-275 recommend that the southbound travel lanes be moved in on a tangent alignment with the existing northbound travel lanes. The traffic analysis indicated that within this segment of I-275, a travel lane needs to be added and dropped between 9th Street North and Ulmerton Road. This adding and dropping of the additional travel lane will be accomplished at the Ulmerton Road ramps. An additional travel lane is needed at the Ulmerton Road entrance and exit ramps. The proposed typical section for I-275 from Ulmerton Road to north of Big Island Gap for the eight lane section is shown in Figure 7-6.

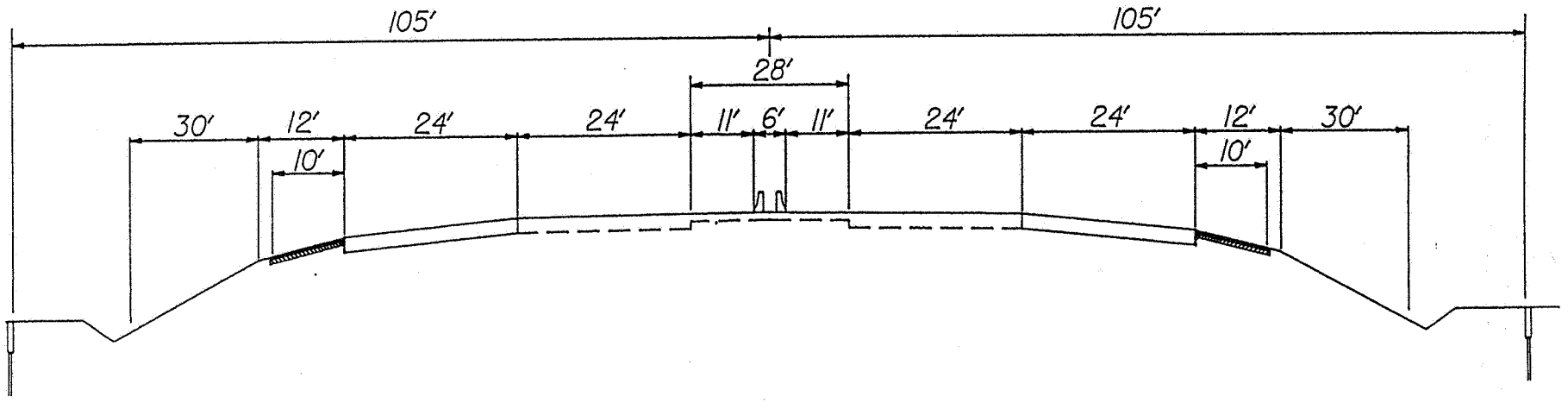


FIGURE 7 - 6

PROPOSED TYPICAL SECTION

FROM ULMERTON ROAD TO 4th STREET NORTH

SOURCE: R,S&H, 1990

REYNOLDS, SMITH & HILLS, INC.
1715 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL. 33607

7.2.2.1 Big Island Gap Bridge

Three bridge options were developed for this structure. They are as follows:

1. Option 1 - construct two five-lane bridges for north and south bound I-275 traffic (See Figure 7-7),
2. Option 2 - construct one five-lane bridge for northbound traffic, one four-lane bridge for southbound I-275 traffic and the 9th Street North ramp and one two-lane bridge for Ulmerton Road (westbound) traffic (See Figure 7-8), and
3. Option 3 - construct one 5-lane northbound bridge, one 3-lane bridge for southbound I-275, and one 2-lane bridge for Ulmerton Road (westbound) and 9th Street North (southbound) traffic (See Figure 7-9).

7.2.2.2 Ulmerton Road (Westbound)

The existing Ulmerton Road (westbound) ramp is a single-lane exit ramp which widens to two travel lanes. The traffic analysis for this ramp indicates that an additional exit lane needs to be added to provide an acceptable LOS for this ramp. Two options were developed for this ramp. The first option considered the reconstruction of the ramp on a new alignment between the existing ramp and the Ulmerton Road (eastbound) ramp (see Figure 7-10). 2010 design year traffic volumes require that this ramp be widened to provide two lanes of capacity. The construction of the ramp on new alignment would facilitate the maintenance of traffic. The second option considered the feasibility of utilizing the existing alignment for the purpose of retaining as much of the existing roadway surface where possible (see Figure 7-11). Twelve feet of additional roadway surface would need to be constructed for approximately 1000 feet to provide two travel lanes.

7.2.2.3 Ulmerton Road (Eastbound)

The Ulmerton Road (eastbound) ramp needs to be improved to provide two lanes of capacity. The existing ramp is currently a single-lane right-hand merge movement to I-275. It is recommended that the Ulmerton Road (eastbound) ramp be reconstructed and upgraded to a left-hand merge movement to I-275.

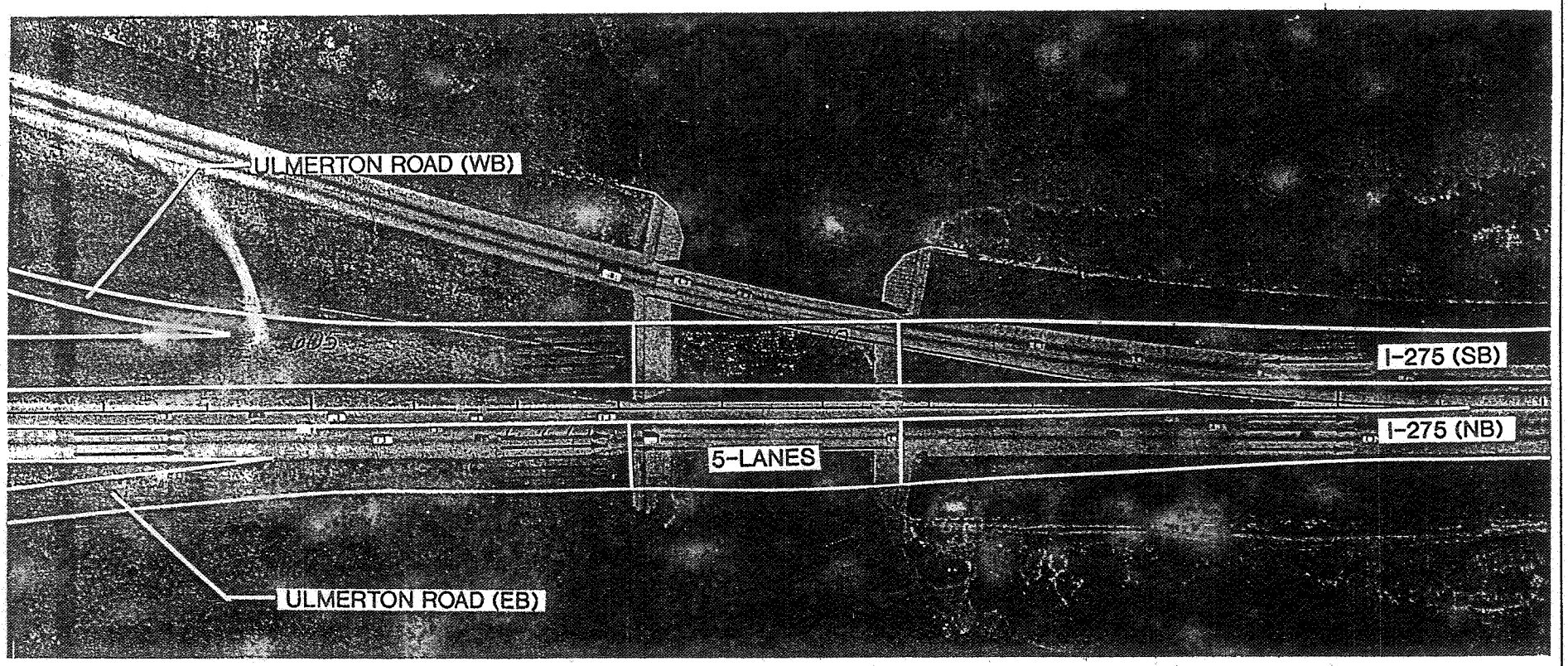


FIGURE 7-7

SEGMENT 2 - 9th STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP

OPTION 1-TWO 5-LANE BRIDGES

SOURCE: R,S&H, 1990

I-275 ROOSEVELT BLVD.
TO
4th STREET NORTH

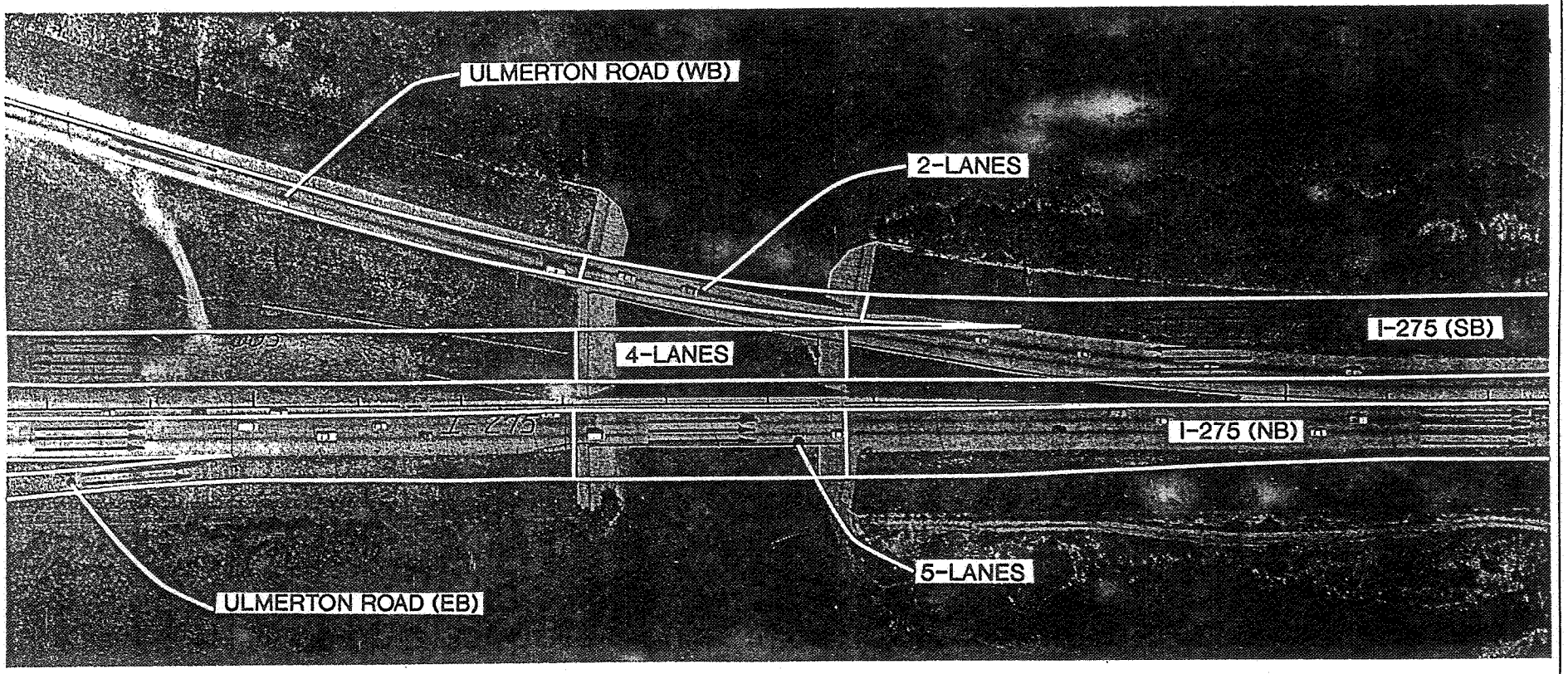


FIGURE 7-8

SEGMENT 2 - 9th STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP

OPTION 2-ONE 5-LANE BRIDGE, ONE-4 LANE BRIDGE AND ONE 2-LANE BRIDGE

SOURCE: R,S&H, 1990

I-275 ROOSEVELT BLVD.
TO
4th STREET NORTH

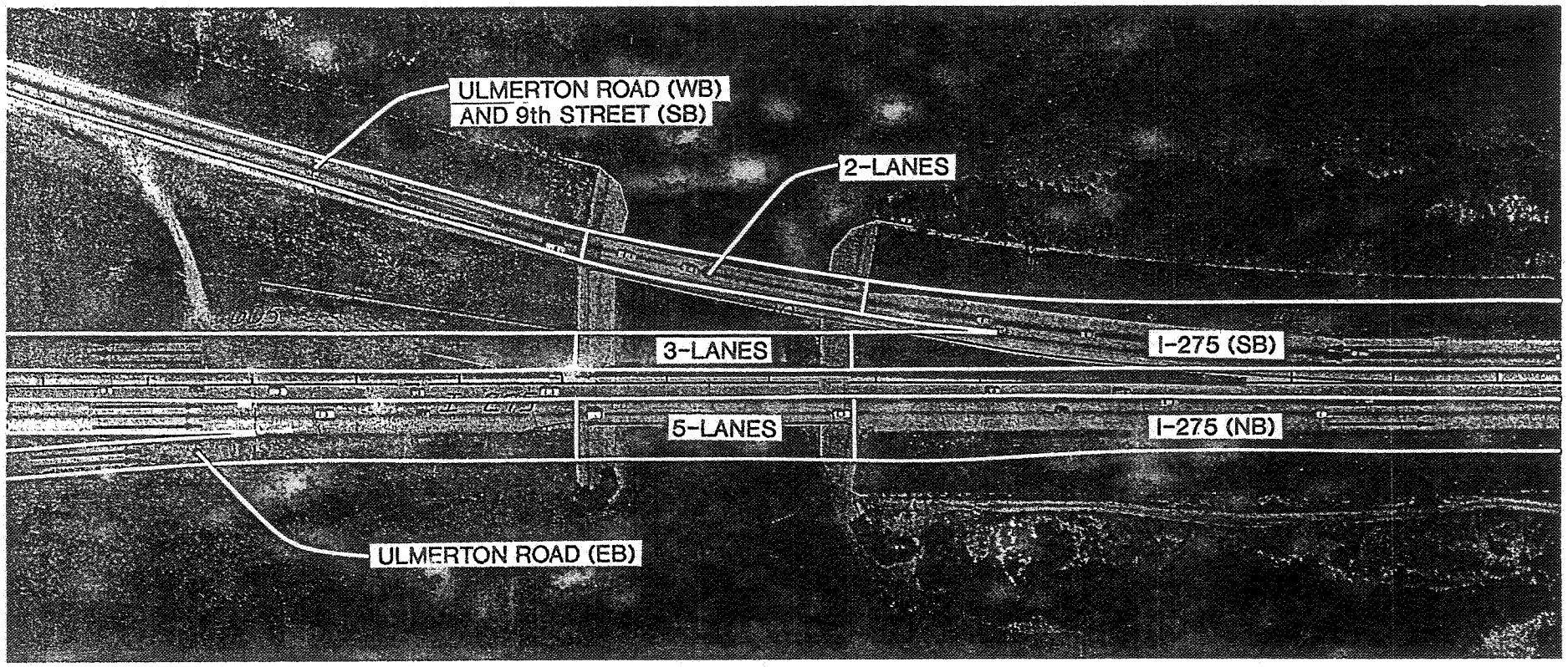


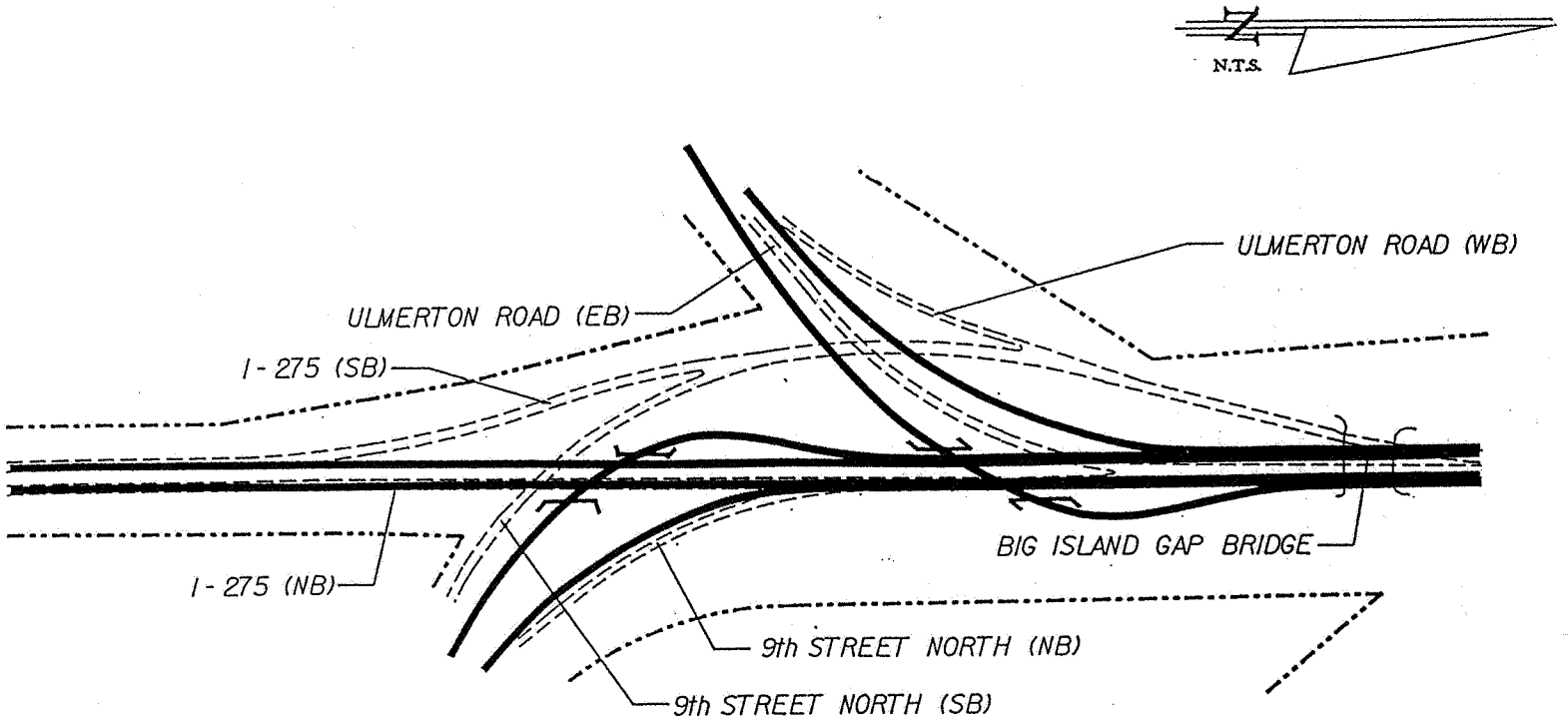
FIGURE 7-9

SEGMENT 2-9th STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP

OPTION 3-ONE 5-LANE BRIDGE, ONE 3-LANE BRIDGE AND ONE 2-LANE BRIDGE

SOURCE: R,S&H, 1990

I-275 ROOSEVELT BLVD.
TO
4th STREET NORTH



LEGEND

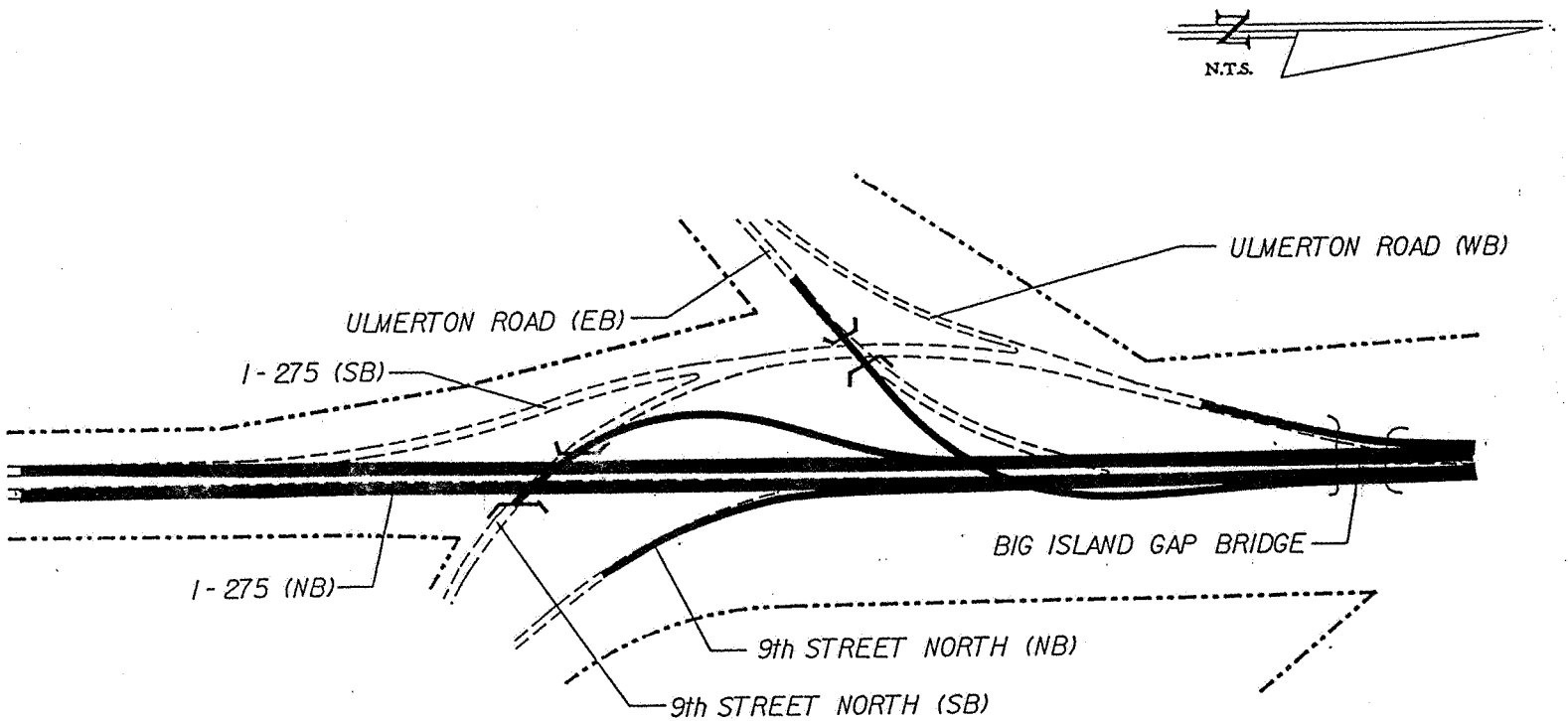
- EXISTING
- LIMITED ACCESS RIGHT-OF-WAY
- PROPOSED NEW ALIGNMENT

FIGURE 7-10

SOURCE: R.S&H, 1990

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP BRIDGE
IMPROVEMENTS ALONG ALL NEW ALIGNMENT

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH



LEGEND

- EXISTING
- LIMITED ACCESS RIGHT-OF-WAY
- PROPOSED ALONG EXISTING ALIGNMENT

FIGURE 7-11

SOURCE: R,S&H, 1990

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP BRIDGE
UTILIZING EXISTING ALIGNMENT OF RAMPS

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH

Considering the need for high capacity, appropriate level of service, and maximum safety in conjunction with freeway operations, it is desirable to provide uniformity in exit and entrance patterns along a freeway. A dissimilar arrangement of entrance or exit ramps causes confusion for the motorist resulting in slowing down on high speed lanes and unexpected manuevers. Except in highly special cases all entrance and exit ramps should be on the right of the mainline (Chapter X, AASHTO, Standard Design Guide). Therefore, the reconstruction of the Ulmerton Road (eastbound) entrance ramp to a left hand merge movement to I-275 is consistent with motorist expectations to merge left. Two options were developed for this ramp. The first option considers the reconstruction of the ramp along new alignment to the south of the existing ramp (see Figure 7-10). The construction of the ramp along new alignment would allow traffic to be maintained on the existing alignment during construction. The second option developed considers utilizing where feasible the existing alignment (see Figure 7-11). This option would allow optimum use of the existing fill material currently in place. Traffic would be maintained along the existing alignment while the bridge structure and portions of the embankment are being constructed. A temporary detour of traffic onto the completed segment will need to be constructed while the existing bridge is demolished and embankment material is put in place. For both options, the two lane ramp would be elevated to cross over I-275, and constructed on bridge piers.

7.2.2.4 9th Street North (Southbound)

The existing 9th Street North (southbound) ramp is a single-lane left-hand exit from I-275. Projected traffic volumes indicate that no additional capacity improvements are needed. It is, however, recommended that the 9th Street North (southbound) ramp be reconstructed to provide a right-hand exit. This recommendation is based upon the desire to provide consistent operational movements along the I-275 corridor.

Two options were developed for this ramp - construct along a new alignment or utilize where feasible the existing alignment. For either option, the bridge structure will be replaced. Replacement is based upon the following reasons:

1. Insufficient distance from the edge of pavement to the bridge end-bents to add additional lanes to I-275,
2. Inadequate side clearance,

3. Inadequate vertical clearance over I-275, and
4. Structural rating.

The first option considers the reconstruction of the ramp along new alignments (See Figure 7-10). This would require that the ramp be constructed on all new fill materials. The existing horizontal alignment for 9th Street North (southbound) is 3°00'00" and has a posted speed of 50 mph. Under this option, the horizontal alignment would be sharper, resulting in a reduced posted speed. In addition, the bridge span necessary to cross I-275 would be longer and because of the required horizontal alignment, the bridge skew would be greater.

The second option considered was to utilize the existing bridge and ramp alignment where possible (See Figure 7-11). By utilizing the existing bridge alignment, an optimum bridge length and skew is obtained. In addition, the existing fill material south of the bridge is retained and minimum roadway improvements are required south of the bridge.

Under either option, it is recommended that traffic along 9th Street North (southbound) be rerouted to 4th Street North (southbound) during construction. During the construction design year of 1995, the p.m. peak-hour traffic projections are 120 vph. 1995 traffic projections for 4th Street North (Southbound) are 500 vph. The combined traffic volume would result in LOS B on the ramp in the evening peak hour. The temporary closure of the 9th Street North (southbound) ramp during construction would require a short detour and temporary inconvenience for motorists. 9th Street North and 4th Street North are connected by several cross streets south of the interstate. One possible cross-street is 116th, approximately 0.5 mile away from 9th Street North. Temporary closure of the 9th Street North (southbound) ramp and rerouting traffic to the 4th Street North ramp during construction will reduce the cost of maintenance of traffic by eliminating the need for the construction of a detour route.

7.2.2.5 9th Street North (Northbound)

The existing 9th Street North (northbound) ramp is a two-lane ramp which merges to a one-lane entrance ramp to I-275 (northbound). No additional capacity improvements are needed for the 2010 design year. Therefore, improvements to this ramp were limited to obtaining desirable geometric design for the entrance ramp along the existing alignment in accordance with Figure X-68B of the AASHTO Design Guidelines.

7.2.3 Segment 3--4th Street North

For both of the 4th Street ramps, two options were developed. They were to improve along new alignment or utilize existing alignment where feasible. No additional capacity is needed for either ramp by the 2010 design year.

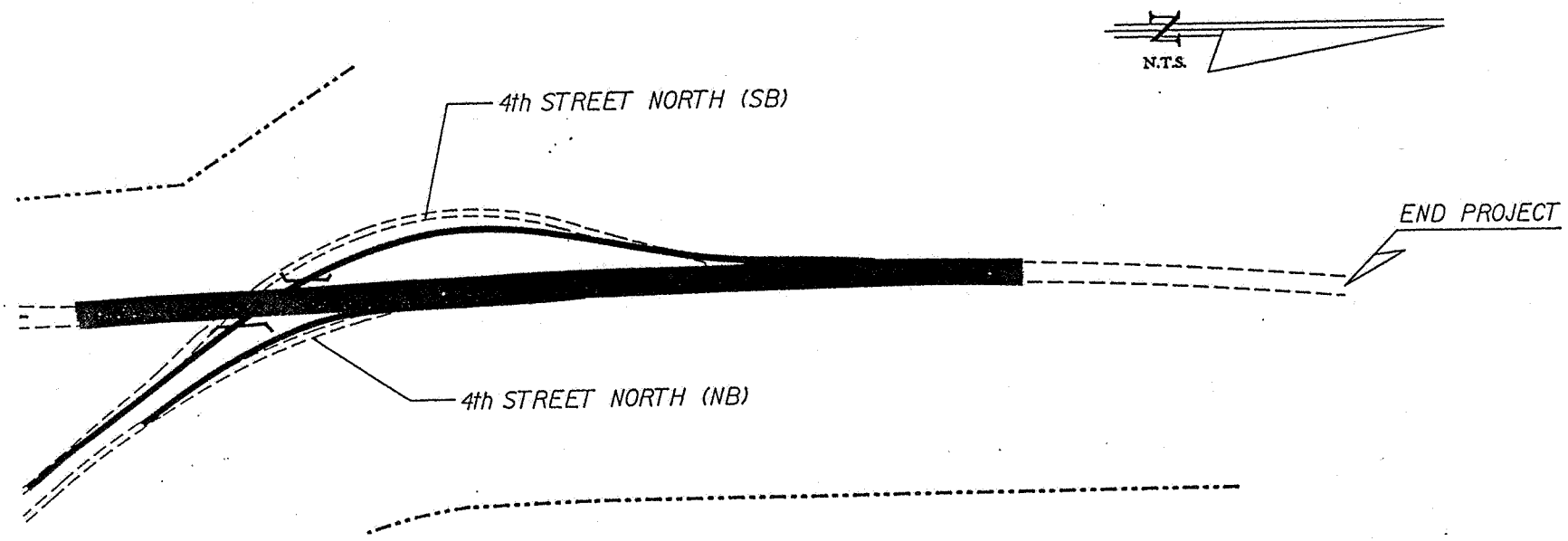
7.2.3.1 4th Street North (Southbound)

The existing 4th Street North (southbound) ramp is a single-lane exit expanding to two lanes before the bridge structure. The option to construct along all new alignment was evaluated. The new alignment would be located east of the existing ramp (see Figure 7-12). Under this option the ramp would have to be constructed on new fill material. The existing 4th Street North (southbound) bridge will be replaced. There is insufficient distance between the edge-of-pavement and the existing bridge pier to allow for the addition of two travel lanes in each direction along I-275. Constructing the ramp on new alignment results in a longer bridge span over I-275 and a sharper skew for the bridge.

The second option evaluated was to retain as much of the existing ramp alignment where feasible. A majority of the existing fill material and roadway surface would be utilized under this option. Like the other option, the 4th Street North (southbound) bridge would be replaced. It is recommended that the 4th Street North (southbound) ramp be closed during construction of the bridge and the traffic be rerouted to the 9th Street North (southbound) ramp. As indicated in Section 7.2.2.3, the combined traffic volume would result in a LOS B for the 9th Street ramp during the evening peak hour. The temporary closure of the 4th Street North (southbound) ramp will require a short detour and temporary inconvenience for motorists. 4th Street North and 9th Street North are parallel roadways which are connected by several cross streets south of the interstate. Temporary closure of 4th Street North (southbound) ramp during construction would result in a considerable reduction in the cost of maintenance of traffic.

7.2.3.2 4th Street North (Northbound)

The existing 4th Street North (northbound) ramp is a two-lane ramp which merges to a single-lane entrance ramp to I-275 northbound. The first option evaluated was to reconstruct the ramp along a new alignment east of the existing ramp (see Figure 7-12). The second option evaluated was to utilize the



LEGEND

- EXISTING
- LIMITED ACCESS RIGHT-OF-WAY
- PROPOSED NEW ALIGNMENT

FIGURE 7-12

SEGMENT 3 - 4th STREET NORTH
IMPROVEMENTS ALONG ALL NEW ALIGNMENT

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH

SOURCE: R.S&H, 1990

existing ramp alignment (see Figure 7-13). This option maximized the use of the existing roadway surface.

7.3 ALTERNATIVE EVALUATION MATRIX

An evaluation matrix was developed for each of the study segments. Options developed for the I-275 mainline and each ramp improvement were compared for each alternative proposed. The following section discusses the advantages and disadvantages of each option and compares the related costs of each option.

7.3.1 Segment 1--Roosevelt Boulevard Interchange

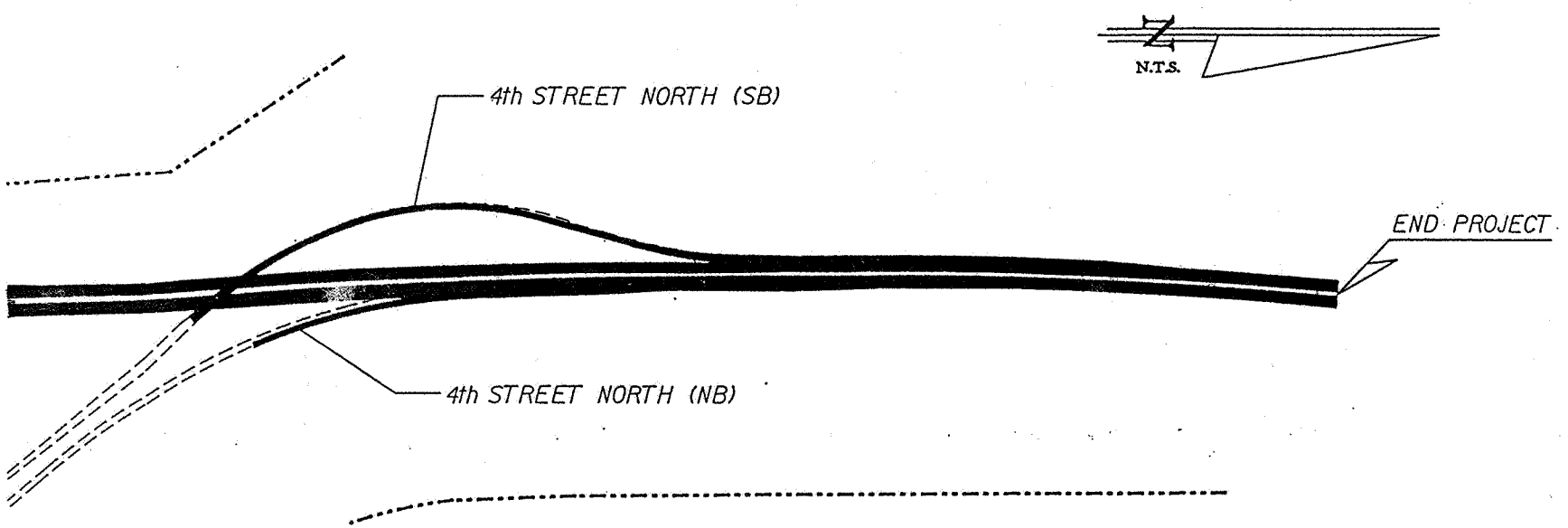
As indicated, two options were developed for the mainline improvements: Widen to the inside or widen to the outside. For either option, all four ramps were redesigned to provide desirable geometry. Table 7-1 reflects the various items which will need to be improved due to widening to the inside or to the outside. For widening to the inside, the following items need to be improved:

1. I-275 overpasses needed to be widened to add one 12-foot wide travel lane in each direction,
2. Ramp "A" bridge over I-275 under this alternative requires no improvements,
3. All four ramps are recommended to be improved to provide desirable geometric design,

For widening to the outside, the following items need to be improved:

1. I-275 overpasses will need to be widened to the outside to provide one 12-foot wide travel lane in each direction,
2. The Ramp "A" bridge over I-275 will be replaced because of insufficient distance from the edge-of-pavement to the bridge pier to add an additional travel lane in each direction, and
3. All four ramps are recommended to be improved to provide desirable geometric design.

Comparative construction cost estimates were developed for each of these options and are shown in Table 7-1. The option to widen to the inside is $1,421,750 dollars less than widening to the outside. This option does not require that the existing ramp "A" be reconstructed to provide for additional travel



LEGEND

PROPOSED ALONG EXISTING ALIGNMENT

EXISTING

LIMITED ACCESS RIGHT-OF-WAY

FIGURE 7-13

SOURCE: R.S&H. 1990

SEGMENT 3 - 4th STREET NORTH

UTILIZING EXISTING ALIGNMENT OF RAMP

I-275
ROOSEVELT BLVD.
TO
4th STREET NORTH

Table 7-1. SEGMENT 1- ROOSEVELT BOULEVARD INTERCHANGE

ITEMS	OPTIONS	
	WIDEN TO INSIDE	WIDEN TO OUTSIDE
I-275 OVERPASSES	$1,475,000	$1,475,000
RAMP "A" BRIDGE	$0	$1,421,750
RAMP IMPROVEMENTS	$960,500	$960,500
TOTAL	$2,435,500	$3,857,250

Source: RS&H,1990

lanes. Based upon this comparison of options for Segment 1, it is recommended that mainline improvements be constructed to the inside. Therefore, the option to widen to the inside will be carried forward.

7.3.2 Segment 2--9th Street North to Ulmerton Road Including Big Island Gap

For this segment of I-275, several options were developed . The following section describes the combinations which were developed for this section of I-275.

Three options were developed for the Big Island Gap bridge. For each option, it is recommended that the existing Big Island Gap bridge be replaced. They are as follows:

1. Option 1-Construct two 5-lane bridges across Big Island Gap on a tangent alignment to the existing northbound lane (see Figure 7-7),
2. Option 2-Construct one 5-lane bridge (northbound) , one 4-lane bridge for southbound traffic and 9th Street North (southbound) , and one 2-lane bridge for Ulmerton Road (westbound) (see Figure 7-8), or
3. Option 3-Construct one 5-lane bridge (northbound), one 3-lane bridge for I-275 southbound traffic, and one 2-lane bridge for Ulmerton Road(westbound) and 9th Street North (southbound) (see Figure 7-9).

Comparative construction cost estimates were prepared for each of these options. Table 7-2 indicates the comparative cost for each option.

As indicated in Section 6.0 of this report, each ramp was evaluated based upon two options. The options considered were to reconstruct the ramp improvements on new alignment or utilize the existing alignment for each ramp. These options, along a new alignment or the existing alignment, were combined with the options developed for Big Island Gap Bridge. The following describes how these options were combined:

1. Option 1A--This option combines the two 5-lane bridges over Big Island Gap with a new proposed alignment for Ulmerton Road (westbound and eastbound) and new alignment for 9th Street North (southbound) and along existing alignment for 9th Street

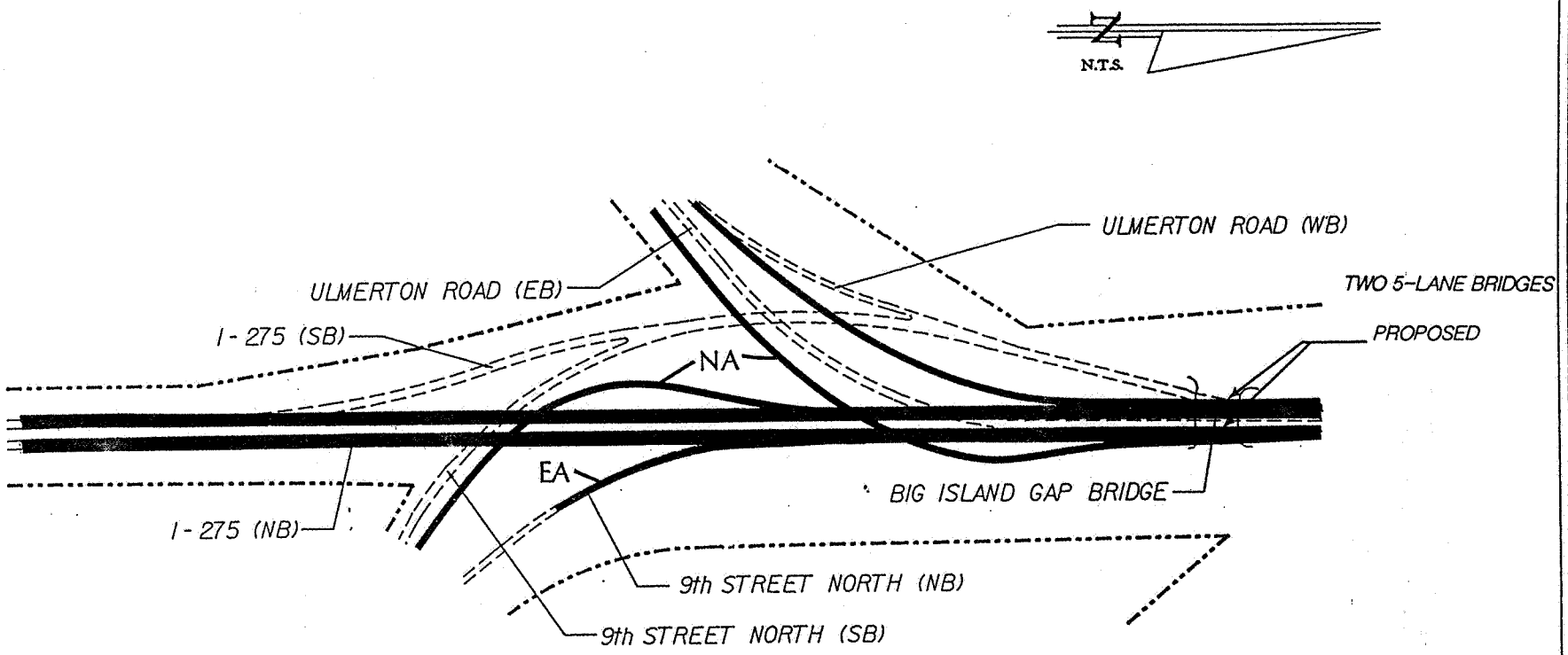
Table 7-2 SEGMENT 2- 9TH ST NORTH TO ULMERTON RD INCLUDING BIG ISLAND GAP BRIDGE

ITEMS	OPTIONS					
	OPTION 1		OPTION 2		OPTION 3	
	A	B	A	B	A	B
BIG ISLAND GAP						
A. TWO 5-LANE BRIDGES	$2,075,000	$2,075,000	$0	$0	$0	$0
B. ONE 5-LANE BRIDGE (NB)	$0	$0	$2,630,000	$2,630,000	$0	$0
ONE 4-LANE BRIDGE (SB. & 9TH. ST.)						
ONE 2-LANE BRIDGE (ULM RD.(WB))						
C. ONE 5-LANE BRIDGE (NB)	$0	$0	$0	$0	$2,480,000	$2,480,000
ONE 3-LANE BRIDGE (SB)						
ONE 2-LANE BRIDGE (ULM RD.& 9TH ST.)						
9TH. STREET NORTH						
A. SOUTHBOUND						
1.NEW ALIGNMENT	$2,659,600	$0	$2,659,600	$0	$0	$0
2.EXISTING ALIGNMENT	$0	$587,000	$0	$587,000	$310,000	$310,000
B. NORTHBOUND						
1.EXISTING ALIGNMENT	$80,500	$80,500	$80,500	$80,500	$80,500	$80,500
ULMERTON ROAD(ULM RD)						
A. EASTBOUND						
1.NEW ALIGNMENT	$3,159,800	$0	$3,159,800	$0	$3,159,800	$0
2.EXISTING ALIGNMENT	$0	$2,772,000	$0	$2,772,000	$0	$2,772,000
B. WESTBOUND						
1.NEW ALIGNMENT	$257,300	$257,300	$0	$0	$0	$0
2.EXISTING ALIGNMENT	$0	$0	$94,500	$94,500	$94,500	$94,500
TOTAL	**$8,232,200**	**$5,771,800**	**$8,624,400**	**$6,164,000**	**$6,124,800**	**$5,737,000**

North (northbound) (see Figure 7-14).

2. Option 1B--This option combines the two 5-lane bridges over Big Island Gap with utilizing all new alignment options for Ulmerton Road (westbound), existing alignment for Ulmerton Road (eastbound), and the existing alignment option for 9th Street North (southbound and northbound) (see Figure 7-15),
3. Option 2A--This option combines the construction of one 5-lane bridge (northbound), one 4-lane bridge for southbound I-275 traffic and 9th Street North (southbound), and one 2-lane bridge for Ulmerton Road westbound with existing alignment for Ulmerton Road (westbound),new alignment for Ulmerton Road (eastbound), and new alignment for 9th Street North (southbound) and along existing alignment for 9th Street North (northbound) (see Figure 7-16).
4. Option 2B--This option combines the construction of one 5-lane bridge (northbound), one 4-lane bridge for southbound I-275 traffic and 9th street North (southbound), and one 2-lane bridge for Ulmerton Road (westbound) with existing alignment for Ulmerton Road (westbound and eastbound) and with the existing alignment option for 9th Street North (southbound and northbound) (see Figure 7-17),
5. Option 3A--This option combines the construction of one 5-lane bridge (northbound), one 3-lane bridge (southbound I-275 traffic), and one 2-lane bridge for Ulmerton Road (westbound) and 9th Street North (southbound) with new alignment for Ulmerton Road (eastbound), existing alignment for Ulmerton Road (westbound), and existing alignment for 9th Street North (southbound and northbound) (see Figure 7-18), or
6. Option 3B--This option combines the construction of one 5-lane bridge (northbound), one 3-lane bridge (southbound I-275 traffic), and one 2-lane bridge for Ulmerton Road and 9th Street North (southbound) with the existing alignment of Ulmerton Road (westbound and eastbound) and with existing alignment option for 9th Street North (southbound and northbound) traffic (see Figure 7-19).

Comparative construction cost estimates were developed for each of these combinations and are presented in Table 7-2. By comparison, Option 3B is the least costly combination of options for this segment of I-275. Option 1B provides the next least costly combination of options. Advantages and disadvantages for both of these options were evaluated. Both Option 1B and 3B provide improvements which meet the capacity requirement for the 2010 design year. Both options utilize existing alignments



OPTION 1A

LEGEND

- EXISTING
- LIMITED ACCESS RIGHT OF WAY
- PROPOSED ALONG EXISTING ALIGNMENT

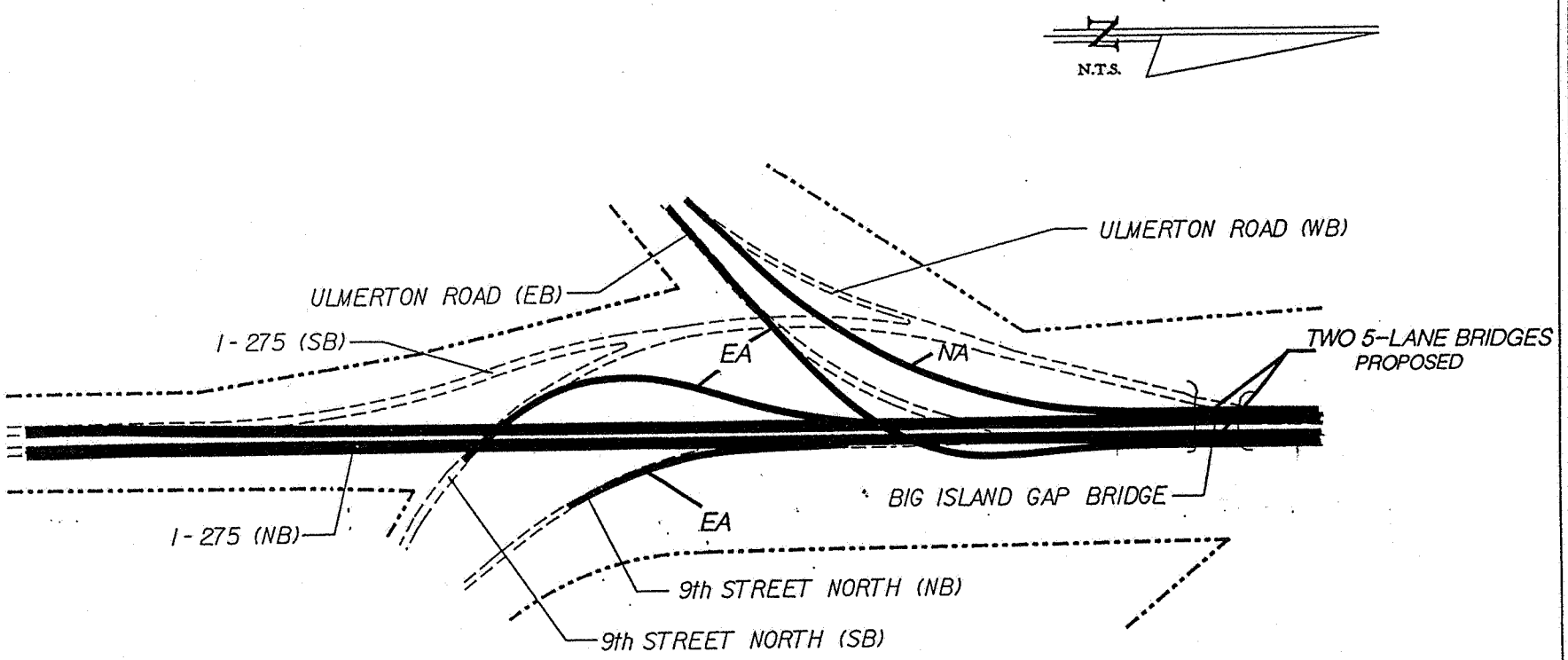
EA EXISTING ALIGNMENT
NA NEW ALIGNMENT

FIGURE 7 – 14

SOURCE: R.S&H. 1990

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP BRIDGE
EXISTING ALIGNMENT FOR I-275

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH



OPTION 1B

LEGEND

EXISTING

LIMITED ACCESS RIGHT-OF-WAY

PROPOSED

EA EXISTING ALIGNMENT

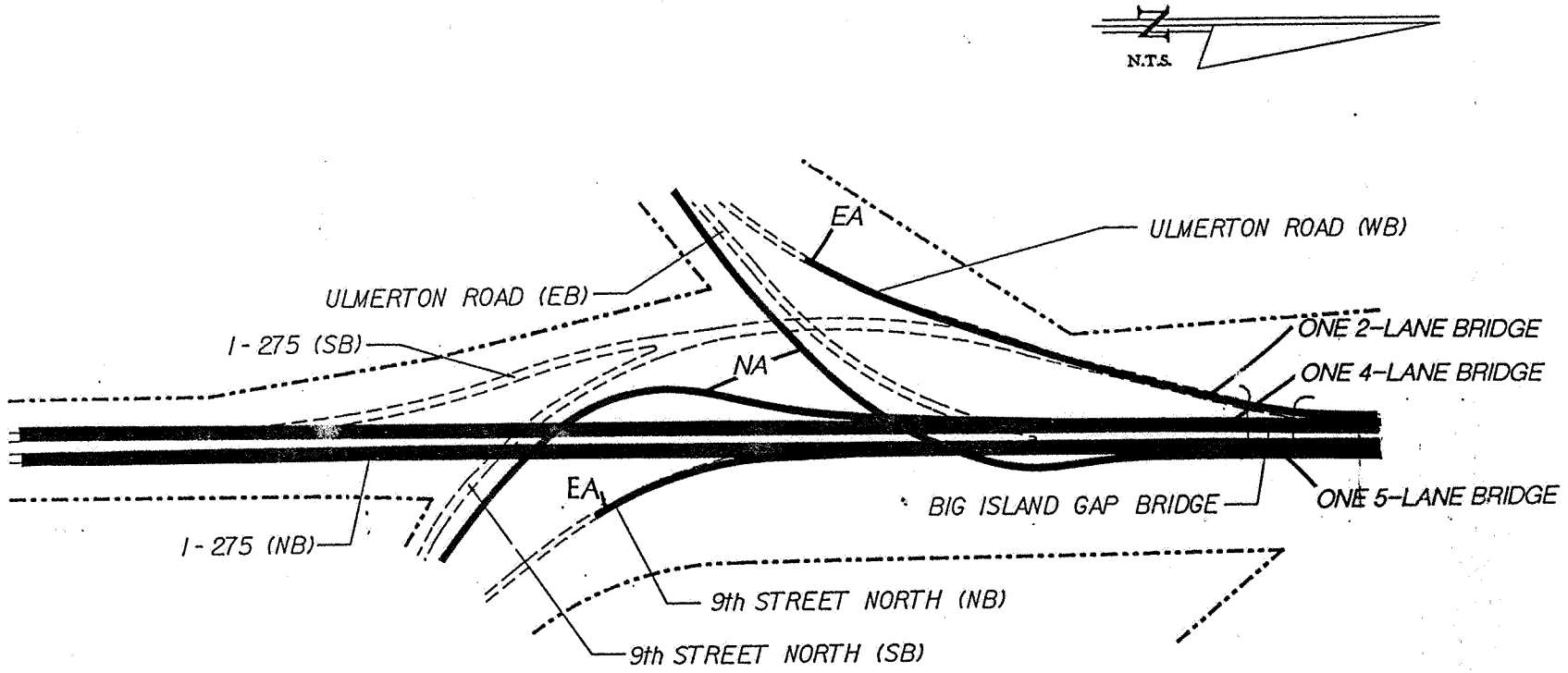
NA NEW ALIGNMENT

FIGURE 7-15

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD INCLUDING BIG ISLAND GAP BRIDGE

SOURCE: R.S&H. 1990

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH



OPTION 2A

LEGEND

EXISTING

LIMITED ACCESS RIGHT-OF-WAY

PROPOSED ALIGNMENT

EA EXISTING ALIGNMENT

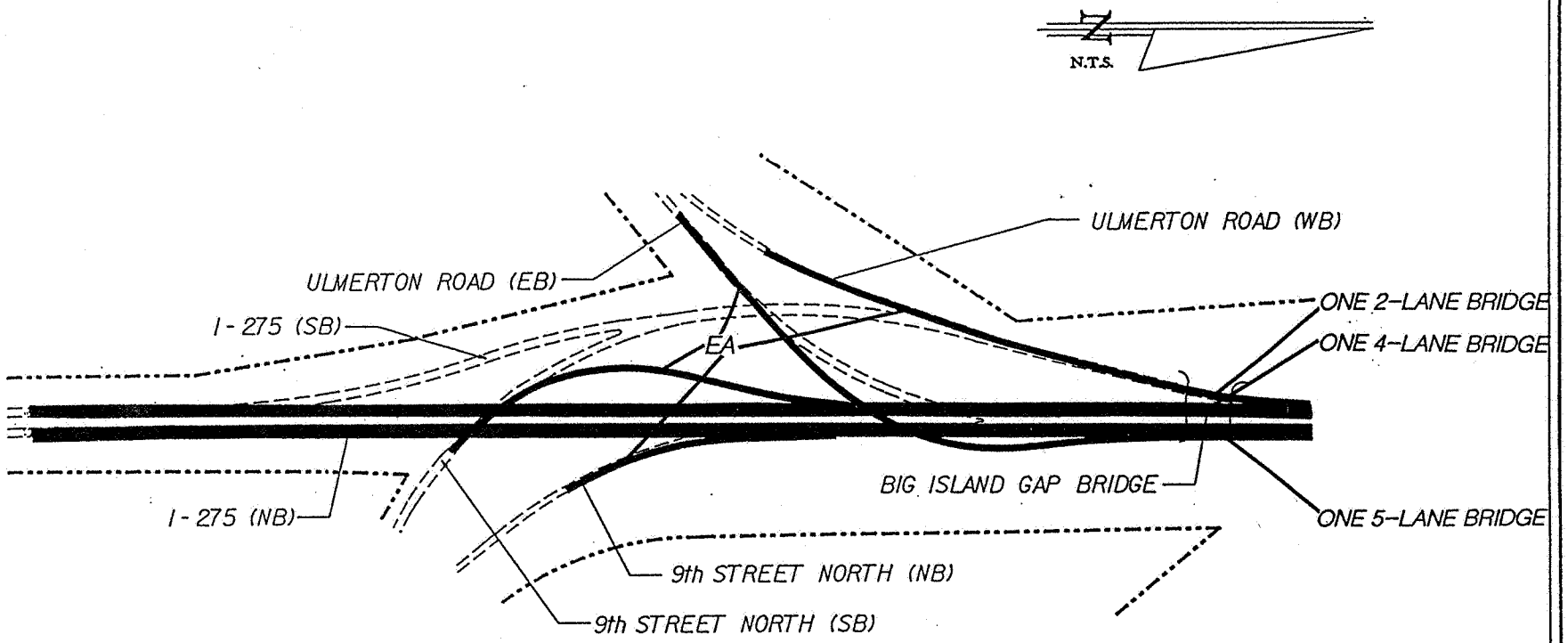
NA NEW ALIGNMENT

FIGURE 7-16

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD INCLUDING BIG ISLAND GAP BRIDGE

SOURCE: R.S&H. 1990

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH



OPTION 2B

LEGEND

EA EXISTING ALIGNMENT

EXISTING

LIMITED ACCESS RIGHT-OF-WAY

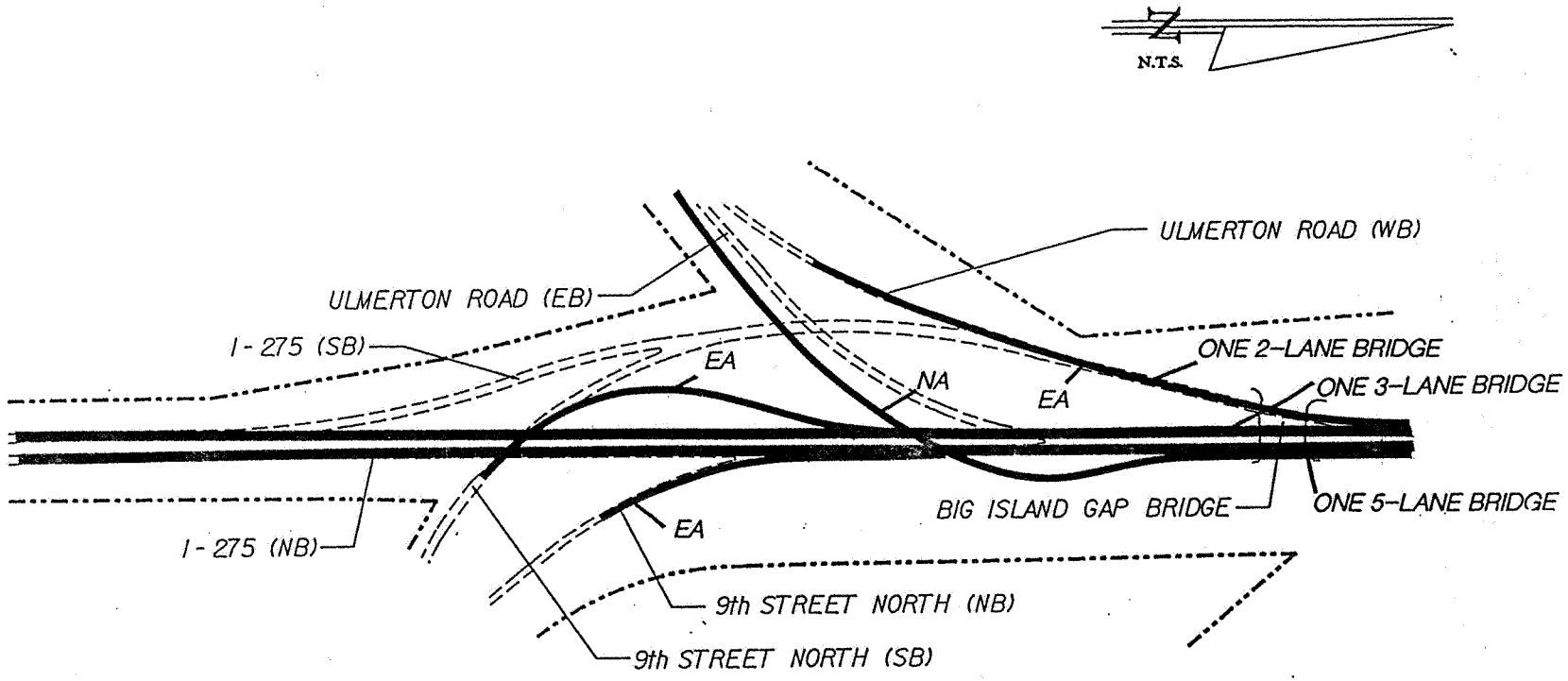
PROPOSED ALIGNMENT

FIGURE 7-17

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP BRIDGE

SOURCE: R.S&H. 1990

I-275
ROOSEVELT BLVD.
TO
4th STREET NORTH



OPTION 3A

LEGEND

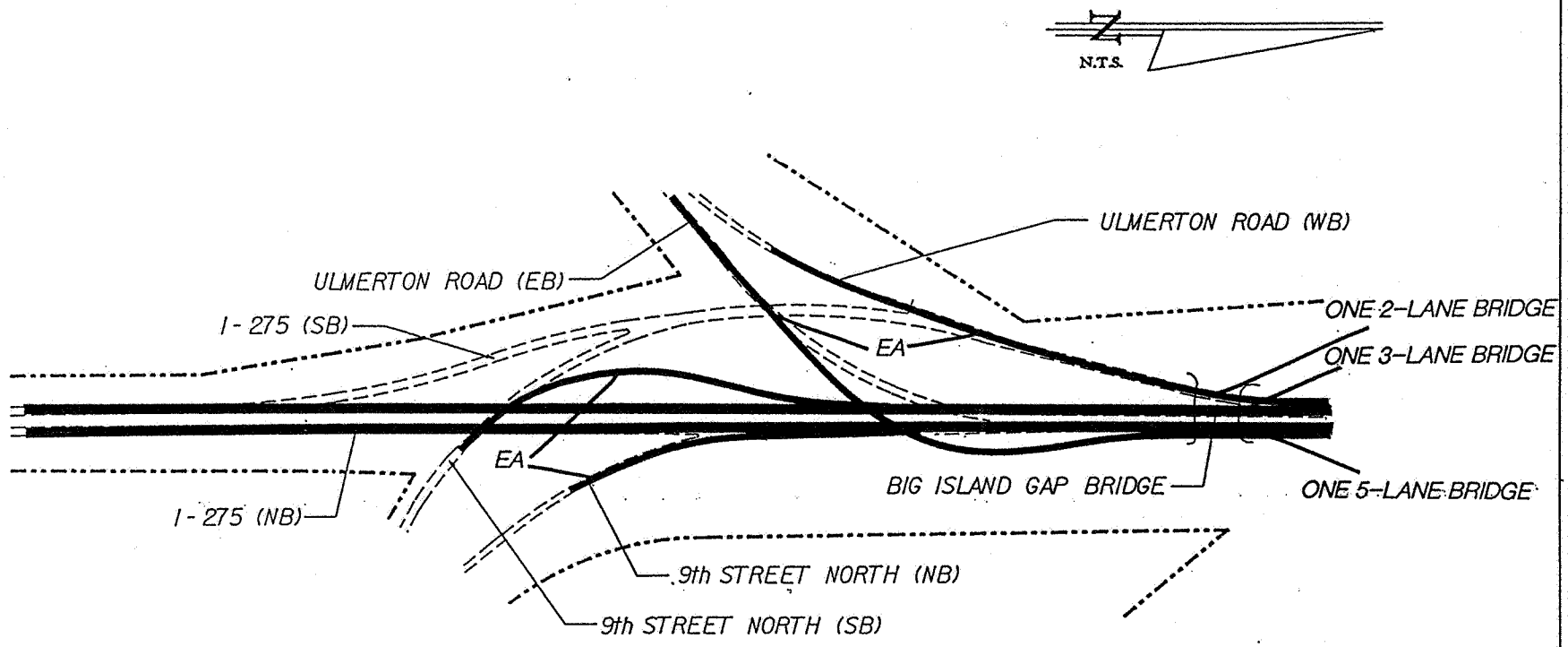
----- EXISTING	EA EXISTING ALIGNMENT
-·-·-·- LIMITED ACCESS RIGHT OF WAY	NA NEW ALIGNMENT
▬▬▬ PROPOSED ALIGNMENT	

FIGURE 7-18

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD INCLUDING BIG ISLAND GAP BRIDGE

SOURCE: R.S&H, 1990

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH



OPTION 3B

LEGEND

EXISTING

LIMITED ACCESS RIGHT-OF-WAY

PROPOSED ALIGNMENT

EA EXISTING ALIGNMENT

FIGURE 7-19

SEGMENT 2 - 9th. STREET NORTH TO ULMERTON ROAD
INCLUDING BIG ISLAND GAP BRIDGE

SOURCE: R.S&H. 1990

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH

for each ramp where feasible and therefore, reduce construction cost. Option 1B recommends the construction of two 5-lane bridges over Big Island Gap. Option 3B recommends the construction of three separate bridges and requires the construction of a bridge attenuator to be built at the point of separation of the three lane bridge for I-275 traffic and the two-lane bridge for Ulmerton Road and 9th Street North (southbound). This attenuator would not have to be constructed for Option 1B because both bridges would be constructed parallel to each other. The exit movement for Ulmerton Road (westbound) would occur after crossing Big Island Gap. This is considered to be an advantage of Option 1B. With regard to environmental impacts, Option 1B has a net acreage of wetland involvement of 0.42 acre while Option 3B has 0.68 acre. Option 1B is located approximately 30 feet away from valuable seagrasses while Option 3B would only be located approximately 5 feet away. The reduced wetland involvement and potential impacts to seagrasses by Option 1B is considered to be an advantage over Option 3B. The difference in cost between these two options is considered negligible. Therefore, the recommended option for Segment 2 is to construct Option 1B.

7.3.3 Segment 3--4th Street North

Two options were developed for this segment of I-275. The options considered for improvement to the 4th Street North ramps were to construct new ramps along all new alignment or to utilize existing alignment where feasible. Table 7-3 provides a comparison of construction cost for each of these options. Approximately $99,000 dollars can be saved by constructing along the existing alignment. Since no additional capacity improvements are needed for the 2010 design year, only operational improvements are required at the ramp. The recommended option for this segment of I-275 is to construct along the existing alignment.

7.4 ALTERNATIVE ANALYSIS BY COMBINATION OF OPTIONS

In order to determine which combination of options for each segment evaluated provided the most feasible alternative, an evaluation matrix was developed. Table 7-4 provide a summary of the combined options. Alternative 1 combines widening to the inside for Segment 1 with Options 1A through 3B and improvements along the existing alignment for Segment 3. Alternative 1 includes mainline improvements associated with the proposed improvements. Those improvements are additional roadway, barrier walls and bridge demolishing. A review of this summary sheet indicates that Alternative 1B is the most feasible from an economic viewpoint. It is recommended that Option 1B of Segment 2 be selected because of the safer operating conditions which would exist with two tangent bridge structure

over Big Island Gap for I-275 southbound, Ulmerton Road, and 9th Street North traffic. Therefore, the recommended alternative to provide capacity improvements to I-275 from Roosevelt Boulevard to 4th Street North is Alternative 1B.

Table 7.3. SEGMENT 3- 4TH. STREET NORTH

ITEMS	OPTIONS	
	NEW ALIGNMENT	EXISTING ALIGNMENT
A. SOUTHBOUND	$1,659,000	$947,900
B. NORTHBOUND	$283,000	$97,400
TOTAL	$1,942,000	$1,045,300

Source: RS&H, 1990

Table 7-4. Alternative Design Analysis Summary Sheet

ALTERNATIVE 1

ITEMS	DESCRIPTION	A	B	C	D	E	F
SEGMENT 1	WIDEN TO INSIDE	$4,566,000	$4,566,000	$4,566,000	$4,566,000	$4,566,000	$4,566,000
SEGMENT 2.	OPTION 1A	$8,232,200	$0	$0	$0	$0	$0
	OPTION 1B	$0	$5,771,800	$0	$0	$0	$0
	OPTION 2A	$0	$0	$8,624,400	$0	$0	$0
	OPTION 2B	$0	$0	$0	$6,164,000	$0	$0
	OPTION 3A	$0	$0	$0	$0	$6,124,800	$0
	OPTION 3B	$0	$0	$0	$0	$0	$5,737,000
SEGMENT 3	EXISTING ALIGN.	$1,045,300	$1,045,300	$1,045,300	$1,045,300	$1,045,300	$1,045,300
I-275	MAINLINE IMPROVEMENTS						
	ROADWAY	$5,072,000	$5,072,000	$5,072,000	$5,072,000	$5,072,000	$5,072,000
	BARRIER WALLS	$850,000	$850,000	$850,000	$850,000	$850,000	$850,000
	BRIDGE DEMO	$350,000	$350,000	$350,000	$350,000	$350,000	$350,000
CONSTRUCTION COST :		$20,115,500	$17,655,100	$20,507,700	$18,047,300	$18,008,100	$17,620,300
RIGHT-OF-WAY COST :		$0	$0	$0	$0	$0	$0
P.E.& CEI(20%)COST :		$4,023,100	$3,531,020	$4,101,540	$3,609,460	$3,601,620	$3,524,060
TOTAL		$24,138,600	$21,186,120	$24,609,240	$21,656,760	$21,609,720	$21,144,360

SOURCE: RSH

8.0 PRELIMINARY DESIGN ANALYSIS

The following section provides additional information used in the development of the options discussed in Section 7.0 of this document.

8.1 DESIGN TRAFFIC VOLUMES

2010 design year traffic projections were developed for the project limits. These projections and a discussion of the methodology used in their development, are included in a Traffic Report for I-275 from Roosevelt Boulevard to Kennedy Boulevard (May 1990) prepared by Reynolds, Smith and Hills, Inc. The a.m. and p.m. peak-hour volumes were also obtained for the study area. These volumes were determined by applying K (peak-hour-volume-to-daily-volume ratio) and D (directional distribution) factors to the AADT volumes. The K factor, the percentage of daily traffic in the peak hour, was estimated to be 8.0 percent for the project. The D factor, the directional distribution factor in the peak hour, was estimated to be a 56/44 split for the project. These factors were based on existing traffic flow characteristics within the study area. The 2010 a.m. and p.m. peak-hour volumes are shown in Figures 8-1 and 8-2. Using these peak-hour volumes, an analysis was conducted to determine the improvements necessary to maintain acceptable operating conditions in the peak hour for the 2010 design year. Section 4.1 and Section 6.0 discuss in detail the results of this analysis.

8.2 TYPICAL SECTIONS

Several typical sections were developed for this study area. The typical sections developed were based upon the capacity requirement identified in the traffic report. I-275 from Roosevelt Boulevard to Ulmerton Road will require three lanes in each direction. From Ulmerton Road to 4th Street North, four travel lanes in each direction are required. The following sections will discuss the typical sections developed for each segment of roadway evaluated.

1. Segment 1--Roosevelt Boulevard Interchange--For this segment of I-275 , two typical sections for mainline improvements were developed. Typical sections developed considered widening to the inside or widening to the outside along the existing mainline. The proposed typical section provides for three 12 foot wide travel lanes in each direction, 10-foot wide paved inside and outside shoulders, and a standard ditch section for the conveyance of stormwater runoff. The median width will vary depending upon whether the additional travel lane is added to the inside or the outside. For the widening to the inside, the median width will

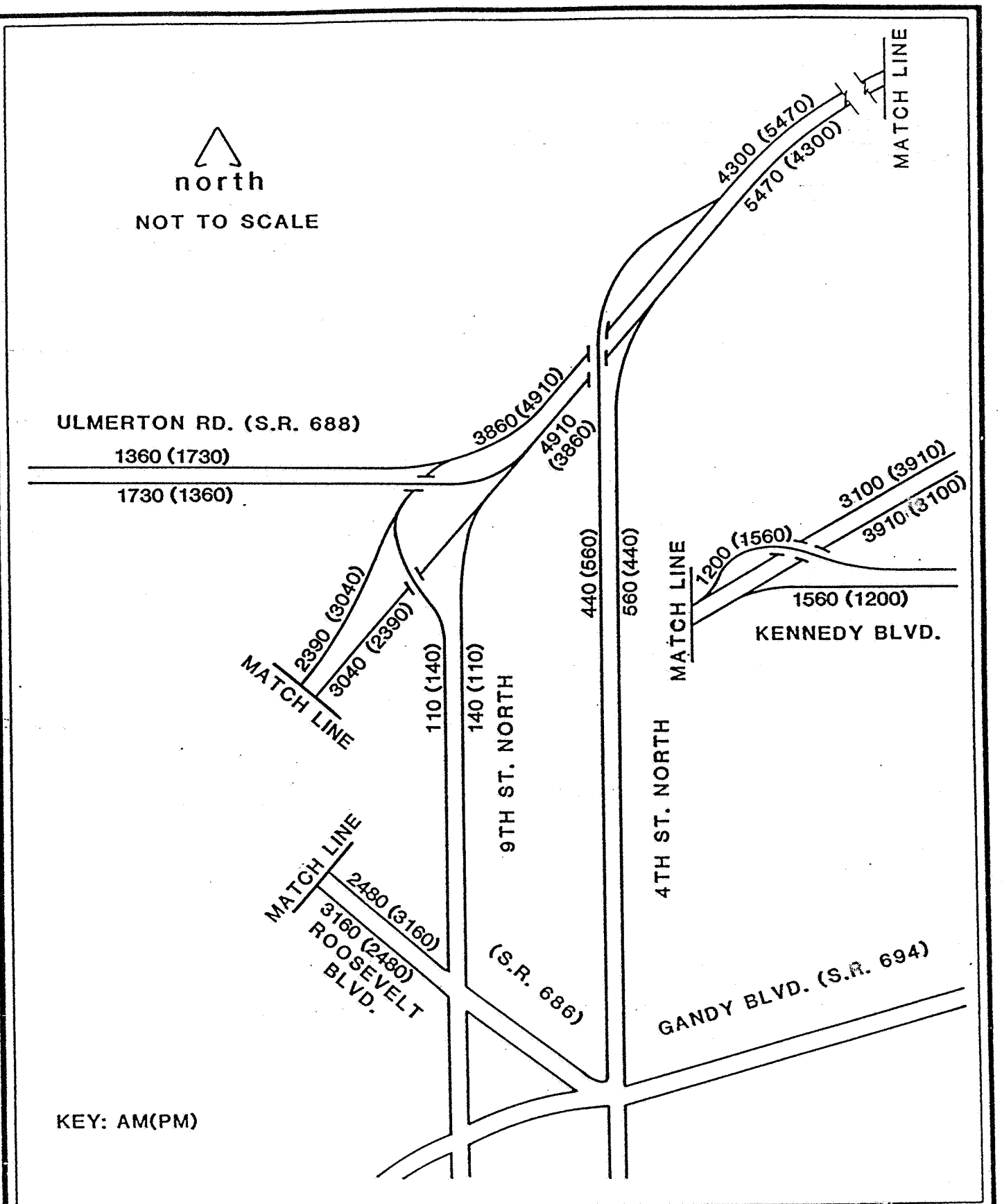


Figure 8-1
DESIGN YEAR (2010)
DIRECTIONAL HOURLY VOLUMES

SOURCE: RS&H, 1990.

I-275
ROOSEVELT BOULEVARD TO KENNEDY BOULEVARD

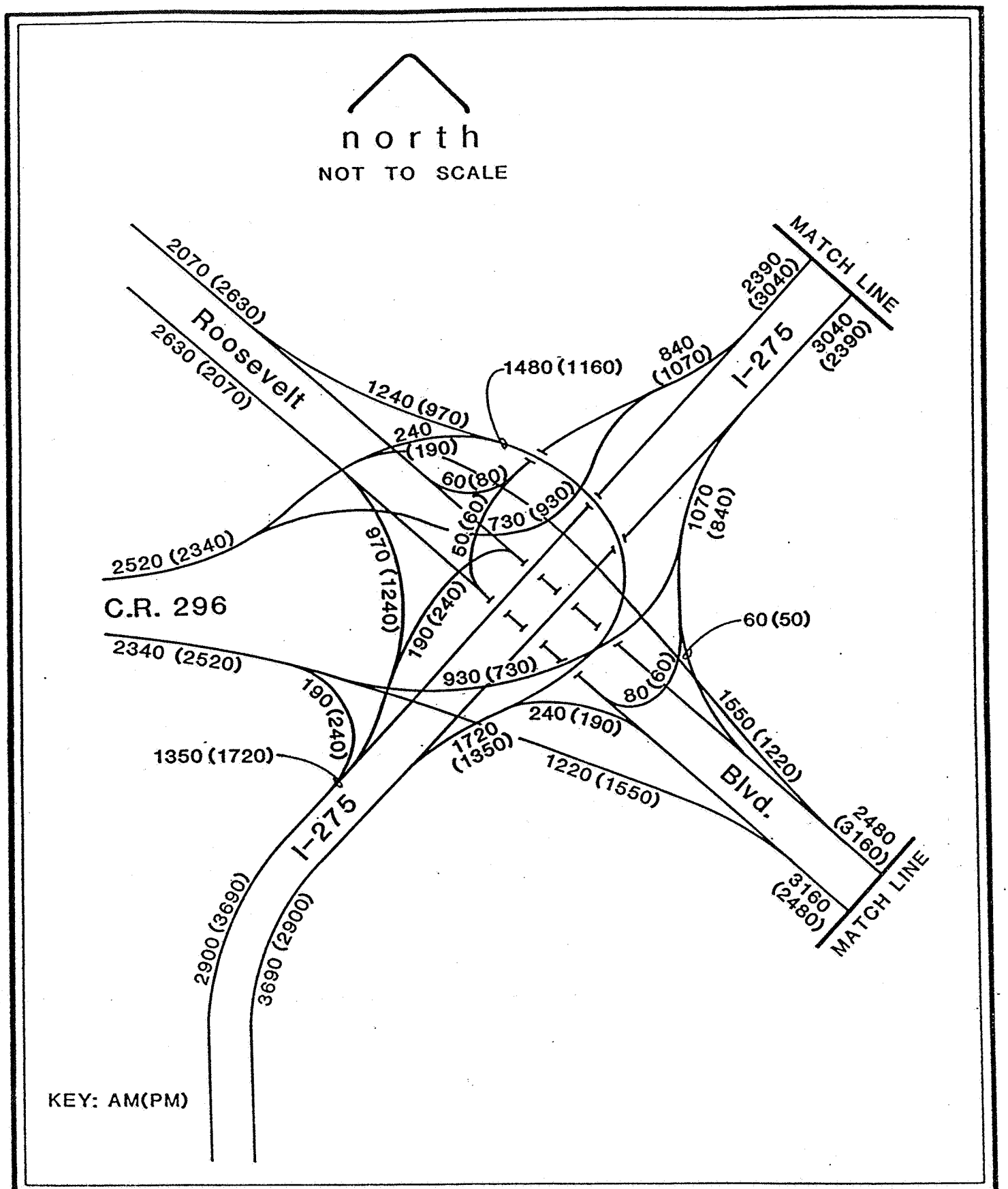


Figure 8-2
DESIGN YEAR (2010)
DIRECTIONAL HOURLY VOLUMES

SOURCE: RS&H, 1990.

I-275
ROOSEVELT BOULEVARD TO KENNEDY BOULEVARD

be 40 feet. For widening to the outside, the median width will be 64 feet. Figure 8-3 shows the typical section developed to add an additional travel lane to the inside. Figure 8-4 shows the typical section developed to widen to the outside. Section 7.2 of this report discusses in detail the results of the alternative analysis and the recommended typical section for this segment of I-275.

2. Segment 2--9th Street North to Ulmerton Road Including Big Island Gap Bridge--For this segment of I-275 from south of 9th Street North to south of Ulmerton Road (eastbound) ramp, the typical section developed for Segment 1 was used for this section of I-275. From Ulmerton Road (eastbound) ramp to the end of the study limits (4th Street North) only one typical section was evaluated. Figure 8-5 shows the typical section developed for this section of I-275. The existing travel lanes for I-275 are separated by an 18-foot wide median with a concrete median barrier separating 24 feet of asphalt pavement which carries two travel lanes in each direction. The addition of the two new travel lanes to the outside allows construction to continue with minimum interaction with the motorist, allowing full utilization of the existing pavement surface. Therefore, only one typical section was developed for this segment of I-275.
3. Segment 3--4th Street North--The typical section discussed above for Segment 2 was also used for this segment of I-275 (See Figure 8-5).

The traffic analysis for the existing ramps indicated that only two ramps need to be improved by the 2010 design year to provide additional capacity (the entrance and exit ramps for Ulmerton Road). Figure 8-6 shows a typical cross section for these improvements. The proposed typical sections for the proposed bridge improvements along the limits are shown in Figures 8-7 through 8-12. All typical sections for this study were developed using current Florida Department of Transportation design standards.

8.3 INTERSECTION CONCEPTS AND SIGNAL ANALYSIS

I-275 is a limited access facility and there are no signalized intersections within the study limits.

8.4 ALIGNMENT AND RIGHT-OF-WAY NEEDS

All proposed improvements for I-275 can be accommodated with the existing limited access right-of-way. No additional right-of-way will be required.

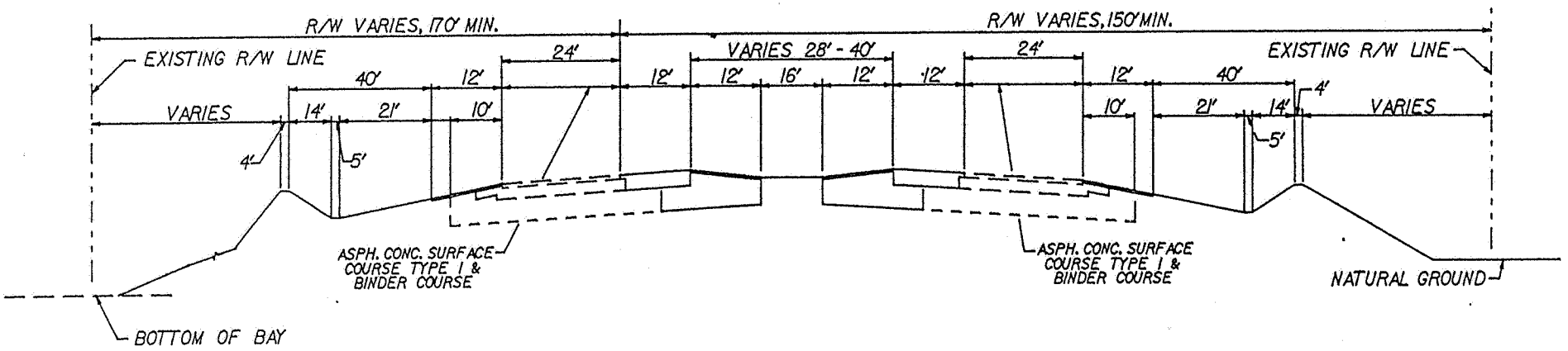


FIGURE 8 - 3

PROPOSED TYPICAL SECTION

FROM ROOSEVELT BLVD. TO ULMERTON ROAD

(WIDENING TO INSIDE)

SOURCE: R,S&H, 1990

REYNOLDS, SMITH & HILLS, INC.
1715 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL. 33607

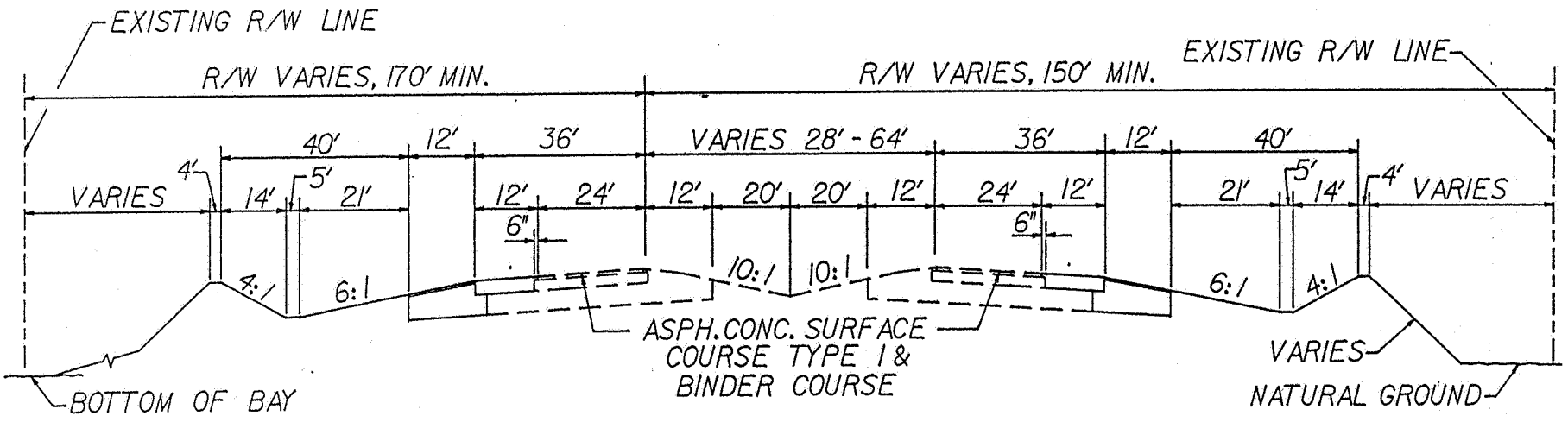


FIGURE 8 - 4

PROPOSED TYPICAL SECTION

FROM ULMERTON ROAD TO 4th STREET NORTH

(WIDENING TO OUTSIDE)

SOURCE: R,S&H, 1990

REYNOLDS, SMITH & HILLS, INC.
1715 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL. 33607

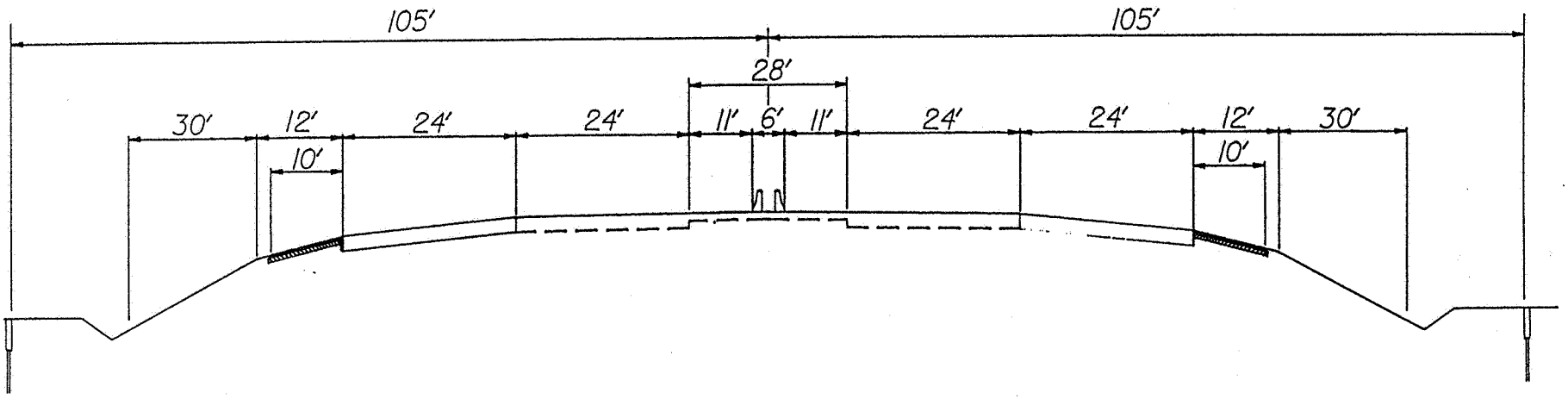


FIGURE 8 - 5

TYPICAL SECTION
FROM ULMERTON ROAD TO 4th STREET NORTH

SOURCE: R.S&H. 1990

REYNOLDS, SMITH & HILLS, INC.
1715 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL. 33607

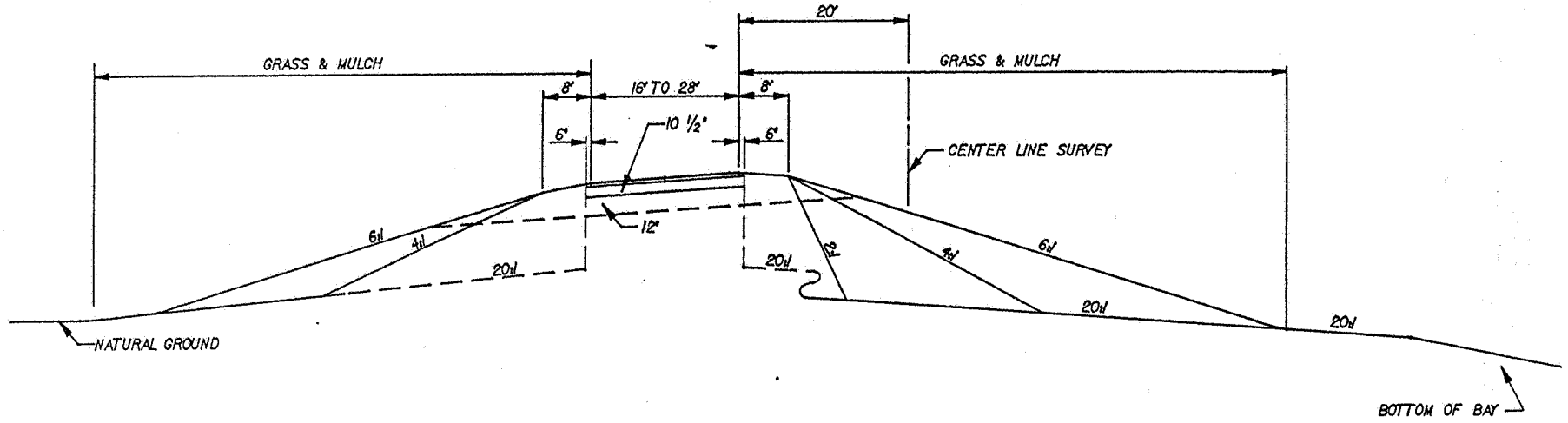


Figure 8-6

PROPOSED RAMP TYPICAL SECTION

SOURCE: R.S&H. 1990

I-275
ROOSEVELT BLVD.
TO
4th STREET NORTH

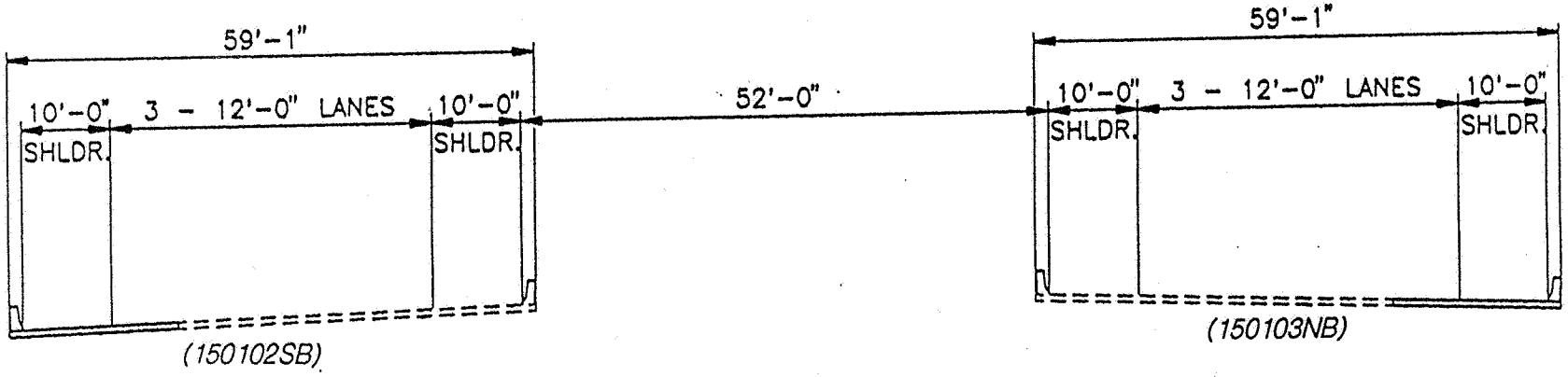


FIGURE 8-7

SOURCE: RS&H, 1990

BRIDGE TYPICAL SECTION
I-275 OVER ROOSEVELT BOULEVARD

I-275
ROOSEVELT BLV. TO
4TH STREET NORTH

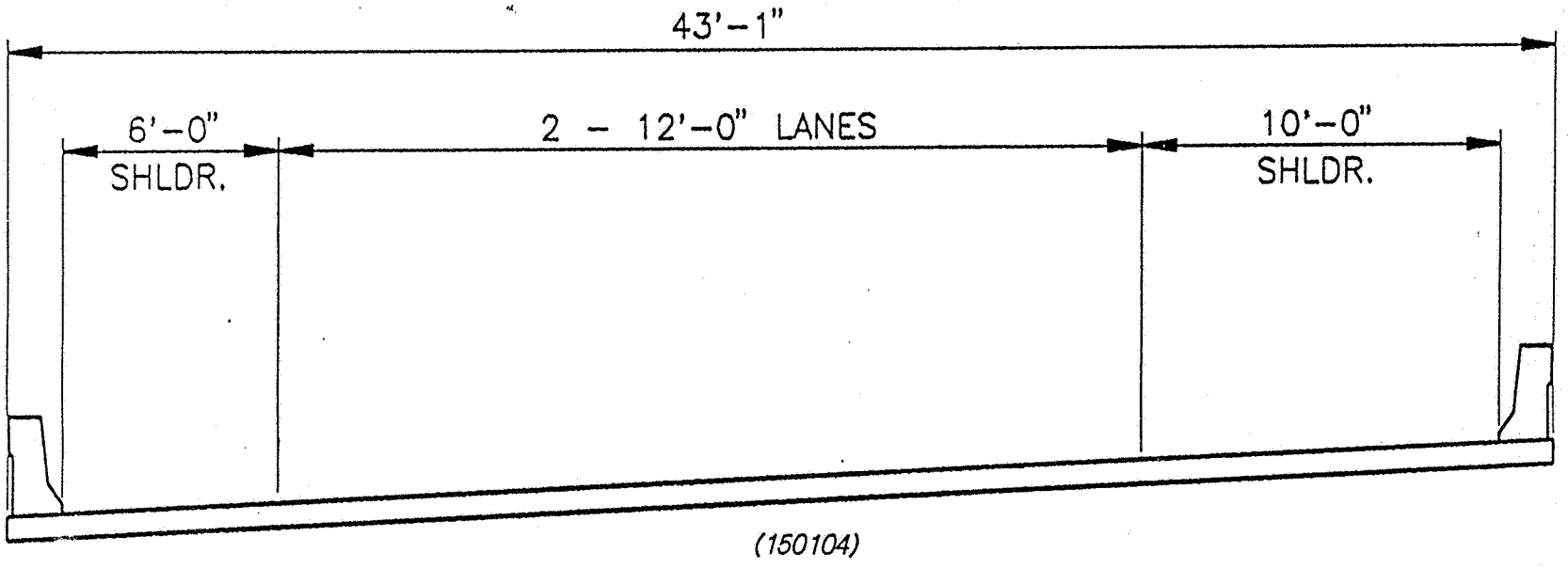


FIGURE 8-8

BRIDGE TYPICAL SECTION
RAMP "A" OVER I-275

SOURCE: RS&H, 1990

I-275
ROOSEVELT BLV. TO
4TH STREET NORTH

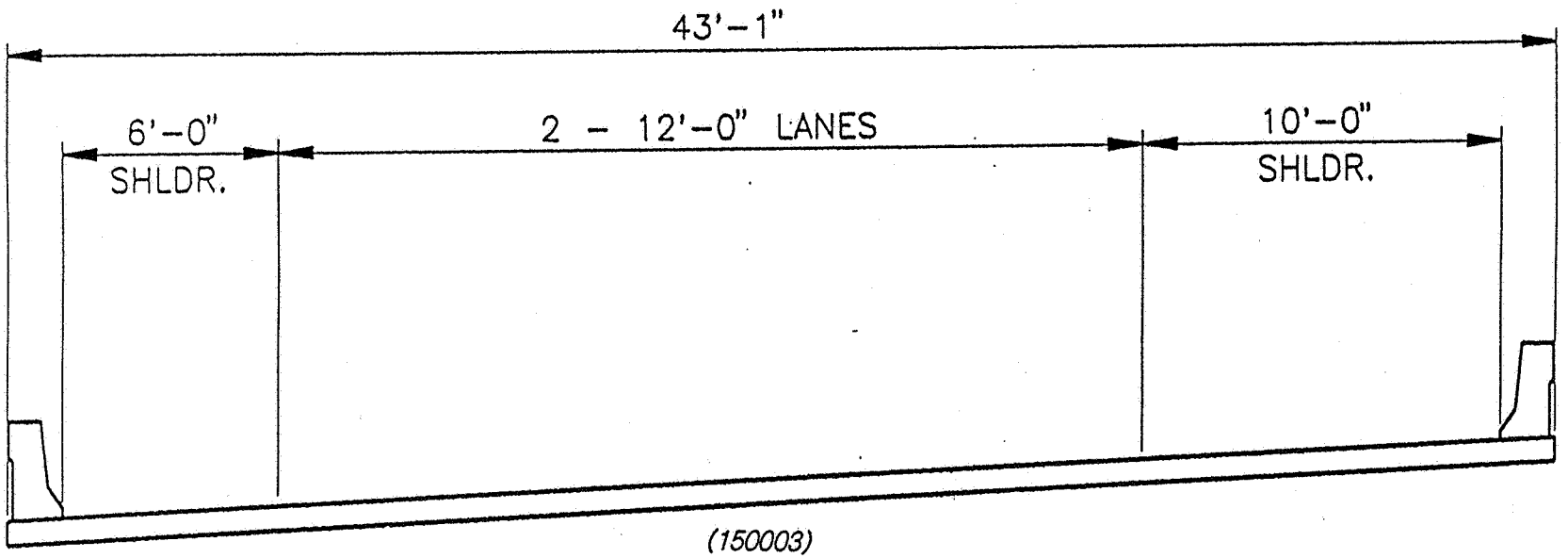


FIGURE 8-9

BRIDGE TYPICAL SECTION
ULMERTON EASTBOUND RAMP

SOURCE: RS&H, 1990

I-275
ROOSEVELT BLV. TO
4TH STREET NORTH

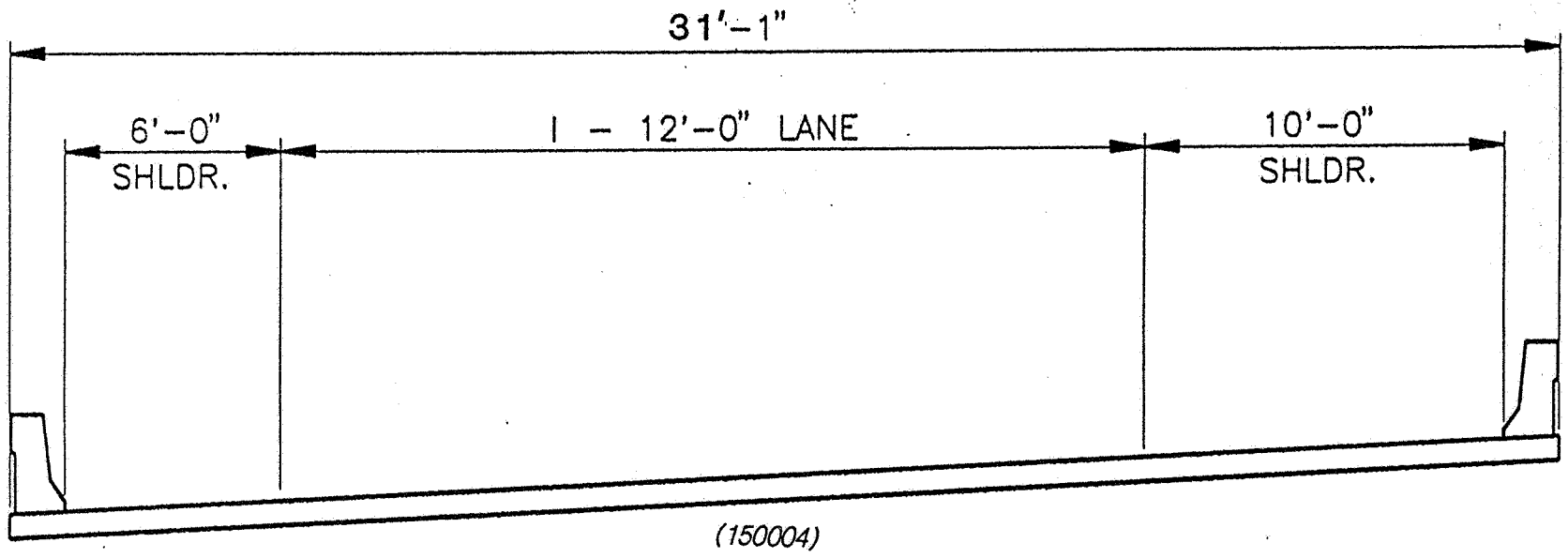


FIGURE 8-10

BRIDGE TYPICAL SECTION
9TH STREET NORTH RAMP (SOUTHBOUND)

SOURCE: RS&H, 1990

I-275
ROOSEVELT BLV. TO
4TH STREET NORTH

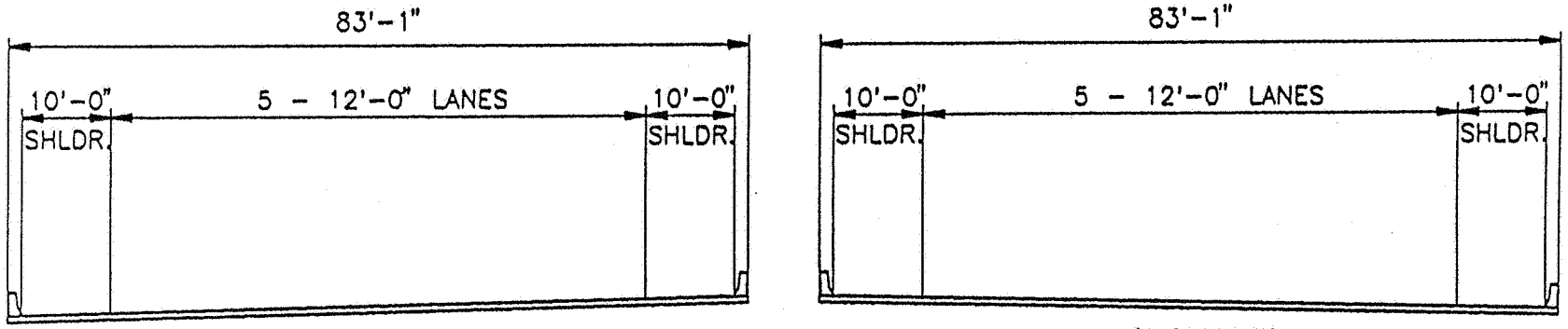


FIGURE 8-11

BRIDGE TYPICAL SECTION
BIG ISLAND GAP

SOURCE: RS&H, 1990

I-275
ROOSEVELT BLV. TO
4TH STREET NORTH

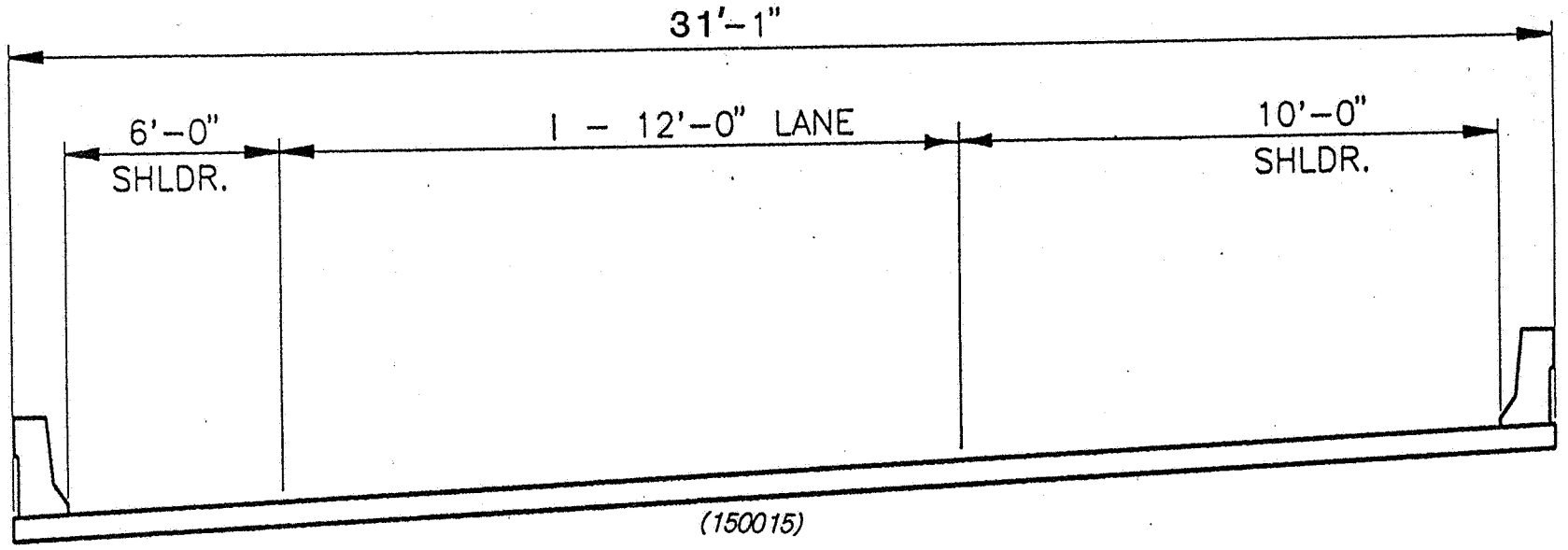


FIGURE 8-12

BRIDGE TYPICAL SECTION
4TH STREET NORTH RAMP (SOUTHBOUND)

SOURCE: RS&H, 1990

I-275
ROOSEVELT BLV. TO
4TH STREET NORTH

8.5 RELOCATIONS

All proposed improvements to I-275 will be accomplished within the existing right-of-way and no additional right-of-way will be acquired. Therefore, the proposed improvements will result in no residential or business relocations.

8.6 RIGHT-OF-WAY COST

All proposed improvements can be accomplished within the existing right-of-way. No additional right-of-way will be required. Therefore, no right-of-way costs are associated with the recommended improvements.

8.7 CONSTRUCTION COST

Construction cost estimates where developed for all proposed improvements. The construction cost estimates were developed using current unit cost based upon the Florida Department of Transportation's District-wide Long Range Estimate Unit Cost.

8.8 PRELIMINARY ENGINEERING COST

The preliminary engineering cost was developed by applying a rate of 20 percent to the estimated construction cost estimate for each option.

8.9 RECYCLING OF SALVAGEABLE MATERIALS

In the development of the various options for the mainline and the ramps improvements, every effort was made to retain were feasible the existing roadway surface and ramp fill material. This approach to the alterative analysis resulted in the development of a recommended alternative which minimized the cost to construct the proposed improvements.

8.10 PEDESTRIAN AND BICYCLE FACILITIES

I-275 is a limited access facility. Pedestrian and bicycle facilities are not permitted.

8.11 SAFETY

All recommended improvements to I-275 and the associated ramps have been developed based upon current FDOT design standards.

8.12 UTILITY IMPACTS

All companies maintaining utility lines within the study limits were contacted. The results of the information provided by these companies indicate that utility impacts for this study are limited to the Roosevelt Boulevard Interchange area. Utility impacts caused by the proposed improvements will be minimal.

8.13 MAINTENANCE OF TRAFFIC

In the development of alternatives for the proposed capacity improvements, maintenance of traffic was considered. Traffic will be maintained on the existing facility when the additional lane(s) are constructed for the mainline. The recommended improvements to the ramps require that a site specific Maintenance of Traffic (MOT) Plan be developed especially for the construction/replacement of the Big Island Gap Bridge. The MOT plan will be developed during final design and in accordance with current acceptable guidelines provided by FDOT and approved by Federal Highway Administration.

8.14 VALUE ENGINEERING

This section will be completed at a later date upon completion of this task by FDOT.

8.15 DRAINAGE

A Location Hydraulic Report has been prepared for this study. The report is contained in Appendix A of this report. For information pertaining to drainage, see Appendix A.

8.16 WETLAND INVOLVEMENT

Every practical effort has been made to minimize the impact to the wetland resources of the project area. The recommended design involves only wetlands that have been previously disturbed. Improvements to this 2.0 mile long section of I-275 will affect a total of 5.38 acres within five wetland areas. Of this total, only 0.80 acre will be permanently eliminated by the placement of fill. The remainder of the wetland involvement (4.58 acres), entails short term or minor alterations which will not result in a net loss of wetlands (e.g., culverting, shading/piling installation and regrading). Compensation for impacts which would result in a permanent loss of wetland benefits can be readily accomplished via wetland creation or enhancement. A Permit Coordination Report has been prepared for this study. The report provides additional detailed information regarding wetland involvement along the study area.

9.0 COMMENTS AND COORDINATION

9.1 INTRODUCTION

A Public Involvement Program has been developed and is being carried out as an integral part of this project. The purpose of this program is to establish and maintain communication with the public at large and individuals and agencies concerned with the project and its potential impacts. To ensure open communication and agency and public input, FDOT has provided an early notification package to state and federal agencies, and other interested parties defining the project and, in cursory terms, describing anticipated issues and impacts. Finally, in an effort to resolve all issues identified, FDOT has conducted an extensive interagency coordination and consultation effort and a public participation process. This section of the document details FDOT's program to fully identify, address, and resolve all project-related issues identified through the public involvement process.

9.2 GOVERNMENTAL AGENCY RESPONSES

9.2.1 ADVANCE NOTIFICATION RESPONSES

FDOT, through the advance notification process, informed a number of federal, state, and local agencies of the initiation of this project and its scope. An Advance Notification Package was distributed to the Office of Planning and Budgeting on June 26, 1990. Also, individual packages were sent directly to local governments. The following agencies received advance notification packages. Those agencies that responded to the package are indicated by an asterisk.

FEDERAL

Federal Highway Administration
U.S. Department of the Interior - U.S. Geological Survey
U.S. Department of the Interior - Bureau of Land Management
U.S. Department of the Interior - U.S. Fish and Wildlife Service - Field Office
U.S. Department of the Interior - National Park Service
U.S. Army Corps of Engineers
U.S. Environmental Protection Agency
U.S. Department of Housing and Urban Development
U.S. Department of Health and Human Services - Center of Disease Control
U.S. Department of Energy
National Marine Fisheries Service - Area Supervisor

National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Federal Aviation Administration - District Office*
Federal Emergency Management Agency
Commander (oan) - Seventh Coast Guard District

STATE

Florida Game and Freshwater Fish Commission
Florida Department of State - Division of Historical Resources*
Florida Department of Environmental Regulation*
Florida Department of Natural Resources - West Central Florida Field Office*
Florida Department of Natural Resources - Bureau of Land Management Services*
Office of Environment - Chief
Marine Fisheries Commission
Federal - Aid Program Coordinator

REGIONAL/LOCAL

Tampa Bay Regional Planning Council
Southwest Florida Water Management District*

The Office of the Governor has indicated that the proposed improvements will be in accordance with state plans, projects, programs, and objectives when consideration is given to the comments expressed by the reviewing agencies (see letter in Appendix C, page C-1). Copies of the agency response letters are included in Appendix C. The pertinent comments from the agencies which responded are summarized below.

Federal Aviation Administration

Comment: If the proposed construction or alteration satisfies any of the criteria found in Section 77.13 "Construction or Alteration Requiring Notice" of FAA Form 7460-1, please submit a completed form to the South Region office.

Response: FDOT will prepare/submit a completed FAA Form 7460-1 at the appropriate state of project development to comply with Federal Aviation Regulation, Part 77, subchapter B. The notice required under Section 77.13(a)(1) through (4) will be submitted at least 30 days before the earlier of the following dates: (1) The date the proposed construction or alteration is to begin, and (2) the date an application for a construction permit is to be filed.

Florida Department of State - Division of Historical Resources

Comment: Determination of the potential impacts to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places is dependent upon the results of a cultural resource survey. If the project avoids or mitigates project impacts to any identified significant archaeological or historic sites, the proposed project will have no effect on any sites listed or eligible for listing in the National Register of Historic Places.

Response: FDOT will be undertaking a cultural resource survey. If any significant archaeological or historic sites are identified, appropriate actions will be taken to avoid or mitigate project impacts.

Florida Department of Environmental Regulation (DER)

Comment: A wetland resource permit would be required for any fill to be placed in the Department's (DER) jurisdictional wetlands.

Response: FDOT will work closely with DER to resolve any problems related to wetland taking. A Permit Coordination Report will be circulated to all interested and jurisdictional agencies for review/comment. FDOT will prepare needed permit applications at the appropriate stage of project development to comply with Florida Statues.

State of Florida Department of Natural Resources

West Central Florida Field Office

Comment: The Department of Natural Resources , Division of State Lands requires consent in the form of an easement for public right-of-way on Sovereignty submerged lands pursuant to Chapter 18-21, FAC.

Response: The proposed improvements to I-275 will occur within the existing FDOT right-of-way. Therefore, an easement for public right-of-way on sovereignty submerged lands is not necessary.

State of Florida Department of Natural Resources

Bureau of Land Management Services

Comment: If land outside of existing FDOT right-of-way is required for the proposed improvements, the project may affect lands vested in the Board of Trustees of the Internal Improvement Trust Fund. Any use of these lands or others identified during the more specific permitting process will require an easement pursuant to Rule 18-2, FAC. Of particular concern are those lands comprising the Gateway Project which have been designated for natural resource protection.

Response: The proposed improvements to I-275 in the vicinity of the "Gateway Project" will occur within the existing FDOT right-of-way. Therefore, an easement to use this property is not necessary.

Southwest Florida Water Management District (SWFWMD)

Comment: Aspects of water quality and quantity concerning the planned improvements to I-275 should be evaluated in a surface water management permit application to Chapter 40D-4 and Chapter 40D-40, Florida Administrative Code (FAC). Additionally, pursuant to Chapter 40D-4.051 (2)(c), FAC, activities conducted in wetlands require a permit from SWFWMD. Conditions for issuance of a surface water management permit include reasonable assurance that the proposed activities will not cause adverse environmental impacts or adverse impacts to wetlands, fish and wildlife, or other natural resources.

Response: FDOT will prepare needed permit applications at the appropriate stage of project development to comply with Florida Statues. The proposed project has been designed to minimize impacts to: 1) water quality, 2) wetlands, and 3) fish and wildlife habitats to the greatest extent feasible.

9.2.2 Permit Coordination Report Responses

Preliminary coordination with federal, state, and local environmental and regulatory permitting agencies was initiated. A Permit Coordination Report (PCR) was prepared and sent (September, 1990) to the following agencies for their review and comment. Those agencies that responded are indicated with an asterisk.

1. U.S. Army Corps of Engineers (COE),
2. U.S. Environmental Protection Agency (EPA),

3. U.S. Fish and Wildlife Service (FWS)*,
4. Florida Department of Environmental Regulation (DER)*,
5. Southwest Florida Water Management District (SWFWMD)*,
6. Florida Game and Fresh Water Fish Commission (FGFWFC),
7. National Marine Fisheries Commission (NMF)*,
8. Pinellas County Department of Environmental Management (PCDEM),
9. Pinellas County Water and Navigation Control Authority (PCWNCA),
10. Pinellas County Department of Public Works (PCDPW)*,
11. Florida Department of Natural Resources (DNR)*, and
12. United States Coast Guard (USCG).

Copies of the response letters are included in Appendix F. The pertinent comments from these agencies which responded are summarized below.

United States Department of the Interior

Fish and Wildlife Service

Comment: The proposed mitigation to reduce the impacts of filling Wetland Sites 2 and 3 is considered adequate. No adverse impacts to the manatee is anticipated during the proposed bridge construction of I-275 at Big Island Gap (Wetland Site 4) if the proposed precautions for manatee protection are followed.

Response: The construction precautions to minimize impacts on manatees and sea turtles are described in Section 8.0, Endangered and Threatened Species, of the PCR. These precautions will be conditions in the construction contract and shall be adhered to by the contractor chosen.

Florida Department of Environmental Regulation

Southwest District

Comments: A permit may be required from this agency pursuant to Chapter 403, Florida Statutes for the following items:

1. Dredge and fill in waters of the state, Chapter 403.913(1) F.S. and Chapter 17-312.030 and 17-312.806,

2. Regrading/land alteration activity,
3. Filling and relocation/reconstruction of roadside ditches,
4. Major bridge replacement,
5. Culvert construction,
6. 17-25 FAC Stormwater treatment facilities in state waters.

Response: Applicable permits will be applied for during the design phase of the project.

Southwest Florida Water Management District

Comment: Any activities in wetlands as defined in Chapter 40D-4.021 (10) FAC will require a permit from this agency. The appropriateness of the proposed mitigation will be evaluated during the permitting process. Detailed mitigation plan and construction plans are required with a Chapter 40D-4 Surface Water Permit application. In areas where stormwater management systems are not practicable, equivalent treatment and attenuation may be accommodated within the same drainage basin with the provision that the pollution load is not increased. A coordination meeting should be set between FDER, the District, and your agency to formally establish the permit review responsibilities especially with respect to Chapter 17-25 FAC.

Response: Stormwater management for the proposed project is discussed in Section 7.0, Stormwater Management, of the PCR. FDOT has coordinated with SWFWMD and have provided them with a PCR which describes the conceptual design of the stormwater management system for this project. FDOT will continue coordination efforts and obtain applicable permits during the design phase of the project.

National Marine Fisheries Service

Comment: If successful, the proposed mitigation for Wetland Site 3; the tentatively proposed mitigation at Wetland Sites 2 and 4; the recovery of the "regraded" areas would adequately compensate for the project impacts. If the following items are included in the permit application to the COE, there would be no objection to the issuance of a Corps permit for the project.

1. Specify that wetland plants will be planted in the wetland created.
2. Consider mitigation necessary for Wetland Sites 2 and 4 and include it in the final plans.
3. Include a three year monitoring plan to ensure survival of planted species.

Response: Detailed wetland mitigation plan will be developed during the design phase of the project. This plan will identify specific methods, plant species, and monitoring periods to be used.

Pinellas County Department of Public Works

Comment: The report and drawings for the I-275 project have been reviewed and compared to the Pinellas County Stormwater Management Plan (SWMP). No conflicts with the SWMP were found. There are the following box culverts in the vicinity of the project all of which lie in the Roosevelt Creek Basin (#23):

1. SWMP Structure # S23-01-06 = FDOT Structure # S-21,
2. SWMP Structure # S23-04-04, and
3. SWMP Structure # S23-01-02.

Response: None required.

Florida Department of Natural Resources

Bureau of Land Management Services

Comment: The project is located within the existing FDOT right-of-way; therefore, unless state-owned uplands outside the right-of-way are needed, no further authorization is required from this Bureau.

Response: None required.

9.3 PUBLIC INVOLVEMENT

A Public Involvement Plan was developed and implemented at appropriate stages throughout the project. The Plan involved the public through notification and meetings which included:

1. State, local, regional, and federal agencies, and public and private groups having a concern in the project being contacted at the outset of the study.
2. The local news media being utilized for carrying public notices and news releases concerning the project.
3. A public hearing being held at a site located near the project area.

A public hearing was held on Tuesday, October 9, 1990, between 4:00 pm and 7:00 pm, at the Radissson Inn Clearwater, Bay Room, 3580 Ulmerton Road (S.R. 688), Clearwater, Florida. An open format was used in which residents and any interested parties were able to see the project displayed and talk to FDOT representatives who were available to answer any questions. The public hearing was held to inform the public of the results of the study and to give the public the opportunity to express their view regarding location, design, and social, economic, and environmental effect of the proposed project.

All persons attending the public hearing were afforded the opportunity to comment about the project and have their comments included in the official transcript of the public hearing. This could be achieved in three ways: 1) a court reporter was present at the hearing to record any oral comments, 2) comment sheets were provided for any written comments, and/or 3) interested parties could write a letter addressed to Mr. David A. Twiddy, Jr., P.E., Project Development and Environment Administrator of FDOT concerning any comments about the project. Comments received no later than October 19, 1990, were included as part of the official public hearing transcript.

Nine people unrelated to the project team attended the public hearing. The attendees consisted of property owners along I-275, engineers from Pinellas County, a planner from the City of St. Petersburg, a newspaper reporter from the St. Petersburg Times, and concerned citizens. Comments were typically concerning the need for the project and the proposed schedule. Attendants were in favor of the improvements and wanted it implemented as soon as possible.

Specific questions and comments raised at the pubic hearing were answered at the hearing. One person spoke for the public record at the hearing (see Appendix G, Official Public Hearing Transcript). No written statements, letters, or exhibits were received within the time period allotted for comments. The remainder of this section addresses specific comments resulting form the public hearing. The number of individuals who expressed the particular comment is shown in parenthesis.

Comment: This road is badly needed and the sooner the better. We are in support of the proposed improvements to I-275 (three individuals).

Response: None

Comment: The signs need to be improved along this section of I-275 (one individual).

Response: The improvement of signs and the need for additional signs will be considered during the design/construction phase of the project.

In addition, one comment was received regarding sections of I-275 outside the limits of the project to the east. The individual was informed that his comments would have to be addressed during the study of that section.

10.0 COMMITMENTS AND RECOMMENDATIONS

The upgrading of I-275 from Roosevelt Boulevard to 4th Street North has been developed in accordance with current federal and state policies and procedures governing the development of transportation facilities. This process produced a considerable amount of technical data concerning the traffic service, engineering, social, and environmental consequences of the alternatives considered. Through a program of public and agency involvement, additional input was obtained. After careful evaluation of all these inputs, the following commitments and recommendations are made concerning the route location and conceptual design of the improvements of this section of I-275.

10.1 Commitments

The following commitments have been included in the I-275 upgrading proposal in order to minimize impacts and to mitigate those impacts that are unavoidable.

10.1.1 Endangered Species

1. To safeguard manatees from potential harm, the following manatee and sea turtle protection plan will be included in the construction contract:
   a. Construction personnel will be supplied with habitat and species descriptions and a warning of penalties for intentional or negligent harm under the Endangered Species Act of 1973, as amended, and for manatees, under the Marine Mammal Protection Act of 1972 and the Florida Manatee Act.
   b. Constant surveillance will be maintained by specially-trained construction personnel to insure that manatees and sea turtles are not endangered by construction activities, are allowed free passage, and are not entangled in turbidity barriers.
   c. Should any manatees be injured or killed, a telephone report will be made using the manatee hot line (1-800-342-1821).
   d. Vessels associated with the project will be on the light displacement category where practicable, and will observe slow (no wake) speeds in shallow water. Operators will be held responsible for any collisions.
   e. Turbidity barriers will be employed to prevent turbidity from concealing manatees or sea turtles and to prevent them from contact with construction equipment. Turbidity barriers will have surface anchors or be anchored by tangle-resistant or hemp rope.

f. Construction debris will not be discarded into the water.

g. Signs will be posted as an on-site warning of the sea turtles' and manatee's potential presence, endangered status, and precautions needed.

h. Blasting will probably be used for removal of the existing bridge piers and associated footings at Big Island Gap. Prior to blasting, a zone within an area defined by a radius equal to (26000 W1/3)64.7 will be surveyed by boat for the presence of manatees and sea turtles (W = weight of the explosive charge in pounds). No blasting will be allowed until the zone is clear.

i. The contractor will keep a log of all sightings, injuries, or killings of manatees and sea turtles occurring during construction. A report summarizing these incidents will be submitted to the U.S. Fish and Wildlife Service upon completion of the project.

2. The same safeguards which were developed to protect the manatee will be applied to protect sea turtles. The contractor will be responsible for maintaining continuous surveillance for the presence of sea turtles in the project area.

3. To mitigate for the loss of black skimmer, American oyster-catcher and least tern nesting habitat, an area approximately 3 acres in the size will be scraped of vegetation. If it is determined that there is not a high enough shell content on the proposed mitigation site to prevent erosion and regrowth of vegetation, clean shell fill will be deposited. The area will be rescraped at least every two years before the month of May to remove vegetation which might decrease its desirability as a potential nesting site. If no evidence of usage by any of the three species is observed by the end of the fifth year, the maintenance program will be discontinued.

10.1.2 Wetlands

1. In order to prevent construction related damage to seagrasses, no staging facilities will be allowed in the vicinity of grassbeds. In addition at the project's preconstruction meeting, contractor and FDOT construction personnel will be advised of the location of marine grassbeds in the project area to prevent inadvertent damage, such as propeller dredging, by construction related boat activity.

2. In accordance with the FDOT's Standard Specifications for Road and Bridge Construction, all Best Management Practices will be adhered to during the construct phase of the project for erosion control and water quality considerations.

No significant long-term environmental impacts are foreseen as a result of construction of this project.

10.1.3 Water Quality

1. Best Management Practices will be used during the construction phase for erosion control and water quality considerations.
2. FDOT will continue to coordinate with the District Office of FDER throughout the development of the project's stormwater management plan to ensure that the final drainage design will be in compliance with Chapter 17-25, FAC, the Stormwater Rule.

10.2 Recommendations

The proposed improvements to I-275 are from south of Roosevelt Boulevard to north of 4th Street North. Based on the freeway capacity analysis conducted, a majority of I-275 segments within the project limits will operate at LOS E or worse by 2010 if no improvements are made. To obtain acceptable operating conditions (LOS D or better), link improvements are required from south of the Roosevelt Boulevard interchange to north of 4th Street North. The segment of I-275 from north of Roosevelt Boulevard interchange to Ulmerton Road require three lanes in each direction. The addition of one travel lane in each direction will be accomplished by adding one-twelve foot wide travel lane to the inside of the existing median leaving a 40 foot grassed median. For purposes of providing lane balance, it is recommended that the additional travel lanes be extended through the Roosevelt Boulevard interchange to match the existing six lane typical section south of the interchange.

The segment of I-275 from Ulmerton Road to 4th Street North requires the addition of two travel lanes in each direction to provide 8 lanes of capacity by the 2010 design year. It is recommended that the two-twelve foot wide travel lanes be added in each direction be added to the existing outside travel lanes resulting in an 8 lane typical section. The median width varies from 28 to 22 feet along this segment of I-275.

Ramp capacity improvements are required at Ulmerton Road. The capacity analysis for both the eastbound on ramp and the westbound off ramp indicates that an additional lane is needed to provide an acceptable level of service by the 2010 design year. Only geometric design improvements are required for the existing ramps at Roosevelt Boulevard, 9th Street North, and 4th Street North. All recommended ramp improvements except the Ulmerton Road (westbound) exit ramp are to be

constructed along the existing alignment. The Ulmerton Road (westbound) ramp will be constructed along new alignment.

The recommended alternative for providing capacity improvements to I-275 from south of Roosevelt Boulevard to 4th Street North is Alternative 1B (see Table 7-4, Alternative Design Analysis Summary Sheet on page 7-36). A detailed discussion of the recommended alternative is contained in Section 7.0 of this report.

APPENDIX A--LOCATION HYDRAULIC REPORT

LOCATION HYDRAULIC REPORT

I-275
ROOSEVELT BOULEVARD TO 4TH STREET
PINELLAS COUNTY, FLORIDA

State Project No.: 15190-1426
Federal Aid Project No.: IR-275-7(218)22
WPI No.: 7147848

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SEVEN OFFICE
TAMPA, FLORIDA

Prepared by:
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1715 North Westshore Blvd., Suite 500
Tampa, Florida 33607

August, 1990

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1.0 INTRODUCTION

Interstate 275 (I-275) is a major north/south freeway which runs from I-75 in north Hillsborough County through Pinellas County and connects with I-75 in Manatee County (see Figure 1-1). The tremendous growth in the Tampa Bay area in both Pinellas and Hillsborough Counties has caused traffic volumes to exceed the capacity of I-275. A section of I-275 from Roosevelt Boulevard to 4th Street North, a distance of 2.0 miles, is being evaluated for the purpose of providing additional capacity improvements.

This Location Hydraulics Report will discuss the impacts on the existing drainage system. Most of this project lies in tidally affected, environmentally sensitive areas directly adjacent to Tampa Bay. There are three main conveyance structures through the project limits, one 8' x 4' box culvert, two 9'x 7' box culverts and the Big Island Gap bridge. Section 3.0 discusses the analysis of these structures and recommended improvements.

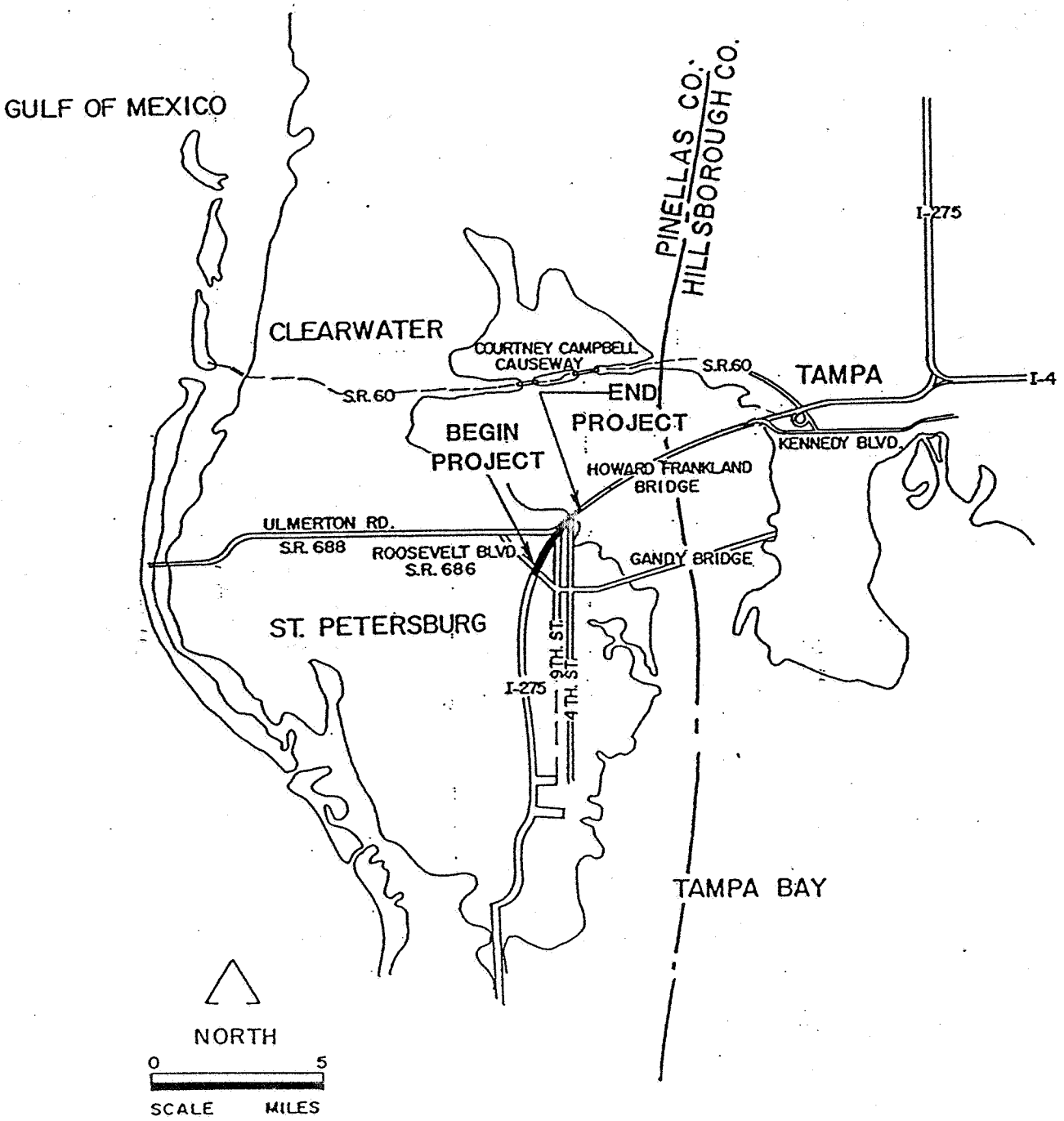


Figure 1-1
PROJECT LOCATION MAP

SOURCE: RS&H, 1990.

I-275
ROOSEVELT BOULEVARD
TO 4th. St. NORTH

2.0 BACKGROUND

I-275 was constructed as a rural freeway in 1959. The existing roadway cross section from Roosevelt Boulevard to Ulmerton Road consists of two 12-foot wide traffic lanes in each direction, paved 4-foot wide inside shoulders, and paved 10-foot wide outside shoulders. The median width varies throughout the project length. From north of Ulmerton Road to 4th Street North, the existing cross section provides two 12-foot wide travel lanes in each direction, an 18-foot wide paved median consisting of 8-foot wide inside shoulders and a 2-foot wide concrete barrier, and 10-foot wide paved outside shoulders. The entrance and exit ramps for 9th Street North, Ulmerton Road, and 4th Street North have single-lane entrances and exits from I-275 which widen to two lanes on the ramps.

3.0 DRAINAGE CONDITIONS

3.1 HYDROLOGIC CONDITIONS

The project area, with its close proximity to Tampa Bay, is characterized by tidally influenced, swampy areas. An examination of soils mapping prepared by the U.S. Soil Conservation Service (SCS) indicates this portion of the I-275 corridor passes through watersheds that consist of soils categorized as Hydrologic Soils Group (HSG) B/D and D. These soils are poorly drained with a water table depth of 0 to 1 foot above existing grades.

3.2 HYDRAULIC CONDITIONS

FEMA maps indicating the general floodplain areas are provided in Figure 3-1. As this map indicates, the entire subject I-275 corridor lies in the 100 year floodplain. This floodplain has a base elevation of 10.0 MSL, and contains areas of coastal wave velocity. FDOT drainage maps from I-275 construction plans were reviewed to confirm the delineation of the current drainage basins. SWFWMD and USGS maps were also reviewed for topographic information. FDOT construction plans indicate that the existing roadway profile elevation ranges from 3 feet below to 5 feet above the 100 year flood elevation (10 ft. MSL) for this section of I-275. The portions of I-275 below the 100 year flood elevation shown from the north end of the Roosevelt Boulevard Interchange to the west approach of the Big Island Gap Bridge, and from the east approach to the Big Island Gap Bridge to a point on I-275 adjacent to Big Island. This amounts to approximately 27,200 linear feet (5.21 miles) of roadway below the 100 year flood elevation. Proposed improvements to I-275 will be made to the existing conditions. Information regarding the 50 year flood elevations is not available. Design of the recommended improvements will not consider hurricane type flood conditions. FDOT maintenance personnel confirm that the existing drainage structures function properly and are generally in good condition.

A table of all existing drainage structures (Table 3-1) presents all structures within the limits of this project. See Figures 3-3 to 3-5 for locations of all existing structures. Structures S-1 and S-21 are the main conveyance features for upstream overland runoff. These two structures not only convey overland runoff, but also are tidally affected. Section 3.2.1 explains the hydraulic analysis of these structures. A subbasin map for the study area provided as Figure 3-2, shows the contributing drainage areas to Structures S-1 and S-21.

3.2.1 Analysis of Major Conveyance Structures

The peak runoff rates for the drainage basins contributing to S-1 and S-21 were generated using the SCS Unit Hydrograph Method for a 100-year/24-hour storm event with 12.0 inches of rainfall. This event is based on the hydrologic information presented in the Southwest Florida Water Management District (SWFWMD) technical manual. The hydrographs were computed using the SCSUNIT software with a peak factor of 256 and an SCS Type II-Florida Modified Rainfall Distribution.

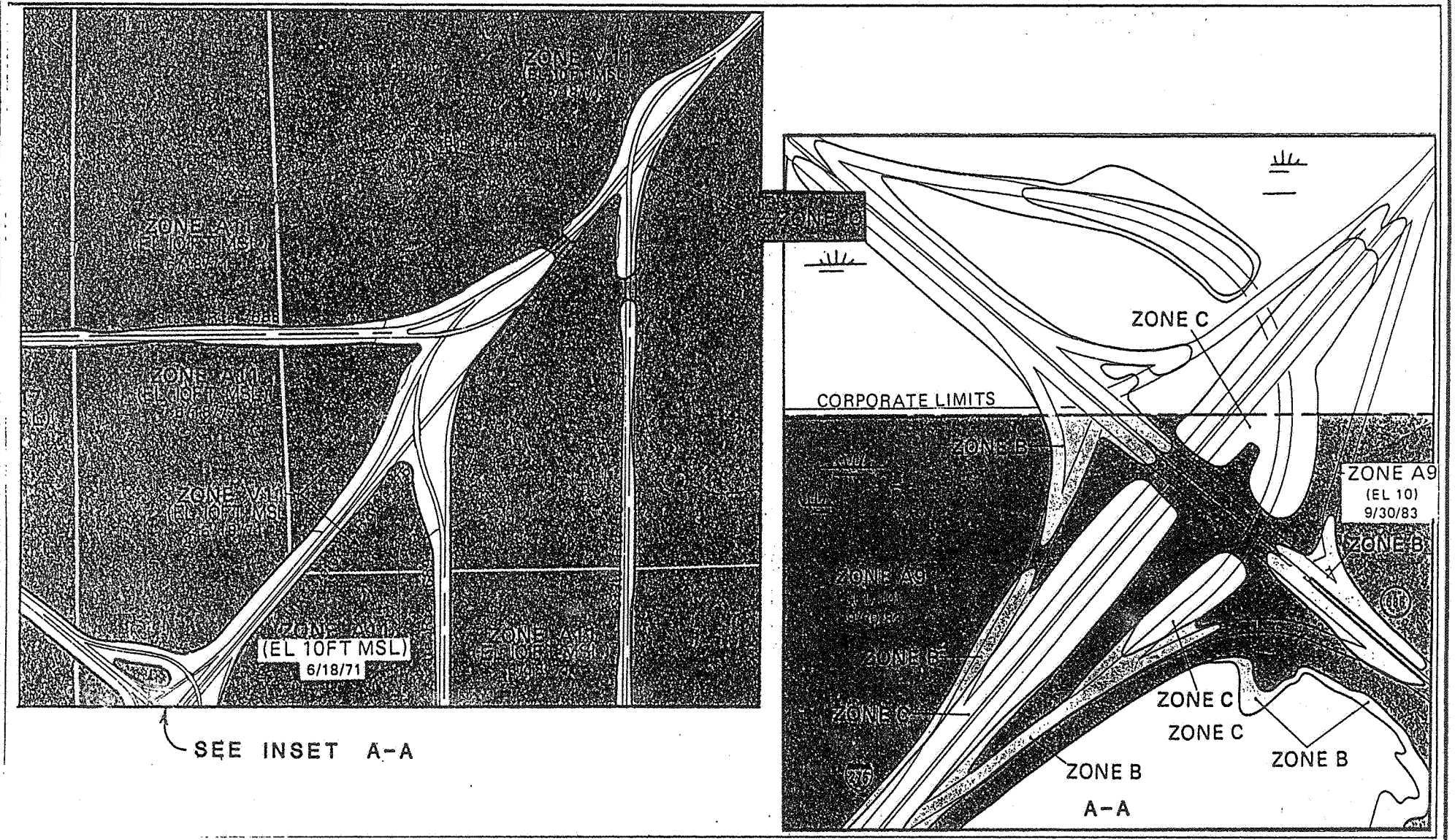


FIGURE 3-1

FEMA FLOODPLAIN MAP

SOURCE: R,S&H, 1990

I-275
ROOSEVELT BLVD.
TO
4th STREET NORTH

Table 3-1. Existing Drainage Structures

Structure Number	Description	Station
S-1	8' x 4' Box Culvert (215 lin.ft.)	502+50
S-2	Inlet w/18" R.C.P. (92 lin. ft.)	510+60
S-3	Inlet w/15" R.C.P. (65 lin. ft.)	511+80
S-4	Inlets w/15" R.C.P. (130 lin. ft.)	514+60
S-5	2-24" R.C.P. (110 lin. ft.)	515+20
S-6	15" R.C.P. (81 lin. ft.)	517+50
S-7	Inlet w/15" R.C.P. (81 lin. ft.)	520+50
S-8	Inlets w/18" R.C.P. (690 lin. ft.)	521+90 to 526+20
S-9	Inlet w/24" R.C.P. (200 lin. ft.)	522+25 to 524+25
S-10	Inlet w/15" R.C.P. (70 lin. ft.)	523+05
S-11	Inlet w/24" R.C.P. (50 lin. ft.)	524+95
S-12	Inlet w/15" R.C.P. (41 lin. ft.)	528+40
S-13	Inlet w/15" R.C.P. (41 lin. ft.)	529+00
S-14	18" R.C.P. (50 lin. ft.)	530+20
S-15	24" R.C.P. (50 lin. ft.)	532+05
S-16	Inlets w/15" R.C.P./18" R.C.P. (130 lin. ft./41 lin. ft.)	532+25
S-17	Inlets w/24" R.C.P. (268 lin. ft.)	535+00 to 535+45
S-18	Inlet w/18" R.C.P. (96 lin. ft.)	540+00
S-19	Inlet w/18" R.C.P. (83 lin. ft.)	547+00
S-20	Inlet w/18" R.C.P. (24 lin. ft.)	557+35
S-21	2-8'x 7' Box Culvert (184 lin. ft.)	557+70

Table 3-1. Existing Drainage Structures, Continued

Structure Number	Description	Station
S-22	Inlet w/18" R.C.P. (91 lin. ft.)	567+00
S-23	30" R.C.P. (160 lin. ft.)	579+00
S-24	24" R.C.P. (220 lin. ft.)	590+00
S-25	24" R.C.P. (160 lin. ft.)	590+50
S-26	Inlet w/24" R.C.P. (360 lin. ft.)	605+00
S-27	24" R.C.P. (130 lin. ft.)	624+00
S-28	36" R.C.P. (135 lin. ft.)	636+70
S-29	Inlet 18" R.C.P. (65 lin. ft.)	507+80
S-30	Inlet 15" L.M.P. (51.35 lin. ft.)	518+62
S-31	Inlet 15" C.M.P. (48.52 lin. ft.)	518+62
S-32	Inlet 15" C.M.P. (80 lin. ft.)	524+90
S-33	Inlet 15" C.M.P. (80 lin. ft.)	529+40

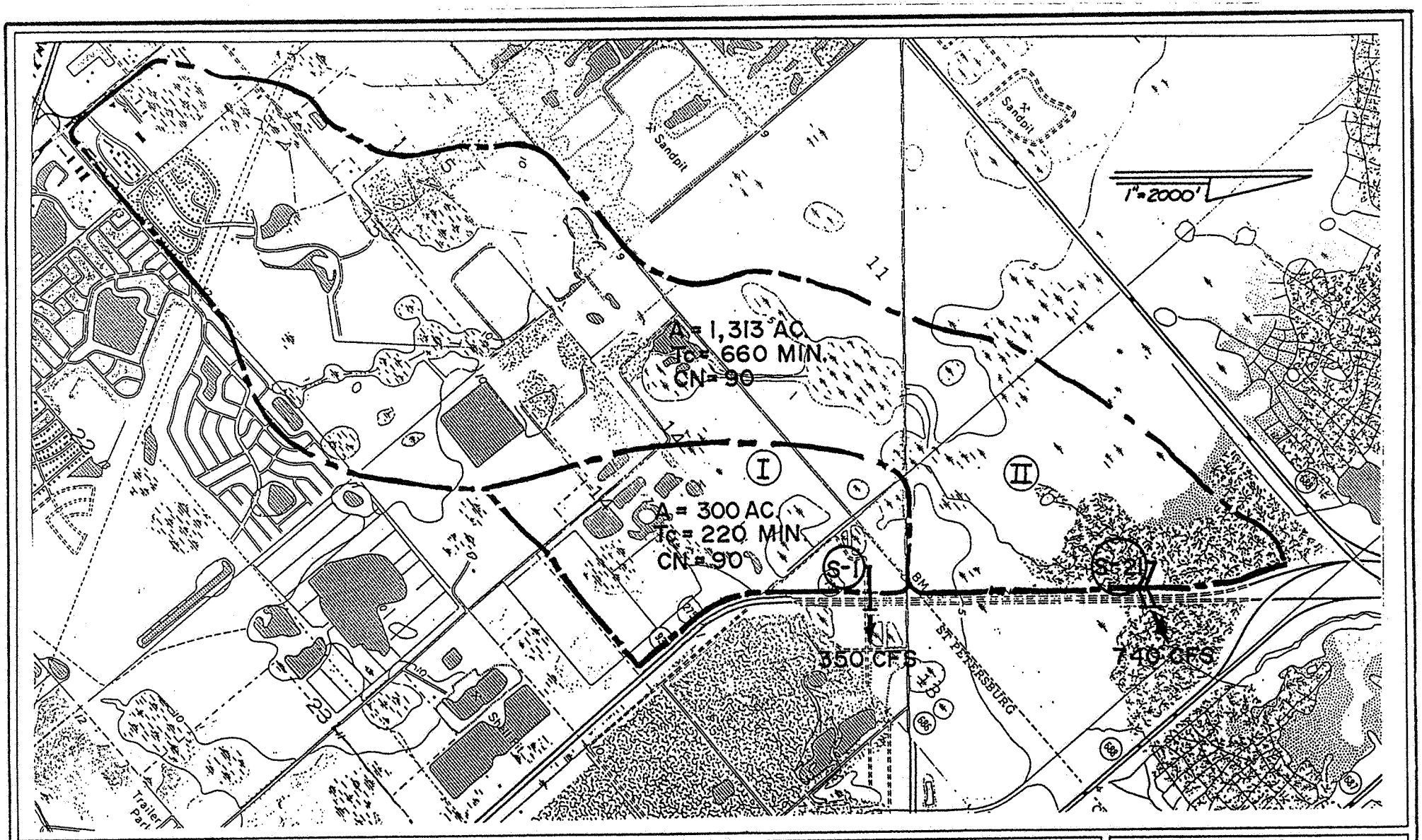


FIGURE 3-2

DRAINAGE SUB-BASIN MAP

SOURCE: R,S&H, 1990

I-275
ROOSEVELT BLVD.
TO
4th STREET NORTH

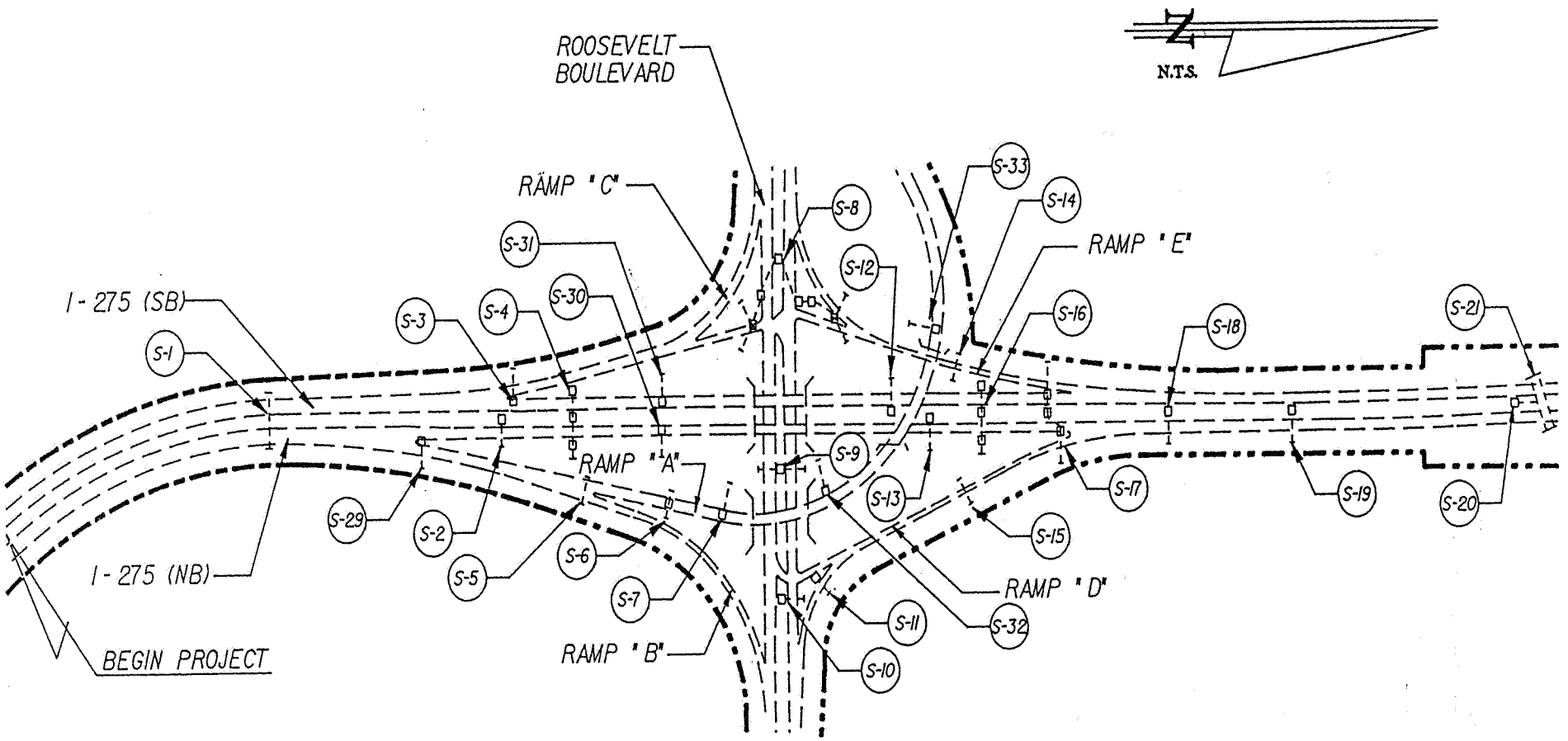
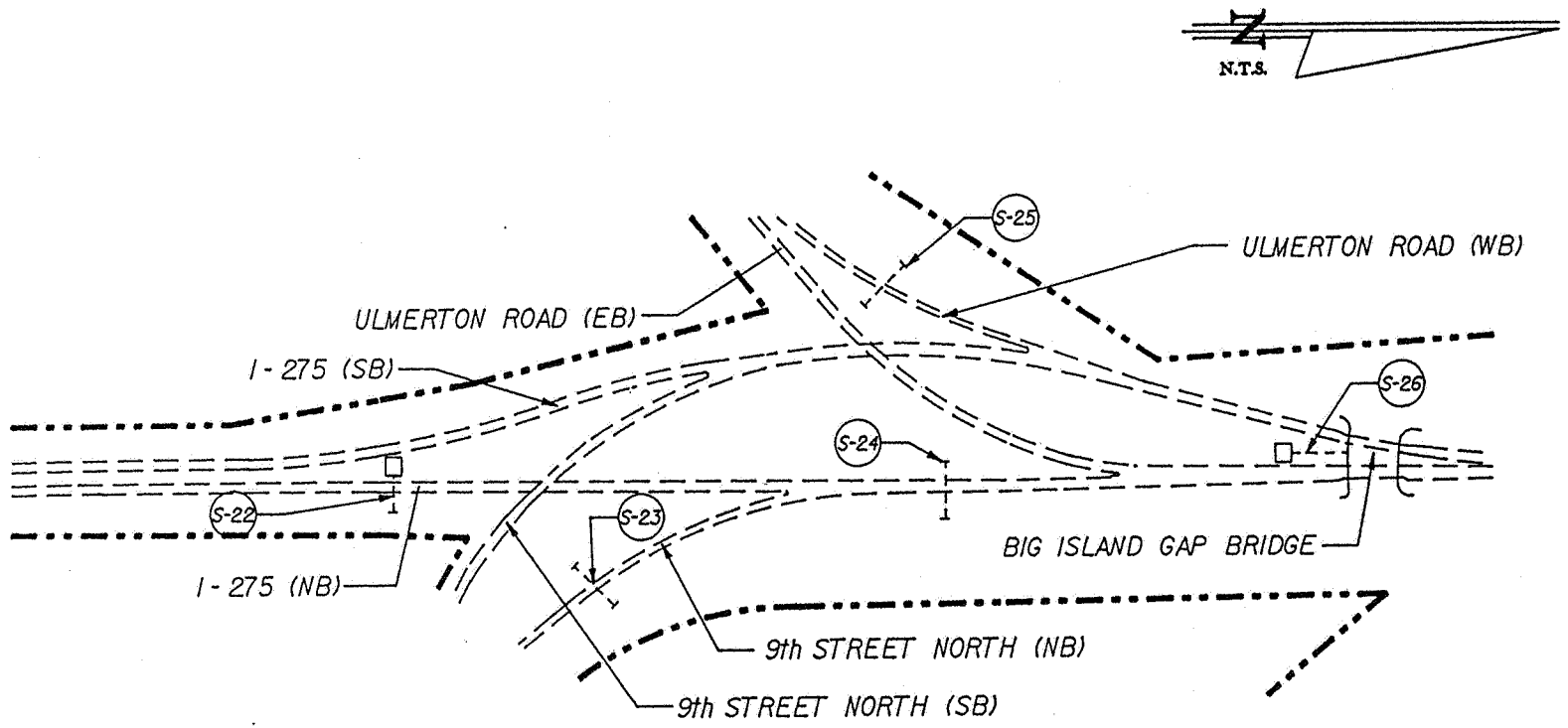


FIGURE 3 - 3

EXISTING DRAINAGE STRUCTURES

SOURCE: R,S&H, 1990

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH



LEGEND

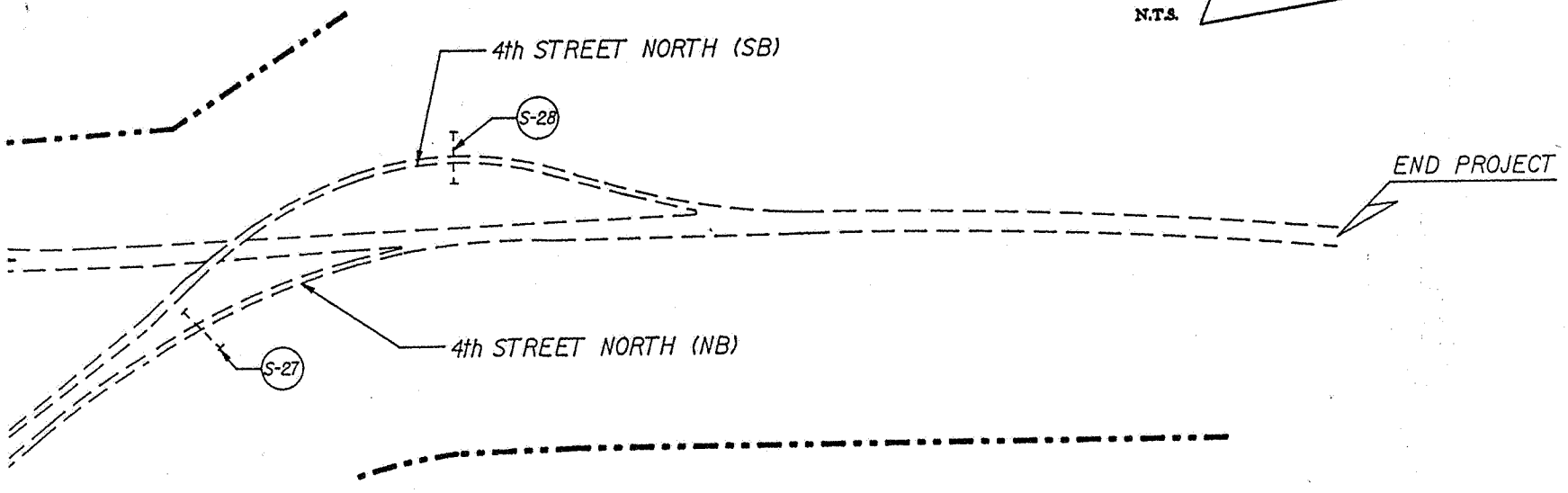
- EXISTING PAVEMENT
- LIMITED ACCESS RIGHT OF WAY
- INLET W/R.C.P.
- HEADWALL W/R.C.P.

FIGURE 3-4

SOURCE: R.S&H, 1990

EXISTING DRAINAGE STRUCTURES

I - 275
ROOSEVELT BLVD.
TO
4th STREET NORTH



LEGEND

- EXISTING PAVEMENT
- LIMITED ACCESS RIGHT OF WAY
- INLET W/R.C.P.
- HEADWALL W/R.C.P.

FIGURE 3-5

EXISTING DRAINAGE STRUCTURES

SOURCE: R,S&H, 1990

I-275
ROOSEVELT BLVD.
TO
4th STREET NORTH

The peak discharges calculated for these two structures were routed through the existing hydraulic structures and rated for adequacy in terms of conduit size (length, width, and depth) and assumed tailwater conditions. A flowing-full condition was assumed for this analysis. This assumption allows peak discharges to be routed through these structures under tailwater depths equal to the hydraulic openings.

The hydraulic analyses were performed using FDOT nomographs for box culverts under inlet and outlet control conditions.

Subbasins I and II contribute to structures S-1 and S-21, respectively. Subbasin I consists of an area of 300 acres with an average terrain slope of 0.05 percent. This area generates a peak flow of 350 cfs. Structure S-1 is adequate to pass this peak discharge without overtopping I-275. Subbasin II includes an area of 1,313 acres, with an average terrain slope of 0.06 percent. Structure S-21 is adequate to pass a peak discharge rate of 740 cfs without overtopping I-275.

Structure S-21 is reanalyzed in the proposed condition with an extended length of approximately 18 feet to 202 feet. This extended structure increased headwater depths less than 0.1 feet under inlet and outlet conditions.

The preceding analysis demonstrates that no hydraulic improvements are required for the major conveyance structures.

The remaining major conveyance structure is the Big Island Gap Bridge. This structure bridges a natural waterway within the bay, along the causeway, and between two land masses. This structure is only influenced tidally and by storm surge.

After review of FDOT Bridge Inspection Reports from February, 1990, there is no indication of hydraulic erosion on the bridge pilings or channel cross section.

The Big Island Gap Bridge will be replaced in kind with no modification to the existing waterway cross section. The remaining structures are minor roadway storm sewers and are not analyzed as part of this report.

3.3 PROPOSED STORMWATER MANAGEMENT SCHEME

The proposed I-275 typical sections (see Figure 3-6 and 3-7) will incorporate stormwater management facilities to treat and alternate stormwater runoff from additional impervious pavement added to the existing roadway.

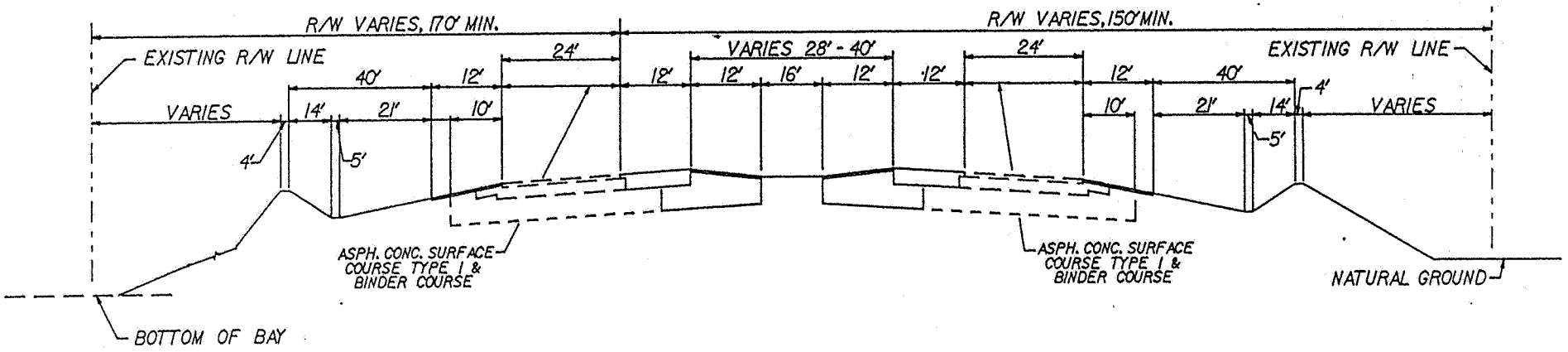


FIGURE 3 - 6

PROPOSED TYPICAL SECTION

FROM ROOSEVELT BLVD. TO ULMERTON ROAD

(WIDENING TO INSIDE)

SOURCE: R,S&H, 1990

REYNOLDS, SMITH & HILLS, INC.
1715 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL. 33607

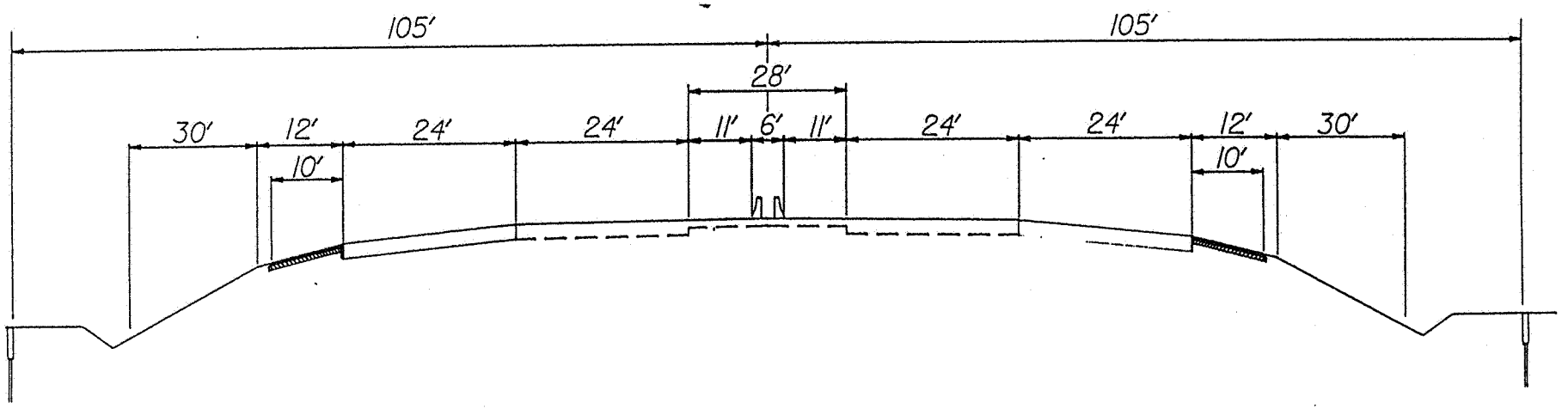


FIGURE 3 - 7

TYPICAL SECTION
FROM ULMERTON ROAD TO 4th STREET NORTH

SOURCE: R.S&H. 1990

REYNOLDS, SMITH & HILLS, INC.
1715 N. WESTSHORE BLVD.
SUITE 500
TAMPA, FL. 33607

The stormwater management facilities will consist of a series of retention swales connected by earthen weirs. Runoff will be collected and a portion will assimilate through natural soil percolation. The remaining volume will convey through the system and discharge at natural points along the project limits. Additional areas for stormwater management facilities will develop from the realignment of the roadway and ramps. Wet detention and/or dry retention ponds with discharge control structures can be constructed in these areas.

In locations where stormwater management facilities are impossible to construct, the associated runoff volumes will be compensated for elsewhere within the project.

No significant impacts to the natural and beneficial values of this floodplain are associated with this proposed project. Impacts to the base floodplain will be minimized by adherence to Section 104 of DOT Standards for Road and Bridge Construction. The project is a category 3 project. The modifications to drainage structures included in this project will result in an insignificant change in their capacity to carry floodwater. This change will cause minimal increases in flood heights and flood limits. These minimal increases will not result in any significant adverse impacts on the natural and beneficial floodplain values or any significant change in flood risks or damage. There will not be a significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

APPENDIX B--CORRESPONDENCE

U.S. Department of Transportation
United States Coast Guard

Commander
Seventh Coast Guard District

Federal Bldg.
51 S.W. 1st Ave
Miami, FL 33130-1681
Staff Symbol: (oan)
Phone: (305) 536-4103

16591/2996
Serial: 0622
APR 3 0 1986

Reynolds, Smith and Hills
Attn: Ms. Wendy Giesy
1715 N. Westshore Blvd.
P.O. Box 22003
Tampa, FL 33622

DRAFT FINDING OF NO SIGNIFICANT IMPACT FOR THE I-275 HOWARD FRANKLAND PARALLEL BRIDGE ACROSS OLD TAMPA BAY, MILE 5.1, PINELLAS AND HILLSBOROUGH COUNTIES, FLORIDA (STATE PROJECT #15190-1491)

This responds to your letter of April 22, 1986. We have reviewed the revised Sections 2.4, 3.3.4 and 4.15.5 of the draft Finding of No Significant Impact, and have determined that they meet our requirements. Good work!

Sincerely,

A. CATTALINI
Captain, U. S. Coast Guard
Chief, Aids to Navigation Branch
Seventh Coast Guard District
By direction of the District Commander

Copy: Florida Department of Transportation, Tallahassee; Attn: Mr. C. L. Irwin
Federal Highway Administration, Tallahassee; Attn: Mr. G. Rice

APPENDIX C--RESPONSES TO THE ADVANCE NOTIFICATION PROCESS

STATE OF FLORIDA

Office of the Governor

THE CAPITOL
TALLAHASSEE, FLORIDA 32399-0001

BOB MARTINEZ
GOVERNOR

August 31, 1990

Mr. David A. Twiddy, Jr., P.E.
Project Development and Environment
Administrator
Department of Transportation
4950 West Kennedy Boulevard
Suite 500
Tampa, Florida 33609

RE: State Project 15190-1426 - Work Program Item 7147848 - Advance Notification to Upgrade Lane Facility - From I-275: Roosevelt Boulevard to 4th Street in Pinellas County, Florida

SAI: FL9007030009C

Dear Mr. Twiddy:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 83-150, Section 216.212, Florida Statutes, the Coastal Zone Management Act and the National Environmental Policy Act, has coordinated a review of the above referenced project.

Pursuant to Presidential Executive Order 12372, the project will be in accord with State plans, programs, procedures and objectives; and approved for submission to the federal funding agency when consideration is given to the enclosed agency comments.

Please review the enclosed comments submitted by the Department of Environmental Regulation (DER) requiring a permit modification be provided.

The Department of Natural Resources (DNR) states that the project may involve sovereign lands and may require consent from the Board of Trustees of the Internal Improvement Fund, if consent has not previously been obtained. The applicant should contact the DNR's Division of State Lands to determine State title interest in the project site.

The Department of State (DOS) notes that a cultural resource survey will be conducted to identify significant archaeological and/or historic sites. The proposed project will have no effect on this site, if the Department of Transportation avoids or mitigates the impact on sites identified in the survey.

Based on the comments from our reviewing agencies, funding for the proposed action is consistent with the Florida Coastal Management Program (FCMP) advanced notification stage. Subsequent environmental documents will be reviewed to determine continued consistency with the FCMP as provided for in 15 CFR 930.95. These documents should provide thorough information regarding the location and extent of wetlands dredging and filling, borrow sources, dredging or filling associated with bridge construction and stormwater management. Continued concurrence with this project will be based, in part, on adequate resolution of issues identified during earlier reviews. Any environmental assessments prepared for this project should be submitted to the Florida State Clearinghouse for interagency review.

Please enter the State Application Identifier (SAI) Number, shown above, in box 3a of Standard Form 424 and append a copy of this letter and any enclosures to your application. These actions will assure the federal agency of your compliance with Florida's review requirements, help ensure notification of federal agency action under the Federal Assistance Award Data System (FAADS) and reduce the chance of unnecessary delays in processing your application by the federal agency.

Sincerely,

Karen K. MacFarland

Karen K. MacFarland, Director
State Clearinghouse

KKM/rt

Enclosure(s)

Response From: Department of Environmental Regulation
Department of Natural Resources
Department of State

cc: DER
DNR
DOS
Ted Hoehn
J. C. Kraft - FDOT

U.S. Department of Transportation
Federal Aviation Administration

ORLANDO AIRPORTS DISTRICT OFFICE
9677 TRADEPORT DRIVE, SUITE 130
ORLANDO, FLORIDA 32827-5397

June 29, 1990

Mr. David A. Twiddy, Jr., P.E.
Project Development & Environment Administrator
Florida Department of Transportation
4950 W. Kennedy Blvd., Suite 500
Tampa, Florida 33609

SUBJECT: Advance Notification
Work Program Item No. 7147848
State Project Nos. 15190-1426
Federal-Aid Project Nos. IR-275-7(218)22
I-275: Roosevelt Blvd., to 4th Street
Pinellas County, Florida

Dear Mr. Twiddy:

Enclosed is FAA Form 7460-1. If the proposed construction or alteration satisfies any of the criteria found in Section 77.13 "Construction or Alteration Requiring Notice" of the aforementioned form, please submit a completed form to the Southern Region address also found on the cover sheet of the 7460-1.

If further information is required, please contact me at (407) 648-6583.

Sincerely,

Richard M. Owen
Plans & Programs Manager

Enclosure

cc: Mr. J. C. Kraft

"PARTNERS IN CREATING TOMORROW'S AIRPORTS"

Project Development District 7 JUL 2 3 1990

FLORIDA DEPARTMENT OF STATE

Jim Smith
Secretary of State

DIVISION OF HISTORICAL RESOURCES

R.A. Gray Building
500 South Bronough
Tallahassee, Florida 32399-0250
Director's Office (904) 488-1480
Telecopier Number (FAX) (904) 488-3353

July 17, 1990

Ms. Karen K. MacFarland, Director
State Planning and Development Clearinghouse
Office of Planning and Budgeting
The Capitol
Tallahassee, Florida 32399-0001

In Reply Refer To:
Laura A. Kammerer
Historic Sites Specialist
(904) 487-2333
Project File No. 901872

RE: Cultural Resource Assessment Request
SAI# FL9007030008C
Florida Department of Transportation; SPN: 15190-1491, 3497, & 10190-1492; I-275: 4th St. to Kennedy Blvd.
Pinellas and Hillsborough Counties, Florida

Dear Ms. MacFarland:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the above referenced project(s) for possible impact to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

We have reviewed the Advanced Notification of Florida Department of Transportation project referenced above. We note that the project will have a cultural resource survey performed. Therefore, conditioned upon the Florida Department of Transportation undertaking a cultural resource survey, and appropriately avoiding or mitigating project impact to any identified significant archaeological or historic sites, the proposed project will have no effect on any sites listed, or eligible for listing in the National Register of Historic Places. If these conditions are met the project will also be consistent with the historic preservation aspects of Florida's coastal zone program.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's archaeological and historic resources is appreciated.

Sincerely,

George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/lak
xc: C. Leroy Irwin, FDOT
David A. Twiddy, Jr., FDOT

Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor | Dale Twachtmann, Secretary | John Shearer, Assistant Secretary

July 26, 1990

Mr. Don Henningsen, Senior Government Analyst
Intergovernmental Coordination
Office of the Governor
413 Carlton Building
Tallahassee, Florida 32399-0001

Dear Mr. Henningsen:

Re: SAI Nos. FL 9007030009C and FL 9007030008C
DOT Advance Notifications
Work Program Item Nos. 7147811, 7147836, 7144390, 7147848
Widening I-75 (Howard Franklin Bridge) from Kennedy Blvd. (Hillsborough Co.) to Roosevelt Blvd. (Pinellas Co.)

We have reviewed the Advance Notifications (AN) for two referenced projects. Both projects are for the widening of the Howard Franklin Bridge and Causeway (I-275) from 4 lanes to 8 lanes. The Department has issued a wetland resource permit (No. 29/521174189) and subsequent modifications for most of the work proposed in these ANs. No further consistency determination for the permitted work is required from the Department.

The ANs do not provide enough information to distinguish between the work covered under the permit and the extent of additional work. However, we contacted Ralph Mervine (DOT-Miami) who made the following clarifying statements:

- the new westbound bridge, which was permitted for 3 lanes at a width of 66 ft. 9 in., is being built for 4 lanes at a width which is 4 ft. greater than permitted;
- piling clusters are located at the station numbers indicated in the permit, but additional pilings are required at each cluster;
- no fill, in waters of the State, will be required beyond that which is existing or permitted; and
- the "marginal quality marshes situated within the existing median" are not connected to waters of the State.

Based on this additional information, we find that the proposed work, which is not yet covered under Permit No. 29/521174189, to be consistent with our authority in the Florida Coastal Management Program at this time. The proposed changes to the permitted bridge will require a permit modification. The Department of Transportation should immediately submit a permit modification request for this work. In order for this work to be done as a modification to the existing permit, the modification must be authorized by the Department and completed prior to the expiration of the permit, which is August 29, 1991. Modifications or new permits would be required for any additional fill to be placed in the Department's jurisdiction. Isolation of the median from waters of the State should, therefore, be confirmed prior to any construction in that area. The stormwater review, which will be necessary for the widening of the new bridge and the construction of 4 additional lanes in the causeways, should be addressed through a major permit modification.

For additional information concerning this letter or permit modification requirements please contact Martin Seeling, our Transportation Coordinator at (904) 488-0130 or (SC) 278-0130.

Sincerely,

Mickey D. Bryant, Administrator
Intergovernmental Coordination

cc: John Bossart
Bob Stetler
Martin Seeling
Ralph Mervine

STATE OF FLORIDA
DEPARTMENT OF NATURAL RESOURCES

Marjory Stoneman Douglas Building • 3900 Commonwealth Boulevard • Tallahassee, Florida 32399
Tom Gardner, Executive Director

September 26, 1990

Mr. Donald Skelton
Project Development and Environmental Engineer
Florida Department of Transportation
4950 W. Kennedy Blvd., Suite 500
Tampa, Florida 33609

Dear Mr. Skelton:

RE: Advance Notification
WPI: 7147848
SPN: 15190-1426
FACN: IR-275-7(218)22
I-275 from Roosevelt Blvd., to 4th Street North
Pinellas Co.

Thank you for your recent advance notification regarding the above captioned project. The Department of Natural Resources, Division of State Lands requires consent in the form of an easement for public right of way on sovereignty submerged lands pursuant to Chapter 18-21, F.A.C.

Upon receipt of the Joint DER/ACOE application for this project, our Title and Lands Record Section will identify any activity occurring on state-owned lands. A Completeness summary will be sent to you requesting any additional information required to complete your file.

If you have any questions, please feel free to contact me at the State Lands West Central Florida District Office, 8402 Laurel Fair Circle, Suite 212, Tampa, Florida 33610-7364. (813) 622-7634.

Sincerely,

William M. Torres, Planning Manager
DSL West Central Florida District Office

WMT/er

STATE OF FLORIDA
DEPARTMENT OF NATURAL RESOURCES

Marjory Stoneman Douglas Building • 3900 Commonwealth Boulevard • Tallahassee, Florida 32399
Tom Gardner, Executive Director

July 24, 1990

Mr. David A. Twiddy, Jr., P.E.
Project Development & Environmental
Administrator
Florida Department of Transportation
4950 W. Kennedy Boulevard, Suite 500
Tampa, Florida 33609

Dear Mr. Twiddy:

RE: Advance Notification
I-275: Roosevelt Boulevard to 4th Street
Pinellas County

The subject property may affect lands title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund. Excerpts from the state lands inventory identifying these parcels are attached for your information. Any use of these lands or others identified during the more specific permitting process will require an easement pursuant to rule 18-2, Florida Administrative Code. Of particular concern are those lands comprising the Gateway Project. Gateway was purchased under the Conservation and Recreation Lands (CARL) Program and as such is designated for natural resource protection. Attached is a copy of the Incompatible Use Policy adopted by the Board of Trustees of the Internal Improvement Trust Fund on May 24, 1988. Any request for use of Gateway lands must comply with the policy.

It is unclear from the information provided with your advance notification whether any land outside of existing DOT right-of-way will be required. In the event additional land is needed, I will be happy to answer any questions you may have regarding our rule or policy. I may be reached at Suncom 278-2291 or (904) 488-2291.

Sincerely,

Tracy Peters

Tracy Peters, Planner IV
Bureau of Land Management Services
Division of State Lands

TP/ss
Attachments
cc: Mr. J.C. Kraft

State of Florida

Department of Natural Resources

Memorandum

July 20, 1990

TO: *Jack Woodard, Assistant Director*
Division of Resource Management

FROM: *Grant Gelhardt, Planner IV* GG
Office of Environmental Services
Division of State Lands

SUBJECT: *Consistency Review*

FILE NO.: *FL9007030008C*
FL9007030009C

APPLICANT: *Department of Transportation*

PROJECT: *Howard Frankland Bridge/I-275*

I have conducted a review of the information supplied by the applicant for the above mentioned project. The Board of Trustees of the Internal Improvement Trust Fund granted a perpetual easement (No. 21876) over the portion of the project located in Pinellas County to the State Road Department to be used for public road right-of-way purposes. It does not appear, at this time, that any state owned submerged or upland resource outside the easement area will be impacted. If the project traverses any sovereignty submerged lands outside the easement area an additional easements from the Board of Trustees of the Internal Improvement Trust Fund will be required. Any portion of the project that traverses sovereignty submerged lands should be designed to have minimal impacts to the submerged and wetland communities.

A portion of the project is also located in Hillsborough County. All sovereignty submerged lands in the county were conveyed to the Hillsborough County Port Authority by the legislature in 1945. Therefore, the Office of Environmental Services will not be commenting on this portion of the project.

If you have any questions please contact me at (904) 488-6242.

GG
Attachments:
cc: Bill Torres

Southwest Florida Water Management District

2379 Broad Street (U.S. 41 South) Brooksville, Florida 34609-6899
Phone (904) 796-7211 or 1-800-423-1476 SUNCOM 628-4150

July 25, 1990

Mr. David A. Twiddy, Jr., P.E.
Project Development and Environment Administrator
Florida Department of Transportation
4950 West Kennedy Boulevard, Suite 500
Tampa, Florida 33609

Subject: Advance Notification
I-275 : Roosevelt Boulevard to 4th Street, Pinellas County, Florida
Work Program Item Number: 7147848
State Project Number: 15190-1426
Federal Aid Project Number: IR-295-7(218)22

Dear Mr. Twiddy:

Thank you for the opportunity to respond to the Advance Notification document for the above referenced project. Although the District will reserve more detailed comments for the Permit Coordination Report and subsequent permitting process, the following general comments should be considered.

Aspects of water quality and quantity concerning the planned improvements to Interstate 275 should be evaluated in a surface water management permit application pursuant to Chapter 40D-4 and Chapter 40D-40 F.A.C.

Additionally, from the information submitted, it appears that the subject property contains wetlands as defined in Chapter 40D-4.021(10), F.A.C. Pursuant to Chapter 40D-4.051(2)(c), F.A.C., activities conducted in wetlands require a permit from this agency. Pursuant to Chapter 40D-4.301(1)(f), F.A.C., conditions for issuance of a surface water management permit include reasonable assurance that the proposed activity "will not cause adverse environmental impacts or adverse impacts to wetlands, fish and wildlife, or other natural resources". Please consult Chapters 40-4, 40D-40 F.A.C. and the District's "Basis of Review for Surface Water Management Permit Applications Within the Southwest Florida Water Management District" for assistance in the design of surface water management facilities. Should you need to obtain copies of these documents, please contact me at (813) 985-7481, extension 2006, and I will see that you get them.

Due to the location of the project within "Waters of the State" pursuant to Chapter 403 F.A.C., and within an area of Outstanding Florida Waters, the Florida Department of Environmental Regulation will be consulted concerning their jurisdiction.

Again, thank you for the opportunity to comment and please keep me informed of any future developments.

Sincerely,

John M. Emery
Environmental Scientist Supervisor
Tampa Permitting Department
Resource Regulation

JME:dc210
cc: Paul O'Neil

APPENDIX D--STRUCTURES INVENTORY AND APPRAISAL

90.7 SUFFICIENCY RATING (NOT DEF)

STRUCTURE INVENTORY AND APPRAISAL

12/14/89

IDENTIFICATION

(1)	STATE	FLORIDA
(2)	HIGHWAY DISTRICT	07
(3)	COUNTY 103 (4) CITY/TOWN	1900
(5)	INVENTORY ROUTE	1110027S0
(6)	FEATURE INTERSECTED ROOSVELT BLVD	0103 L
(7)	FACILITY CARRIED SR-93 (I-275)	
(8)	STRUCTURE NUMBER	150102
(9)	LOCATION I-275 AND SR-666	
(10)	VERT CLEARANCE	99 FT 99 IN
(11)	MILEPOINT	12.44
(12)	ROAD SECTION NO	1093
(13)	DEFENSE BRIDGE LETTER	P
(14)	DEFENSE MILEPOINT	1.94
(15)	DEFENSE SECTION LENGTH	9.2
(16)	LATITUDE 27D 52.5" (17) LONGITUDE 082D 39.5"	
(18)	PHYSICAL VULNERABILITY	2
(19)	BYPASS DETOUR LENGTH	01 MI
(20)	TOLL	ON FREE ROAD
(21)	CUSTODIAN	S H DEPT
(22)	OWNER	S H DEPT
(23)	FEDERAL-AID PROJECT NUMBER	I757460

CLASSIFICATION

(24)	HIGHWAY SYSTEM	INTERSTATE, URBAN
(25)	ADMINISTRATIVE	STATE
(26)	FUNCTIONAL CLASS	INTERSTATE URBAN

STRUCTURE DATA

(27)	YEAR BUILT	7000
(28)	LANES ON STR 02 UNDER	04
(29)	ADT ON STR	016230
(30)	YEAR OF ADT	1986
(31)	DESIGN LOAD	MS-20M
(32)	APP ROWY WOTH W/SHLD	48 FT
(33)	BRIDGE MEDIAN	OPEN
(34)	SKEW	00
(35)	STRUCTURE FLARED	NO
(36)	TRAFFIC SAFETY FTRS.	1111
(37)	HISTORICAL SIGNIFICANCE	5
(38)	NAV CONTROL	NO
(39)	NAV VERT CLEARANCE	000 FT
(40)	NAV HORIZ CLEARANCE	0000 FT
(41)	OPEN OR CLOSED	OPEN
(42)	TYPE SERVICE	HIGHWAY HWY W/WD PD
(43)	STRUCTURE TYPE MAIN	PRS CONC / STR/MD GR
(44)	STRUCTURE TYPE APP	OTHER / OTHER
(45)	NO OF SPANS MAIN	004
(46)	NO OF APPROACH SPANS	0000
(47)	TOTAL HORIZ CLEARANCE	40.0 FT
(48)	MAX SPAN LENGTH	0087 FT
(49)	STRUCTURE LENGTH	000247 FT
(50)	SIDEWALK LEFT 0.0 FT RIGHT	0.0 FT
(51)	BRIDGE RDWY WIDTH CURB TO CURB	40.0 FT
(52)	DECK WIDTH OUT TO OUT	42.3 FT
(53)	VERT CLEARANCE OVER DECK	99 FT 99 IN
(54)	MIN VERT UNDERCLEARANCE	15 FT 05 IN
(55)	MIN LAT UNDERCLEARANCE RIGHT	10.0 FT
(56)	MIN LAT UNDERCLEARANCE LEFT	17.4 FT
(57)	WEARING SURFACE	CONCRETE

CONDITION RATING

(58)	DECK	8
(59)	SUPERSTRUCTURE	8
(60)	SUBSTRUCTURE	8
(61)	CHANNEL & CHANNEL PROTECTION	N
(62)	CULVERT & RETAINING WALLS	N
(63)	ESTIMATED REMAINING LIFE	32 YRS
(64)	OPERATING RATING	253 HS 29T
(65)	APPROACH ROADWAY ALIGNMENT	8
(66)	INVENTORY RATING	244 HS 24T

APPRAISAL RATING

(67)	STRUCTURE CONDITION	6
(68)	DECK GEOMETRY	8
(69)	UNDERCLEARANCE VERTICAL & LATERAL	5
(70)	SAFE LOAD CAPACITY	6
(71)	WATERWAY ADEQUACY	N
(72)	APPROACH ROADWAY ALIGNMENT	8

PROPOSED IMPROVEMENTS

(73)	YEAR NEEDED	1997
(74)	TYPE OF SERVICE	0
(75)	TYPE OF WORK	301
(76)	IMPROVEMENT LENGTH	000000 FT
(77)	DESIGN LOADING	UNKWN
(78)	ROADWAY WIDTH	0000 FT
(79)	NUMBER OF LANES	00
(80)	ADT 000000 (81) YEAR	1900
(82)	PROPOSED RDWY IMPROVEMENT YEAR	1900
(83)	APPROACH IMPROVEMENT	NOT APP
(84)	COST OF IMPROVEMENTS	$196,000
(85)	P E COST	$0
(86)	DEMOLITION COST	$0
(87)	SUBSTRUCTURE COST	$0
(88)	SUPERSTRUCTURE COST	$0
(89)		
(90)	DATE OF LAST INSPECTION	09/14/88

STRUCTURE INVENTORY AND APPRAISAL

12/14/8

89.9 SUFFICIENCY RATING (NOT DEF)

IDENTIFICATION

(1) STATE: FLORIDA
(2) HIGHWAY DISTRICT: 07
(3) COUNTY: 103 (4) CITY/TOWN: 1900
(5) INVENTORY ROUTE: 1 1 002750
(6) FEATURE INTERSECTED: ROOSEVELT BLVD 0102 R
(7) FACILITY CARRIED: SR-93 I-275
(8) STRUCTURE NUMBER: 150103
(9) LOCATION: I-275 AND SR-686
(10) VERT CLEARANCE: 99 FT 99 IN
(11) MILEPOINT: 13.44
(12) ROAD SECTION NO: 1090
(13) DEFICIENCY ALPHA LETTER:
(14) DEFICIENCY MILEPOINT: 1.34
(15) DEFICIENCY SECTION LENGTH: 9.6
(16) LATITUDE 27D 52.5M (17) LONGITUDE 082D 39.8M
(18) PHYSICAL VULNERABILITY: 4
(19) BYPASS DETOUR LENGTH: 01 MI
(20) TOLL: ON FREE ROAD
(21) CUSTODIAN: 3 H DEPT
(22) OWNER: 3 H DEPT
(23) FEDERAL-AID PROJECT NUMBER: 1757400

CLASSIFICATION

(24) HIGHWAY SYSTEM: INTERSTATE, URBAN
(25) ADMINISTRATIVE: STATE
(26) FUNCTIONAL CLASS: INTERSTATE URBAN

STRUCTURE DATA

(27) YEAR BUILT: 7000
(28) LANES ON STR 02 UNDER: 4
(29) ADT ON STR: 025431
(30) YEAR OF ADT: 1976
(31) DESIGN LOAD: MS-20M
(32) APP ROAD WIDTH W/SHLD: 48 FT
(33) BRIDGE MEDIAN: OPEN
(34) SKEW: 00
(35) STRUCTURE FLARED: NO
(36) TRAFFIC SAFETY FTRS.: 1111
(37) HISTORICAL SIGNIFICANCE: 5
(38) NAV CONTROL: NO
(39) NAV VERT CLEARANCE: 000 FT
(40) NAV HORIZ CLEARANCE: 0000 FT
(41) OPEN OR CLOSED: OPEN
(42) TYPE SERVICE: HIGHWAY HWY W/AD PD
(43) STRUCTURE TYPE MAIN: PRS CONC / STR/MS PR
(44) STRUCTURE TYPE APP: OTHER / OTHER
(45) NO OF SPANS MAIN: 004
(46) NO OF APPROACH SPANS: 000
(47) TOTAL HORIZ CLEARANCE: 040.0 FT
(48) MAX SPAN LENGTH: 00047 FT
(49) STRUCTURE LENGTH: 000247 FT
(50) SIDEWALK: LEFT 0.0 FT RIGHT 0.0 FT
(51) BRIDGE RDWY WIDTH CURB TO CURB: 40.0 FT
(52) DECK WIDTH OUT TO OUT: 42.3 FT
(53) VERT CLEARANCE OVER DECK: 99 FT 99 IN
(54) MIN VERT UNDERCLEARANCE: 16 FT 10 IN
(55) MIN LAT UNDERCLEARANCE RIGHT: 30.0 FT
(56) MIN LAT UNDERCLEARANCE LEFT: 17.4 FT
(57) WEARING SURFACE: CONCRETE

CONDITION RATING

(58) DECK:
(59) SUPERSTRUCTURE:
(60) SUBSTRUCTURE:
(61) CHANNEL & CHANNEL PROTECTION:
(62) CULVERT & RETAINING WALLS:
(63) ESTIMATED REMAINING LIFE: 32 YRS
(64) OPERATING RATING: 257 MS 32T
(65) APPROACH ROADWAY ALIGNMENT:
(66) INVENTORY RATING: 248 MS EST

PROPOSED IMPROVEMENTS

(70) YEAR PLANNED: 1997
(71) TYPE OF SERVICE: 0
(72) TYPE OF WORK: 301
(73) LENGTH OF STRUCTURE: 001000 FT
(74) DESIGN LOADING: UNKN
(75) ROADWAY WIDTH: 0000 FT
(76) NUMBER OF LANES: 00
(77) ADT: 000000 (78) YEAR: 19
(79) PROPOSED WORK IMPROVEMENT YEAR: 19
(80) APPROACH IMPROVEMENT: NOT APP

APPRAISAL RATING

(67) STRUCTURE CONDITION:
(68) DECK GEOMETRY:
(69) UNDER CLEARANCE VERTICAL & LATERAL:
(70) LOAD CAPACITY:
(71) WATERWAY ADEQUACY:
(72) APPROACH ROADWAY ALIGNMENT:

(74) COST OF IMPROVEMENTS: $1,005,00
(75) P E COST:
(76) DEMOLITION COST:
(77) SUBSTRUCTURE COST:
(78) SUPERSTRUCTURE COST:
(79)
(90) DATE OF LAST INSPECTION: 09/14/8

STRUCTURE INVENTORY AND APPRAISAL

12/14/89

99.0 SUFFICIENCY RATING (NOT DEF)

IDENTIFICATION

(1) STATE: FLORIDA
(2) HIGHWAY DISTRICT: 07
(3) COUNTY: 103 (4) CITY/TOWN: 1900
(5) INVENTORY ROUTE: 1 1 7002750
(6) FEATURE INTERSECTED: SR-686/ROOSEVELT BLVD. S
(7) FACILITY CARRIED: I-275 NB OFF RAMP
(8) STRUCTURE NUMBER: 150075
(9) LOCATION: I-275/SR-686 INTERCHANGE
(10) VERT CLEARANCE: 99 FT 99 IN
(11) MILEPOINT: 0.44
(12) ROAD SECTION ID: 00000
(13) DESIGNATED SUFFIX LETTER:
(14) DEPENDENT MILEPOINT: 0.00
(15) DEPENDENT SECTION LENGTH: 0.0
(16) LATITUDE 000 2.0M (17) LONGITUDE 000 10.0M
(18) PHYSICAL VULNERABILITY:
(19) BYPASS DETOUR LENGTH: 00 41
(21) TOLL: ON FREE ROAD
(21) CUST. DIA.: S.H. DEPT
(22) OWNER: S.H. DEPT
(23) FEDERAL-AID PROJECT NUMBER: 1757450

CLASSIFICATION

(24) HIGHWAY SYSTEM: INTERSTATE, URBAN
(25) ADMINISTRATIVE: STATE
(26) FUNCTIONAL CLASS: INTERSTATE URBAN

STRUCTURE DATA

(27) YEAR BUILT: 7000
(28) LANES ON STR 02 UNDER: 04
(29) ADT ON STR: 007500
(30) YEAR OF ADT: 1986
(31) DESIGN LOAD: MS-18+V
(32) APP ROAY WIDTH W/SHLD: 42 FT
(33) BRIDGE MEDIAN: NONE
(34) SKEW: 99
(35) STRUCTURE FLARED: NO
(36) TRAFFIC SAFETY FTRS.: 1111
(37) HISTORICAL SIGNIFICANCE: 5
(38) NAV CONTROL: NO
(39) NAV VERT CLEARANCE: 000 FT
(40) NAV HORIZ CLEARANCE: 0000 FT
(41) OPEN OR CLOSED: OPEN
(42) TYPE SERVICE: HIGHWAY HWY W/RD RD
(43) STRUCTURE TYPE MAIN: PRS CONC / STR/ND GR
(44) STRUCTURE TYPE APP: OTHER / OTHER
(45) NO OF SPANS MAIN: 004
(46) NO OF APPROACH SPANS: 0000
(47) TOTAL HORIZ CLEARANCE: 40.0 FT
(48) MAX SPAN LENGTH: 0059 FT
(49) STRUCTURE LENGTH: 000293 FT
(50) SIDEWALK: LEFT 0.0 FT RIGHT 0.0 FT
(51) BRIDGE RDWY WIDTH CURB TO CURB: 40.0 FT
(52) ROAD WIDTH OUT TO OUT: 42.4 FT
(53) VERT CLEARANCE OVER DECK: 13 FT 11 IN
(54) MIN VERT UNDERCLEARANCE: 15 FT 03 IN
(55) MIN LAT UNDERCLEARANCE RIGHT: 30.4 FT
(56) MIN LAT UNDERCLEARANCE LEFT: 16.7 FT
(57) WEARING SURFACE: CONCRETE

CONDITION RATING

(58) DECK: 6
(59) SUPERSTRUCTURE: 6
(60) SUBSTRUCTURE: 6
(61) CHANNEL & CHANNEL PROTECTION: N
(62) CULVERT & RETAINING WALLS: N
(63) APPROX WATER RETAINING LIFE: 32 YRS
(64) UNDERCLEAR RATING: 253 HS 29T
(65) APPROACH ROADWAY ALIGNMENT: 9
(66) INVENTORY RATING: 240 HS 22T

PROPOSED IMPROVEMENTS

(73) YEAR IMPROVED: 1997
(74) TYPE OF SERVICE: U
(75) TYPE OF WORK: 331
(76) IMPROVEMENT LENGTH: 000000 FT
(77) DESIG. LOADING: 0000 KIPS
(78) ROADWAY WIDTH: 0000 FT
(79) NUMBER OF LANES: 00
(80) ADT: 000000 (81) YEAR: 1900
(82) PROPOSED RDWY IMPROVMT YEAR: 1900
(83) APPROACH IMPROVEMENT: NOT APP

APPRAISAL RATING

(67) STRUCTURE CONDITION: 5
(68) DECK GEOMETRY: 3
(69) UNDERCLEARANCE VERTICAL & LATERAL: 5
(70) SAFE LOAD CAPACITY: 6
(71) WATERWAY ADEQUACY: N
(72) APPROACH ROADWAY ALIGNMENT: 7

(84) COST OF IMPROVEMENTS: $1587000
(85) P.E. COST: 00
(86) DEMOLITION COST: 00
(87) SUBSTRUCTURE COST: 00
(88) SUPERSTRUCTURE COST: 00
(89)
(90) DATE OF LAST INSPECTION: 04/28/88

STRUCTURE INVENTORY AND APPRAISAL

100.0 SUFFICIENCY RATING (NOT DEF) — 12/14/89

IDENTIFICATION

(1) STATE	FLORIDA
(2) HIGHWAY DISTRICT	07
(3) COUNTY 103 (4) CITY/TOWN	1900
(5) INVENTORY ROUTE	1 1700275C
(6) FEATURE INTERSECTED I-275/SR-93	S
(7) FACILITY CARRIED RAMP 'A'	
(8) STRUCTURE NUMBER	150104
(9) LOCATION I-275 AT SR-565	
(10) VERT CLEARANCE	99 FT 99 IN
(11) MILEPOINT	0.54
(12) ROAD SECTION NO	00000
(13) DEFENSE BRIDGE LETTER	
(14) DEFENSE MILEPOINT	0.00
(15) DEFENSE SECTION LENGTH	0.0
(16) LATITUDE DDD MM.M (17) LONGITUDE DDDD MM.M	0.0M
(18) PHYSICAL VULNERABILITY	2
(19) BYPASS DETOUR LENGTH	00 MI
(20) TOLL	ON FREE ROAD
(21) CUSTODIAN	S H DEPT
(22) OWNER	S H DEPT
(23) FEDERAL-AID PROJECT NUMBER	I75743C

CLASSIFICATION

(24) HIGHWAY SYSTEM	INTERSTATE, URBAN STATE
(25) ADMINISTRATIVE	
(26) FUNCTIONAL CLASS	INTERSTATE URBAN

STRUCTURE DATA

(27) YEAR BUILT	7000
(28) LANES ON STR 02 UNDER	05
(29) ADT ON STR	007500
(30) YEAR OF ADT	1988
(31) DESIGN LOAD	HS-20M
(32) APP ROWY WDTH W/SHLD	42 FT
(33) BRIDGE MEDIAN	NONE
(34) SKEW	30
(35) STRUCTURE FLARED	NO
(36) TRAFFIC SAFETY FTRS.	1111
(37) HISTORICAL SIGNIFICANCE	5
(38) NAV CONTROL	NO
(39) NAV VERT CLEARANCE	000 FT
(40) NAV HORIZ CLEARANCE	0000 FT
(41) OPEN OR CLOSED	OPEN
(42) TYPE SERVICE	HIGHWAY HWY W/HD PD
(43) STRUCTURE TYPE MAIN	PRS-CONC / STR/MB OR
(44) STRUCTURE TYPE APP	OTHER / OTHER
(45) NO OF SPANS MAIN	006
(46) NO OF APPROACH SPANS	0000
(47) TOTAL HORIZ CLEARANCE	40.3 FT
(48) MAX SPAN LENGTH	0095 FT
(49) STRUCTURE LENGTH	000479 FT
(50) SIDEWALK LEFT 0.0 FT RIGHT	0.0 FT
(51) BRIDGE RDWY WIDTH CURB TO CURB	40.0 FT
(52) DECK WIDTH OUT TO OUT	42.3 FT
(53) VERT CLEARANCE OVER DECK	99 FT 99 IN
(54) MIN VERT UNDERCLEARANCE	16 FT 03 IN
(55) MIN LAT UNDERCLEARANCE RIGHT	13.7 FT
(56) MIN LAT UNDERCLEARANCE LEFT	30.0 FT
(57) WEARING SURFACE	CONCRETE

CONDITION RATING

(58) DECK	7
(59) SUPERSTRUCTURE	6
(60) SUBSTRUCTURE	6
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERT & RETAINING WALLS	N
(63) ESTIMATED REMAINING LIFE	32 YRS
(64) OPERATING RATING	245 HS 25T
(65) APPROACH ROADWAY ALIGNMENT	6
(66) INVENTORY RATING	237 HS 21T

APPRAISAL RATING

(67) STRUCTURE CONDITION	7
(68) DECK GEOMETRY	9
(69) UNDERCLEARANCE VERTICAL & LATERAL	7
(70) SAFE LOAD CAPACITY	7
(71) WATERWAY ADEQUACY	N
(72) APPROACH ROADWAY ALIGNMENT	7

PROPOSED IMPROVEMENTS

(73) YEAR NEEDED	1997
(74) TYPE OF SERVICE	0
(75) TYPE OF WORK	301
(76) IMPROVEMENT LENGTH	000000 FT
(77) DESIGN LOADING	UNKWN
(78) ROADWAY WIDTH	0000 FT
(79) NUMBER OF LANES	00
(80) ADT 000000 (81) YEAR	1900
(82) PROPOSED RDWY IMPROVEMENT YEAR	1900
(83) APPROACH IMPROVEMENT	NOT APP
(84) COST OF IMPROVEMENTS	$379,000
(85) P E COST	$0
(86) DEMOLITION COST	$0
(87) SUBSTRUCTURE COST	$0
(88) SUPERSTRUCTURE COST	$0
(89)	
(90) DATE OF LAST INSPECTION	09/14/88

STRUCTURE INVENTORY AND APPRAISAL

12/14/89

****** SUFFICIENCY RATING

IDENTIFICATION		STRUCTURE DATA		CLASSIFICATION	
(1) STATE	FLORIDA	(24) HIGHWAY SYSTEM	INTERSTATE, URBAN		
(2) HIGHWAY DISTRICT	07	(25) ADMINISTRATIVE			
(3) COUNTY 103 (4) CITY/TOWN	1900	(26) FUNCTIONAL CLASS			
(5) INVENTORY ROUTE	211002750				
(6) FEATURE INTERSECTED RAMP "A"					
(7) FACILITY CARRIED	I-275/SR-93				
(8) STRUCTURE NUMBER	150104	(27) YEAR BUILT	2000	(42) TYPE SERVICE	HIGHWAY HWY W/NO PD
(9) LOCATION	I-275 AND SR-535 ENTER	(28) LANES ON STR 02 UNDER	05	(43) STRUCTURE TYPE MAIN	PRS CONC / STR/MB GR
(10) VERT CLEARANCE	15 FT 03 IN	(29) ADT ON STR	039491	(44) STRUCTURE TYPE APP	OTHER /
(11) MILEPOINT	12.57	(30) YEAR OF ADT	19	(45) NO OF SPANS MAIN	
(12) ROAD SECTION NO	1090	(31) DESIGN LOAD		(46) NO OF APPROACH SPANS	
(13) DEFENSE BRIDGE LETTER		(32) APP ROAY WIDTH W/SHLD	FT	(47) TOTAL HORIZ CLEARANCE	66.3 FT
(14) DEFENSE MILEPOINT	2.06	(33) BRIDGE MEDIAN		(48) MAX SPAN LENGTH	0096 FT
(15) DEFENSE SECTION LENGTH	9.2	(34) SKEW		(49) STRUCTURE LENGTH	000479 FT
(16) LATITUDE 27D 48.3" (17) LONGITUDE 082D 39.6"		(35) STRUCTURE FLARED		(50) SIDEWALK LEFT	FT RIGHT FT
(18) PHYSICAL VULNERABILITY	2	(36) TRAFFIC SAFETY FTRS.		(51) BRIDGE ROAY WIDTH CURB TO CURB	FT
(19) BYPASS DETOUR LENGTH	00 MI	(37) HISTORICAL SIGNIFICANCE		(52) DECK WIDTH OUT TO OUT	FT
(20) TOLL	ON FREE ROAD	(38) NAV CONTROL		(53) VERT CLEARANCE OVER DECK	FT IN
(21) CUSTODIAN		(39) NAV VERT CLEARANCE	FT	(54) MIN VERT UNDERCLEARANCE	FT IN
(22) OWNER		(40) NAV HORIZ CLEARANCE	FT	(55) MIN LAT UNDERCLEARANCE RIGHT	FT
(23) FEDERAL-AID PROJECT NUMBER		(41) OPEN OR CLOSED		(56) MIN LAT UNDERCLEARANCE LEFT	FT
				(57) WEARING SURFACE	

CONDITION RATING		PROPOSED IMPROVEMENTS	
(58) DECK		(73) YEAR NEEDED	19
(59) SUPERSTRUCTURE		(74) TYPE OF SERVICE	
(60) SUBSTRUCTURE		(75) TYPE OF WORK	
(61) CHANNEL & CHANNEL PROTECTION		(76) IMPROVEMENT LENGTH	FT
(62) CULVERT & RETAINING WALLS		(77) DESIGN LOADING	
(63) ESTIMATED REMAINING LIFE	YRS	(78) ROADWAY WIDTH	FT
(64) OPERATING RATING	T	(79) NUMBER OF LANES	
(65) APPROACH ROADWAY ALIGNMENT		(80) ADT (81) YEAR	19
(66) INVENTORY RATING	T	(82) PROPOSED BDGY IMPROVEMENT YEAR	19
		(83) APPROACH IMPROVEMENT	

APPRAISAL RATING			
(67) STRUCTURE CONDITION		(84) COST OF IMPROVEMENTS	$0
(68) DECK GEOMETRY		(85) P E COST	$0
(69) UNDERCLEARANCE VERTICAL & LATERAL		(86) DEMOLITION COST	$0
(70) SAFE LOAD CAPACITY		(87) SUBSTRUCTURE COST	$0
(71) WATERWAY ADEQUACY		(88) SUPERSTRUCTURE COST	$0
(72) APPROACH ROADWAY ALIGNMENT		(89)	
		(90) DATE OF LAST INSPECTION	/ /

STRUCTURE INVENTORY AND APPRAISAL

03/14/90

74.2 SUFFICIENCY RATING (NOT USED)

IDENTIFICATION

(1) STATE: FLORIDA
(2) HIGHWAY DISTRICT: 07
(3) COUNTY (ODOT): 000 (4) CITY/TOWN:
(5) INVENTORY ROUTE: 1 10053300
(9) FEATURE INTERSECTED: I-275 SOUTHBOUND
(7) FACILITY CARRIED: SR-583/ULMERTON RD
(8) STRUCTURE NUMBER: 150003
(9) LOCATION: 2.3 MI NORTH OF 71+536
(10) VERT CLEARANCE: 99 T 99 99
(11) MILEPOINT: 13.10
(12) ROAD SECTION NO: 3897
(13) DEFENSE HIGHWAY: 0
(14) DEFENSE MILEPOINT: 4.50
(15) DEFENSE SECTION LENGTH: 4.9
(16) LATITUDE 27D 54.0M (17) LONGITUDE 082D 39.0M
(18) PHYSICAL VULNERABILITY: 2
(19) BYPASS DETOUR LENGTH: 04 MI
(20) TOLL: ON FREE ROAD
(21) CUSTODIAN: 1 DEPT
(22) [illegible]: 4 DEPT
(23) FEDERAL AID PROJECT NUMBER: FAI4195

CLASSIFICATION

(24) HIGHWAY SYSTEM: FA PRIMARY, URBAN
(25) ADMINISTRATIVE: STATE
(26) FUNCTIONAL CLASS: MINOR ARTERIAL URBAN

STRUCTURE DATA

(27) YEAR BUILT: 5900
(28) LANES ON STR 02 UNDER: 02
(29) ADT ON STR: 0165259
(30) YEAR OF ADT: 1988
(31) DESIGN LOAD: M3-24
(32) APPROACH WIDTH W/SHLD: 40 FT
(33) BRIDGE MEDIAN: NONE
(34) SKEW: 48
(35) STRUCTURE FLARED: NO
(36) TRAFFIC SAFETY FTRS.: 0111
(37) HISTORICAL SIGNIFICANCE: 5
(38) NAV CONTROL: NO
(39) NAV VERT CLEARANCE: 000 FT
(40) NAV HORIZ CLEARANCE: 0000 FT
(41) OPEN OR CLOSED: OPEN
(42) TYPE SERVICE: HIGHWAY HWY W/NO PD
(42) STRUCTURE TYPE MAIN: PRS CONC / STL/NO GR
(44) STRUCTURE TYPE APP: OTHER / OTHER
(45) NO OF SPANS MAIN: 003
(46) NO OF APPROACH SPANS: 0000
(47) TOTAL HORIZ CLEARANCE: 28.0 FT
(48) MAX SPAN LENGTH: 107.2 FT
(49) STRUCTURE LENGTH: 000120 FT
(50) SIDEWALK: LEFT 2.0 FT RIGHT 2.0 FT
(51) BRIDGE RDWY WIDTH CURB TO CURB: 28.0 FT
(52) DECK WIDTH OUT TO OUT: 34.1 FT
(53) VERT CLEARANCE OVER DECK: 99 FT 99 IN
(54) MIN VERT UNDERCLEARANCE: 15 FT 02 IN
(55) MIN LAT UNDERCLEARANCE RIGHT: 9.1 FT
(56) MIN LAT UNDERCLEARANCE LEFT: 15.1 FT
(57) WEARING SURFACE: CONCRETE

CONDITION RATING

(58) DECK: 7
(59) SUPERSTRUCTURE: 7
(60) SUBSTRUCTURE: 8
(61) CHANNEL & CHANNEL PROTECTION: N
(62) CULVERT & RETAINING WALLS:
(63) ESTIMATED REMAINING LIFE: 21 YRS
(64) OPERATING RATING: 264 MS 36T
(65) APPROACH ROADWAY ALIGNMENT: 8
(66) INVENTORY RATING: 257 MS 32T

APPRAISAL RATING

(67) STRUCTURE CONDITION: 7
(68) DECK GEOMETRY: 4
(69) UNDERCLEARANCE VERTICAL & LATERAL: N
(70) SAFE LOAD CAPACITY: 5
(71) WATERWAY ADEQUACY: N
(72) APPROACH ROADWAY ALIGNMENT: 8

PROPOSED IMPROVEMENTS

(73) YEAR NEEDED: 1997
(74) TYPE OF SERVICE: 0
(75) TYPE OF WORK: 331
(76) IMPROVEMENT LENGTH: 000000 FT
(77) DESIGN LOADING: UNKWN
(78) ROADWAY WIDTH: 0000 FT
(79) NUMBER OF LANES: .00
(80) ADT: 000000 (81) YEAR: 1900
(82) PROPOSED RDWY IMPROVEMENT YEAR: 1900
(83) APPROACH IMPROVEMENT: NOT APP
(84) COST OF IMPROVEMENTS: $1,500,000
(85) P E COST: $0
(86) DEMOLITION COST: $0
(87) SUBSTRUCTURE COST: $0
(88) SUPERSTRUCTURE COST: $0
(89)
(90) DATE OF LAST INSPECTION: 02/12/90

STRUCTURE INVENTORY AND APPRAISAL

84.2 SUFFICIENCY RATING (NOT DEF)

02/21/90

IDENTIFICATION

(1) STATE: FLORIDA
(2) HIGHWAY DISTRICT: 07
(3) COUNTY 103 (4) CITY/TOWN: 0000
(5) INVENTORY ROUTE: 1 3 1 0 0 6 8 8 0
(6) FEATURE INTERSECTED I-275 S
(7) FACILITY CARRIED: C-688 / 9TH ST N
(8) STRUCTURE NUMBER: 150004
(9) LOCATION: 9TH ST. NO. EXIT
(10) VERT CLEARANCE: 99 FT 99 IN
(11) MILEPOINT: 13.49
(12) ROAD SECTION NO: 00000
(13) DEFENSE BRIDGE LETTER
(14) DEFENSE MILEPOINT: 0.00
(15) DEFENSE SECTION LENGTH: 0.0
(16) LATITUDE 00D 0.0M (17) LONGITUDE 000 0.0M
(18) PHYSICAL VULNERABILITY: 2
(19) BYPASS DETOUR LENGTH: 02 MI
(20) TOLL: ON FREE ROAD
(21) CUSTODIAN: S H DEPT
(22) OWNER: S H DEPT
(23) FEDERAL-AID PROJECT NUMBER: FA14195

CLASSIFICATION

(24) HIGHWAY SYSTEM: FA URBAN
(25) ADMINISTRATIVE: STATE
(26) FUNCTIONAL CLASS: MINOR ARTERIAL URBAN

STRUCTURE DATA

(27) YEAR BUILT: 5900
(28) LANES ON STR 02 UNDER: 02
(29) ADT ON STR: 001500
(30) YEAR OF ADT: 1990
(31) DESIGN LOAD: HS-20M
(32) APP RDWY WDTH W/SHLD: 40 FT
(33) BRIDGE MEDIAN: NONE
(34) SKEW: 48
(35) STRUCTURE FLARED: NO
(36) TRAFFIC SAFETY FTRS.: 0111
(37) HISTORICAL SIGNIFICANCE: 5
(38) NAV CONTROL: NO
(39) NAV VERT CLEARANCE: 000 FT
(40) NAV HORIZ CLEARANCE: 0000 FT
(41) OPEN OR CLOSED: OPEN
(42) TYPE SERVICE: HIGHWAY HWY W/WD PD
(43) STRUCTURE TYPE MAIN: PRS CONC / STR/MB GR
(44) STRUCTURE TYPE APP: OTHER / OTHER
(45) NO OF SPANS MAIN: 003
(46) NO OF APPROACH SPANS: 0000
(47) TOTAL HORIZ CLEARANCE: 28.0 FT
(48) MAX SPAN LENGTH: 0072 FT
(49) STRUCTURE LENGTH: 000197 FT
(50) SIDEWALK LEFT 2.0 FT RIGHT 2.0 FT
(51) BRIDGE RDWY WIDTH CURB TO CURB: 28.0 FT
(52) DECK WIDTH OUT TO OUT: 34.1 FT
(53) VERT CLEARANCE OVER DECK: 99 FT 99 IN
(54) MIN VERT UNDERCLEARANCE: 15 FT 01 IN
(55) MIN LAT UNDERCLEARANCE RIGHT: 10.3 FT
(56) MIN LAT UNDERCLEARANCE LEFT: 10.7 FT
(57) WEARING SURFACE: CONCRETE

CONDITION RATING

(58) DECK: 7
(59) SUPERSTRUCTURE: 7
(60) SUBSTRUCTURE: 7
(61) CHANNEL & CHANNEL PROTECTION: N
(62) CULVERT & RETAINING WALLS: N
(63) ESTIMATED REMAINING LIFE: 21 YRS
(64) OPERATING RATING: 254 HS 30T
(65) APPROACH ROADWAY ALIGNMENT: 8
(66) INVENTORY RATING: 248 HS 27T

APPRAISAL RATING

(67) STRUCTURE CONDITION: 7
(68) DECK GEOMETRY: 4
(69) UNDERCLEARANCE VERTICAL & LATERAL: 5
(70) SAFE LOAD CAPACITY: 9
(71) WATERWAY ADEQUACY: N
(72) APPROACH ROADWAY ALIGNMENT: 8

PROPOSED IMPROVEMENTS

(73) YEAR NEEDED: 1997
(74) TYPE OF SERVICE: 0
(75) TYPE OF WORK: 301
(76) IMPROVEMENT LENGTH: 000000 FT
(77) DESIGN LOADING: UNKWN
(78) ROADWAY WIDTH: 0000 FT
(79) NUMBER OF LANES: 00
(80) ADT 000000 (81) YEAR: 1900
(82) PROPOSED RDWY IMPROVEMENT YEAR: 1900
(83) APPROACH IMPROVEMENT: NOT APP
(84) COST OF IMPROVEMENTS: $156,000
(85) P E COST: $0
(86) DEMOLITION COST: $0
(87) SUBSTRUCTURE COST: $0
(88) SUPERSTRUCTURE COST: $0
(89)
(90) DATE OF LAST INSPECTION: 02/12/90

STRUCTURE INVENTORY AND APPRAISAL

02/21/90

81.0 SUFFICIENCY RATING (NOT DEF)

IDENTIFICATION

(1) STATE	FLORIDA
(2) HIGHWAY DISTRICT	07
(3) COUNTY 103 (4) CITY/TOWN	0000
(5) INVENTORY ROUTE	1 3100687 0
(5) FEATURE INTERSECTED I-275/SR-93	4TH ST NORTH SR687
(7) FACILITY CARRIED	150015
(8) STRUCTURE NUMBER	
(9) LOCATION	2.4 MILES NO GANDY BLVD
(10) VERT CLEARANCE	99 FT 99 IN
(11) MILEPOINT	5.77
(12) ROAD SECTION NO	00000
(13) DEFENSE BRIDGE LETTER	
(14) DEFENSE MILEPOINT	0.00
(15) DEFENSE SECTION LENGTH	0.0
(16) LATITUDE 000 0.0" (17) LONGITUDE 0000	0.0"
(18) PHYSICAL VULNERABILITY	2
(19) BYPASS,DETOUR LENGTH	02 MI
(20) TOLL	ON FREE ROAD
(21) CUSTODIAN	S H DEPT
(22) OWNER	S H DEPT
(23) FEDERAL-AID PROJECT NUMBER	I41(9)5

CLASSIFICATION

(24) HIGHWAY SYSTEM	FA PRIMARY, URBAN
(25) ADMINISTRATIVE	STATE
(26) FUNCTIONAL CLASS	MINOR ARTERIAL URBAN

STRUCTURE DATA

(27) YEAR BUILT	5900
(28) LANES ON STR 02 UNDER	04
(29) ADT ON STR	005433
(30) YEAR OF ADT	1988
(31) DESIGN LOAD	HS-20M
(32) APP RDWY WDTH W/SHLD	40 FT
(33) BRIDGE MEDIAN	NONE
(34) SKEW	55
(35) STRUCTURE FLARED	NO
(36) TRAFFIC SAFETY FTRS.	0111
(37) HISTORICAL SIGNIFICANCE	5
(38) NAV CONTROL	NO
(39) NAV VERT CLEARANCE	000 FT
(40) NAV HORIZ CLEARANCE	0000 FT
(41) OPEN OR CLOSED	OPEN
(42) TYPE SERVICE	HIGHWAY HWY W/WD P
(43) STRUCTURE TYPE MAIN	PRS CONC / STR/MB GI
(44) STRUCTURE TYPE APP	OTHER / OTHER
(45) NO OF SPANS MAIN	00
(46) NO OF APPROACH SPANS	000
(47) TOTAL HORIZ CLEARANCE	28.0 FT
(48) MAX SPAN LENGTH	0081 FT
(49) STRUCTURE LENGTH	000306 FT
(50) SIDEWALK LEFT 2.0 FT	RIGHT 2.0 FT
(51) BRIDGE RDWY WIDTH CURB TO CURB	28.0 FT
(52) DECK WIDTH OUT TO OUT	34.1 FT
(53) VERT CLEARANCE OVER DECK	99 FT 99 IN
(54) MIN VERT UNDERCLEARANCE	15 FT 03 IN
(55) MIN LAT UNDERCLEARANCE RIGHT	9.3 FT
(56) MIN LAT UNDERCLEARANCE LEFT	6.3 FT
(57) WEARING SURFACE	CONCRETE

CONDITION RATING

(58) DECK	7
(59) SUPERSTRUCTURE	7
(60) SUBSTRUCTURE	8
(61) CHANNEL & CHANNEL PROTECTION	N
(62) CULVERT & RETAINING WALLS	N
(63) ESTIMATED REMAINING LIFE	21 YRS
(64) OPERATING RATING	260 HS 33T
(65) APPROACH ROADWAY ALIGNMENT	9
(66) INVENTORY RATING	251 HS 20T

APPRAISAL RATING

(67) STRUCTURE CONDITION	7
(68) DECK GEOMETRY	4
(69) UNDERCLEARANCE VERTICAL & LATERAL	5
(70) SAFE LOAD CAPACITY	9
(71) WATERWAY ADEQUACY	N
(72) APPROACH ROADWAY ALIGNMENT	8

PROPOSED IMPROVEMENTS

(73) YEAR NEEDED	1997
(74) TYPE OF SERVICE	0
(75) TYPE OF WORK	30
(76) IMPROVEMENT LENGTH	000000 FT
(77) DESIGN LOADING	UNKWN
(78) ROADWAY WIDTH	0000 FT
(79) NUMBER OF LANES	00
(80) ADT 000000 (81) YEAR	190
(82) PROPOSED ROWY IMPROVEMENT YEAR	190
(83) APPROACH IMPROVEMENT	NOT API
(84) COST OF IMPROVEMENTS	$242,00
(85) P E COST	$
(86) DEMOLITION COST	$
(87) SUBSTRUCTURE COST	$
(88) SUPERSTRUCTURE COST	$
(89)	
(90) DATE OF LAST INSPECTION	02/12/9

STRUCTURE INVENTORY AND APPRAISAL

03/13/90

7a.1 SUFFICIENCY RATING (NOT DEF)

IDENTIFICATION

(1) STATE	FLORIDA	
(2) HIGHWAY DISTRICT	07	
(3) COUNTY 103 (4) CITY/TOWN	0000	
(5) INVENTORY ROUTE	111002750	
(6) FEATURE INTERSECTED BIG ISLAND GAP	0106 L	
(7) FACILITY CARRIED	SR 93 OR I-275 NB	
(8) STRUCTURE NUMBER	150105	
(9) LOCATION	INTERSEC SR 686 AND I-275	
(10) VERT CLEARANCE	99 FT 99 IN	
(11) MILEPOINT	14.08	
(12) ROAD SECTION NO	4092	
(13) DEFENSE BRIDGE LETTER	P	
(14) DEFENSE MILEPOINT	0.13	
(15) DEFENSE SECTION LENGTH	4.2	
(16) LATITUDE 27D 54.0" (17) LONGITUDE 082D 38.0"	2	
(18) PHYSICAL VULNERABILITY		
(19) BYPASS DETOUR LENGTH	01 MI	
(20) TOLL	ON FREE ROAD	
(21) CUSTODIAN	S H DEPT	
(22) OWNER	S H DEPT	
(23) FEDERAL-AID PROJECT NUMBER	FA14195	

CLASSIFICATION

(24) HIGHWAY SYSTEM	INTERSTATE, URBAN
(25) ADMINISTRATIVE	STATE
(26) FUNCTIONAL CLASS	INTERSTATE URBAN

STRUCTURE DATA

(27) YEAR BUILT	5900
(28) LANES ON STR 02 UNDER	00
(29) ADT ON STR	042629
(30) YEAR OF ADT	1988
(31) DESIGN LOAD	HS-20M
(32) APP RDWY WIDTH W/SHLD	46 FT
(33) BRIDGE MEDIAN	NONE
(34) SKEW	00
(35) STRUCTURE FLARED	NO
(36) TRAFFIC SAFETY FTRS.	0111
(37) HISTORICAL SIGNIFICANCE	5
(38) NAV CONTROL	NO
(39) NAV VERT CLEARANCE	000 FT
(40) NAV HORIZ CLEARANCE	0000 FT
(41) OPEN OR CLOSED	OPEN

	HIGHWAY	WATERWAY
(42) TYPE SERVICE	PRS CONC / OTHER /	STR/MB GR OTHER
(43) STRUCTURE TYPE MAIN		
(44) STRUCTURE TYPE APP		
(45) NO OF SPANS MAIN		005
(46) NO OF APPROACH SPANS		0000
(47) TOTAL HORIZ CLEARANCE		32.0 FT
(48) MAX SPAN LENGTH		0049 FT
(49) STRUCTURE LENGTH		000240 FT
(50) SIDEWALK	LEFT 2.0 FT RIGHT	2.0 FT
(51) BRIDGE RDWY WIDTH CURB TO CURB		28.0 FT
(52) DECK WIDTH OUT TO OUT		34.3 FT
(53) VERT CLEARANCE OVER DECK		99 FT 99 IN
(54) MIN VERT UNDERCLEARANCE		00 FT 00 IN
(55) MIN LAT UNDERCLEARANCE RIGHT		99.9 FT
(56) MIN LAT UNDERCLEARANCE LEFT		0.0 FT
(57) WEARING SURFACE		CONCRETE

CONDITION RATING

(58) DECK	7
(59) SUPERSTRUCTURE	8
(60) SUBSTRUCTURE	8
(61) CHANNEL & CHANNEL PROTECTION	8
(62) CULVERT & RETAINING WALLS	N
(63) ESTIMATED REMAINING LIFE	21 YRS
(64) OPERATING RATING	262 HS 34T
(65) APPROACH ROADWAY ALIGNMENT	7
(66) INVENTORY RATING	255 HS 31T

PROPOSED IMPROVEMENTS

(73) YEAR NEEDED	1992
(74) TYPE OF SERVICE	0
(75) TYPE OF WORK	371
(76) IMPROVEMENT LENGTH	000000 FT
(77) DESIGN LOADING	UNKWN
(78) ROADWAY WIDTH	0000 FT
(79) NUMBER OF LANES	00
(80) ADT 000000 (81) YEAR	1900
(82) PROPOSED RDWY IMPROVEMENT YEAR	1900
(83) APPROACH IMPROVEMENT	NOT APP

APPRAISAL RATING

(67) STRUCTURE CONDITION	5
(68) DECK GEOMETRY	5
(69) UNDERCLEARANCE VERTICAL & LATERAL	N
(70) SAFE LOAD CAPACITY	9
(71) WATERWAY ADEQUACY	8
(72) APPROACH ROADWAY ALIGNMENT	8

(84) COST OF IMPROVEMENTS	$155,000
(85) P E COST	$0
(86) DEMOLITION COST	$0
(87) SUBSTRUCTURE COST	$0
(88) SUPERSTRUCTURE COST	$0
(89)	
(90) DATE OF LAST INSPECTION	02/12/90

STRUCTURE INVENTORY AND APPRAISAL

90.5 SUFFICIENCY RATING (NOT CEF) 05/22/90

IDENTIFICATION

(1) STATE FLORIDA
(2) HIGHWAY DISTRICT 07
(3) COUNTY 103 (4) CITY/TOWN 0000
(5) INVENTORY ROUTE 1111UC275J
(6) FEATURE INTERSECTED BIG ISLAND GAP C105 R
(7) FACILITY CARRIED SR 93 CR I-275 EB
(8) STRUCTURE NUMBER 150106
(9) LOCATION INTERSEC SR 686 AND I-275
(10) VERT CLEARANCE 99 FT 99 IN
(11) MILEPOINT 14.06
(12) ROAD SECTION NO 1092
(13) DEFENSE BRIDGE LETTER
(14) DEFENSE MILEPOINT 0.13
(15) DEFENSE SECTION LENGTH 4.2
(16) LATITUDE 27D 54.0M (17) LONGITUDE 082D 38.0M
(18) PHYSICAL VULNERABILITY 2
(19) BYPASS DETOUR LENGTH 02 MI
(20) TOLL ON FREE ROAD
(21) CUSTODIAN S H DEPT
(22) OWNER S H DEPT
(23) FEDERAL-AID PROJECT NUMBER FAI4195

CLASSIFICATION

(24) HIGHWAY SYSTEM INTERSTATE, RURAL
(25) ADMINISTRATIVE STATE
(26) FUNCTIONAL CLASS INTERSTATE RURAL

STRUCTURE DATA

(27) YEAR BUILT 5974
(28) LANES ON STR 02 UNDER 00
(29) ADT ON STR 042629
(30) YEAR OF ADT 1988
(31) DESIGN LOAD HS-20M
(32) APP ROWY WIDTH W/SHLD 46 FT
(33) BRIDGE MEDIAN NONE
(34) SKEW 00
(35) STRUCTURE FLARED NO
(36) TRAFFIC SAFETY FTRS. 0111
(37) HISTORICAL SIGNIFICANCE 5
(38) NAV CONTROL NO
(39) NAV VERT CLEARANCE 000 FT
(40) NAV HORIZ CLEARANCE 0000 FT
(41) OPEN OR CLOSED OPEN
(42) TYPE SERVICE HIGHWAY WATERWAY
(43) STRUCTURE TYPE MAIN PRS CONC / STR/MB GR
(44) STRUCTURE TYPE APP OTHER / OTHER
(45) NO OF SPANS MAIN 005
(46) NO OF APPROACH SPANS 0000
(47) TOTAL HORIZ CLEARANCE 44.0 FT
(48) MAX SPAN LENGTH 0048 FT
(49) STRUCTURE LENGTH 000240 FT
(50) SIDEWALK LEFT 0.0 FT RIGHT 2.0 FT
(51) BRIDGE RDWY WIDTH CURB TO CURB 44.0 FT
(52) DECK WIDTH OUT TO OUT 48.1 FT
(53) VERT CLEARANCE OVER DECK 99 FT 99 IN
(54) MIN VERT UNDERCLEARANCE 00 FT 00 IN
(55) MIN LAT UNDERCLEARANCE RIGHT 99.9 FT
(56) MIN LAT UNDERCLEARANCE LEFT 0.0 FT
(57) WEARING SURFACE CONCRETE

CONDITION RATING

(58) DECK 7
(59) SUPERSTRUCTURE 8
(60) SUBSTRUCTURE 7
(61) CHANNEL & CHANNEL PROTECTION 8
(62) CULVERT & RETAINING WALLS N
(63) ESTIMATED REMAINING LIFE 21 YRS
(64) OPERATING RATING 262 PS 34T
(65) APPROACH ROADWAY ALIGNMENT 8
(66) INVENTORY RATING 255 HS 31T

APPRAISAL RATING

(67) STRUCTURE CONDITION 7
(68) DECK GEOMETRY 5
(69) UNDERCLEARANCE VERTICAL & LATERAL N
(70) SAFE LOAD CAPACITY 9
(71) WATERWAY ADEQUACY 8
(72) APPROACH ROADWAY ALIGNMENT 8

PROPOSED IMPROVEMENTS

(73) YEAR NEEDED 1997
(74) TYPE OF SERVICE C
(75) TYPE OF WORK 201
(76) IMPROVEMENT LENGTH 000000 FT
(77) DESIGN LOADING LVRHA
(78) ROADWAY WIDTH 0000 FT
(79) NUMBER OF LANES 00
(80) ADT 000000 (81) YEAR 1900
(82) PROPOSED RDWY IMPROVEMENT YEAR 1900
(83) APPROACH IMPROVEMENT NOT APP
(84) COST OF IMPROVEMENTS $190,000
(85) P E COST $0
(86) DEMOLITION COST $0
(87) SUBSTRUCTURE COST $0
(88) SUPERSTRUCTURE COST $0
(89)
(90) DATE OF LAST INSPECTION 02/12/90

APPENDIX E--1985 HCM RAMP ANALYSES

****

FACILITY LOCATION.... I-275 @ ROOSEVLT BLVD. NB OFF-RAMP
ANALYST.............. RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS.................. 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR...................... .95
HIGHWAY DESIGN SPEED (mph)............ 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 3 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) TWO LANE RAMP.

	UPSTREAM RAMP *********	FREEWAY ********	ANALYSIS RAMP *********	DOWNSTREAM RAMP **********
VOLUME	N.A.	3690	1720	N.A.
% TRUCKS	N.A.	5	5	N.A.
RAMP TYPE	N.A.	N.A.	OFF	N.A.
DISTANCE	N.A.	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 50 % OF FREEWAY TRUCKS

RESULTS USING FIGURE I.5- 12

ITEM	VPH	Fhv	PCPH
V1	363	0.97	394
V(1+A)	946	0.98	1016
Va	583	0.97	633
Vb	1137	0.97	1234
Vf	3690	0.97	4004

Vd1 = 1016 pcph (LOS = C)
Vd2 = 1234 pcph (LOS = C)

Vf(Before diverge) = 4004 pcph (LOS = C)

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ROOSEVLT BLVD. NB OFF-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ ROOSEVLT BLVD. NB OFF-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 3 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) TWO LANE RAMP.

	UPSTREAM RAMP *********	FREEWAY *******	ANALYSIS RAMP *********	DOWNSTREAM RAMP **********
VOLUME	N.A.	2900	1350	N.A.
% TRUCKS	N.A.	5	5	N.A.
RAMP TYPE	N.A.	N.A.	OFF	N.A.
DISTANCE	N.A.	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 49 % OF FREEWAY TRUCKS

RESULTS USING FIGURE I.5- 12

ITEM	VPH	Fhv	PCPH
V1	289	0.97	314
V(1+A)	709	0.98	762
Va	420	0.97	456
Vb	930	0.97	1009
Vf	2900	0.97	3147

Vd1 = 762 pcph (LOS = B)
Vd2 = 1009 pcph (LOS = C)

Vf(Before diverge) = 3147 pcph (LOS = B)

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ROOSEVLT BLVD. NB OFF-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. SB ON-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 11-01-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP ********	FREEWAY *******	ANALYSIS RAMP ********	DOWNSTREAM RAMP **********
VOLUME	N.A.	2160	740	N.A.
% TRUCKS	N.A.	5	5	N.A.
RAMP TYPE	N.A.	N.A.	ON	N.A.
DISTANCE	N.A.	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 39 % OF FREEWAY TRUCKS

RAMP ANALYZED ALONE USING FIGURE I.5- 9

WARINING! IN USING THIS NOMOGRAPH:
Normal range for Vf is 3000 to 7700 vph

	V1	Vr	Vf
	****	****	*****
VPH	216	740	2160
ET	1.7	1.7	1.7
Fhv	0.88	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	258	803	2344

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3147	B
MERGE:	1061	C

RAMP ANALYZED ALONE USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	173	740	2160
ET	1.7	1.7	1.7
Fhv	0.86	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	212	803	2344

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3147	B
MERGE:	1015	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. SB ON-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. SB ON-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP ********	FREEWAY *******	ANALYSIS RAMP ********	DOWNSTREAM RAMP **********
VOLUME	N.A.	2740	950	N.A.
% TRUCKS	N.A.	5	5	N.A.
RAMP TYPE	N.A.	N.A.	ON	N.A.
DISTANCE	N.A.	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 34 % OF FREEWAY TRUCKS

RAMP ANALYZED ALONE USING FIGURE I.5- 9

WARINING! IN USING THIS NOMOGRAPH:
Normal range for Vf is 3000 to 7700 vph

	V1	Vr	Vf
	****	****	*****
VPH	359	950	2740
ET	1.7	1.7	1.7
Fhv	0.92	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	411	1031	2973

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4004	B
MERGE:	1442	C

RAMP ANALYZED ALONE USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	219	950	2740
ET	1.7	1.7	1.7
Fhv	0.87	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	265	1031	2973

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4004	B
MERGE:	1296	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. SB ON-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. SB OFF-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 3 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
	********	*******	********	**********
VOLUME	N.A.	2390	840	N.A.
% TRUCKS	N.A.	5	5	N.A.
RAMP TYPE	N.A.	N.A.	OFF	N.A.
DISTANCE	N.A.	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 50 % OF FREEWAY TRUCKS

RAMP ANALYZED ALONE USING FIGURE I.5- 7

	V1	Vr	Vf
	****	****	*****
VPH	1045	840	2390
ET	1.7	1.7	1.7
Fhv	0.96	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1146	912	2594

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	2594	B
DIVERGE:	1146	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. SB OFF-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. SB OFF-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 3 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
VOLUME	N.A.	3040	1070	N.A.
% TRUCKS	N.A.	5	5	N.A.
RAMP TYPE	N.A.	N.A.	OFF	N.A.
DISTANCE	N.A.	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 49 % OF FREEWAY TRUCKS

RAMP ANALYZED ALONE USING FIGURE I.5- 7

	V1	Vr	Vf
	****	****	*****
VPH	1304	1070	3040
ET	1.7	1.7	1.7
Fhv	0.96	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1430	1161	3299

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3299	B
DIVERGE:	1430	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. SB OFF-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. NB ON-RAMP
ANALYST.............. RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 AM PEAK PEAK

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 3 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
VOLUME	N.A.	1970	1070	N.A.
% TRUCKS	N.A.	5	5	N.A.
RAMP TYPE	N.A.	N.A.	ON	N.A.
DISTANCE	N.A.	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 52 % OF FREEWAY TRUCKS

RAMP ANALYZED ALONE USING FIGURE I.5- 6

WARINING! IN USING THIS NOMOGRAPH:
Normal range for Vf is 2400 to 6200 vph

	V1	Vr	Vf
	****	****	*****
VPH	360	1070	1970
ET	1.7	1.7	1.7
Fhv	0.91	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	416	1161	2138

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3299	B
MERGE:	1577	D

RAMP ANALYZED ALONE USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	118	1070	1970
ET	1.7	1.7	1.7
Fhv	0.77	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	161	1161	2138

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3299	B
MERGE:	1322	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. NB ON-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 AM PEAK PEAK

****

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. NB ON-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 3 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP ********	FREEWAY *******	ANALYSIS RAMP ********	DOWNSTREAM RAMP **********
VOLUME	N.A.	1550	840	N.A.
% TRUCKS	N.A.	5	5	N.A.
RAMP TYPE	N.A.	N.A.	ON	N.A.
DISTANCE	N.A.	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 56 % OF FREEWAY TRUCKS

RAMP ANALYZED ALONE USING FIGURE I.5- 6

WARINING! IN USING THIS NOMOGRAPH:
Normal range for Vf is 2400 to 6200 vph

	V1	Vr	Vf
	****	****	*****
VPH	258	840	1550
ET	1.7	1.7	1.7
Fhv	0.89	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	305	912	1682

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	2594	B
MERGE:	1217	C

RAMP ANALYZED ALONE USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	93	840	1550
ET	1.7	1.7	1.7
Fhv	0.75	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	131	912	1682

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	2594	B
MERGE:	1043	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ROOSEVELT BLVD. NB ON-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

FACILITY LOCATION.... I-275 @ 9TH ST. N. NB ON-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 3 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
VOLUME	N.A.	3040	140	1730
% TRUCKS	N.A.	5	5	5
RAMP TYPE	N.A.	N.A.	ON	ON
DISTANCE	N.A.	N.A.	N.A.	1500

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 49 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH DOWNSTREAM RAMP USING FIGURE I.5- 6

	V1	Vr	Vf
	****	****	*****
VPH	622	140	3040
ET	1.7	1.7	1.7
Fhv	0.92	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	712	152	3299

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3451	C
MERGE:	864	B

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ 9TH ST. N. NB ON-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

FACILITY LOCATION.... I-275 @ 9TH ST. N. NB ON-RAMP
ANALYST.............. RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 3 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
VOLUME	N.A.	2390	110	1360
% TRUCKS	N.A.	5	5	5
RAMP TYPE	N.A.	N.A.	ON	ON
DISTANCE	N.A.	N.A.	N.A.	1500

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 50 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH DOWNSTREAM RAMP USING FIGURE I.5- 6

WARINING! IN USING THIS NOMOGRAPH:
Normal range for Vf is 2400 to 6200 vph

	V1	Vr	Vf
	****	****	*****
VPH	463	110	2390
ET	1.7	1.7	1.7
Fhv	0.92	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	530	119	2594

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	2713	B
MERGE:	649	B

RAMP ANALYZED WITH DOWNSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	143	110	2390
ET	1.7	1.7	1.7
Fhv	0.77	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	195	119	2594

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	2713	B
MERGE:	314	A

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ 9TH ST. N. NB ON-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ 9TH ST. N. SB OFF-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
	********	*******	********	**********
VOLUME	1360	3860	110	N.A.
% TRUCKS	5	5	5	N.A.
RAMP TYPE	OFF	N.A.	OFF	N.A.
DISTANCE	1200	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 36 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH UPSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	301	110	2500
ET	1.7	1.7	1.7
Fhv	0.90	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	352	119	2713

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	2713	A
DIVERGE:	352	A

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ 9TH ST. N. SB OFF-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ 9TH ST. N. SB OFF-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP ********	FREEWAY *******	ANALYSIS RAMP ********	DOWNSTREAM RAMP **********
VOLUME	1730	4910	140	N.A.
% TRUCKS	5	5	5	N.A.
RAMP TYPE	OFF	N.A.	OFF	N.A.
DISTANCE	1200	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 33 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH UPSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	383	140	3180
ET	1.7	1.7	1.7
Fhv	0.91	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	443	152	3451

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3451	B
DIVERGE:	443	A

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ 9TH ST. N. SB OFF-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ ULMERTON RD. SB OFF-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 11-01-90
OTHER INFORMATION.... 2010 AM PEAK

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
	*********	*******	*********	**********
VOLUME	440	3690	750	110
% TRUCKS	5	5	5	5
RAMP TYPE	OFF	N.A.	OFF	OFF
DISTANCE	4300	N.A.	N.A.	1200

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 33 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH UPSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	1038	750	3250
ET	1.7	1.7	1.7
Fhv	0.97	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1126	814	3527

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3527	B
DIVERGE:	1126	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. SB OFF-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 AM PEAK

C) RAMP ANALYSIS RESULTS (CONTINUED)

RAMP ANALYZED WITH DOWNSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	1038	750	3250
ET	1.7	1.7	1.7
Fhv	0.97	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1126	814	3527

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3527	B
DIVERGE:	1126	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. SB OFF-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 AM PEAK

C) RAMP ANALYSIS RESULTS (CONTINUED)

RAMP ANALYZED ALONE USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	1038	750	3250
ET	1.7	1.7	1.7
Fhv	0.97	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1126	814	3527

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	3527	B
DIVERGE:	1126	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. SB OFF-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 AM PEAK

FACILITY LOCATION.... I-275 @ ULMERTON RD. SB OFF-RAMP
ANALYST.............. RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
VOLUME	560	4690	950	140
% TRUCKS	5	5	5	5
RAMP TYPE	OFF	N.A.	OFF	OFF
DISTANCE	4300	N.A.	N.A.	1200

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 36 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH UPSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	1317	950	4130
ET	1.7	1.7	1.7
Fhv	0.96	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1444	1031	4482

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4482	C
DIVERGE:	1444	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. SB OFF-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

C) RAMP ANALYSIS RESULTS (CONTINUED)

RAMP ANALYZED WITH DOWNSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	1317	950	4130
ET	1.7	1.7	1.7
Fhv	0.96	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1444	1031	4482

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4482	C
DIVERGE:	1444	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. SB OFF-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

C) RAMP ANALYSIS RESULTS (CONTINUED)

RAMP ANALYZED ALONE USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	1317	950	4130
ET	1.7	1.7	1.7
Fhv	0.96	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1444	1031	4482

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4482	C
DIVERGE:	1444	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. SB OFF-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ ULMERTON RD. NB ON-RAMP
ANALYST.............. RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 11-01-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP ********	FREEWAY *******	ANALYSIS RAMP ********	DOWNSTREAM RAMP **********
VOLUME	140	3820	950	560
% TRUCKS	5	5	5	5
RAMP TYPE	ON	N.A.	ON	ON
DISTANCE	1500	N.A.	N.A.	2800

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 35 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH UPSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	348	950	3960
ET	1.7	1.7	1.7
Fhv	0.88	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	416	1031	4297

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	5328	C
MERGE:	1447	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. NB ON-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

C) RAMP ANALYSIS RESULTS (CONTINUED)

RAMP ANALYZED WITH DOWNSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	348	950	3960
ET	1.7	1.7	1.7
Fhv	0.88	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	416	1031	4297

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	5328	C
MERGE:	1447	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. NB ON-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

C) RAMP ANALYSIS RESULTS (CONTINUED)

RAMP ANALYZED ALONE USING FIGURE I.5- 9

	V1	Vr	Vf
	****	****	*****
VPH	605	950	3960
ET	1.7	1.7	1.7
Fhv	0.93	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	685	1031	4297

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	5328	C
MERGE:	1716	D

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. NB ON-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ ULMERTON RD. NB ON-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP ********	FREEWAY *******	ANALYSIS RAMP ********	DOWNSTREAM RAMP **********
VOLUME	110	3000	750	440
% TRUCKS	5	5	5	5
RAMP TYPE	ON	N.A.	ON	ON
DISTANCE	1500	N.A.	N.A.	2800

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 33 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH UPSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	273	750	3110
ET	1.7	1.7	1.7
Fhv	0.88	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	327	814	3375

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4189	B
MERGE:	1141	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. NB ON-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

C) RAMP ANALYSIS RESULTS (CONTINUED)

RAMP ANALYZED WITH DOWNSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	273	750	3110
ET	1.7	1.7	1.7
Fhv	0.88	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	327	814	3375

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4189	B
MERGE:	1141	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. NB ON-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

C) RAMP ANALYSIS RESULTS (CONTINUED)

RAMP ANALYZED ALONE USING FIGURE I.5- 9

	V1	Vr	Vf
	****	****	*****
VPH	408	750	3110
ET	1.7	1.7	1.7
Fhv	0.92	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	467	814	3375

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4189	B
MERGE:	1281	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ ULMERTON RD. NB ON-RAMP
TIME AND DATE..... ; 11-01-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

FACILITY LOCATION.... I-275 @ 4TH ST. N. NB ON-RAMP
ANALYST.............. RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP	FREEWAY	ANALYSIS RAMP	DOWNSTREAM RAMP
VOLUME	1730	3180	560	N.A.
% TRUCKS	5	5	5	N.A.
RAMP TYPE	ON	N.A.	ON	N.A.
DISTANCE	2800	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 43 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH UPSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	465	560	4910
ET	1.7	1.7	1.7
Fhv	0.86	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	569	608	5328

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	5936	C
MERGE:	1177	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ 4TH ST. N. NB ON-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ 4TH ST. N. NB ON-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP ********	FREEWAY ********	ANALYSIS RAMP ********	DOWNSTREAM RAMP **********
VOLUME	1360	2500	440	N.A.
% TRUCKS	5	5	5	N.A.
RAMP TYPE	ON	N.A.	ON	N.A.
DISTANCE	2800	N.A.	N.A.	N.A.

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 34 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH UPSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	366	440	3860
ET	1.7	1.7	1.7
Fhv	0.89	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	433	477	4189

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4666	C
MERGE:	910	B

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ 4TH ST. N. NB ON-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ 4TH ST. N. SB OFF-RAMP
ANALYST..... RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS..... 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR..... .95
HIGHWAY DESIGN SPEED (mph)..... 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP *********	FREEWAY *******	ANALYSIS RAMP *********	DOWNSTREAM RAMP **********
VOLUME	N.A.	4300	440	1360
% TRUCKS	N.A.	5	5	5
RAMP TYPE	N.A.	N.A.	OFF	OFF
DISTANCE	N.A.	N.A.	N.A.	4300

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 37 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH DOWNSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	749	440	4300
ET	1.7	1.7	1.7
Fhv	0.93	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	848	477	4666

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	4666	C
DIVERGE:	848	B

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ 4TH ST. N. SB OFF-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 AM PEAK HOUR

****

FACILITY LOCATION.... I-275 @ 4TH ST. N. SB OFF-RAMP
ANALYST.............. RA
TIME OF ANALYSIS.....
DATE OF ANALYSIS..... 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

A) ADJUSTMENT FACTORS

PERCENTAGE OF TRUCKS.................. 5 (Typical - 200 #/HP)
PEAK HOUR FACTOR...................... .95
HIGHWAY DESIGN SPEED (mph)............ 70
(BUSES AND RV'S ARE CONSIDERED AS TRUCKS)

LEVEL TERRAIN

B) INPUT INFORMATION

NO. OF LANES ON FREEWAY : 4 (per direction)

ANALYSIS RAMP CHARACTERISTICS:
****
(1) RIGHT-HAND RAMP.
(2) ONE LANE RAMP.

	UPSTREAM RAMP ********	FREEWAY *******	ANALYSIS RAMP ********	DOWNSTREAM RAMP **********
VOLUME	N.A.	5470	560	1730
% TRUCKS	N.A.	5	5	5
RAMP TYPE	N.A.	N.A.	OFF	OFF
DISTANCE	N.A.	N.A.	N.A.	4300

C) RAMP ANALYSIS RESULTS

TRUCK PRESENCE IN LANE 1: 49 % OF FREEWAY TRUCKS

RAMP ANALYZED WITH DOWNSTREAM RAMP USING APPROXIMATION METHOD

	V1	Vr	Vf
	****	****	*****
VPH	1002	560	5470
ET	1.7	1.7	1.7
Fhv	0.92	0.97	0.97
PHF	0.95	0.95	0.95
PCPH	1146	608	5936

CHECKPOINT	VOLUME	LOS
**********	******	***
FREEWAY:	5936	C
DIVERGE:	1146	C

IDENTIFYING INFORMATION

FACILITY LOCATION.... I-275 @ 4TH ST. N. SB OFF-RAMP
TIME AND DATE..... ; 10-29-90
OTHER INFORMATION.... 2010 PM PEAK HOUR

APPENDIX F--RESPONSES TO THE PERMIT COORDINATION REPORT

OCT 2 5 1990

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. BOX 2676
VERO BEACH, FLORIDA 32961-2676

October 23, 1990

Mr. Donald J. Skelton
Project Engineer
Florida Department of Transportation
4950 W. Kennedy Blvd., Suite 500
Tampa, Fl. 33609

Dear Mr. Skelton:

Reference is made to your Permit Coordination Report for Project No. IR-275-7(218)22, State Project Number 15190-1426, dated September 20, 1990, to widen I-275 from Roosevelt Blvd., to 4th Street North in Pinellas County. These comments are submitted in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), and the Endangered Species Act of 1973, as amended.

Although we have not made an onsite inspection of the project site, our general familiarity of the project area combined with a review of the Permit Coordination Report and interpretation of the attached aerial photographs allows us to prepare the following comments.

Two wetland areas at Sites 2 and 3 would be filled. These wetland areas are not of high value to fish and wildlife resources as they are totally enclosed by major highway development. The amount of fill to be placed on Site 2 would be .05 acre while Site 3 would be filled with .75 acre of fill. Mitigation is proposed to reduce the impact of these fills. Approximately .29 acres of wetland enhancement in stormwater facilities is proposed to mitigate Site 2, while .75 acres of wetland creation is proposed to serve as mitigation for Site 3. The U.S. Fish and Wildlife Service believes that the mitigation proposed is adequate.

The proposed bridge construction of I-275 at Big Island Gap (wetland Site 4) could adversely impact the endangered West Indian manatee (Trichechus manatus); however, if the listed manatee protection construction precautions described by Florida Department of Transportation are also made conditions of the Corps permit, no adverse impact to the manatee is anticipated.

U.S. GOVERNMENT PRINTING OFFICE: 1990-735-060/200

We appreciate the opportunity to comment.

If you have further questions on this matter, please contact Bruce Birnhak of my staff (407-562-3909).

Sincerely yours,

David L. Ferrell
Field Supervisor

cc:
NMFS, Panama City, FL
FG&FWFC, Vero Beach, FL
DER, Tallahassee, FL
FWS, Jacksonville, FL

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347 • 813-623-5561

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary
Dr. Richard Garrity, Deputy Assistant Secretary

October 8, 1990

Donald J. Skelton
Department of Transportation
4950 W. Kennedy Blvd., Suite 500
Tampa, FL 33609

RE: W.P.I. No. 7147848
State Project No. 15190-1426
Road Capacity Improvements of I-75 from Roosevelt Blvd. to 4th Street North
Pinellas County

Dear Sir:

We have been notified that you are planning to undertake the following mentioned work. This letter constitutes notice that a permit may be required from this agency pursuant to Chapter 403, Florida Statutes, for the following items:

1. Dredge and fill in waters of the state, Chapter 403.913(1) F.S. and Chapter 17-312.030 and 17-312.806;
2. regrading/land alteration activity;
3. filling and relocation/reconstruction of roadside ditches;
4. major bridge replacement;
5. culvert construction; and
6. 17-25 FAC Stormwater treatment facilities in state waters.

We are enclosing our application forms for your project. Please complete the appropriate sections of the forms and forward them to this office. If you have any questions or need assistance with the application, please contact George Craciun at the District Office at Ext. 332.

Sincerely,

Bob Stetler

Bob Stetler
Environmental Administrator
Water Management

BS/gc/msb

Enclosure

Southwest Florida Water Management District

2379 Broad Street (U.S. 41 South) Brooksville, Florida 34609-6899
Phone (904) 796-7211 or 1-800-423-1476 SUNCOM 628-4150

October 11, 1990

Mr. Donald J. Skelton
Project Engineer
Florida Department of Transportation
4950 West Kennedy Boulevard, Suite 500
Tampa, FL 33609

Subject: Permit Coordination Report
I-275 - Roosevelt Boulevard to 4th Street
County: Pinellas
Work Program Item Number: 7147848
State Project Number: 15190-1426
Federal Aid Project Number: IR-295-7(218)22

Dear Mr. Skelton:

Thank you for the opportunity to respond to the Final Permit Coordination document for the above referenced project. Although the District will reserve more detailed comments for the subsequent permitting process, the following comments should be considered.

The information within the report indicates that the project site contains wetlands as defined in Chapter 40D-4.021 (10) F.A.C. As mentioned in the District's July 25, 1990 letter which addressed concerns of the Advance Notification submittal, any activities within these wetland areas will require a permit from this agency. Additionally, the Report commented upon preliminary compensation for proposed impacts to wetlands. Unfortunately, the District will not provide more specific comments concerning the appropriateness of the proposed mitigation prior to a field inspection and submittal of construction plans with a detailed mitigation plan in conjunction with a Chapter 40D-4 Surface Water Permit application. Any mitigation plan should contain appropriate justification for the wetland impact, an analysis of alternative routes with regard to wetland impacts, a wetland compensation proposal that will replace and supplement the loss of the wetland areas, and a maintenance and monitoring program to ensure the success of the proposed plan.

Please be advised that in areas where stormwater management systems are not practicable, equivalent treatment and attenuation may be accommodated within the same drainage basin with the provision that the pollution load is not increased.

Also, due to the occurrence of "Waters of the State" which are under the joint jurisdiction of the Florida Department of Environmental Regulation (FDER) and the District, it is recommended that a coordination meeting be set between FDER, the District, and your agency to formally establish the permit review responsibilities especially with respect to Chapter 17-25 F.A.C.

The above comments are intended to aid in the preparation of your permitting package but should not be interpreted as being binding upon the District prior to review of the permit application. Additionally, we strongly urge that you seek a pre-application conference prior to submittal of your permit application to discuss aspects of the subject project which may need clarification or further consultation. Please contact either Alba Evans or John Emery to set a date, at (813) 985-7481.

Again, thank you very much for the opportunity to comment and please keep me informed of any further developments.

Sincerely,

John W. Heuer, P.G.
Director
Tampa Permitting Department
Resource Regulation

JWH:dsw
cc: Alba Evans, P.E.
John Emery
Suspense File

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9450 Koger Boulevard
St. Petersburg, FL 33702

October 19, 1990

Donald J. Skelton, Project Engineer
Department of Transportation
Project Development and Environment
4950 W. Kennedy Blvd., Suite 500
Tampa, FL 33609

Dear Mr. Skelton:

This responds to your request for comments on the Final Permit Coordination Report for the proposed expansion of I-275 from Roosevelt Boulevard to 4th Street North in Pinellas County, Florida. [WPI No. 7147848; State Project No. 15190-1426; FAP No. IR-275-7(218)22]

In general, the report is well written and effectively addresses the potential impacts to wetland resources. If successful, the proposed mitigation for wetland site 3; the tentatively proposed (i.e. "if necessary") mitigation at wetland sites 2 and 4; and the recovery of the "regraded" areas would adequately compensate for the project's impacts. Accordingly, we recommend the following:

1. specify that wetland species will be planted (as opposed to allowing natural revegetation) in the created wetland for site 3
2. consider the tentatively proposed mitigation for wetland sites 2 and 4 to be necessary and include it in the final plans
3. include a three year monitoring plan to ensure survival of planted species in the created wetland and successful natural revegetation of the regraded areas

If these recommendations are included in your permit application to the U.S. Army Corps of Engineers and the design and wetland impacts of the I-275 expansion project remain as outlined in this report, we would not object to issuance of a Corps permit for the project.

Thank you for the opportunity to review this report. If you have questions regarding our comments, please contact Ms. Shelley Du Puy of our Panama City Area Office at 904/234-5061.

Sincerely yours,

Edwin E. Kepner

for Andreas Mager, Jr.
Assistant Regional Director
Habitat Conservation Division

BOARD OF COUNTY COMMISSIONERS
PINELLAS COUNTY, FLORIDA
DEPARTMENT OF PUBLIC WORKS
440 COURT STREET
CLEARWATER, FL 34616
PHONE: (813) 462-3251

COMMISSIONERS

CHARLES E. RAINEY - CHAIRMAN
GEORGE GREER - VICE CHAIRMAN
JOHN CHESNUT, JR.
BARBARA SHEEN TODD
BRUCE TYNDALL

October 5, 1990

Florida Department of Transportation
Attn: Donald Skelton
Project Development and Environment
4950 West Kennedy Boulevard, Suite 500
Tampa, Florida 33609

RE: I-275 from Roosevelt Boulevard to 4th Street North

Dear Mr. Skelton:

We have reviewed the report and drawings for the Department of Transportation Project on I-275 from Roosevelt Boulevard to Fourth Street North against the Pinellas County Stormwater Management Plan (S.W.M.P.). Although we found no conflicts with the S.W.M.P., the following features lie in the vicinity of the project:

1. S.W.M.P. Structure # S23-01-06 = D.O.T. Structure # S-21 (I-275 Station 555 + 50) is a double 8' X 7' box culvert. The S.W.M.P. proposes no changes in the structure, but does recommend the following channel improvements:
   a) 22' bottom width upstream,
   b) 35' bottom width downstream, and
   c) 3:1 side slopes.

2. S.W.M.P. Structure # S23-04-04 is a double 8' X 7' box culvert under Ulmerton Road. The S.W.M.P. proposes the following channel improvements (south side of Ulmerton Road):
   a) Bottom width = 36', and
   b) 2:1 side slopes

3. S.W.M.P. Structure # S23-01-02 is a double 8' X 7' box culvert underneath 9th Street North. The City of St. Petersburg is planning to add a third box culvert and improve the tributary that runs parallel to 9th Street (per S.W.M.P.). Further information may be gained by contacting the City of St. Petersburg Engineering Department.

The features described all lie in the Roosevelt Creek Basin (#23). Thank you for the opportunity to review the referenced report.

Sincerely,

Kenneth D. Northuis

Kenneth D. Northuis
Public Works Engineer

KDN/gm
PWAGM4/286

STATE OF FLORIDA
DEPARTMENT OF NATURAL RESOURCES

Marjory Stoneman Douglas Building • 3900 Commonwealth Boulevard • Tallahassee, Florida 32399
Tom Gardner, Executive Director

October 2, 1990

Mr. Donald J. Skelton
Project Engineer
Department of Transportation
4950 West Kennedy Boulevard
Suite 500 Tampa, Florida 33609

Dear Mr. Skelton:

RE: Permit Coordination Report
I-275 From Roosevelt Boulevard to 4th Street North, Pinellas County

Thank you for providing a copy of the subject report. The project is located within existing DOT right-of-way; therefore, unless state-owned uplands outside the right-of-way are needed, no further authorization is required from this Bureau.

Please call me at Suncom 278-2291 or (904) 488-2291 if you have any questions.

Sincerely,

Tracy Peters

Tracy Peters, Planner
Bureau of Land Management Services
Division of State Lands

TP/tc

APPENDIX G--OFFICIAL PUBLIC HEARING TRANSCRIPT

ORIGINAL

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NO.: 15190-1426
FEDERAL AID PROJECT NO.: IR-275-7(218)22
WORK PROGRAM ITEM NO.: 7147848

PUBLIC HEARING

(I-275 FROM ROOSEVELT BOULEVARD
TO 4TH STREET NORTH)

DATE: Tuesday, October 9, 1990

TIME: 4:00 p.m. - 7:00 p.m.

PLACE: Radisson Inn
3580 Ulmerton Road
State Road 688
Clearwater, Florida

REPORTED BY: MS. CATHY J. JOHNSON
Notary Public, CSR, RPR, CP

I N D E X

Mr. Vic Scodius
13982 103rd Avenue North
Largo, Florida 34644

My comment is this road is badly needed and the sooner the better. That's all I'd like to say.

STATE OF FLORIDA]
]
COUNTY OF HILLSBOROUGH]

I, CATHY J. JOHNSON, Registered Professional Reporter and Notary Public in and for the State of Florida at large, hereby certify that the Public Hearing Statements were recorded in Stenotypy and electronically by me and that the foregoing pages constitute a true and correct transcription of my recordings thereof.

I FURTHER CERTIFY THAT I am neither an attorney nor of counsel for the parties to this cause nor a relative or employee of any attorney or party connected with this litigation and that I have no interest in the outcome of this action.

WITNESS my hand and seal this 10th day of October, 1990, at Tampa, Hillsborough County, Florida.

Cathy J. Johnson

My Commisson Expires:
December 9, 1992