Appendix B
Existing Conditions

Information To Build On
Engineering • Consulting • Testing

May 24, 2004

Reynolds, Smith & Hills, Inc.
300 S. Pine Island Road, Suite # 300
Plantation, Florida 33324-2619

Attention: Mr. Jeff V. Easley, P.E.

Re: Report of
Geotechnical Engineering Services
I-595 PD&E Study
From West of S. W. 136th Ave. to
East of I-95
Broward County, Florida

Financial Project ID: 409354-1-22-01
PSI Project No. 397-35117
GCME Project No. 2000-01-03008

Dear Mr. Easley:

Professional Service Industries, Inc. (PSI) along with GCME, Inc. has completed a geotechnical study along the I-595 Corridor from West of S. W. 136th Avenue to East of I-95 in Broward County, Florida. GCME, Inc. performed the engineering on this project. Drilling services, Laboratory Testing program and Quality Assurance was provided by PSI, Inc.

PSI, Inc. appreciates the opportunity to be of service to you on this project. If you have any questions or if you need additional information, please do not hesitate to call our office.

Sincerely,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Hugo E. Soto, P.E
Senior Geotechnical Engineer
Florida Registration No. 36440
HES/cf

GCME

Geotechnical Report

Roadway

I-595 PD&E Study
From West of SW 136th Ave. to East of I-95
Broward County, FL

Financial Project ID: 409354-1-22-01

GCME Project No.: 2000-01-03008

May 21, 2004

Prepared For:

PSI, Inc.
7950N. W. 64th Street
Miami, FL 33166

GCME

May 21, 2004

PSI, Inc.
7950 N. W. 64th Street
Miami, FL 33166

Attention: **Mr. Hugo Soto, P.E.**

SUBJECT: **Geotechnical Report - Roadway**
I-595 PD&E Study
From West of SW 136th Ave. to East of I-95
Broward County, Florida
FM No.: 409354-1-22-01
GCME Project No.: 2000-01-03008

Dear Mr. Easley:

GCME, Inc. has completed the Geotechnical Report - Roadway for the subject project. The project corridor runs along Interstate I-595 from west of SW 136th Avenue to east of I-95 in Broward County, Florida. The objective of this study was to drill soil borings in order to find any "trash fill" materials at the site. The work was done in accordance with our contract with your firm, and Roadway and Traffic Design Standards published by Florida Department of Transportation (FDOT).

The following report presents the methods of study; factual data obtained during the study, and includes related opinions and design recommendations related to roadway design and construction of the project.

We are pleased to be of continued service to RS&H, Inc. and the Florida Department of Transportation (FDOT). If you have any questions or comments regarding the contents of the following report, please call.

Very truly yours,

GCME, INC.

Minh Le
Staff Geotechnical Engineer

Partha Ghosh, P.E.
Principal Geotechnical Engineer
FL Registration No. 51377

ML/PG: mg
2000-01-03008rpt1

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Project Description

This entire project corridor runs along Interstate I-595 (SR 862) with limits beginning west of SW 136th Avenue (approximately MP 0.00) and proceeding east to a point just east of Interstate I-95 (approximately MP 12.00) in Broward County, Florida, a distance of about 12 miles. The project involves Project Development and Environmental (PD&E) Study of the entire corridor for interstate improvements including ramp re-sequencing, interchange modifications, a new reversible roadway, new collector-distributor roads, bridge replacement and bridge widening.

1.2 Site Conditions

The entire project site is located in the central portion of Broward County along Interstate I-595 just west of Interstate I-95. Land in the project vicinity is urbanized and consists of roadways through commercial neighborhoods. Terrain in the area is relatively flat except the Interstate I-595 corridor (embankment) and its interchanges with cross roads. The subject project corridor consists of three (3) northbound and southbound through lanes, and crosses over a number of cross roads.

2.0 SITE GEOLOGY

The Soil Survey of Broward County, Florida, Eastern Part, published in December 1976 by U.S. Department of Agricultural (USDA) Soil Conservation Service (SCS), was researched for general near-surface soil information within the general project vicinity. This information indicates that the proposed project site and surrounding lands are generally underlain by the following mapping units:

1. Margate Fine Sand (Ma) – This is a nearly level, poorly drained, sandy soil that is underlain by limestone at a depth of 20 to 40 inches but has solution holes as deep as 60 inches. It is on nearly level, low terraces between the Everglades and the low, sandy Atlantic Coastal Ridge.

2. Margate – Urban Land Complex (Mu) – This complex consists of Margate fine sand and Urban land. About 50 to 70 percent of the complex is open land, such as lawn, vacant lots, parks, and playgrounds; and about 30 to 50 percent is Urban land. The open land consists of nearly level, poorly drained Margate soil that has been modified in most places by spreading fill material over the surface of the original soil to an average thickness about 12 inches. The fill material is a mixture of sand, limestone and shell fragments that range from sand size to about 3 inches in diameter. About 65 to 95 percent of the material is sand.

3. Immokalee Fine Sand (Ia) – This is a nearly level, deep, poorly drained, sandy soil that has a layer well coated with organic matter at a depth of about 30 inches or more. It is on broad, low ridges in the eastern part of the survey area. Included with this soil in mapping are small areas of Basinger fine sand, Pompano fine sand, and Margate fine sand. Also included are a few areas of soils that have thin subsoil that has an accumulation of organic matter.

4. Immokalee – Urban Land Complex (Iu) – This complex consists of Immokalee fine sand and Urban land. About 20 to 45 percent of the complex is open land, such as lawn and vacant lots; and about 40 to 70 percent is Urban land. The open land consists of nearly level, poorly drained Immokalee soils that had been modified in most places by spreading sandy material on the surface of the soil to an average thickness of about 12 inches. Included with this complex in mapping are small areas of Basinger, Pompano, Margate and Hallandale soils. These soils also have been modified by spreading fill material on the surface of the original soil. About 80 percent of the fill material on the Immokalee soils is sand. The rest of the fill materials consist of a mixture of shell fragments and limestone fragments ranging from sand size to about 3 inches in diameter.

5. Udorthents, shaped (Un) – This map unit consists of a mixture of soil and geologic soil materials that has been shaped and contoured mainly for golf courses and major highways. This mixed material is commonly obtained from nearby excavations and spread over the natural soil to a depth of 20 inched or more. It consists primarily of limestone fragments and sand. This soil is somewhat poorly drained to moderately well drained in most areas. Where the mixed fill material is less than about 30 inches thick,

most of the underlying natural soils can be identified. Of these, Hallandale and Margate soils are dominant and the others include Immokalee soils, Basinger soils, and other poorly to very poorly drained soils.

6. Basinger Fine Sand (Ba) – This is a nearly level, poorly drained, deep sandy soil in broad sloughs and flats. Included in mapping are small areas of Immokalee fine sand, Pompano fine sand, and Margate fine sand.

7. Hallandale Fine Sand (Ha) – This nearly level, poorly drained, sandy soil is underlain by limestone at a depth of 7 to 20 inches. It is in broad flats east of the Everglades and west of the Atlantic Coastal Ridge. Included with this soil in mapping are small areas of Margate fine sand, Dania muck and Plantation muck. In some areas a thin layer, 4 inches thick or less, of organic material is on the surface.

8. Hallandale-Urban land complex (Hb). This complex consists mainly of Hallandale fine sand and Urban land. The areas of these components are so intermixed or so small that separation at the scale of mapping is impractical. Depth to the water table depends on the established drainage in the area.

9. Hallandale and Margate soils (Hm). These are nearly level, poorly drained soils that have been modified by grading, shaping, and covering with 8 to 20 inches of fill material. These alterations were made to provide a base for construction of homes, streets, and industrial buildings. Depth to the water table in these soils is variable and depends on the established drainage in the area

10. Lauderhill muck (La). This is a nearly level, very poorly drained, organic soil underlain by limestone at a depth of 20 to 40 inches. It is broad flats in the Everglades. Included with this soil in mapping are small areas of Dania muck and small areas of soils that have organic material 36 to 51 inches thick over limestone. Also included are small areas of Okeelanta muck.

11. Okeelanta muck (Ok). This is a nearly level, very poorly drained organic soil underlain by sand at a depth of 16 to 40 inches. The soil is found in small to large freshwater marshes, swamps, and drainageways in the broad flatlands east of the Everglades. Included with this soil in mapping are small areas of soil that contain less decomposed organic material below the surface layer; soils that contain organic material 40 to 51 inches thick; and soil that are underlain by limestone at a depth of more than 51 inches.

12. Sanibel muck (Sa). This is a nearly level, deep, very poorly drained soil that has a muck surface layer over sandy mineral material. It is in ponds, drainageways, and low, broad flats in the eastern part of the country. Included with this soil in mapping are small areas of Dania muck, Lauderhill muck, Plantation muck, Okeelanta muck, and Margate fine sand. Also included are a few small areas of soils that are similar to Sanibel muck but have dark grayish brown underlying layer.

13. Pm-Plantation muck. This is a nearly level, very poorly drained soil that has a muck surface layer over sandy mineral material. It is in broad flats along the eastern edge of

the Everglades. The organic surface layer is subject to oxidation, which decreases its amount of organic material each year. Included with this soil in mapping are a few small areas of Dania muck, Lauderhill muck, Margate fine sand, and Hallandale fine sand.

14. Pomello fine sand (Po). This is a nearly level to gently sloping, deep, moderately well drained, sandy soil that has a layer well coated with organic matter at a depth of 30 to 50 inches. It is on low ridges east of the Everglades. Slopes are 0 to 5 percent. Included with this soil in mapping are small areas of a moderately well drained soil that does not have a subsoil that has an accumulation of organic mater.

15. Pompano fine sand (Pp). This is a nearly level, deep, poorly drained, sandy soil in sloughs and a broad flats in the eastern part of the survey area. Included in mapping are small areas of Immokalee fine sand, Basinger fine sand and Margate fine sand.

16. Arents, organic substratum-Urban land complex (Ao). This complex consists of Arents, organic substratum, in open areas and of Urban land, or areas covered by concrete and buildings. About 50 to 70 percent is Arents, organic substratum, and about 30 to 50 percent is Urban land. The areas of these components are so intermixed or so small that to map them separately at the scale used is impractical. Areas are nearly level.

The USDA Soils Map for the project is shown on Plate 1.

Table 13 within the SCS Soil Survey for Broward County, Eastern Part indicates the AASHTO Soil Classifications for these mapping units. Further, these classifications were compared with the Florida Department of Transportation (FDOT) Standard Index No. 500 "Removal of Organic and Plastic Material" and No. 505 "Embankment Utilization". Results of our comparison indicate that the above soil units are generally classified as A-3/A-2-4 soils to depths of 6 feet, excepting the organic (muck) soils (La, Ok, Sa, and Pm) which are classified as A-8 soil, and need to be removed and replaced with select fill. The FDOT Specification indicates A-3 and A-2-4 soils as select materials and hence, should be considered suitable for embankment support.

3.0 FIELD INVESTIGATION

As requested by RS&H, Inc., subsoils along certain section of the proposed roadway alignments were explored by drilling auger profile borings to nominal depths of 15 feet below the existing ground surface. Based on the meeting between PSI, Inc. and RS&H, Inc., it was decided to do auger borings at some determined locations in order to find and delineate the possible presence of any trash fill materials. RS&H, Inc. provided the horizontal controls (Stations) for performing the auger borings along the project corridor. PSI, Inc. drilled all the auger borings.

The numbering schedule and locations of the borings drilled for the proposed roadway improvements are as follows:

• South side of I-595, East of Nob Hill Road to East of University Drive:	Thirteen (13) borings, numbered B-1 through B-13
• North side of I-595 between Florida's Turnpike and SR7/US441:	Eleven (11) borings, numbered B-14 through B-24
• North side of I-595, East of University Drive to East of Nob Hill Road:	Twenty-two (22) borings, numbered B-25 through B-46
• North side of I-595 between I-75 and SW 136th Ave:	Five (5) borings, numbered B-47 through B-51
• Northwest quadrant of the intersection of I-595 and I-75	Five (5) borings, numbered B-52 through B-56

As mentioned above, RS&H, Inc. provided the locations for performing the auger borings along the project corridor. A boring location plan (provided by RS&H) showing the approximate locations of the borings are presented on the sheets titled "Boring Location Plan", Plates 2,3 and 4. The station, offset and elevation information of the locations where the borings are drilled are provided in the report along with the soil profiles, and were reported to us by RS&H, Inc.

4.0 LABORATORY ANALYSIS

Samples from the borings were field-classified, placed in sealed containers, and transported to the laboratory for further analysis by a soils engineer. Selected samples were tested for moisture content, organic content and fines (-200) content. The test results were used together with visual examination to classify the soils according to the American Association of State Highway and Transportation Officials (AASHTO) in general accordance with the American Society of Testing and Materials (ASTM) test designation D-3282, titled "Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes". Soil profiles for the auger profile borings drilled are presented on Figures 1 through 6. The soil profiles are plotted to elevation information provided to us by RS&H, Inc. The laboratory tests were performed by PSI, Inc. and are presented in Table-1.

5.0 SUBSURFACE CONDITIONS

Soils and soil profiles found in auger borings drilled for the study generally consisted of the following soil types:

1 Brown to gray sand with silt, some organic stained, some shell fragments, fine gravel and grass roots (Topsoil)

2 Light brown to gray sand with silt, sometimes with some fine gravel (cemented sand) (A-3, A-2-4)

3 Dark brown to gray sand with silt, some organic stain and sometimes with some limerock fragments (A-3, A-2-4)

3A Dark brown sand with silt, organic stained with organics, and sometimes with pieces of tree roots (A-8)

4 Gray to light brown sand with silt and some limerock fragment (A-3, A-1-b)

5 Gray to light brown sand mixed with limestone (A-1-b))

6 Dark brown to black organic sand with peat (A-8)

The granular profiles, interlayering of Strata 1, 2, 3, 4 and 5 occupy a majority of the project corridor. Stratum 3A soils are organic stained with organics. At one isolated location (B-27) along the project corridor, pieces of tree roots were found in the Stratum 3A soils.

Stratum 3A and 6 soils consist of organic soils (peat/muck) and need to be removed and replaced with select embankment fill in accordance to Standard Index 500. These soils were found in boring numbers, B-8, B-17, B-22, B-23, B-27 and in boring locations located on north side of I-595 between Nob Hill Road and Pine Island Road.

In addition, in one boring location (B-53) a piece of steel was found between the approximate depth interval of 3 and 4 feet below grade. Again, at another location (B-25) a small piece of glass was found between the approximate interval of 3 and 4 feet.

The subsoils exist along the project alignment in a fairly complex arrangement, the details for which can be gleaned from the soil profile sheets. Figures 1 through 6 show the soil profiles, which are plotted to elevation information available to us. Groundwater levels (elevations) and the dates they were recorded are shown adjacent to the borings.

The depth to the water table was measured in each of the borings and is plotted adjacent to the soil profiles on Figures 1 through 6. Depth to groundwater measured in the borings drilled ranged between 2.1 and 8.6 feet below ground surface. However, in many locations, groundwater was not recorded due to borehole cave-in. The wide variation in groundwater table depths is attributed to the difference in site grades. Groundwater condition will vary with environmental variation and seasonal condition, such as the frequency and magnitude of rainfall patterns, as well as man-made influences, such as existing swells, drainage ponds, and under drains.

6.0 ROADWAY EMBANKMENT EVALUATION

Review of the data gathered for this study indicates that the section of the roadway corridor explored is generally suitable for the planned construction when viewed from a geotechnical engineering perspective. The subsurface conditions are not expected to impose any significant constraints or limitations on the design or construction of the planned project from a soil mechanics, foundation engineering or engineering geology standpoint. However, the organic soils that exist within the project corridor must be especially considered during the final design of the roadways.

We mentioned that the soil borings were drilled in order to find any "trash fill" materials at the site. The borings did not encounter any such trash fill materials within the depth of exploration except for two minor pieces, a piece of steel found in boring B-53 and a piece of glass found in boring B-25. We anticipate that the piece of glass and steel found are not significant enough to indicate the possible presence of any "trash fill" materials.

7.0 LIMITATIONS OF STUDY

The geotechnical engineer warrants that the findings, recommendations, specifications, or professional advice contained herein are presented after being prepared following generally accepted professional engineering practice in the fields of foundation engineering, soil mechanics and engineering geology. This company is not responsible for the conclusion, opinion, or recommendations made by others based on this data. No other warranties are expressed or implied.

The scope of the investigation was intended to evaluate soil conditions within the influence of proposed roadway embankment and does not include an evaluation of potential deep soil problems such as sinkholes. The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated. If any subsoil variations become evident during the course of this project, a re-evaluation of the recommendations contained in this report will be necessary after we have had an opportunity to observe the characteristics of the conditions encountered. The applicability of the report should also be reviewed in the event significant changes occur in the design, nature, or location of the proposed structures.

The scope of our services does not include any environmental assessment or investigation for the presence or absence of hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in the report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our client.

psi Environmental Geotechnical Construction
Consulting • Engineering • Testing

TABLE 1 - SUMMARY OF LABORATORY TEST RESULTS

I-595 PD&E STUDY
GCME PROJECT NO. 2000-01-03008
PSI PROJECT No. 397-35117

BORING NUMBER	SAMPLE DEPTH INTERVAL (ft)	SIEVE ANALYSIS (PERCENT PASSING) #200	ORGANIC CONTENT (%)	NATURAL MOISTURE CONTENT (%)
B-2	3"-1'	6.4	-	17
B-5	3"-4'	-	5.3	12
B-8	5'-8'	1.7	9.1	30
B-11	4"-3.5'	-	4.5	9
B-15	3'-4.5'	-	2.8	18
B-17	6'-8.5'	-	9.1	55
B-22	10'-13'	6.1	11.0	35
B-23	5'-14'	10.9	-	24
B-23	3'-5'	-	7.3	26
B-24	6"-5'	-	3.1	19
B-24	11'-15'	-	3.9	16
B-28	7.5'-9'	3.3	5.9	49
B-32	8'-10'	6.9	5.4	35
B-32	10'-15'	-	1.5	22
B-33	6'-10'	-	6.0	22
B-34	4'-10'	-	3.2	14
B-37	8'-10'	-	23.0	61
B-39	5'-8'	-	18.2	62
B-40	5'-9'	-	14.0	56
B-41	3'-5'	3.5	4.1	34
B-41	5'-8'	-	34.9	117
B-45	2'-3.5'	-	1.3	20
B-50	3"-6.5'	-	4.5	11
B-56	6"-8'	-	12.1	22

START OF PROJECT

MATCH LINE A-A

MATCH LINE A-A

MATCH LINE B-B

MATCH LINE B-B

END OF PROJECT

SCALE: 1:20000

USDA SOILS MAP

REVISIONS					
Date	By	Description	Date	By	

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

I-595 PD&E STUDY

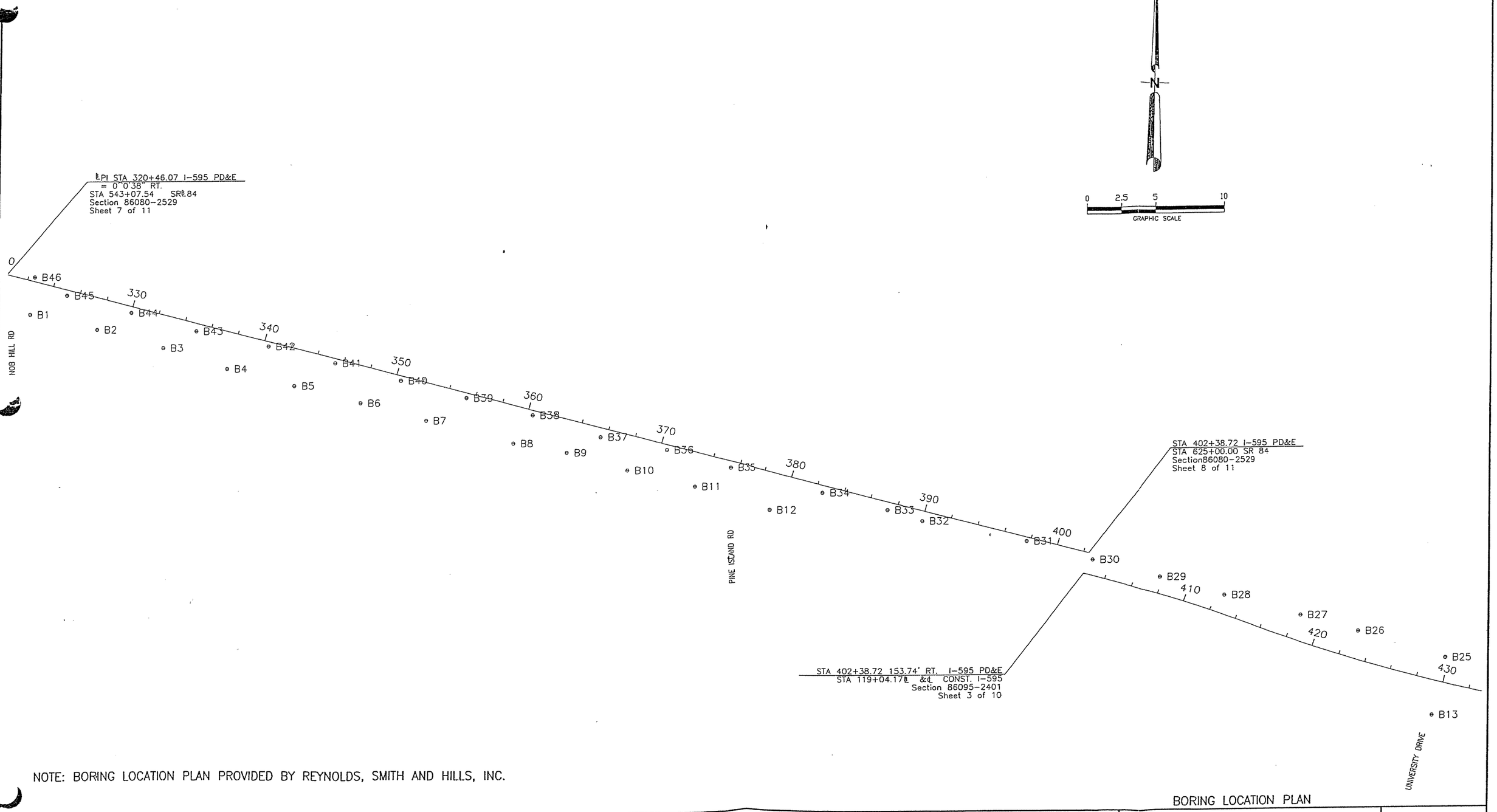
SHEET NO.

PLATE 1

GCME PROJECT No. -01-03008

GCME/2003/03008/PLATE1.DWG

℄PI STA 320+46.07 I-595 PD&E
= 0°0'38" RT.
STA 543+07.54 SR℄84
Section 86080-2529
Sheet 7 of 11



STA 402+38.72 I-595 PD&E
STA 625+00.00 SR 84
Section86080-2529
Sheet 8 of 11

STA 402+38.72 153.74' RT. I-595 PD&E
STA 119+04.17℄ &℄ CONST. I-595
Section 86095-2401
Sheet 3 of 10

N

0 2.5 5 10
GRAPHIC SCALE

NOTE: BORING LOCATION PLAN PROVIDED BY REYNOLDS, SMITH AND HILLS, INC.

BORING LOCATION PLAN

REVISIONS					
Date	By	Description	Date	By	

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

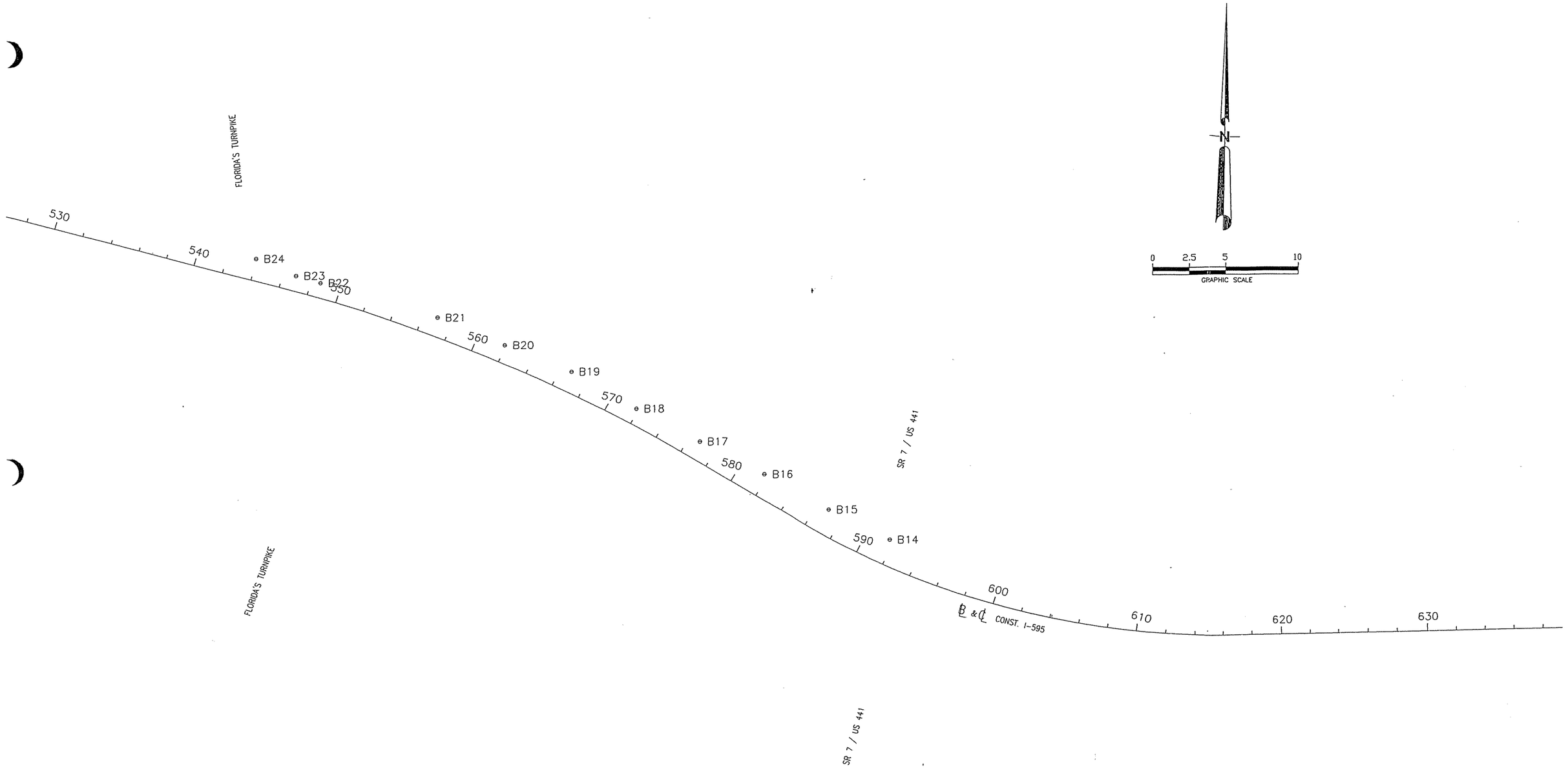
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

I-595 PD&E STUDY

SHEET NO.

PLATE-2

GCME/2002/03008/PSI/826.DWG



NOTE: BORING LOCATION PLAN PROVIDED BY REYNOLDS, SMITH AND HILLS, INC.

BORING LOCATION PLAN

REVISIONS					
Date	By	Description	Date	By	

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

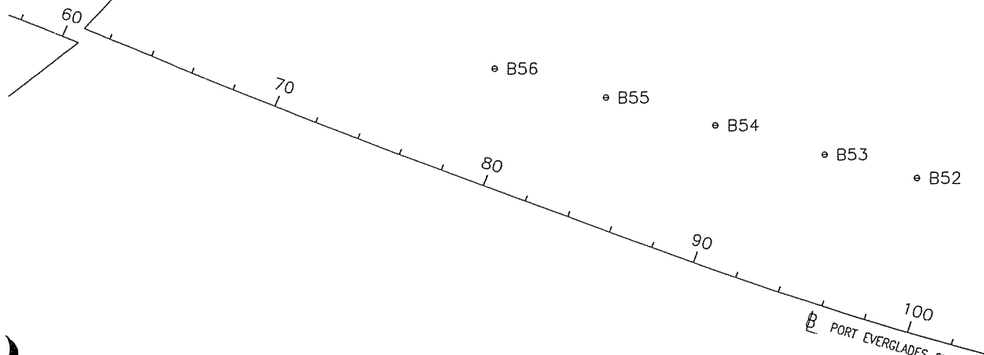
I-595 PD&E STUDY

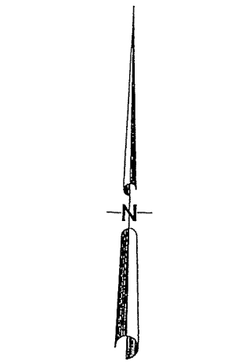
SHEET NO.

PLATE-3

GCME/2002/03008/PSI/826.DWG

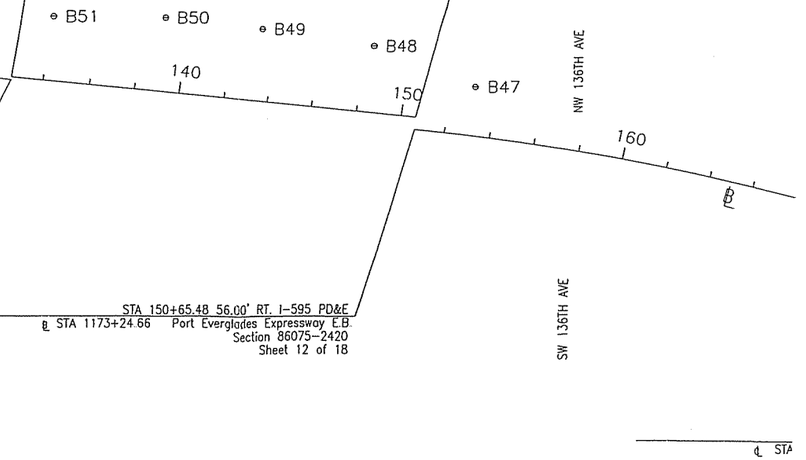
STA 60+75.71 68.00' LT. I-595 PD&E
STA 833+34.90 ℄Port Everglades Expressway W.B.
Section 86075-2420
Sheet 9 of 18





STA 132+60.33 12.00' LT. I-595 PD&E
STA 955+19.51 Port℄Everglades Expressway W.B.
Section 86075-2420
Sheet 11 of 18

STA 150+65.48 I-595 PD&E
STA 973+24.66 Port℄Everglades Expressw
Section 86075-2420
Sheet 12 of 18



STA 132+60.33 I-595 PD&E
℄STA 955+19.51 Port Everglades Expressway W.B.
Section 86075-2420
Sheet 11 of 18

STA 150+65.48 56.00' RT. I-595 PD&E
℄ STA 1173+24.66 Port Everglades Expressway E.B.
Section 86075-2420
Sheet 12 of 18

℄ STA

NOTE: BORING LOCATION PLAN PROVIDED BY REYNOLDS, SMITH AND HILLS, INC.

BORING LOCATION PLAN

REVISIONS					
Date	By	Description	Date	By	

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

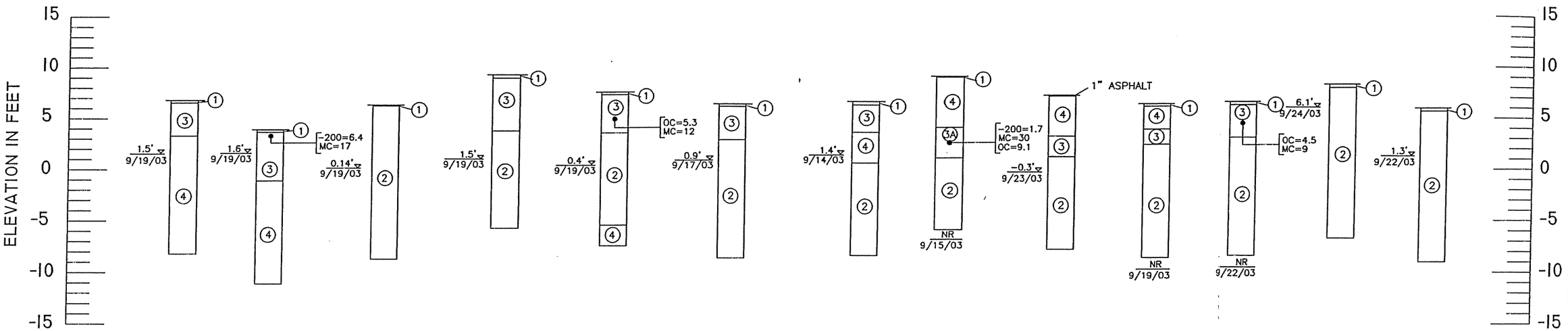
I-595 PD&E STUDY

SHEET NO.

GCME/2002/03008/PSI/826.DWG

PLATE-4

BORING NO.:	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13
STATION:	322+85	327+87	332+96	337+89	342+95	347+96	352+96	359+54	363+48	368+07	373+17	379+08	429+78
OFFSET:	243.6' RT	229.16' RT	235.71' RT	264.73' RT	265.3' RT	264.5' RT	267.0' RT	267.0' RT	235.3' RT	252.1' RT	245.0' RT	271.1' RT	246.1' RT
ELEVATION:	+6.8'	+3.9'	+6.3'	+9.3'	+7.6'	+6.4'	+6.6'	+9.1'	+7.2'	+6.4'	+6.6'	+8.3'	+6.0'



SCALE: 1"=10'V

LEGEND

① BROWN TO GRAY SAND WITH SILT, SOME ORGANIC STAINED, SOME SHELL FRAGMENTS, FINE GRAVEL AND GRASS ROOTS (TOPSOIL)

② LIGHT BROWN TO GRAY SAND WITH SILT, SOMETIMES WITH SOME FINE GRAVEL (CEMENTED SAND) (A-3, A-2-4)

③ DARK BROWN TO DARK GRAY SAND WITH SILT, SOME ORGANIC STAIN AND SOMETIMES WITH SOME LIMEROCK FRAGMENTS (A-3, A-2-4)

(3A) DARK BROWN SAND WITH SILT, ORGANIC STAINED WITH ORGANICS, AND SOMETIMES WITH PIECES OF TREE ROOTS (A-8)

④ GRAY TO LIGHT BROWN SAND WITH SILT AND SOME LIMEROCK FRAGMENT (A-3, A-1-b)

⑤ GRAY TO LIGHT BROWN SAND MIXED WITH LIMESTONE (A-1-b)

⑥ DARK BROWN TO BLACK ORGANIC SAND WITH PEAT (A-8)

9/19/03 GROUNDWATER LEVEL WITH DATE MEASURED

NR 9/19/03 GROUNDWATER NOT RECORDED DUE TO BOREHOLE CAVE-IN

NOTES:

AUGER BORINGS DRILLED BY PSI, INC. USING CME-55 DRILLING RIG. DRILLER NAME - OSCAR CORREA.

SOUTH OF I-595
EAST OF NOB HILL RD. TO EAST OF UNIVERSITY DR.

GCME PROJECT No. 03-01-03008

REVISIONS					
Date	By	Description	Date	By	Description

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

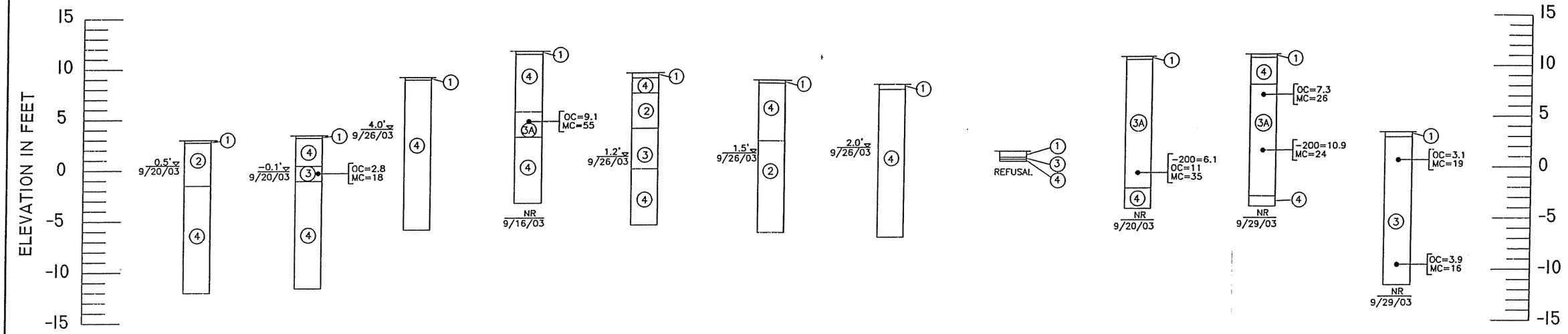
I-595 PD&E STUDY
ROADWAY SOIL PROFILES

SHEET NO.

GCME/2003/03008/FIGURE 1

FIGURE: 1

BORING NO.:	B-14	B-15	B-16	B-17	B-18	B-19	B-20	B-21	B-22	B-23	B-24
STATION:	591+72	586+91	581+77	576+78	571+86	566+80	561+94	556+99	548+62	546+92	543+96
OFFSET:	173.45' LT	168.92' LT	153.8' LT	123.65' LT	106.44' LT	138.77' LT	121.16' LT	128.72' LT	100.60' LT	104.15' LT	149.03' LT
ELEVATION:	+3.0'	+3.4'	+9.1'	+11.7'	+9.5'	+8.7'	+8.2'	+1.6'	+11.0'	+11.2'	+3.5'



SCALE: 1"=10'V

LEGEND

① BROWN TO GRAY SAND WITH SILT, SOME ORGANIC STAINED, SOME SHELL FRAGMENTS, FINE GRAVEL AND GRASS ROOTS (TOPSOIL)

② LIGHT BROWN TO GRAY SAND WITH SILT, SOMETIMES WITH SOME FINE GRAVEL (CEMENTED SAND) (A-3, A-2-4)

③ DARK BROWN TO DARK GRAY SAND WITH SILT, SOME ORGANIC STAIN AND SOMETIMES WITH SOME LIMEROCK FRAGMENTS (A-3, A-2-4)

③A DARK BROWN SAND WITH SILT, ORGANIC STAINED WITH ORGANICS, AND SOMETIMES WITH PIECES OF TREE ROOTS (A-8)

④ GRAY TO LIGHT BROWN SAND WITH SILT AND SOME LIMEROCK FRAGMENT (A-3, A-1-b)

⑤ GRAY TO LIGHT BROWN SAND MIXED WITH LIMESTONE (A-1-b)

⑥ DARK BROWN TO BLACK ORGANIC SAND WITH PEAT (A-8)

$\frac{9/20/03}{\nabla}$ GROUNDWATER LEVEL WITH DATE MEASURED

$\frac{NR}{9/20/03\ \nabla}$ GROUNDWATER NOT RECORDED DUE TO BOREHOLE CAVE-IN

NOTES:

AUGER BORINGS DRILLED BY PSI, INC. USING CME-55 DRILLING RIG. DRILLER NAME - OSCAR CORREA.

BORING B-21 IS NOT ACCESIBLE WITH A DRILLING RIG. SO, THE BORING LOCATION WAS DRILLED WITH A HAND AUGER.

NORTH OF I-595
BETWEEN FLORIDA TURNPIKE AND SR7/441

GCME PROJECT No. 03-01-03008

REVISIONS					
Date	By	Description	Date	By	Description

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

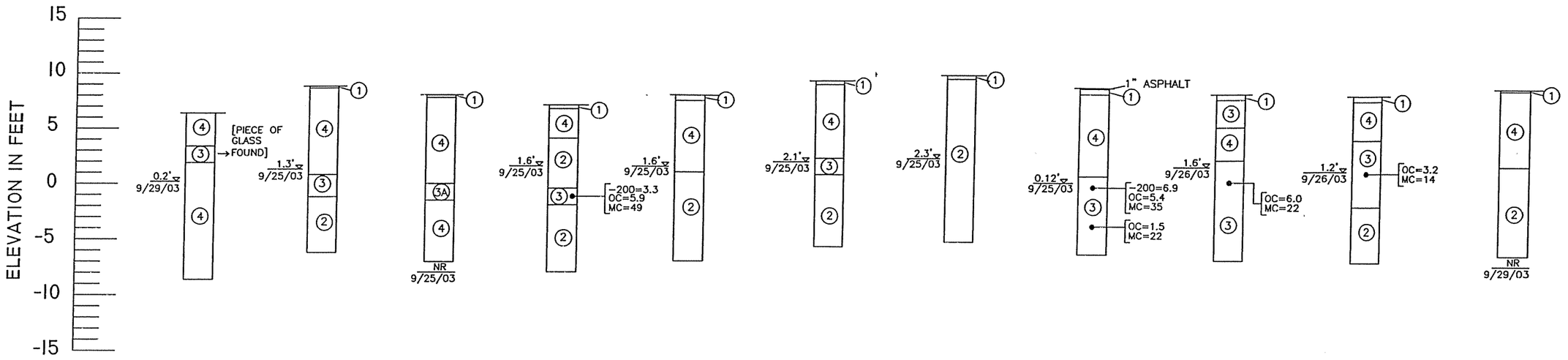
I-595 PD&E STUDY
ROADWAY SOIL PROFILES

SHEET NO.

GCME/2003/03008/FIGURE 2

FIGURE: 2

BORING NO.:	B-25	B-26	B-27	B-28	B-29	B-30	B-31	B-32	B-33	B-34	B-35
STATION:	429+72	422+84	418+43	412+64	407+79	402+79	397+72	390.0' LT	387+36	382+50	375+38
OFFSET:	181.8' LT	203.9 LT	186.1' LT	137.0' LT	120.0' LT	113.5' LT	29.0' LT	72.4' RT	58.0' RT	52.0' RT	47.0' LT
ELEVATION:	+6.4'	+8.8'	+8.0'	+7.1'	+8.1'	+9.4'	+9.8'	+8.7'	+8.2'	+8.0'	+8.6'



SCALE: 1"=10'V

LEGEND

① BROWN TO GRAY SAND WITH SILT, SOME ORGANIC STAINED, SOME SHELL FRAGMENTS, FINE GRAVEL AND GRASS ROOTS (TOPSOIL)

② LIGHT BROWN TO GRAY SAND WITH SILT, SOMETIMES WITH SOME FINE GRAVEL (CEMENTED SAND) (A-3, A-2-4)

③ DARK BROWN TO DARK GRAY SAND WITH SILT, SOME ORGANIC STAIN AND SOMETIMES WITH SOME LIMEROCK FRAGMENTS (A-3, A-2-4)

③A DARK BROWN SAND WITH SILT, ORGANIC STAINED WITH ORGANICS, AND SOMETIMES WITH PIECES OF TREE ROOTS (A-8)

④ GRAY TO LIGHT BROWN SAND WITH SILT AND SOME LIMEROCK FRAGMENT (A-3, A-1-b)

⑤ GRAY TO LIGHT BROWN SAND MIXED WITH LIMESTONE (A-1-b)

⑥ DARK BROWN TO BLACK ORGANIC SAND WITH PEAT (A-8)

$\frac{\nabla}{9/29/03}$ GROUNDWATER LEVEL WITH DATE MEASURED

$\frac{NR\ \nabla}{9/29/03}$ GROUNDWATER NOT RECORDED DUE TO BOREHOLE CAVE-IN

NOTES:

AUGER BORINGS DRILLED BY PSI, INC. USING CME-55 DRILLING RIG. DRILLER NAME - OSCAR CORREA.

NORTH OF I-595
EAST OF UNIVERSITY DR. TO EAST OF NOB HILL RD.
SHEET 1 OF 2

GCME PROJECT No. 2003-01-03008

REVISIONS					
Date	By	Description	Date	By	Description

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

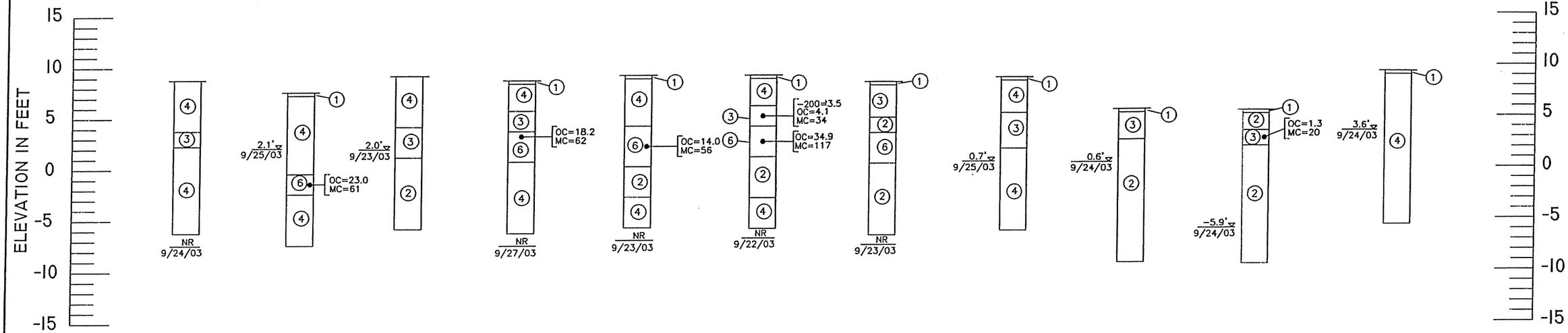
I-595 PD&E STUDY
ROADWAY SOIL PROFILES

SHEET NO.

GCME/2003/03008/FIGURE 3

FIGURE: 3

BORING NO.:	B-36	B-37	B-38	B-39	B-40	B-41	B-42	B-43	B-44	B-45	B-46
STATION:	370+51	365+57	360+39	355+36	350+39	345+39	340+37	334+98	330+01	325+11	322+40
OFFSET:	37.3' LT	66.0' RT	34.2' LT	35.4' LT	34.3' LT	33.0' LT	34.6' LT	56.6' LT	45.9' LT	41.3' LT	36.5' RT
ELEVATION:	+8.8'	+7.6'	+9.2'	+8.8'	+9.3'	+9.2'	+8.5'	+8.9'	+5.8'	+5.6'	+9.4'



SCALE: 1"=10'V

LEGEND

① BROWN TO GRAY SAND WITH SILT, SOME ORGANIC STAINED, SOME SHELL FRAGMENTS, FINE GRAVEL AND GRASS ROOTS (TOPSOIL)

② LIGHT BROWN TO GRAY SAND WITH SILT, SOMETIMES WITH SOME FINE GRAVEL (CEMENTED SAND) (A-3, A-2-4)

③ DARK BROWN TO DARK GRAY SAND WITH SILT, SOME ORGANIC STAIN AND SOMETIMES WITH SOME LIMEROCK FRAGMENTS (A-3, A-2-4)

③A DARK BROWN SAND WITH SILT, ORGANIC STAINED WITH ORGANICS, AND SOMETIMES WITH PIECES OF TREE ROOTS (A-8)

④ GRAY TO LIGHT BROWN SAND WITH SILT AND SOME LIMEROCK FRAGMENT (A-3, A-1-b)

⑤ GRAY TO LIGHT BROWN SAND MIXED WITH LIMESTONE (A-1-b)

⑥ DARK BROWN TO BLACK ORGANIC SAND WITH PEAT (A-8)

9/24/03 GROUNDWATER LEVEL WITH DATE MEASURED

NR 9/24/03 GROUNDWATER NOT RECORDED DUE TO BOREHOLE CAVE-IN

NOTES:

AUGER BORINGS DRILLED BY PSI, INC. USING CME-55 DRILLING RIG. DRILLER NAME - OSCAR CORREA.

NORTH OF I-595
EAST OF UNIVERSITY DR. TO EAST OF NOB HILL RD.
SHEET 2 OF 2

GCME PROJECT No. 1-01-03008

REVISIONS					
Date	By	Description	Date	By	Description

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

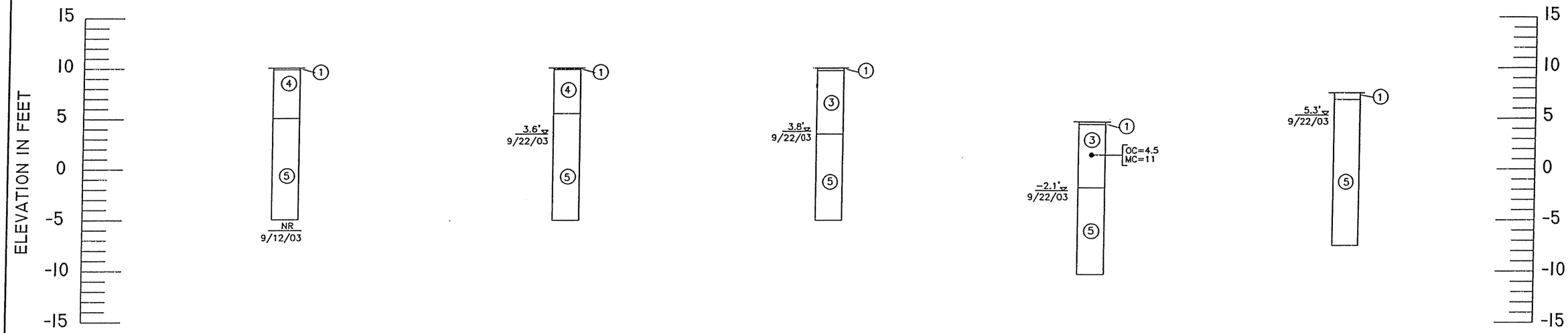
I-595 PD&E STUDY
ROADWAY SOIL PROFILES

SHEET NO.

GCME/2003/03008/FIGURE 4

FIGURE: 4

BORING NO.:	B-47	B-48	B-49	B-50	B-51
STATION:	153+10	148+42	143+42	139+03	134+12
OFFSET:	219.0' LT	295.36' LT	319.60' LT	327.01' LT	284.88' LT
ELEVATION:	+10.1'	+10.0'	+10.0'	+4.7'	+7.5'



SCALE: 1"=10'V

LEGEND

① BROWN TO GRAY SAND WITH SILT, SOME ORGANIC STAINED, SOME SHELL FRAGMENTS, FINE GRAVEL AND GRASS ROOTS (TOPSOIL)

② LIGHT BROWN TO GRAY SAND WITH SILT, SOMETIMES WITH SOME FINE GRAVEL (CEMENTED SAND) (A-3, A-2-4)

③ DARK BROWN TO DARK GRAY SAND WITH SILT, SOME ORGANIC STAIN AND SOMETIMES WITH SOME LIMEROCK FRAGMENTS (A-3, A-2-4)

③A DARK BROWN SAND WITH SILT, ORGANIC STAINED WITH ORGANICS, AND SOMETIMES WITH PIECES OF TREE ROOTS (A-8)

④ GRAY TO LIGHT BROWN SAND WITH SILT AND SOME LIMEROCK FRAGMENT (A-3, A-1-b)

⑤ GRAY TO LIGHT BROWN SAND MIXED WITH LIMESTONE (A-1-b)

⑥ DARK BROWN TO BLACK ORGANIC SAND WITH PEAT (A-8)

$\frac{\text{9/12/03}}{\nabla}$ GROUNDWATER LEVEL WITH DATE MEASURED

$\frac{\text{NR}}{\text{9/12/03}}$ GROUNDWATER NOT RECORDED DUE TO BOREHOLE CAVE-IN

NOTES:

AUGER BORINGS DRILLED BY PSI, INC. USING CME-55 DRILLING RIG. DRILLER NAME - OSCAR CORREA.

NORTH OF I-595
BETWEEN I-75 AND SW 136 AVE.

GCME PROJECT No. 0-01-03008

REVISIONS					
Date	By	Description	Date	By	Description

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

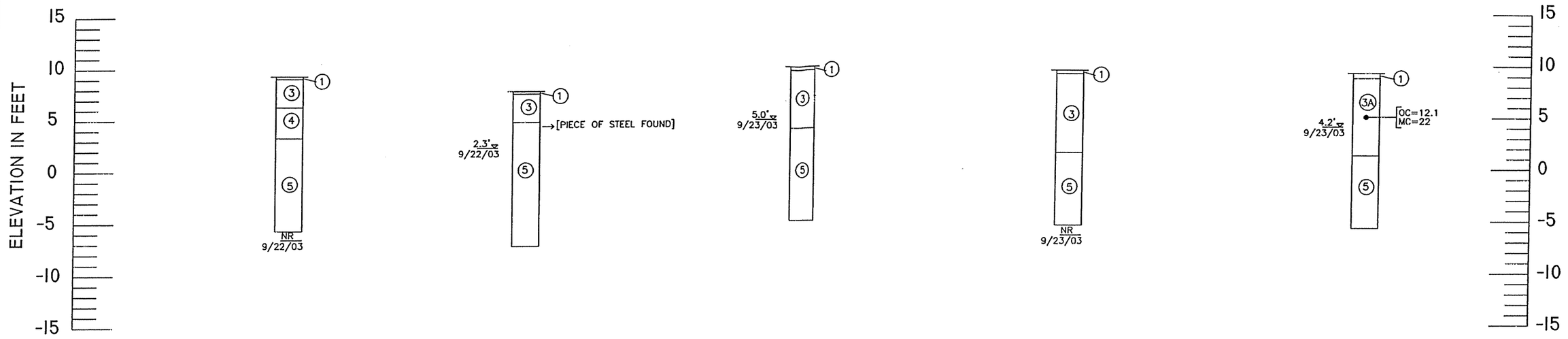
I-595 PD&E STUDY
ROADWAY SOIL PROFILES

SHEET NO.

GCME/2003/03008/FIGURE 5

FIGURE: 5

BORING NO.:	B-52	B-53	B-54	B-55	B-56
STATION:	98+31	93+90	88+79	83+70	78+55
OFFSET:	661.99' LT	638.83' LT	604.77' LT	554.04' LT	502.18' LT
ELEVATION:	+9.3'	+7.8'	+10.2'	+9.7'	+9.4'



SCALE: 1"=10'V

LEGEND

① BROWN TO GRAY SAND WITH SILT, SOME ORGANIC STAINED, SOME SHELL FRAGMENTS, FINE GRAVEL AND GRASS ROOTS (TOPSOIL)

② LIGHT BROWN TO GRAY SAND WITH SILT, SOMETIMES WITH SOME FINE GRAVEL (CEMENTED SAND) (A-3, A-2-4)

③ DARK BROWN TO DARK GRAY SAND WITH SILT, SOME ORGANIC STAIN AND SOMETIMES WITH SOME LIMEROCK FRAGMENTS (A-3, A-2-4)

③A DARK BROWN SAND WITH SILT, ORGANIC STAINED WITH ORGANICS, AND SOMETIMES WITH PIECES OF TREE ROOTS (A-8)

④ GRAY TO LIGHT BROWN SAND WITH SILT AND SOME LIMEROCK FRAGMENT (A-3, A-1-b)

⑤ GRAY TO LIGHT BROWN SAND MIXED WITH LIMESTONE (A-1-b)

⑥ DARK BROWN TO BLACK ORGANIC SAND WITH PEAT (A-8)

9/22/03 GROUNDWATER LEVEL WITH DATE MEASURED

NR 9/22/03 GROUNDWATER NOT RECORDED DUE TO BOREHOLE CAVE-IN

NOTES:

AUGER BORINGS DRILLED BY PSI, INC. USING CME-55 DRILLING RIG. DRILLER NAME -- OSCAR CORREA.

NORTH WEST QUADRANT
INTERSECTION OF I-595 AND I-75

GCME PROJECT No. 0-01-03008

REVISIONS					
Date	By	Description	Date	By	Description

GCME

GCME, INC
LICENSE No. 9076
6859 VISTA PARKWAY NORTH
WEST PALM BEACH, FLORIDA 33411
PARTHA GHOSH, P.E.
LICENSE No. 51377

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
862	BROWARD	409354-1-22-01

I-595 PD&E STUDY
ROADWAY SOIL PROFILES

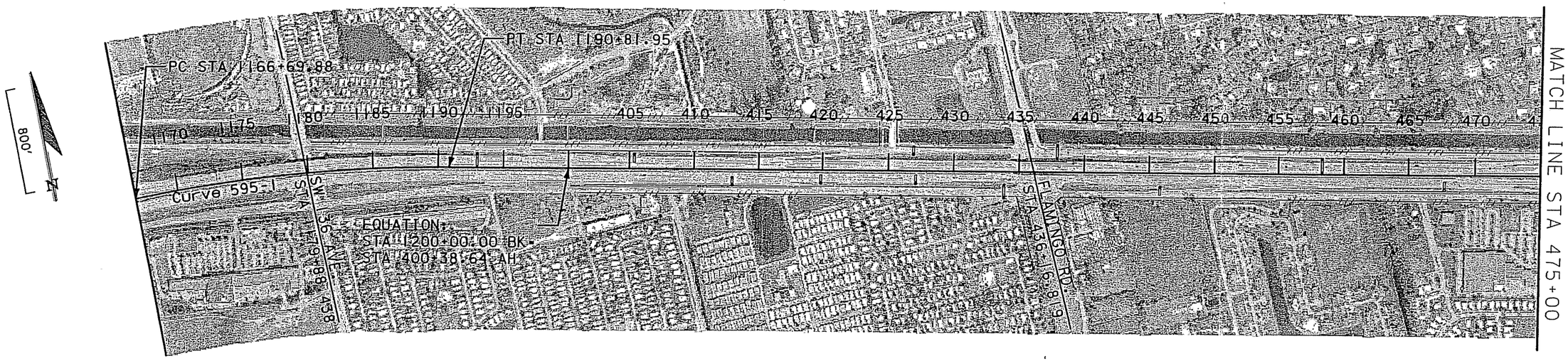
SHEET NO.

GCME/2003/03008/FIGURE 6

FIGURE: 6

WESTBOUND

		SW 136 AVE.					SW 124 AVE. (FLAMINGO RD.)						
	DESIGN SPEED (mi/hr)	70											
VERTICAL ALIGNMENT	GRADE (%)	+0.95	+2.00		-2.20		0.00		+2.10		-2.10		0.00
	LENGTH OF CURVE (ft)	525.3	2200		800		800		2000		800		(800)
	K VALUE	500(S)	524(C)		364(S)		381(S)		476(C)		381(S)		(381(S))
	STOPPING SIGHT DISTANCE (ft)												
HORIZONTAL ALIGNMENT	RADIUS (ft)	TIES INTO ℄ I-595 AT STA 1173+24.660 IN CURVE (SEE EB)											
	SUPERELEVATION	-0.02	T	+0.02		T	-0.02						
CROSS SECTION	NUMBER OF LANES	2+2 OFF	4			3+1 AUX	3					3+1 AUX	
	INSIDE SHOULDER (ft)	10				10						10	
R/W	MEDIAN WIDTH (ft)(TYPE)				64 (LAWN)							64 (LAWN)	
	EXISTING ROAD R/W (ft)	TOTAL 324										TOTAL 324	



EASTBOUND

		SW 136 AVE.						SW 124 AVE. (FLAMINGO RD.)					
	DESIGN SPEED (mi/hr)	70											
VERTICAL ALIGNMENT	GRADE (%)		+2.00	-2.20		0.00		+2.10		-2.10		0.00	
	LENGTH OF CURVE (ft)		2200		800		800		2000		800		(800)
	K VALUE		524(C)		364(S)		381(S)		476(C)		381(S)		(381(S))
	STOPPING SIGHT DISTANCE (ft)												
HORIZONTAL ALIGNMENT	RADIUS (ft)		11460										
	SUPERELEVATION		-0.02						-0.02				
CROSS SECTION	NUMBER OF LANES	5		4+1 AUX		4	4+1 AUX	4	3+1 AUX		3		3+1 AUX
	INSIDE SHOULDER (ft)	10					10						10
R/W	EXISTING ROAD R/W (ft)	(SEE WESTBOUND FOR TOTAL)											

RS&H
Reynolds, Smith and Hills, Inc.
Architecture, Engineering and Planning

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

I-595 PD & E STUDY
PRELIMINARY ENGINEERING REPORT

EXISTING
LEVEL OF SERVICE

FIGURE B-1

WESTBOUND

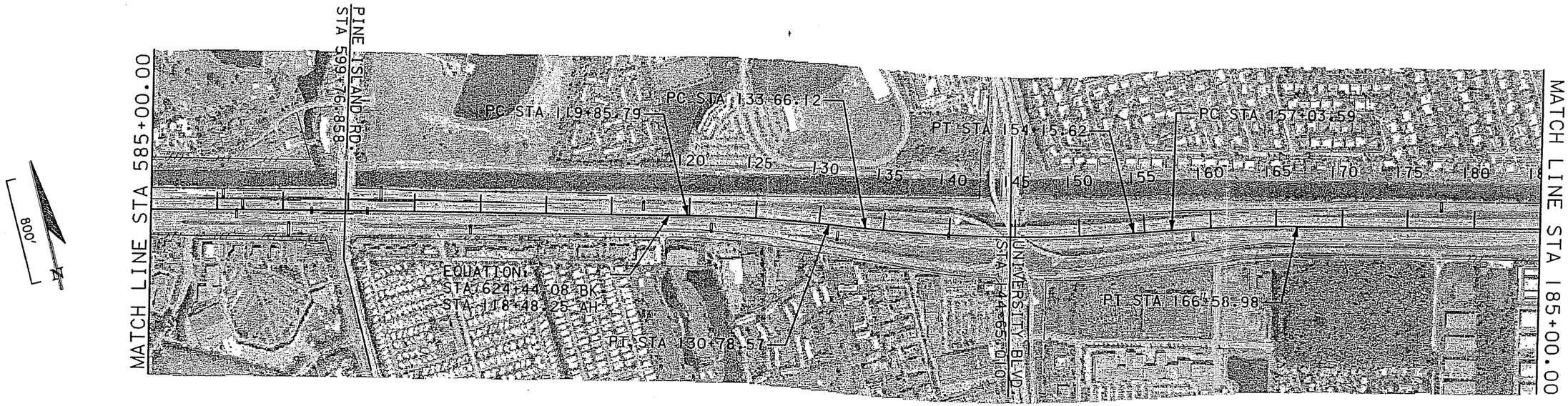
		SW 112 AVE. (HIATUS RD.)					NOB HILL RD.					
	DESIGN SPEED (mi/hr)	70			70				70			
VERTICAL ALIGNMENT	GRADE (%)	+2.10		-2.10		0.00		+2.12		-2.08		0.00	0.00
	LENGTH OF CURVE (ft)	800	2000		800		800		2000		800		
	K VALUE	381(S)	476(C)		381(S)		377(S)		476(C)		385(S)		
	STOPPING SIGHT DISTANCE (ft)												
HORIZONTAL ALIGNMENT	RADIUS (ft)							26444.21		26444.21			
	SUPERELEVATION	-0.02									-0.02		
CROSS SECTION	NUMBER OF LANES	3		3+1 AUX			3				3+1 AUX		
	INSIDE SHOULDER (ft)	10									10		
	MEDIAN WIDTH (ft)(TYPE)	64 (LAWN)									64 (LAWN)		
R/W	EXISTING ROAD R/W (ft)	TOTAL 324									TOTAL 324		

EASTBOUND

		SW 112 AVE. (HIATUS RD.)					NOB HILL RD.					
	DESIGN SPEED (mi/hr)	70			70				70			
VERTICAL ALIGNMENT	GRADE (%)	+2.10		-2.10		0.00		+2.12		-2.08		0.00
	LENGTH OF CURVE (ft)	800	2000		800		800		2000		800	
	K VALUE	381(S)	476(C)		381(S)		377(S)		476(C)		385(S)	
	STOPPING SIGHT DISTANCE (ft)											
HORIZONTAL ALIGNMENT	RADIUS (ft)							26444		26444		
	SUPERELEVATION	-0.02			-0.02						-0.02	
CROSS SECTION	NUMBER OF LANES	3		3+1 AUX			3				3+1 AUX	
	INSIDE SHOULDER (ft)	10									10	
R/W	EXISTING ROAD R/W (ft)	(SEE WESTBOUND FOR TOTAL)										

WESTBOUND

		SW 88 AVE. (PINE ISLAND RD.)					UNIVERSITY DR.						
	DESIGN SPEED (mi/hr)	70											
VERTICAL ALIGNMENT	GRADE (%)		+2.12	-2.04	0.00		+2.10	-2.10					70 0.00
	LENGTH OF CURVE (ft)	800	1950	800		800	2200		800				
	K VALUE	377(S)	469(C)	392(S)		381(S)	524(C)		381(S)				
	STOPPING SIGHT DISTANCE (ft)		365.761										
HORIZONTAL ALIGNMENT	RADIUS (ft)				11459		11459		11459				
	SUPERELEVATION	-0.02			T +0.028	T	-0.02	T	+0.02	T	-0.02		
CROSS SECTION	NUMBER OF LANES	3			3+1 AUX		3		3+1 AUX		3		
	INSIDE SHOULDER (ft)	10									10		
	MEDIAN WIDTH (ft)(TYPE)	64 (LAWN)									64 (LAWN)		
R/W	EXISTING ROAD R/W (ft)	TOTAL VARIES 324 - 354			111 - 291				100 - 155				



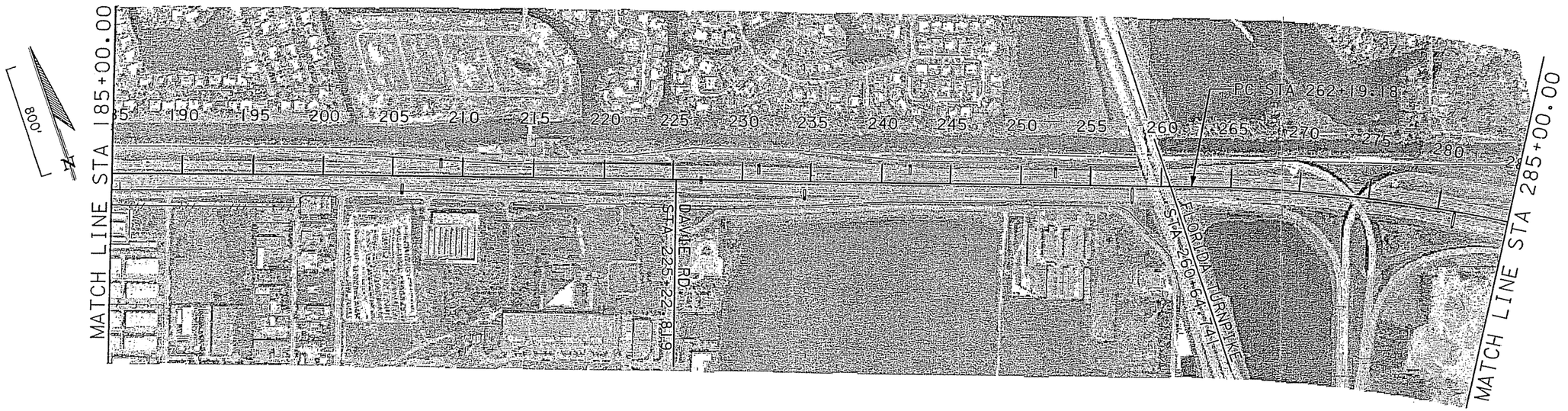
EASTBOUND

		SW 88 AVE. (PINE ISLAND RD.)					UNIVERSITY DR.						
	DESIGN SPEED (mi/hr)	70											
VERTICAL ALIGNMENT	GRADE (%)		+2.12	-2.04	0.00		+2.00	-2.00					70 0.00
	LENGTH OF CURVE (ft)	800	1950	800		800	2200		800				
	K VALUE	377(S)	431(C)	392(S)		400(S)	550(C)		400(S)				
	STOPPING SIGHT DISTANCE (ft)		365.761										
HORIZONTAL ALIGNMENT	RADIUS (ft)				11460		11460		11460				
	SUPERELEVATION	-0.02			-0.02	T	+0.02	T			-0.02		
CROSS SECTION	NUMBER OF LANES	3			3+1 AUX		3						
	INSIDE SHOULDER (ft)	10									10		
R/W	EXISTING ROAD R/W (ft)	(SEE WESTBOUND FOR TOTAL)			98.691 - 350								

RS&H Reynolds, Smith and Hills, Inc. Architecture, Engineering and Planning	*STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION*	***I-595 PD & E STUDY PRELIMINARY ENGINEERING REPORT***	***EXISTING LEVEL OF SERVICE***	***FIGURE B-1*** 3 OF 6

WESTBOUND

		DAVIE RD.						FLORIDA'S TURNPIKE					
	DESIGN SPEED (mi/hr)	70											
VERTICAL ALIGNMENT	GRADE (%)	0.00		+2.60	-2.60	0.00			+0.50	-0.50	0.00		
	LENGTH OF CURVE (ft)		800	1600	800			400	500	400			
	K VALUE		308(S)	5250(C)	308(S)			800(S)	500(C)	800(S)			
	STOPPING SIGHT DISTANCE (ft)			396.241									
HORIZONTAL ALIGNMENT	RADIUS (ft)									11459			
	SUPERELEVATION	-0.02				-0.02		T	+0.02				
CROSS SECTION	NUMBER OF LANES	3	3+1 AUX	3	4	4+1 AUX		4	4+1 AUX	4			
	INSIDE SHOULDER (ft)	10											
	MEDIAN WIDTH (ft)(TYPE)	64 (LAWN)											
R/W	EXISTING ROAD R/W (ft)	100 - 155		183 - 240				180 - 376					



EASTBOUND

		DAVIE RD.						FLORIDA'S TURNPIKE					
	DESIGN SPEED (mi/hr)	70											
VERTICAL ALIGNMENT	GRADE (%)	0.00		+2.60	-2.60	0.00			+0.50	-0.50	0.00		
	LENGTH OF CURVE (ft)		800	1600	800			400	500	400			
	K VALUE		308(S)	308(C)	308(S)			800(S)	500(C)	800(S)			
	STOPPING SIGHT DISTANCE (ft)			396.241									
HORIZONTAL ALIGNMENT	RADIUS (ft)									11460			
	SUPERELEVATION	-0.02				-0.02							
CROSS SECTION	NUMBER OF LANES	AUX	4+1 AUX	4	4+2 AUX	4	4+2 AUX	4	4+2 AUX	3			
	INSIDE SHOULDER (ft)	10											
R/W	EXISTING ROAD R/W (ft)	98.691 - 350		130 - 221		230 - 570							

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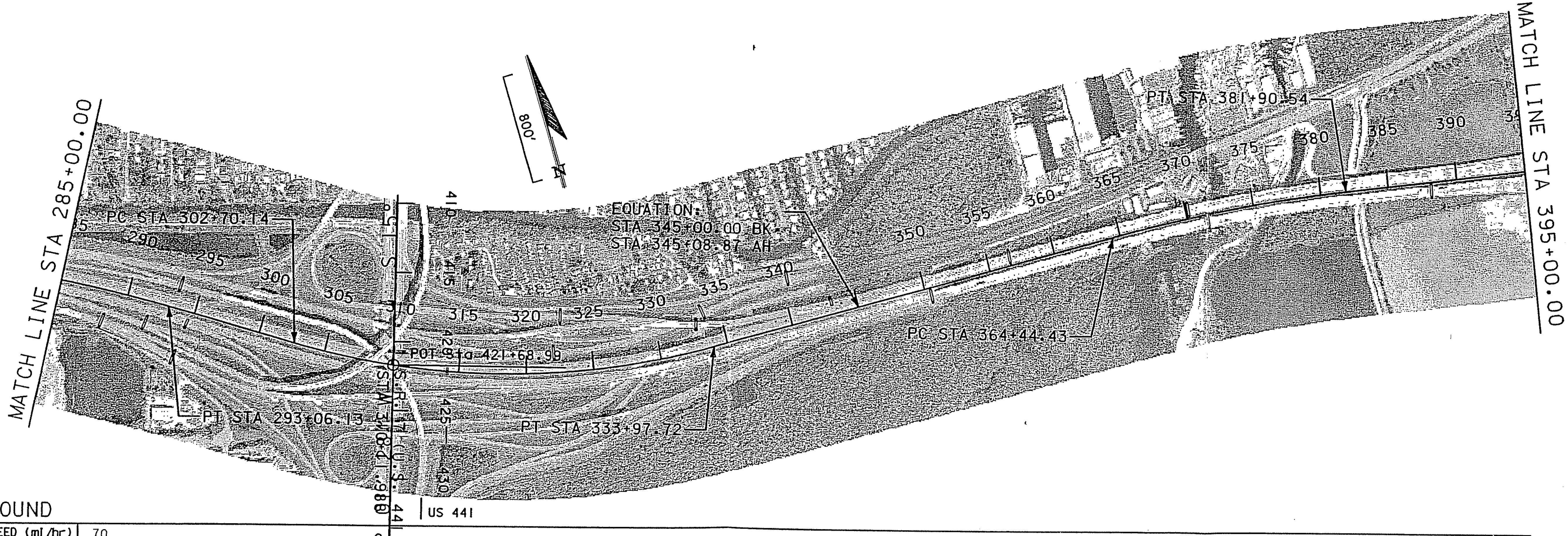
EXISTING
LEVEL OF SERVICE

FIGURE B-1

WESTBOUND

US 441

Category	Item												
	DESIGN SPEED (mi/hr)	70	70										
VERTICAL ALIGNMENT	GRADE (%)		+1.90	+1.90	-1.00	+1.00	-1.00	+2.60	-2.60				
VERTICAL ALIGNMENT	LENGTH OF CURVE (ft)		620		1550	950	1050		1000		2680		1000
VERTICAL ALIGNMENT	K VALUE		326(S)		534(C)	475(S)	525(C)		278(S)		515(C)		305(S)
VERTICAL ALIGNMENT	STOPPING SIGHT DISTANCE (ft)												
HORIZONTAL ALIGNMENT	RADIUS (ft)		-0.04	5729.58		11459							
HORIZONTAL ALIGNMENT	SUPERELEVATION		T	-0.02	T	-0.04	T	-0.02	T	+0.02	T		
CROSS SECTION	NUMBER OF LANES	3	3+1 AUX	3	3+1 AUX	4	4+1 AUX						
CROSS SECTION	INSIDE SHOULDER (ft)	10	10										
CROSS SECTION	MEDIAN WIDTH (ft)(TYPE)	64 (LAWN)	64 (LAWN)										
R/W	EXISTING ROAD R/W (ft)	425 - 850	425 - 850	267 - 425	176 - 267	180 - 255							



EASTBOUND

US 441

Category	Item												
	DESIGN SPEED (mi/hr)	70	70										
VERTICAL ALIGNMENT	GRADE (%)		+1.90	-1.00	+1.00	-1.00	+2.60	-2.60					
VERTICAL ALIGNMENT	LENGTH OF CURVE (ft)		620		1550	950	1050		1000		2680		1000
VERTICAL ALIGNMENT	K VALUE		326(S)		535(C)	475(S)	525(C)		278(S)		515(C)		305(S)
VERTICAL ALIGNMENT	STOPPING SIGHT DISTANCE (ft)												
HORIZONTAL ALIGNMENT	RADIUS (ft)			5730		11460							
HORIZONTAL ALIGNMENT	SUPERELEVATION	-0.02	T	+0.04	T	-0.02							
CROSS SECTION	NUMBER OF LANES	3+1 AUX	3	3	3+1 AUX	4	3	3+2 AUX					
CROSS SECTION	INSIDE SHOULDER (ft)	10	10										
R/W	EXISTING ROAD R/W (ft)	285 - 556	350 - 960	200 - 350	176 - 200	180 - 195							

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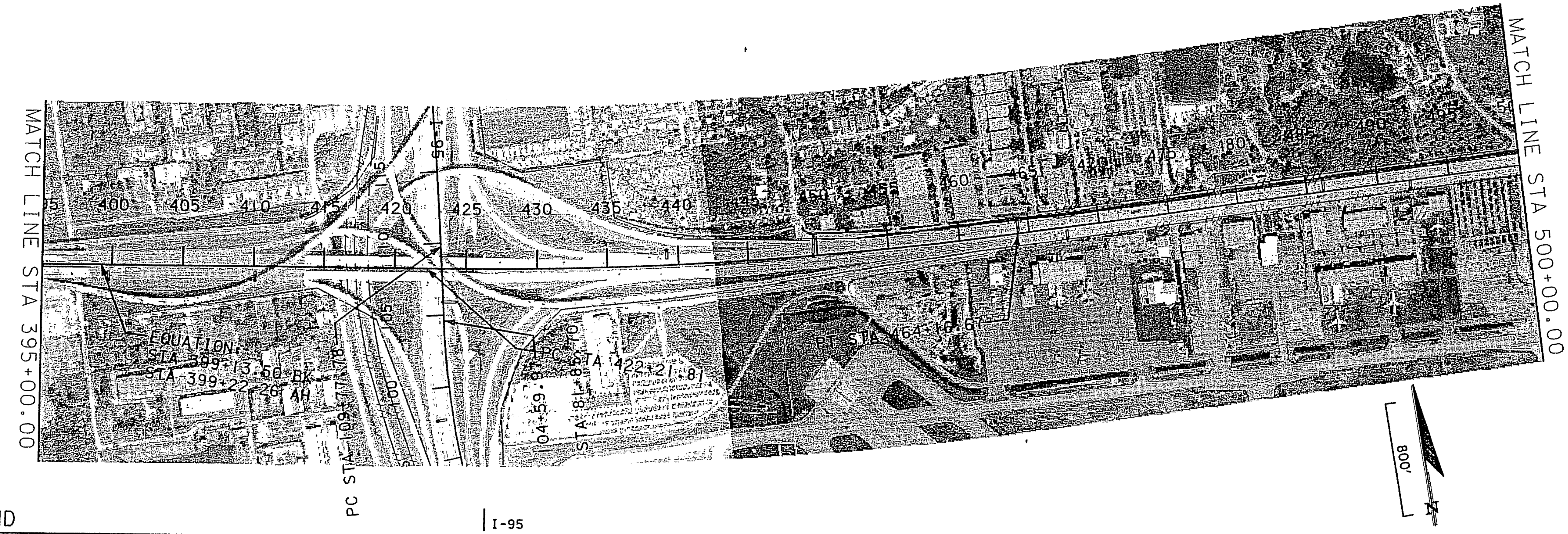
EXISTING LEVEL OF SERVICE

FIGURE B-1

WESTBOUND

I-95

		Values (left to right)
	DESIGN SPEED (mi/hr)	70
VERTICAL ALIGNMENT	GRADE (%)	+0.68 / +0.6846 / +0.6846 / -2.16 / -0.448 / +2.702 / -0.30 / +0.30 / -0.30
	LENGTH OF CURVE (ft)	1542.5 / 640 / 680 / 1200 / 200 / 200 / (400)
	K VALUE	542(C) / 374(S) / 216(S) / 400(C) / 333(S) / 333(C) / [400(S)]
	STOPPING SIGHT DISTANCE (ft)	304.801
HORIZONTAL ALIGNMENT	RADIUS (ft)	28647.89
	SUPERELEVATION	-0.02 / -0.02 / T / -0.025
CROSS SECTION	NUMBER OF LANES	4 / 4 / 3 / 3+1 AUX / 3+2 AUX / 4
	INSIDE SHOULDER (ft)	10 / 10
	MEDIAN WIDTH (ft)(TYPE)	64 (LAWN)
R/W	EXISTING ROAD R/W (ft)	90 - 750 / 90 - 340 / 140 - 340 / 70 - 72



EASTBOUND

I-95

		Values (left to right)
	DESIGN SPEED (mi/hr)	70
VERTICAL ALIGNMENT	GRADE (%)	+0.68 / +0.6846 / +0.6846 / -2.16 / -0.578 / +2.702 / -0.30 / +0.30 / -0.30
	LENGTH OF CURVE (ft)	1542.50 / 800 / 720 / 1200 / 200 / 200 / (400)
	K VALUE	542(C) / 506(S) / 220(S) / 500(C) / 333(S) / 333(C) / [400(S)]
	STOPPING SIGHT DISTANCE (ft)	304.801
HORIZONTAL ALIGNMENT	RADIUS (ft)	28648
	SUPERELEVATION	-0.02 / -0.02 / T / +0.02 / T / -0.025
CROSS SECTION	NUMBER OF LANES	3 / 3+1 AUX / 3 / 3+2 AUX / 4 / 4+2 AUX / 4+1 AUX
	INSIDE SHOULDER (ft)	10
R/W	EXISTING ROAD R/W (ft)	100 - 750 / 100 - 750 / 240 - 490 / 85 - 90

RS&H Reynolds, Smith and Hills, Inc. Architecture, Engineering and Planning	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	I-595 PD & E STUDY PRELIMINARY ENGINEERING REPORT	EXISTING LEVEL OF SERVICE	FIGURE B-1 6 OF 6