

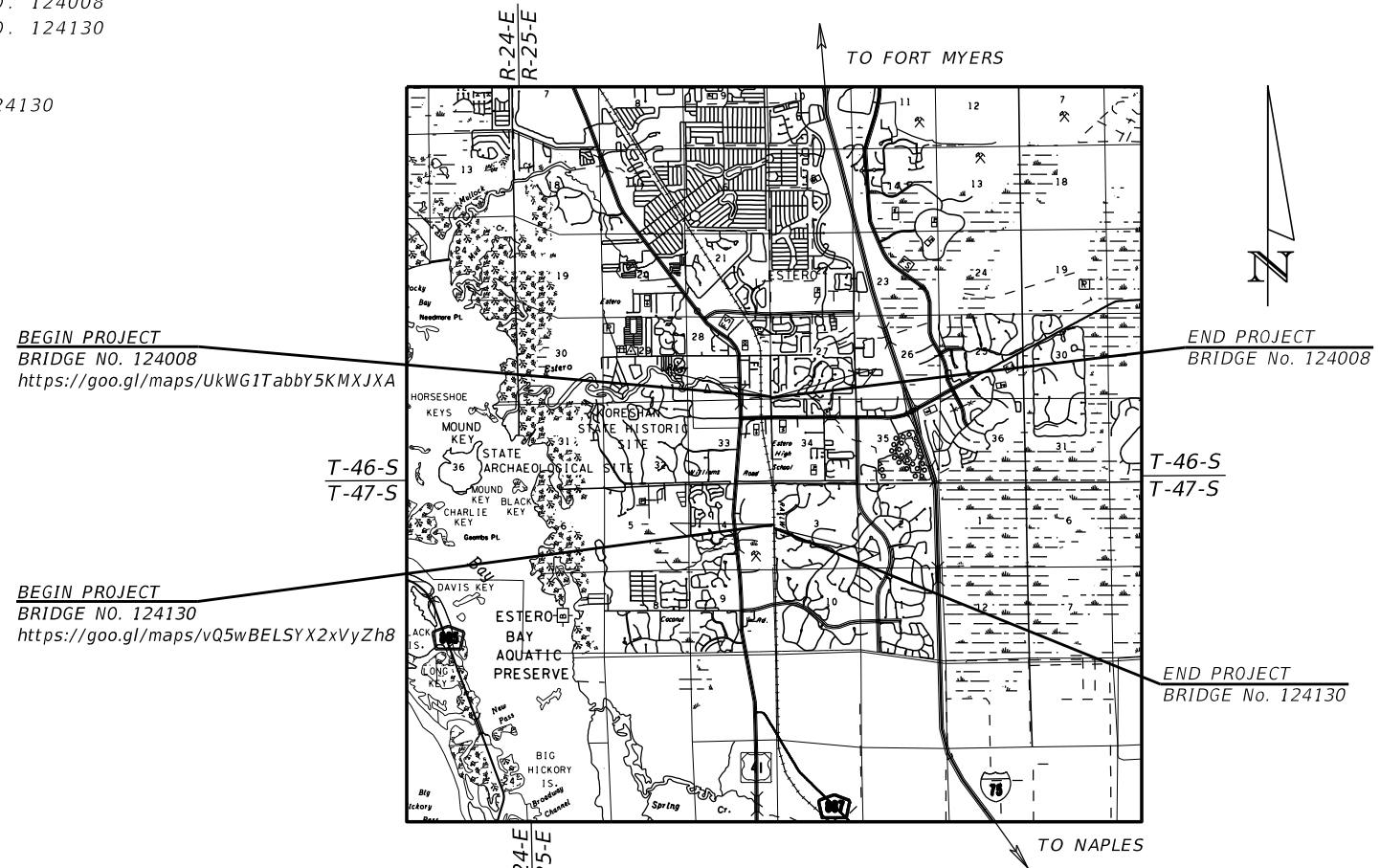
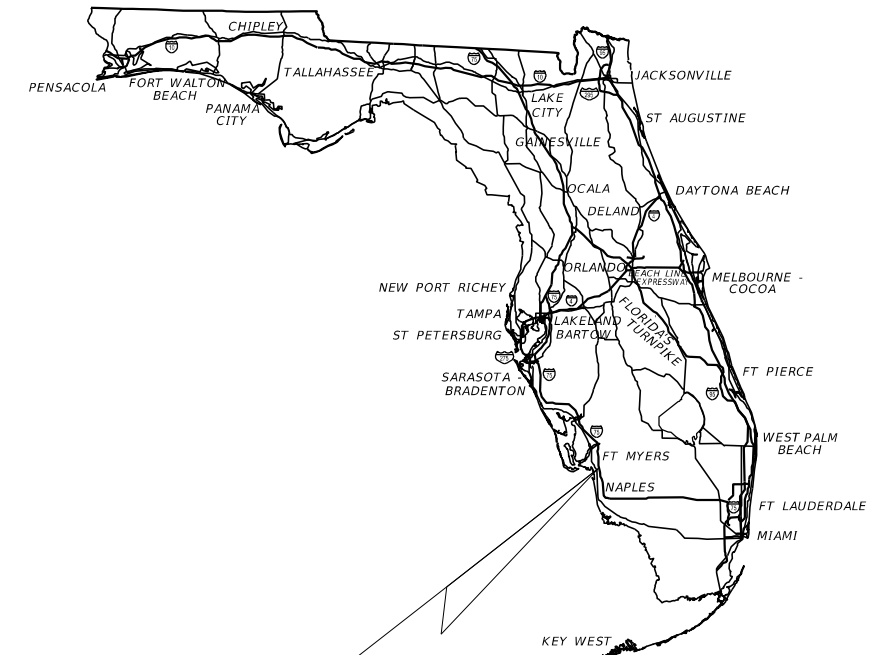
THE VILLAGE OF ESTERO

CONTRACT PLANS

SANDY LANE AND VIA COCONUT POINT BRIDGE REHABILITATION

INDEX OF STRUCTURE PLANS

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B1-1	PLAN AND ELEVATION - BRIDGE NO. 124008
B2-1	PLAN AND ELEVATION - BRIDGE NO. 124130
BX1-1 THRU BX1-29	EXISTING PLANS - BRIDGE NO. 124130



PROJECT
LOCATION

PREPARED FOR:



PREPARED BY:



STRUCTURE PLANS
ENGINEER OF RECORD:

SCOTT A. BETZ, P.E. NO.: 81282
KISINGER CAMPO & ASSOCIATES, CORP.
201 N. FRANKLIN STREET, SUITE 400
TAMPA, FL 33602
PHONE: (813) 871-5331
VENDOR NO: 59-1677145

VILLAGE OF ESTERO
PROJECT MANAGER:

DAVID WILLEMS, P.E.

GOVERNING DESIGN STANDARDS:

Florida Department of Transportation, FY 2021-22 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).
Standard Plans for Road and Bridge Construction and associated IRs are available at the following website:
<http://www.fdot.gov/design/standardplans>

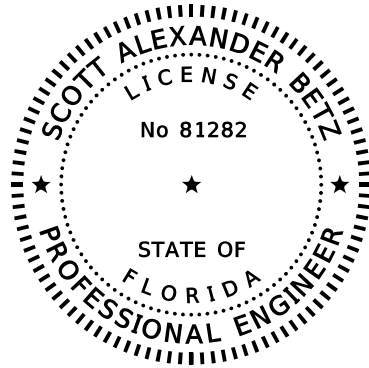
GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2021 Standard Specifications for Road and Bridge Construction at the following website:
<https://www.fdot.gov/programmanagement/Implemented/SpecBooks>

SHEET
NO.

B-1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE
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ON ANY ELECTRONIC COPIES.

Kisinger Campo & Associates Corp.
201 N. Franklin Street
Suite 400
Tampa, FL 33602
Scott Alexander Betz, PE No. 81282

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
B-1	KEY SHEET
B-2	SIGNATURE SHEET
B-3	SUMMARY OF PAY ITEMS
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B-6	CONCRETE RESTORATION DETAILS
B1-1	PLAN AND ELEVATION - BRIDGE NO. 124008
B2-1	PLAN AND ELEVATION - BRIDGE NO. 124130

BRIDGE NOS. 124008 & 124130

REVISIONS						DRAWN BY: ARF 01-21	VILLAGE OF ESTERO			SHEET TITLE: SIGNATURE SHEET		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION							
						CHECKED BY: SAB 01-21	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME:	SHEET NO.	
						DESIGNED BY: ARF 01-21		LEE	N/A	SANDY LANE AND VIA COCONUT POINT BRIDGE REHABILITATION	B-2	
						CHECKED BY: SAB 01-21						

NOTE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 124008

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
LUMP SUM ITEMS	101-1	MOBILIZATION		LS	1		1			
	102-1	MAINTENANCE OF TRAFFIC		LS	1		1			
EARTHWORK	120-5	CHANNEL EXCAVATION	SOUTH CHANNEL	CY	48.5		82.7			
			NORTH CHANNEL		34.2					
	121-70-2	FLOWABLE FILL	NORTHEAST SLOPE SOUTHWEST SLOPE	CY	10.4 0.1		10.5			
SPECIAL FEATURES	104-11	FLOATING TURBIDITY BARRIER	SOUTH CHANNEL	LF	101		195			
			NORTH CHANNEL		94					
	110-4-10	REMOVAL OF EXISTING CONCRETE	SOUTHEAST OUTFALL	SY	5		10			
			NORTHEAST OUTFALL		5					
	110-1-1	CLEARING & GRUBBING	CHANNEL	AC	0.05		0.05			
	327-70-6	MILLING EXISTING ASPHALT PAVEMENT, 1 1/2" AVG. DEPTH	ASPHALT OVERLAY	SY	304		304			
	337-7-81	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC B, FC-12.5, PG 76-22	ASPHALT OVERLAY	TN	25.0		25.0			
	524-4-2	CLEANING AND SEALING JOINTS IN EXISTING CONCRETE SLOPE PAVEMENT	ABUTMENT 1	LF	34		68			
			ABUTMENT 2		34					
	530-1	RIPRAP, SAND-CEMENT	NORTHEAST SLOPE	CY	0.4		0.4			
	530-3-3	RIPRAP- RUBBLE, BANK AND SHORE	SOUTH CHANNEL	TN	110.4		185.3			
			NORTH CHANNEL		74.9					
	530-74	BEDDING STONE	SOUTH CHANNEL	TN	49.2		82.5			
		NORTH CHANNEL		33.3						
711-11-101	PAINTED PAVEMENT MARKINGS, STARDARD, WHITE, SOLID, 6"	ASPHALT OVERLAY	GM	0.038		0.038				
711-11-201	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6"	ASPHALT OVERLAY	GM	0.038		0.038				

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 124130

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
LUMP SUM ITEMS	101-1	MOBILIZATION		LS	1		1			
	102-1	MAINTENANCE OF TRAFFIC		LS	1		1			
CULVERT	401-70-3	RESTORE SPALLED AREAS, LATEX MODIFIED MORTAR-ACRYLIC	CEILINGS & WALLS	CF	101.5		101.5			
	411-1	EPOXY MATERIAL FOR CRACK INJECTION-STRUCTURES REHAB	CEILINGS & WALL JOINTS	GA	12		12			
	411-2	CRACKS INJECT & SEAL- STRUCTURES REHAB	CEILINGS & WALL JOINTS	LF	167		167			
	415-1-4	REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	CEILINGS & WALLS	LB	609		609			

PAY ITEM NOTES:

1. THE COST ASSOCIATED WITH THE REMOVAL OF DEBRIS, SILT, AND OTHER DELETRIOUS MATERIALS AT THE PROJECT SITES NECESSARY FOR THE COMPLETION OF REHABILITATION OPERATIONS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAY ITEM 110-1-1 CLEARING AND GRUBBING.
2. THE COST ASSOCIATED WITH THE EXCAVATION AND REMOVAL OF EMBANKMENT MATERIAL NECESSARY FOR THE INSTALLATION OF BEDDING STONE AND RUBBLE RIPRAP SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAY ITEM 530-3-3 RIPRAP - RUBBLE, BANK AND SHORE.
3. THE COST ASSOCIATED WITH THE REMOVAL OF EXISTING DRAINAGE FLUME CONCRETE SHALL BE COVERED IN THE CONTRACT UNIT PRICE FOR PAY ITEM 110-4-10 REMOVAL OF EXISTING CONCRETE.
4. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL BID ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE ASSOCIATED BID ITEMS.

BRIDGE NOS. 124008 & 124130

REVISIONS						DRAWN BY: ARF 01-21	VILLAGE OF ESTERO			SHEET TITLE: SUMMARY OF PAY ITEMS	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						DESIGNED BY: SAB 01-21	LEE	N/A	PROJECT NAME: SANDY LANE AND VIA COCONUT POINT BRIDGE REHABILITATION	SHEET NO. B-3	
						CHECKED BY: SAB 01-21					

DESIGN SPECIFICATIONS:

1. FDOT STRUCTURES MANUAL DATED JANUARY 2021 AND SUBSEQUENT STRUCTURES DESIGN BULLETINS.
2. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LOAD AND RESISTANCE FACTOR (LRFD) BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION AND ALL SUBSEQUENT INTERIMS.
3. FDOT DESIGN MANUAL DATED JANUARY 2021 AND SUBSEQUENT ROADWAY DESIGN BULLETINS.

PRIMARY SCOPE OF WORK:

CONCRETE RESTORATION, SCOUR REMEDIATION, VOID REPAIR, MILLING AND RESURFACING

VERTICAL DATUM:

ALL ELEVATIONS REFER TO NAVD 1988 UNLESS OTHERWISE NOTED AND ARE APPROXIMATE.

DRAWINGS AND DIMENSIONS:

1. ALL DIMENSION SHOWN ARE BASED ON FIELD MEASUREMENTS AND DO NOT INCLUDE FIELD SURVEY. SCALES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT NECESSARILY REPRESENT SURVEY ELEVATIONS.
2. ALL DIMENSIONS ARE IN FEET AND INCHES.
3. CONTRACTOR SHALL VERIFY ALL DIMENSION IN THE FIELD PRIOR TO ORDERING MATERIALS OR BEGINNING WORK. NOTIFY THE ENGINEER OF SIGNIFICANT CHANGES.
4. DO NOT SCALE DRAWING FOR DIMENSIONS NOT GIVEN.

ENVIRONMENT:

SUPERSTRUCTURE: SLIGHTLY AGGRESSIVE
SUBSTRUCTURE: MODERATELY AGGRESSIVE

POLLUTION CONTROL:

1. SUBMIT A POLLUTION CONTROL PLAN TO THE ENGINEER, IN ACCORDANCE WITH THE FDOT SPECIFICATIONS, FOR APPROVAL PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.
2. DO NOT ALLOW, AT ANY TIME, ANY DISCHARGE OR MATERIALS TO FALL INTO THE WATERWAY.
3. SUBMIT TO THE ENGINEER AN EROSION CONTROL PLAN (ECP) AS REQUIRED IN THE FDOT SPECIFICATIONS. INCLUDE THE AREA REQUIRED FOR STAGING OF EQUIPMENT AND MATERIAL FOR APPROVAL BY THE ENGINEER IN THIS ECP.
4. NO OFFSITE IMPACTS SHALL BE PERMITTED.

EXISTING PLANS:

1. EXISTING PLANS ARE FOR INFORMATIONAL PURPOSES ONLY.
2. VISIT THE SITE PRIOR TO BID TO BECOME FULLY AWARE OF EXISTING FIELD CONDITIONS.

SITE CONDITIONS:

DO NOT DISTURB HABITAT BEYOND THE LIMITS OF CONSTRUCTION.

UTILITIES:

1. THE LOCATIONS OF UTILITIES ARE BASED ON FIELD OBSERVATIONS AND ARE APPROXIMATE. LOCATE ALL UTILITIES PRIOR TO COMMENCING CONSTRUCTION OPERATIONS. IF ANY EXISTING UTILITIES CONFLICT WITH PROPOSED CONSTRUCTION METHODS, MATERIALS, OR EQUIPMENT, NOTIFY THE ENGINEER. AVOID ANY DAMAGE TO EXISTING UTILITIES.
2. UTILITY/AGENCY OWNERS:

COMPANY:	PHONE NUMBER:	EMAIL:
BONITA SPRINGS UTILITIES, INC.	239-872-6228	ENGINEERING@BSU.US
CENTURYLINK	850-559-1444	WILLIAM.MCCLLOUD@CENTURYLINK.COM
COMCAST	561-227-3417	
FLORIDA POWER & LIGHT - LEE	239-353-6047	MICHAEL.MARTINEZ@FPL.COM
SUMMIT BROADBAND INC.	239-821-2670	MREBER@SUMMIT-BROADBAND.COM
LEE COUNTY SIGNAL DEPT.	239-707-4870	JFENCIL@LEEGOV.COM
LEE COUNTY BOCC - FIBER	239-533-7373	ABOISSIERE@LEEGOV.COM
LEE COUNTY UTILITIES	239-533-8150	WHULL@LEEGOV.COM
CROWN CASTLE NG	888-632-0931	FIBER.DIG@CROWNCastle.COM
TECO PEOPLES GAS - FT MYERS	813-275-3783	JDOMNING@TECOENERGY.COM

SURROUNDING VEGETATION:

1. USE CARE AND MINIMIZE DISTURBANCE TO SURROUNDING VEGETATION. DO NOT PLACE ANY TEMPORARY OR PERMANENT FILL IN THE CANAL/SURFACE WATER DURING THE DESILTING AND SHOTCRETE RESTORATION ACTIVITIES. DO NOT IMPACT ANY VEGETATION THAT IS CONSIDERED JURISDICTIONAL FROM A SURFACE WATER STANDPOINT.
2. RE-SOD ANY AREAS DISTURBED BY THE CONSTRUCTION OPERATIONS, AT NO ADDITIONAL COMPENSATION TO THE DEPARTMENT, TO THE ENGINEER'S SATISFACTION PRIOR TO PROJECTS ACCEPTANCE.

TEMPORARY TRAFFIC CONTROL:

1. SUBMIT TO THE ENGINEER FOR REVIEW AT TEMPORARY TRAFFIC CONTROL PLAN, SIGNED AND SEALED BY A STATE OF FLORIDA REGISTERED PROFESSIONAL ENGINEER.
2. MULTI-LANE CLOSURES ARE PROHIBITED.
3. COORDINATE LANE CLOSURES WITH VILLAGE OF ESTERO PUBLIC WORKS.

EXCAVATIONS:

SOIL EXCAVATIONS REQUIRED FOR SLOPE PROTECTION INSTALLATION ADJACENT TO EXISTING BRIDGE COMPONENTS SHALL BE CONDUCTED BY HAND. USE OF MECHANICAL EXCAVATION EQUIPMENT WITHIN 1FT. OF EXISTING COMPONENTS IS PROHIBITED.

EXISTING STRUCTURES:

CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURES DURING ALL REHABILITATION OPERATIONS.

CULVERT REPAIRS:

CRACK REPAIR TO BE CONDUCTED IN ACCORDANCE WITH TECHNICAL SPECIAL PROVISION T401. CRACKS ABOVE 2IN. OF THE WATERLINE SHALL BE REPAIRED USING EPOXY INJECTION METHODS IN ACCORDANCE WITH SECTION 411 OF THE FDOT STANDARD SPECIFICATIONS. ALL OTHER CRACKS, INCLUDING THOSE BELOW THE WATERLINE, SHALL BE REPAIRED IN ACCORDANCE WITH T401, SUBMERGED CRACK REPAIR.

NORTH FLOW WAY EXISTING CONDITIONS:

CONTRACTOR SHALL BE AWARE OF THE PRESENCE OF RUBBLE RIPRAP WITHIN NORTH FLOW WAY. CONTRACTOR SHALL REPLACE ANY DISTURBED RUBBLE RIPRAP RESULTING FROM PROPOSED DEWATERING EFFORTS.

EQUIPMENT:

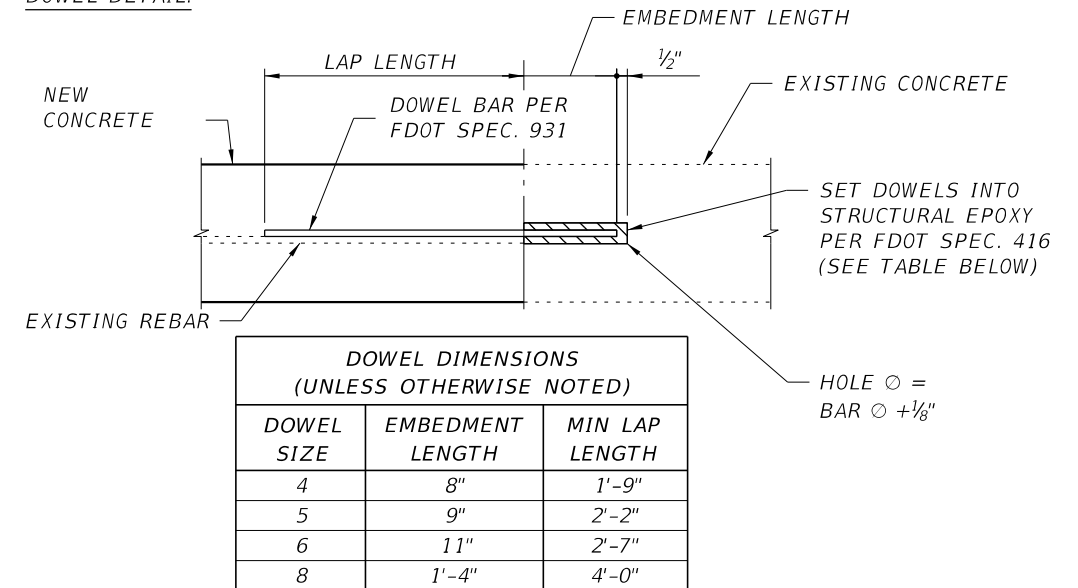
1. THE CONTRACTOR IS TO PROVIDE TURBIDITY CONTROL PRIOR TO BEGINNING ANY WORK, INCLUDING DESILTING IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL MANUAL.
2. THE CONTRACTOR'S EQUIPMENT ON VILLAGE RIGHT-OF-WAY SHALL CLEARLY AND LEGIBLY IDENTIFY THE CONTRACTOR.

ALTERNATE CONSTRUCTION PHASING (CULVERTS):

CULVERT REPAIRS INCLUDED WITHIN THIS PLAN SET ARE INTENDED TO BE COMPLETED DURING LOW WATER CONDITIONS. IF DEWATERING IS TO BE COMPLETED, SUBMIT TO THE DEPARTMENT A DEWATERING PLAN FOR APPROVAL AT LEAST TWO (2) WEEKS PRIOR TO BEGINNING ANY WORK. AT A MINIMUM, DEWATERING PLANS SHALL:

- A. BE SIGNED AND SEALED BY A SPECIALTY ENGINEER CURRENTLY REGISTERED IN THE STATE OF FLORIDA.
- B. PROVIDE DETAILS ON THE TYPE AND SIZE OF ANY PIPING, PUMPS, OR ANY EQUIPMENT PROPOSED TO BE USED.
- C. STATE CLEARLY THE ANTICIPATED LEVEL OF UPSTREAM STAGING AND ITS AFFECT ON THE DRAINAGE BASIN DUE TO THE ALTERNATE PHASING PLAN.
- D. CONTAIN A SKETCH SHOWING PROPOSED SETUP AND A NARRATIVE DESCRIBING THE PLAN.
- E. CONTAIN CRITERIA TO REMOVE OR MODIFY THE SETUP IN CASE OF INCREASED WATER FLOW OR EXTREME WEATHER CONDITIONS.

DOWEL DETAIL:



1. ANY REQUIRED DOWEL HOLES FOR SECURING NEW OR EXISTING REINFORCING STEEL SHALL BE DRILLED INTO EXISTING CONCRETE ACCORDING TO THE DETAIL AND FDOT SPECIFICATIONS SECTION 931.
2. NOTIFY THE ENGINEER OF ANY BROKEN BARS EXTENDING FROM EXISTING CONCRETE WHICH ARE DETERMINED TO HAVE A DIAMETER LOSS OF 25% OR GREATER BY THE ENGINEER. THESE LOCATIONS SHALL RECEIVE DOWELS.
3. THIS DETAIL ONLY APPLIES TO CARBON STEEL.

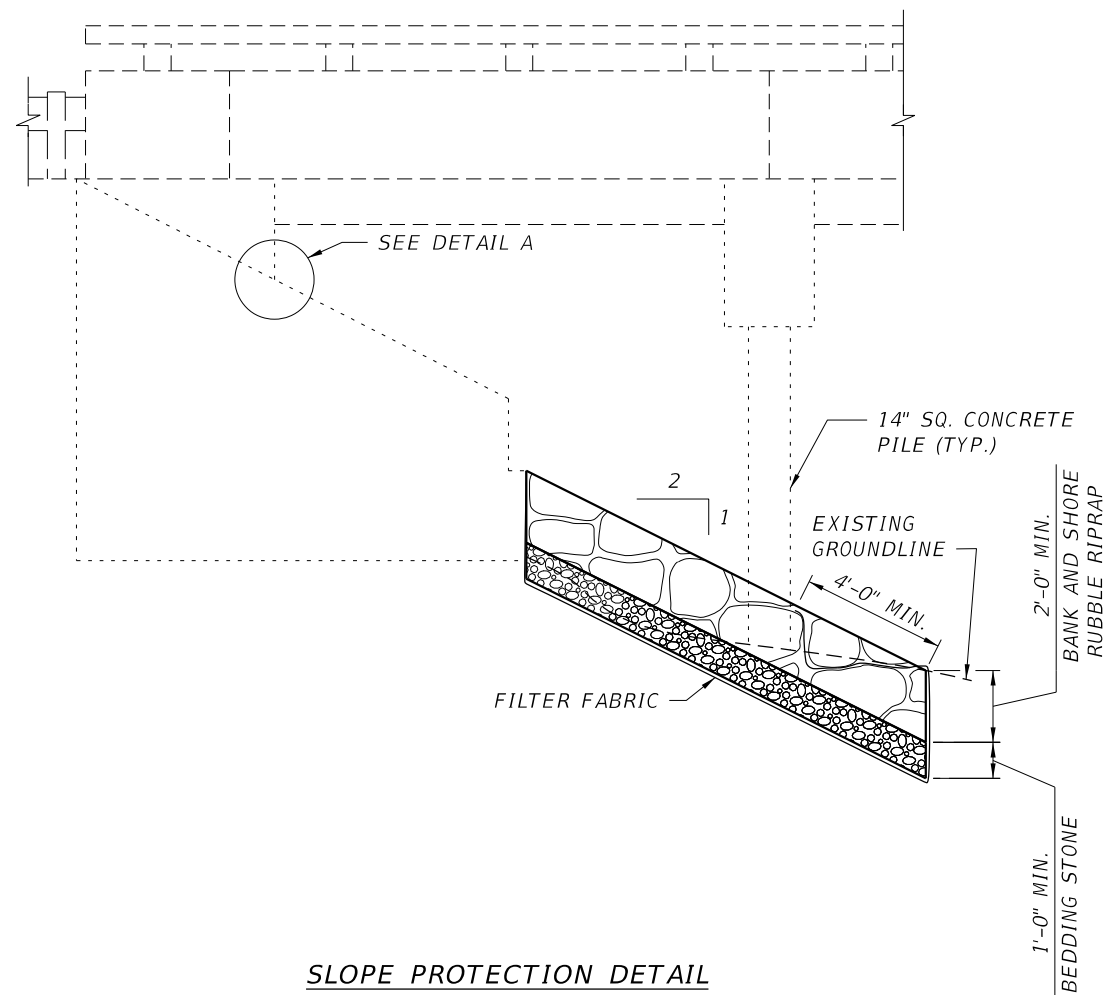
ENDANGERED SPECIES:

1. CONTRACTOR SHALL COMPLY WITH ALL PERMIT CONDITIONS, THE FEDERAL ENDANGERED SPECIES ACT, AND STATE WILDLIFE REGULATIONS.
2. THE PROJECT AREA AT ESTERO RIVER CONTAINS SUITABLE HABITAT FOR THE EASTERN INDIGO SNAKE. CONTRACTOR SHALL ADHERE TO USFWS STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE (2013).
3. THE PROJECT AREA AT ESTERO RIVER MAY CONTAIN SUITABLE HABITAT FOR THE WEST INDIAN MANATEE. CONTRACTOR SHALL ADHERE TO STANDARD MANATEE CONDITIONS FOR IN-WATER WORK (FWC 2011).
4. CONTRACTOR SHALL ADHERE TO FDOT STANDARD SPECIFICATIONS, INCLUDING SECTION 7-1.4, WHICH ADDRESSES WILDLIFE INVOLVEMENT DURING CONSTRUCTION AND DEFINES WHAT ACTIONS THE CONTRACTOR MUST TAKE IN THE EVENT OF UNANTICIPATED INTERACTIONS WITH PROTECTED SPECIES.

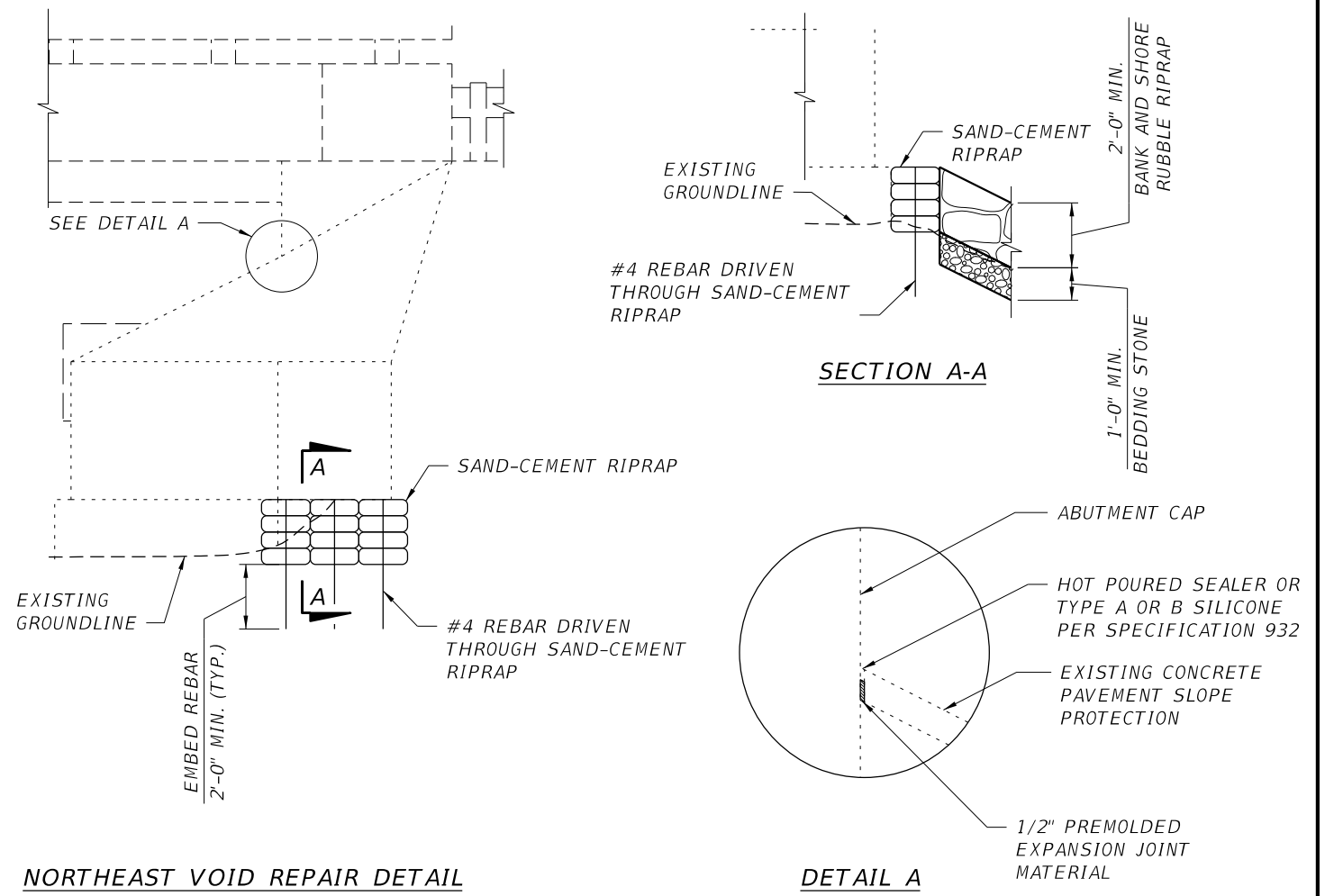
BRIDGE NOS. 124008 & 124130

REVISIONS						DRAWN BY: ARF 01-21 CHECKED BY: SAB 01-21 DESIGNED BY: SAB 01-21 CHECKED BY: SAB 01-21	VILLAGE OF ESTERO			SHEET TITLE: GENERAL NOTES		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME: SANDY LANE AND VIA COCONUT POINT BRIDGE REHABILITATION		SHEET NO. B-4
							LEE	N/A				

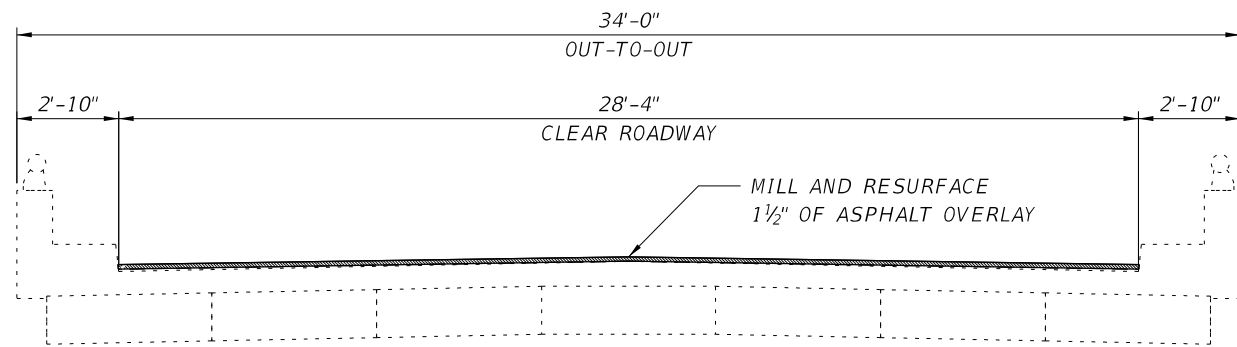
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SLOPE PROTECTION DETAIL
(SOUTH SLOPE SHOWN ; NORTH SLOPE SIMILAR)



NORTHEAST VOID REPAIR DETAIL
(RUBBLE RIPRAP NOT SHOWN FOR CLARITY)



TYPICAL SECTION

MILLING AND RESURFACING NOTES:

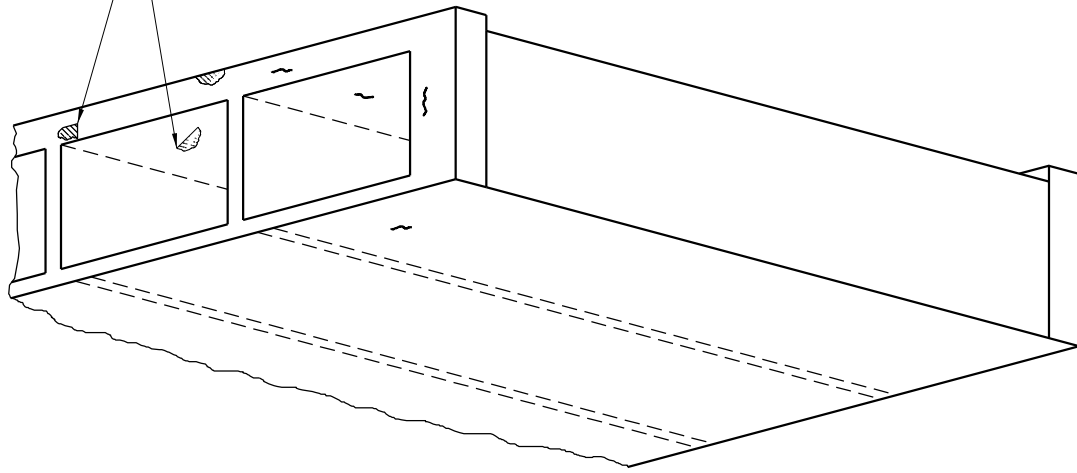
1. MILL AND RESURFACE UP TO 1½" OF ASPHALT OVERLAY OVER THE BRIDGE AND APPROACH SLABS. MILLING AND RESURFACING SHALL NOT BE CONDUCTED WITHIN THE LIMITS OF THE EXISTING EXPANSION JOINT HEADERS. RESURFACING SHALL BE CONDUCTED TO MATCH EXISTING FINISHED GRADE ELEVATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXPANSION JOINTS, HEADERS, AND ANY OTHER STRUCTURAL ITEM RESULTING FROM MILLING OPERATIONS. CONTRACTOR SHALL PROVIDE REPAIRS TO DAMAGED ITEMS AT NO ADDITIONAL COST TO THE DEPARTMENT.
3. ENSURE THAT NO ASPHALT ENTERS OR IMPEDES THE EXISTING DRAINAGE SCUPPERS ADJACENT TO THE CURBS.
4. INSTALL PAVEMENT MARKINGS AT LOCATIONS IN-KIND WITH EXISTING PAVEMENT MARKINGS.

BRIDGE NO. 124008

REVISIONS						DRAWN BY: BAH 01-21 CHECKED BY: SAB 01-21 DESIGNED BY: BAH 01-21 CHECKED BY: SAB 01-21	VILLAGE OF ESTERO			SHEET TITLE: MISCELLANEOUS DETAILS	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						Kisinger Campo & Associates Corp. 201 N. Franklin Street Suite 400 Tampa, FL 33602 Scott A. Betz, PE No. 81282		LEE	N/A		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

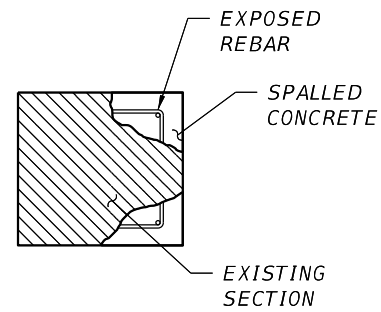
REPAIR CRACKS, HONEYCOMB, DELAMINATIONS, AND SPALLS IN WINGWALLS, HEADWALLS AND BOX CULVERT INTERIORS AS APPROVED BY THE ENGINEER (TYP.)



① BOX CULVERT
CONCRETE DEFICIENCIES

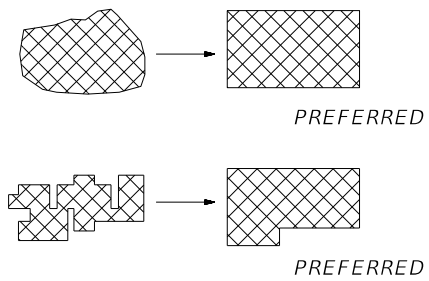
WORK IDENTIFICATION

- ① REPAIR CRACKS $\geq \frac{1}{32}$ " WIDE, SPALLS, HONEYCOMB, AND DELAMINATIONS IN THE CULVERT AND HEADWALL, AS APPROVED BY THE ENGINEER.



TYPICAL SPALL WITH EXPOSED REBARS

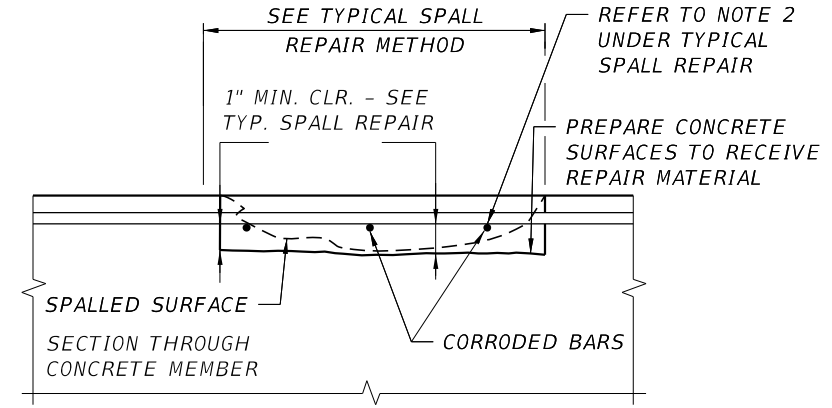
TYPICAL DEFICIENCIES



SIMPLE PATCH CONFIGURATION

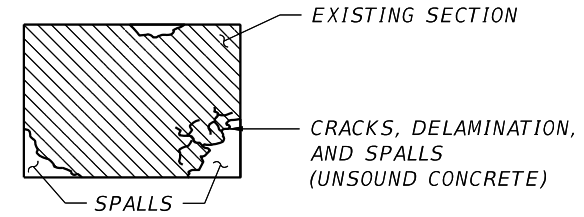
AT CORNER LOCATIONS PROVIDE RIGHT ANGLE CUTS. PATCH CONFIGURATIONS SHALL BE KEPT AS SIMPLE AS POSSIBLE. INDIVIDUAL REPAIR AREAS WITHIN 2 FEET SHALL BE JOINED AT THE DIRECTION OF THE ENGINEER.

LAP SPLICE TABLE	
REBAR SIZE	LAP SPLICE LENGTH
4	1'-0"
5	1'-3"
6	1'-6"
7	2'-1"
8	2'-9"
9	3'-5"
10	4'-4"
11	5'-4"



EXPOSING AND UNDERCUTTING REINFORCING STEEL

APPLICABLE TO HORIZONTAL, VERTICAL, AND OVERHEAD LOCATIONS



TYPICAL DELAMINATIONS AND SPALLS

TYPICAL CRACK REPAIR METHOD

1. REMOVE UNSOUND CONCRETE FROM CRACK AREA IN ACCORDANCE WITH SECTION 411.
2. OBTAIN ENGINEER'S APPROVAL TO CARRY OUT CRACK REPAIR (IN LIEU OF SPALL REPAIR) FOR CASES WHERE ADJACENT CONCRETE IS OTHERWISE SOUND AND CRACKING IS NOT A RESULT OF CORRODING REINFORCEMENT.
3. APPLY CLASS II FINISH AT CRACK REPAIR TO REMOVE FINS OR KNOBS.
4. FOR CRACKS UP TO $\frac{1}{8}$ " USE AN EPOXY RESIN WITH MINIMUM PROPERTIES OF: VISCOSITY 325 CPS, 28 DAY COMPRESSIVE STRENGTH 13000 PSI. FOR CRACKS $\frac{1}{8}$ " TO $\frac{1}{4}$ ", USE AN INJECTION GEL OR NON-SAG PASTE WITH 28-DAY COMPRESSIVE STRENGTH OF 10000 PSI.
5. FOR CAP SEAL, USE INJECTION GEL WITH MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 12000 PSI.
6. ENGINEER TO APPROVE CRACK AND CAP SEAL MATERIAL PRIOR TO BEGINNING CONSTRUCTION.
7. FOR CRACKS AT OR BELOW 2" ABOVE WATERLINE, REPAIR IN ACCORDANCE WITH TECHNICAL SPECIAL PROVISION T401.

TYPICAL SPALL REPAIR

1. FOR CONCRETE RESTORATION, REMOVE AND REPAIR UNSOUND CONCRETE FROM AREAS TO BE REPAIRED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. AREAS WELL ADHERED TO EXISTING STRAND OR REINFORCEMENT SHALL REMAIN.
2. SECURE ANY REINFORCEMENT WHICH IS LOOSE IN PLACE BY TYING TO OTHER SECURED BARS OR BY OTHER APPROVED METHODS. INSTALL LAP SPLICES IN ACCORDANCE WITH THE TABLE.
3. CLEAN EXPOSED REBARS AND ANY LOOSE CONCRETE OR ABRASIVES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. FILL VOIDS WITH REPAIR MATERIAL IN ACCORDANCE WITH THE TECHNICAL SPECIAL PROVISIONS FOR CONCRETE RESTORATION.

GENERAL NOTE:

DEFICIENCIES SHOWN ARE FOR ILLUSTRATION ONLY, ANY DIMENSIONS ARE APPROXIMATE. IN THE PRESENCE OF THE ENGINEER, CLEARLY OUTLINE ALL AREAS IN NEED OF REPAIR WITH AN APPROVED PAINT OR MARKER PRIOR TO DEMOLITION. DO NOT PERFORM DEMOLITION OF ANY AREA OR MEMBER OF THE STRUCTURE UNTIL THE CONTRACTOR RECEIVES APPROVAL FROM THE ENGINEER.

BRIDGE NOS. 124008 & 124130



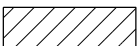
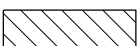

DEFICIENCY LIST - BRIDGE NO. 124130		
DEFICIENCY	LOCATION	SIZE
CRACK	NORTHWEST WINGWALL TO SIDEWALL JOINT	8'-0" LONG x $\frac{1}{32}$ " WIDE
CRACK	NORTHEAST WINGWALL TO SIDEWALL JOINT	8'-0" LONG x $\frac{1}{32}$ " WIDE
CRACK	SOUTHWEST WINGWALL TO SIDEWALL JOINT	8'-0" LONG x $\frac{1}{32}$ " WIDE
CRACK	SOUTHEAST WINGWALL TO SIDEWALL JOINT	4'-0" LONG x $\frac{1}{16}$ " WIDE
CRACK	CELL 1 CEILING AND WALLS, 30FT. FROM W END	22'-0" LONG x $\frac{1}{32}$ " WIDE
CRACK	CELL 2 CEILING AND WALLS, 30FT. FROM W END	22'-0" LONG x $\frac{1}{32}$ " WIDE
CRACK	CELL 3 CEILING AND WALLS, 30FT. FROM E END	22'-0" LONG x $\frac{1}{32}$ " WIDE
(4) CRACKS	CELL 4 CEILING AND WALLS	(4) 22'-0" LONG x $\frac{1}{32}$ " WIDE
SPALL / VOID	CELL 1 CEILING, 83FT. FROM E END	5" x 2" x 3" DEEP
HONEYCOMB	CELL 1 CEILING, 68FT. FROM E END	3'-0" x 10'-0" x 2" DEEP
VOID	CELL 1 WALL 2, 65FT. FROM E END	1'-8" x 4" x 6" DEEP
HONEYCOMB	CELL 2 CEILING, 38FT. FROM W END	1'-0" x 3'-0" x 3" DEEP
HONEYCOMB	CELL 2 CEILING, 48FT. FROM W END	30'-0" x 10'-0" x UP TO 4" DEEP *
HONEYCOMB	CELL 3 CEILING AT W END	4'-0" x 3'-0" x $\frac{1}{2}$ " DEEP
HONEYCOMB	CELL 3 CEILING, 50FT. FROM W END	30'-0" x 3'-0" x UP TO 4" DEEP *
HONEYCOMB	CELL 3 CEILING AT E END	1'-6" x 2'-0" x 1" DEEP
HONEYCOMB	CELL 4 CEILING, 70FT. FROM E END	2'-0" x 10'-0" x 2" DEEP
HONEYCOMB	CELL 4 CEILING, 35FT. FROM E END	1'-3" x 2" x 5" DEEP
HONEYCOMB	CELL 4 CEILING AT E END	1'-0" x 2" x $1\frac{1}{2}$ " DEEP
DELAMINATION	CELL 4 CEILING AT E END	10" x 3"

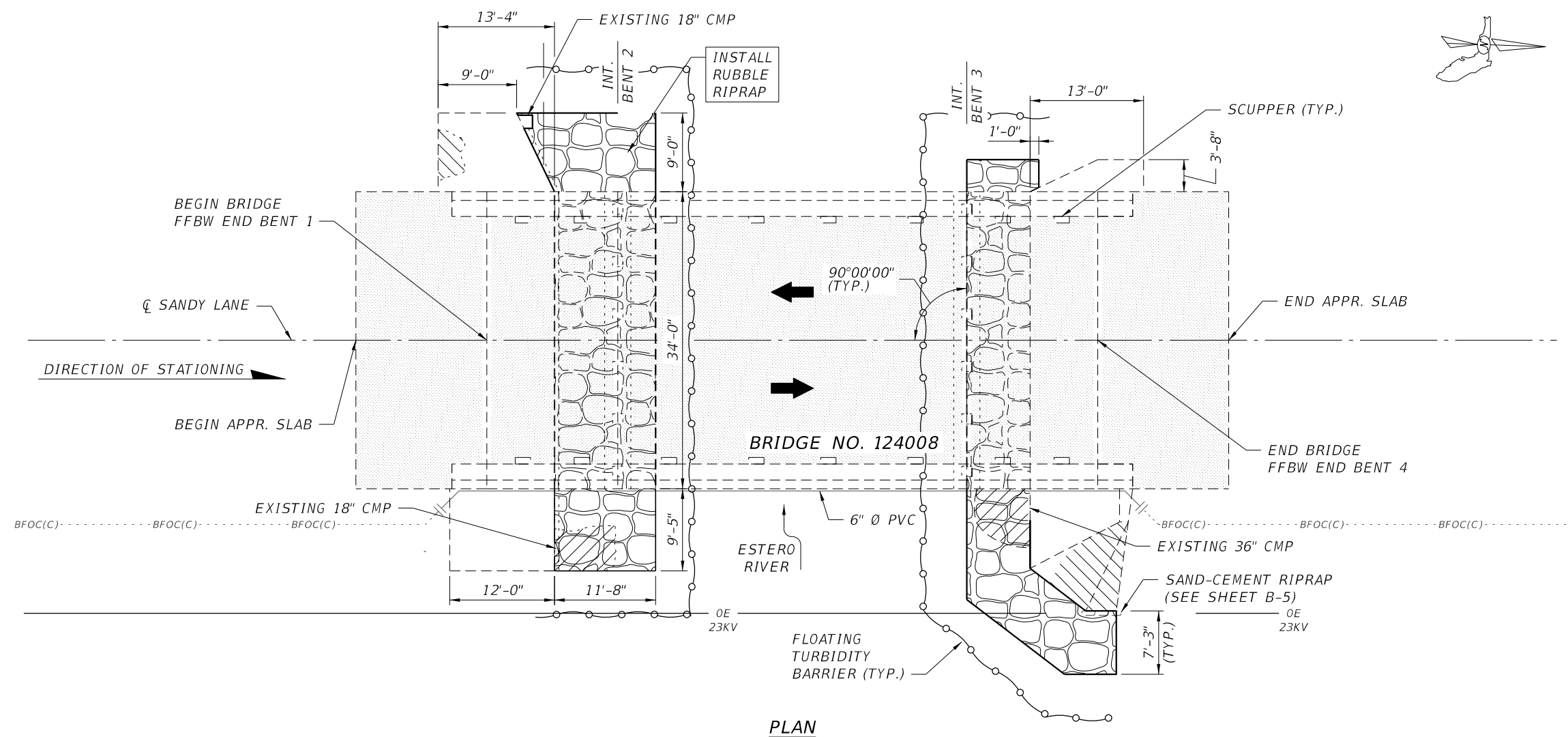
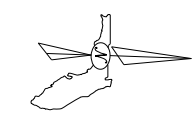
* INTERMITTENT HONEYCOMB IN AREA. IN THE PRESENCE OF THE ENGINEER, MARK AREAS REQUIRING SPALL REPAIR PRIOR TO ORDERING MATERIAL OR BEGINNING WORK.

REVISIONS						DRAWN BY: ARF 01-21	VILLAGE OF ESTERO			SHEET TITLE: CONCRETE RESTORATION DETAILS	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						CHECKED BY: SAB 01-21				PROJECT NAME: SANDY LANE AND VIA COCONUT POINT BRIDGE REHABILITATION	SHEET NO. B-6
						DESIGNED BY: SAB 01-21	LEE	N/A			
						CHECKED BY: SAB 01-21					

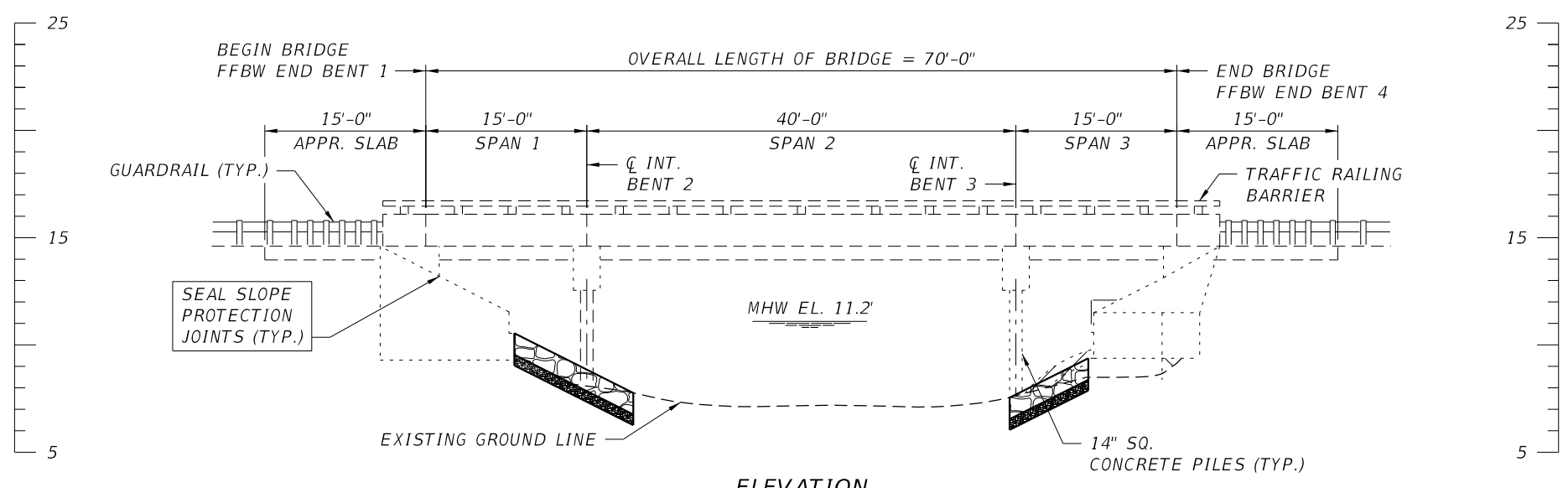
NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

LEGEND:

-  RUBBLE RIPRAP TO BE INSTALLED
-  BEDDING STONE TO BE INSTALLED
-  EXISTING CONCRETE TO BE REMOVED
-  EXISTING VOID TO BE FILLED
-  MILLING AND RESURFACING



PLAN



ELEVATION

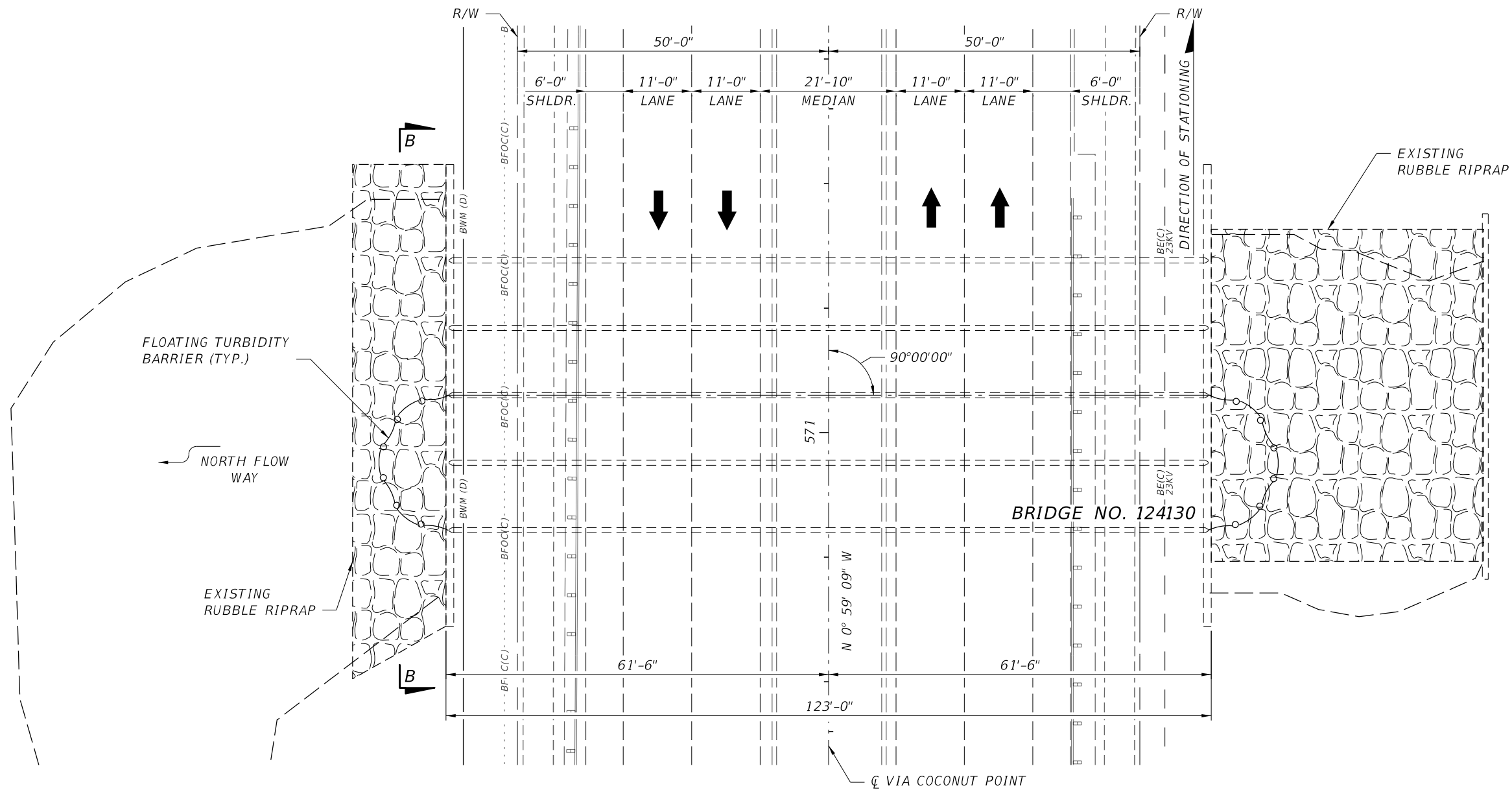
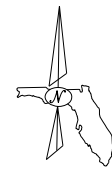
NOTES:

1. THE ELEVATIONS SHOWN ARE APPROXIMATE. ELEVATIONS HAVE BEEN ESTIMATED BASED ON NATIONAL GEODETIC SURVEY (NGS) SURVEY CONTROL POINT: 175 81 A19B
2. MEAN HIGH WATER (MHW) SHOWN IS APPROXIMATE. MHW ESTIMATE BASED ON UNITED STATES GEOLOGICAL SURVEY (USGS) STREAM GAGE STATIONS 02291580 & 02291597 AND FIELD OBSERVATIONS.

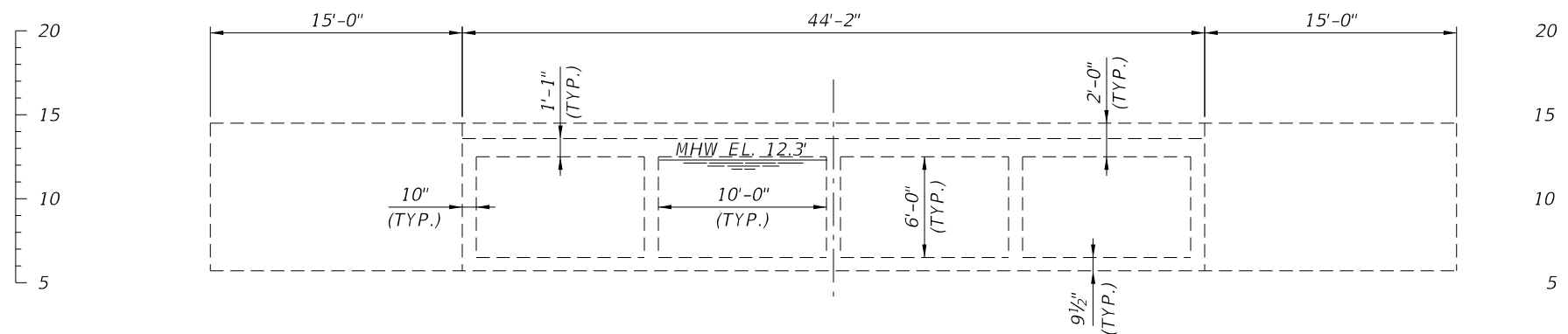
BRIDGE NO. 124008

REVISIONS						DRAWN BY: ARF 01-21	VILLAGE OF ESTERO			SHEET TITLE: PLAN AND ELEVATION BRIDGE NO. 124008		REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION							
						CHECKED BY: SAB 01-21	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME: SANDY LANE AND VIA COCONUT POINT BRIDGE REHABILITATION		SHEET NO. B1-1
						DESIGNED BY: ARF 01-21		LEE	N/A			
						CHECKED BY: SAB 01-21				7/16/2021 9:29:24 AM		c:\pwworkingdir\kca-pw\entley.com_kca-pw-01\scott_betz\dms22362\B1PlanElev01.dwg

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



PLAN



VIEW B-B

NOTES:

1. THE ELEVATIONS SHOWN ARE APPROXIMATE. ELEVATIONS HAVE BEEN ESTIMATED BASED ON NATIONAL GEODETIC SURVEY (NGS) SURVEY CONTROL POINT: 175 81 A19B
2. MEAN HIGH WATER (MHW) SHOWN IS APPROXIMATE, PER FIELD OBSERVATIONS.
3. FLOATING TURBIDITY BARRIER SHALL BE PLACED AT A MAXIMUM OF TWO BARRELS CONSECUTIVELY. PHASE REPAIR OPERATIONS AND ADJUST FTB ACCORDINGLY.

BRIDGE NO. 124130

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kisinger Campo & Associates Corp.
 201 N. Franklin Street
 Suite 400
 Tampa, FL 33602
 Scott A. Betz, PE No. 81282

DRAWN BY: ARF 01-21	VILLAGE OF ESTERO		
CHECKED BY: SAB 01-21			
DESIGNED BY: ARF 01-21	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
CHECKED BY: SAB 01-21		LEE	N/A

SHEET TITLE: PLAN AND ELEVATION BRIDGE NO. 124130		REF. DWG. NO.
PROJECT NAME: SANDY LANE AND VIA COCONUT POINT BRIDGE REHABILITATION		SHEET NO. B2-1

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

EXISTING PLANS ROADWAY IMPROVEMENTS

CONTRACT PLANS

SANDY LANE EXTENSION

From
COCONUT ROAD TO WILLIAMS ROAD (PHASE I)
~~PELICAN COLONY BLVD. EXT. TO COCONUT RD. (PHASE III)~~
And
~~PELICAN COLONY BLVD. EXTENSION~~
From
~~SR 45 (US41) TO SANDY LANE EXTENSION (PHASE III)~~

COMPONENTS OF CONTRACT PLANS SET

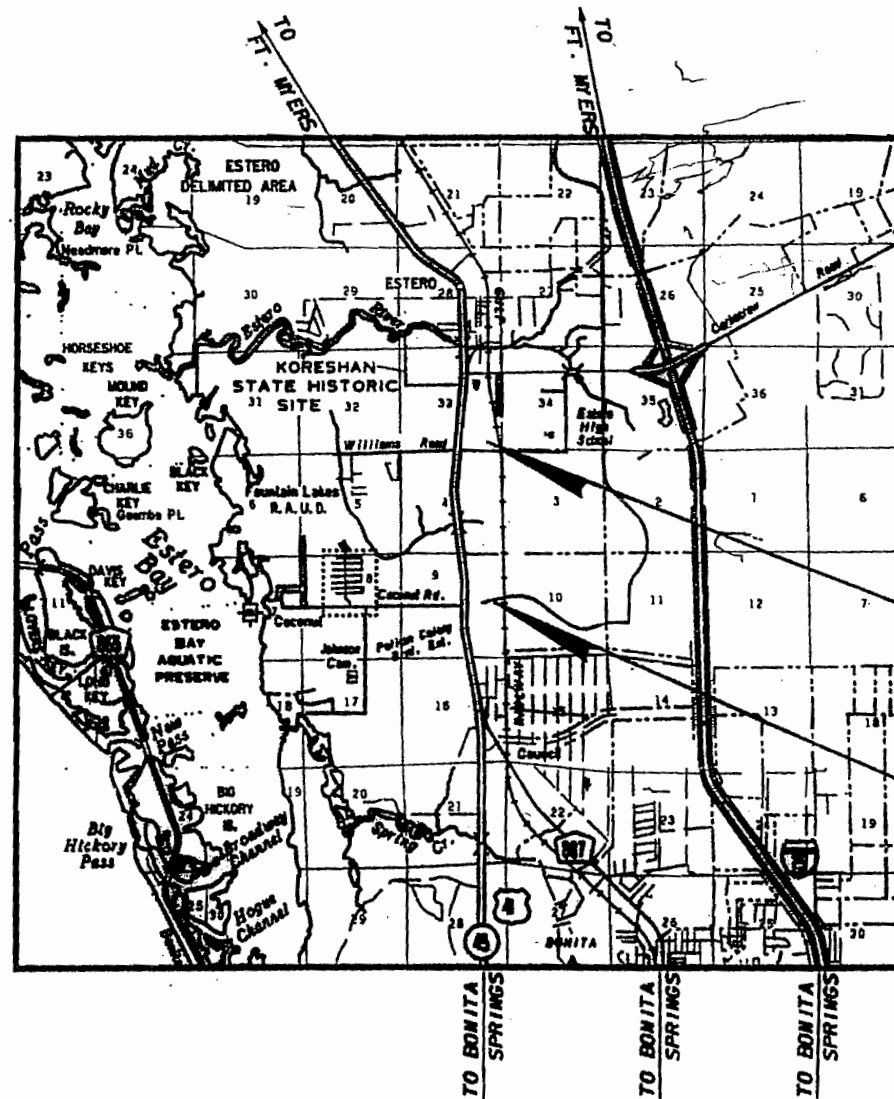
- ROADWAY PLANS
- ~~SIGNING AND PAVEMENT MARKING PLANS~~
- ~~SIGNALIZATION PLANS~~
- ~~LIGHTING PLANS~~
- STRUCTURAL PLANS

INDEX OF PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SUMMARY OF PAY ITEMS
2A	BASIN BOUNDARY MAP
15-13 Phase II	DRAINAGE MAPS
14-16	TYPICAL SECTION
17	SUMMARY OF QUANTITIES
19-20	SUMMARY OF DRAINAGE STRUCTURES
21	GENERAL NOTES
22	CURVE DATA
23-24	PROJECT LAYOUT SHEET
31-40 (31-50 Phase I)	ROADWAY PLANS
51	MISCELLANEOUS DETAILS
51A, 51B, 51C	DRAINAGE DETAILS
155-167 Phase II	PROFILE SHEETS
68	CROSS SECTION SOIL SURVEY
102-129 Phase I	CROSS SECTIONS
130-132	SWPPP SHEETS
LD-1	LANDSCAPE PLAN

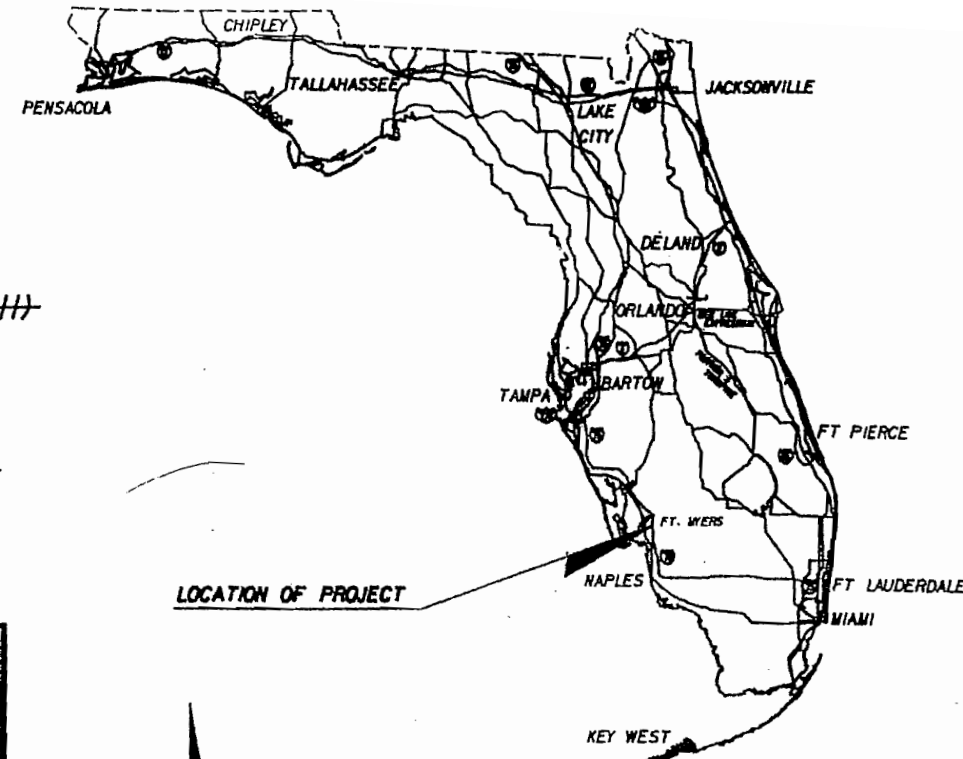
GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED JANUARY 2004,
AND STANDARD SPECIFICATIONS FOR ROAD
AND BRIDGE CONSTRUCTION DATED 2004,
AS AMENDED BY CONTRACT DOCUMENTS.

REVISIONS: 01/11/05 SILT FENCE REDUCTION PER LCDOT
03/29/05 DRIVEWAY #14 SHIFT, REVISED EXISTING
GROUND ELEVATIONS ON CROSS SECTIONS



END PROJECT LOCATION
AT SANDY LANE EXT.
AND WILLIAMS ROAD
STA. 603+50.00

BEGIN PROJECT LOCATION
AT SANDY LANE EXT.
STA. 517+00.00



PLANS PREPARED BY:



DAVID PLUMMER & ASSOCIATES, INC.
TRANSPORTATION • CIVIL • STRUCTURAL • ENVIRONMENTAL
FORT MYERS • CORAL GABLES • FORT LAUDERDALE
531 HENRY ST., FT. MYERS, FL 33901 TELEPHONE (239) 332-2517 FAX (239) 332-2545
EB 2690

FOR CONSTRUCTION
PHASE I
APR 05 2005



LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	8630	1.638
BRIDGES		
NET LENGTH OF PROJECT	8630	1.638
EXCEPTIONS		
GROSS LENGTH OF PROJECT	8630	1.638

ROADWAY PLANS
ENGINEER OF RECORD: _____ DATE _____

P.E. NO. 52098

DEVELOPMENT ORDER APPROVED:
DEPARTMENT OF COMMUNITY DEVELOPMENT

PETER J. ECKENRODE _____ DATE _____
DEVELOPMENT SERVICES DIRECTOR

FOR CONSTRUCTION

FEB 21 2006

S-121A
 STA. 544+45.00 (37.0' LI)
 CONST. INLET TYPE P-4
 INDEX No. 200, 210
 EOP ELEV. 16.33
 FL 11.7 (RI)

S-122A
 STA. 515+08.48 (10.0' LI)
 CONST. INLET TYPE P-3
 INDEX No. 200, 210
 EOP ELEV. 16.91
 FL 11.8 (BK)

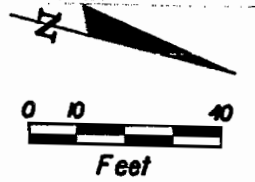
CURVE CO-1 & CONST.
 PI STA. = 513+68.60
 Delta = 27° 07' 29" (LT)
 D = 5° 40' 22"
 T = 243.64
 L = 478.15
 R = 1,010.00
 PC STA. = 511+24.96
 PT STA. = 516+03.11
 e = RC

STA. 518+28.32 & SANDY LANE EXT. =
 STA. 316+74.03 & COCONUT ROAD

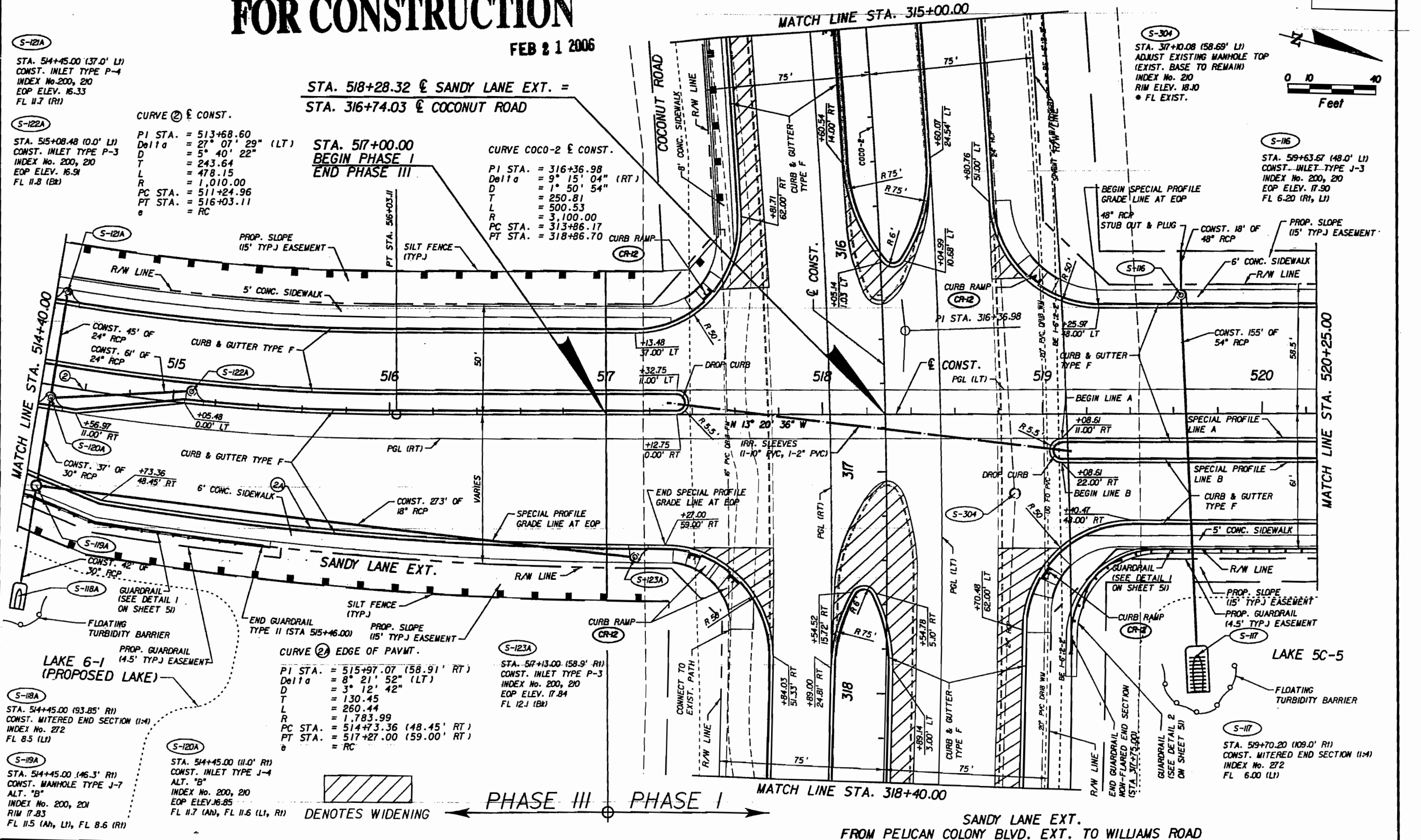
STA. 517+00.00
 BEGIN PHASE I
 END PHASE III

CURVE COCO-2 & CONST.
 PI STA. = 316+36.98
 Delta = 9° 15' 04" (RT)
 D = 1° 50' 54"
 T = 250.81
 L = 500.53
 R = 3,100.00
 PC STA. = 313+86.17
 PT STA. = 318+86.70

S-304
 STA. 317+10.08 (58.69' LI)
 ADJUST EXISTING MANHOLE TOP
 (EXIST. BASE TO REMAIN)
 INDEX No. 210
 RIM ELEV. 18.10
 * FL EXIST.



S-116
 STA. 519+63.67 (48.0' LI)
 CONST. INLET TYPE J-3
 INDEX No. 200, 210
 EOP ELEV. 17.90
 FL 6.20 (RI, LI)



S-118A
 STA. 514+45.00 (93.85' RI)
 CONST. MITERED END SECTION (1:4)
 INDEX No. 272
 FL 8.5 (LI)

S-119A
 STA. 514+45.00 (146.3' RI)
 CONST. MANHOLE TYPE J-7
 ALT. "B"
 INDEX No. 200, 201
 RIM 17.83
 FL 11.5 (Ah, LI), FL 8.6 (RI)

S-120A
 STA. 514+45.00 (11.0' RI)
 CONST. INLET TYPE J-4
 ALT. "B"
 INDEX No. 200, 210
 EOP ELEV. 16.85
 FL 11.7 (Ah), FL 11.6 (LI, RI)

CURVE CO-2 EDGE OF PAVMT.
 PI STA. = 515+97.07 (58.91' RT)
 Delta = 8° 21' 52" (LT)
 D = 3° 12' 42"
 T = 130.45
 L = 260.44
 R = 1,783.99
 PC STA. = 514+73.36 (48.45' RT)
 PT STA. = 517+27.00 (59.00' RT)
 e = RC

S-123A
 STA. 517+13.00 (58.9' RI)
 CONST. INLET TYPE P-3
 INDEX No. 200, 210
 EOP ELEV. 17.84
 FL 12.1 (BK)



PHASE III ← PHASE I

SANDY LANE EXT.
 FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

NO.	REVISIONS	DATE
1	REVISED SILT FENCE LOCATIONS PER LC DOT	1/11/05
2	REDUCED GUARDRAIL	2/15/06

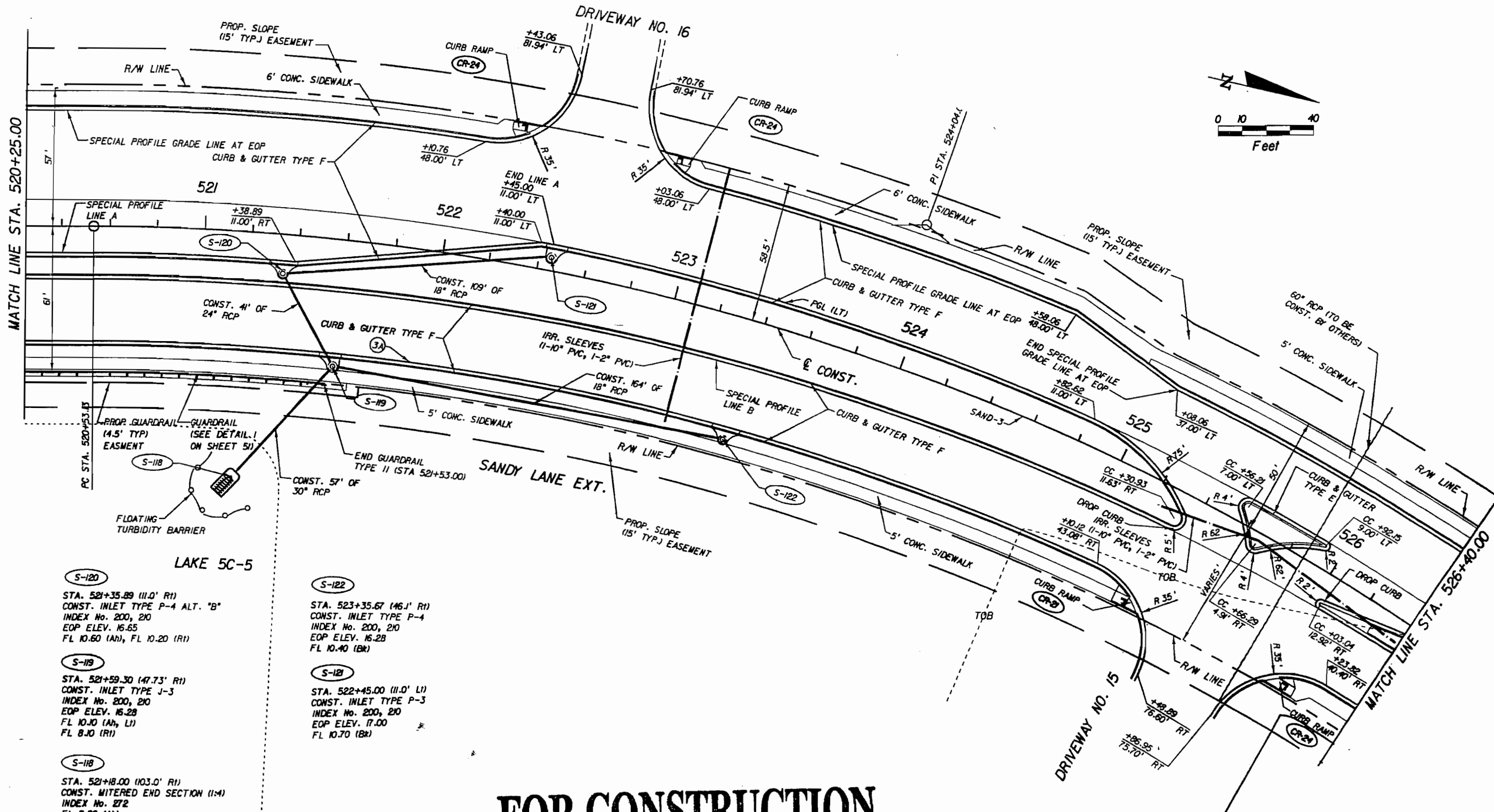
SANDY LANE EXT. FOUR LANE CONSTRUCTION

DESIGNED BY: AB	DATE: 10/04
DRAWN BY: JC	DATE: 10/04
CHECKED BY: TS	DATE: 10/04
VERTICAL SCALE: 40	HORIZONTAL SCALE: 40

DAVID PLUMMER & ASSOCIATES, INC.
 FORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (829) 332-2611 FAX (829) 332-2645
 EB 2690
 TODD SEYMOUR P.E. NO. 52098

ROADWAY PLAN

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED BELOW:	REFERENCE NO.	DRAWING NO.
FLORIDA PROFESSIONAL ENGINEERING REGISTRATION # 52898	PROJECT NO.	SHEET NO. BX-2



- S-120**
 STA. 521+35.89 (11.0' R1)
 CONST. INLET TYPE P-4 ALT. "B"
 INDEX No. 200, 210
 EOP ELEV. 16.65
 FL 10.60 (Ah), FL 10.20 (R1)
- S-119**
 STA. 521+59.30 (47.73' R1)
 CONST. INLET TYPE J-3
 INDEX No. 200, 210
 EOP ELEV. 16.28
 FL 10.10 (Ah, L1)
 FL 8.10 (R1)
- S-118**
 STA. 521+18.00 (103.0' R1)
 CONST. MITERED END SECTION (1:4)
 INDEX No. 272
 FL 8.00 (AN)
- S-122**
 STA. 523+35.67 (16.1' R1)
 CONST. INLET TYPE P-4
 INDEX No. 200, 210
 EOP ELEV. 16.28
 FL 10.40 (BR)
- S-121**
 STA. 522+45.00 (11.0' L1)
 CONST. INLET TYPE P-3
 INDEX No. 200, 210
 EOP ELEV. 17.00
 FL 10.70 (BR)

FOR CONSTRUCTION

PHASE I

APR 05 2005

SANDY LANE EXT.
FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

SANDY LANE EXT.

ROADWAY PLAN

NO.	REVISIONS	DATE
1	SILT FENCE REMOVED PER LCOOT	1/11/05

DESIGNED BY: FB	DATE: 10/04
DRAWN BY: JC	DATE: 10/04
CHECKED BY: TS	DATE: 10/04
VERTICAL SCALE: 1"=4'	HORIZONTAL SCALE: 1"=40'

DAVID PLUMMER & ASSOCIATES, INC.
 PORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (888) 338-8617 FAX (888) 338-8646
 ED 2690

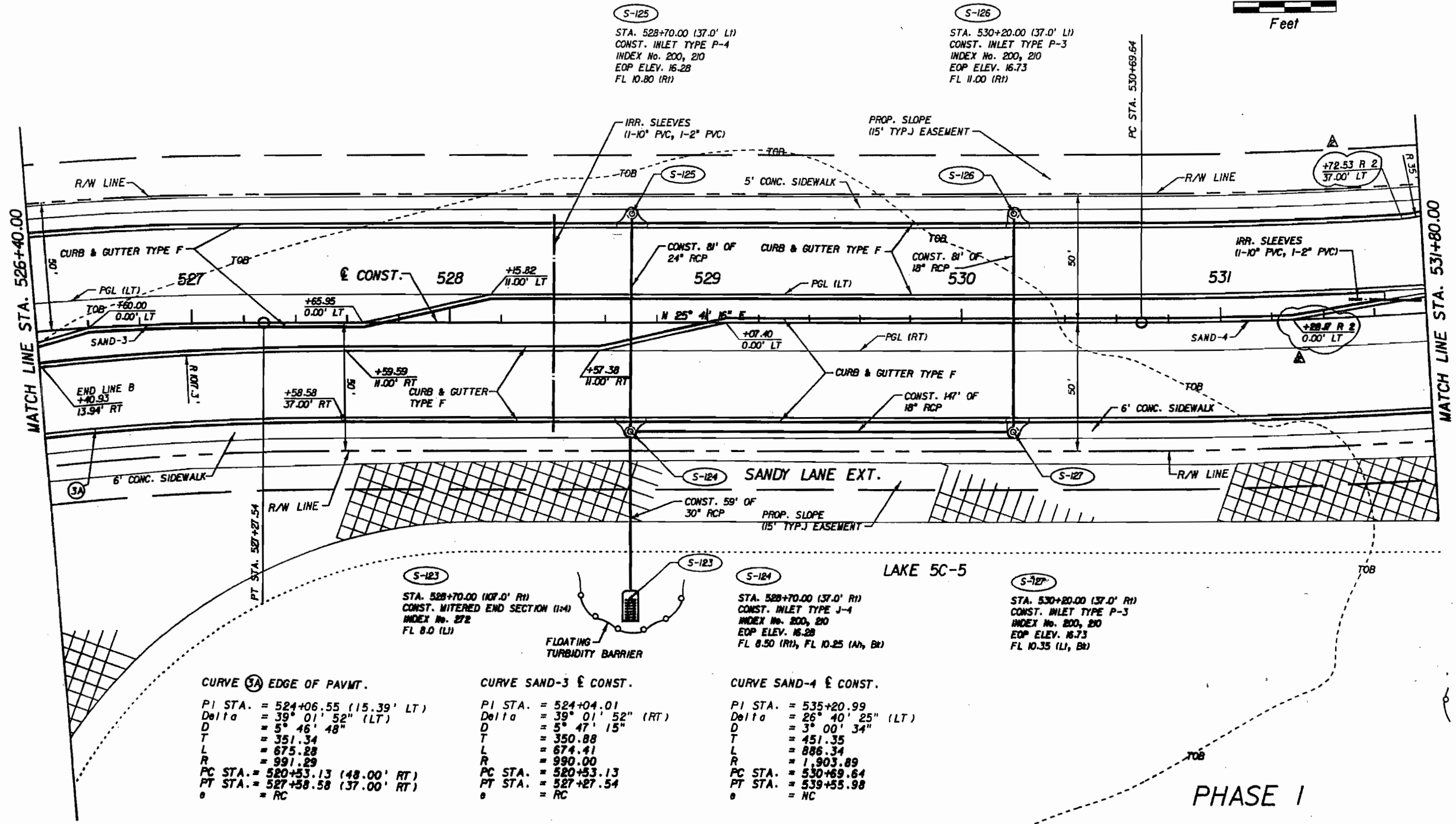
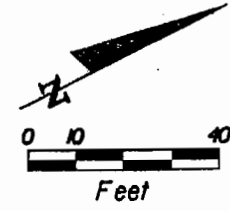
TODD REYMOUR P.E. NO. 52098

PROJECT NO.	DRAWING NO.
DATE	SHEET NO.
	32

THIS DRAWING IS NOT APPROVED UNLESS SIGNED AND SEALED BELOW:

FLORIDA PROFESSIONAL ENGINEERING REGISTRATION # 52098

DATE



CURVE 3A EDGE OF PAVMT.

PI STA. = 524+06.55 (15.39' LT)
 Delta = 39° 01' 52" (LT)
 D = 5' 46' 48"
 T = 351.34
 L = 675.28
 R = 991.29
 PC STA. = 520+53.13 (48.00' RT)
 PT STA. = 527+58.58 (37.00' RT)
 e = RC

CURVE SAND-3 & CONST.

PI STA. = 524+04.01
 Delta = 39° 01' 52" (RT)
 D = 5' 47' 15"
 T = 350.88
 L = 674.41
 R = 990.00
 PC STA. = 520+53.13
 PT STA. = 527+27.54
 e = RC

CURVE SAND-4 & CONST.

PI STA. = 535+20.99
 Delta = 26° 40' 25" (LT)
 D = 3' 00' 34"
 T = 451.35
 L = 886.34
 R = 1,903.89
 PC STA. = 530+69.64
 PT STA. = 539+55.98
 e = NC

FOR CONSTRUCTION

SANDY LANE EXT. FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

APR 05 2008

REVISION	DATE
1	1/10/08
2	3/28/08
3	
4	
5	
6	
7	
8	
9	
10	

SANDY LANE EXT.

DESIGNED BY	JB	DATE	12/04
DRAWN BY	JC	DATE	12/04
CHECKED BY	TS	DATE	12/04
VERTICAL SCALE		HORIZONTAL SCALE	

DAVID PLUMMER & ASSOCIATES, INC.

PORT MYERS • CENTRAL GARDENS • FORT LAUDERDALE
 1324 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (888) 330-0017 FAX (888) 330-0040
 888 2680

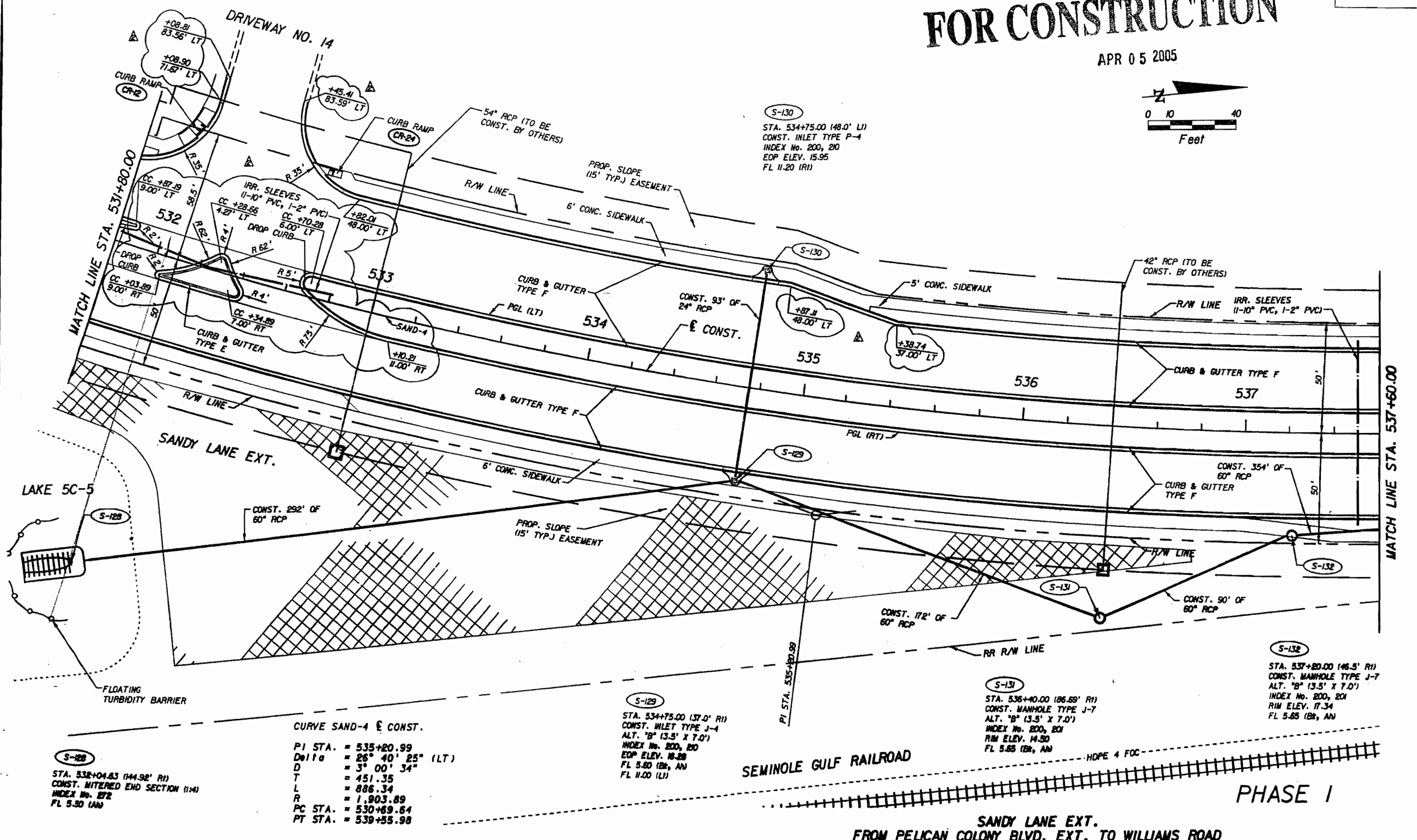
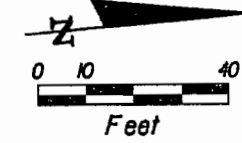
TODD REYNOLDS P.E. NO. 5398

ROADWAY PLAN

PROJECT NO.	BX-4
DATE	

FOR CONSTRUCTION

APR 05 2005



S-128
 STA. 532+04.83 (144.92' RI)
 CONST. MITERED END SECTION (1:4)
 INDEX No. 872
 FL 5.50 (AN)

CURVE SAND-4 E CONST.
 PI STA. = 535+20.99
 Delta = 26° 40' 25" (LT)
 D = 3° 00' 34"
 T = 451.35
 L = 886.34
 R = 1,903.89
 PC STA. = 530+89.64
 PT STA. = 539+35.98

S-129
 STA. 534+75.00 (137.0' RI)
 CONST. INLET TYPE J-4
 ALT. "B" (3.5' X 7.0')
 INDEX No. 200, 201
 EOP ELEV. 18.88
 FL 5.80 (BR, AN)
 FL 11.00 (LI)

S-130
 STA. 534+75.00 (148.0' LI)
 CONST. INLET TYPE P-4
 INDEX No. 200, 210
 EOP ELEV. 15.95
 FL 11.20 (RI)

S-131
 STA. 536+40.00 (186.69' RI)
 CONST. MANHOLE TYPE J-7
 ALT. "B" (3.5' X 7.0')
 INDEX No. 200, 201
 RIM ELEV. 14.50
 FL 5.85 (BR, AN)

S-132
 STA. 537+80.00 (146.5' RI)
 CONST. MANHOLE TYPE J-7
 ALT. "B" (3.5' X 7.0')
 INDEX No. 200, 201
 RIM ELEV. 17.34
 FL 5.65 (BR, AN)

SEMINOLE GULF RAILROAD

**SANDY LANE EXT.
 FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD**

PHASE I

1	SILT FENCE REMOVED PER UDOT	1/1/05
2	REVISED DIV M STATION	3/28/05
BX-5		
DESIGNED BY	DATE	
CHECKED BY	DATE	
VERTICAL SCALE	HORIZONTAL SCALE	

SANDY LANE EXT.

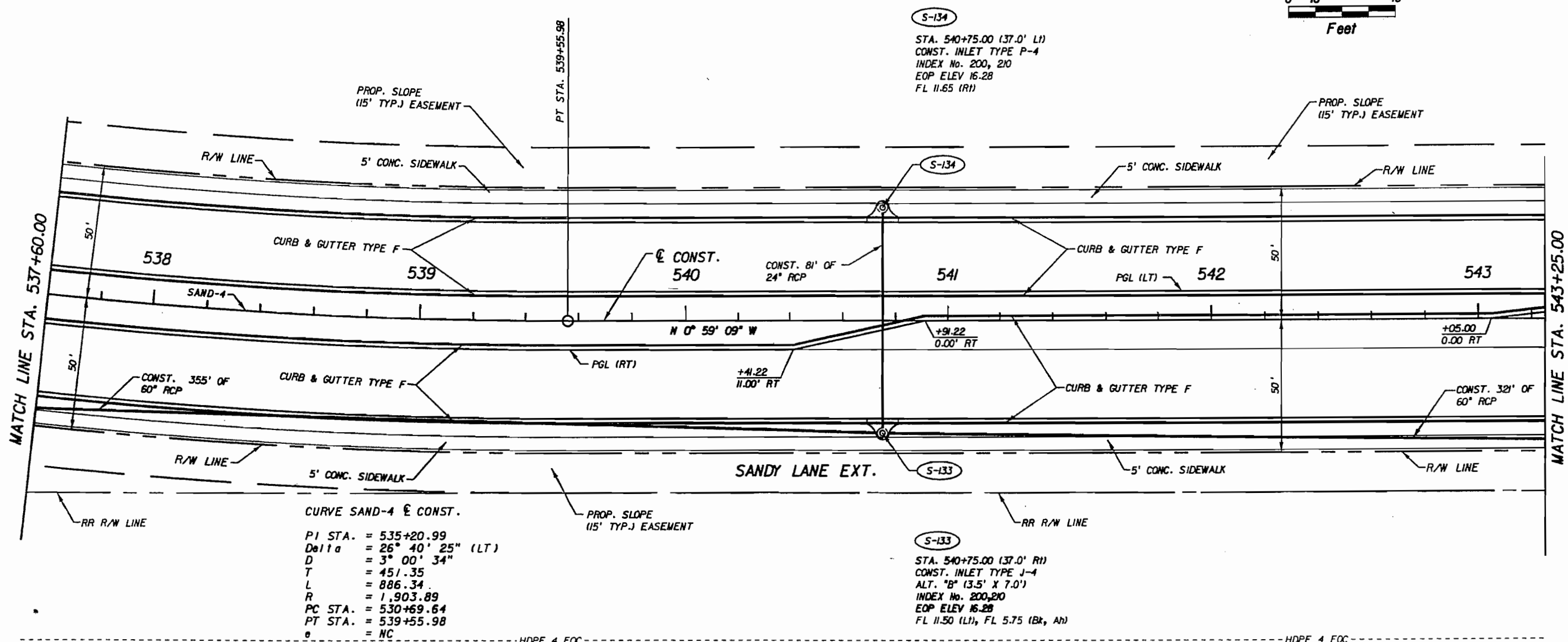
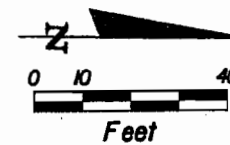
DESIGNED BY	AD	DATE	12/04
CHECKED BY	JC	DATE	12/04
VERTICAL SCALE	1" = 10'	HORIZONTAL SCALE	1" = 40'

DAVID PLUMMER & ASSOCIATES, INC.
 PORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (888) 380-0017 FAX (888) 380-0040
 ED 2000

TODD REYNOLDS P.E. NO. 32888

ROADWAY PLAN

THIS DRAWING AND ANY APPROVED VARIATIONS THEREON ARE THE PROPERTY OF DAVID PLUMMER & ASSOCIATES, INC.	REFERENCE NO.	DRAWING NO.
FLORIDA PROFESSIONAL ENGINEERING BOARD REGISTRATION NO. 15000	PROJECT NO.	BX-5
DATE		



CURVE SAND-4 \hat{C} CONST.
 PI STA. = 535+20.99
 Delta = 26° 40' 25" (LT)
 D = 3° 00' 34"
 T = 451.35
 L = 886.34
 R = 1,903.89
 PC STA. = 530+69.64
 PT STA. = 539+55.98
 \hat{o} = NC

SEMINOLE GULF RAILROAD

FOR CONSTRUCTION

APR 05 2005

PHASE I
 SANDY LANE EXT.
 FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

1	SILT FENCE REMOVED PER LOGDT	1/1/05

SANDY LANE EXT.

DESIGNED BY	RB	DATE	10/04
DRAWN BY	JC	DATE	10/04
CHECKED BY	TS	DATE	10/04
VERTICAL SCALE	1" = 10'	HORIZONTAL SCALE	1" = 40'

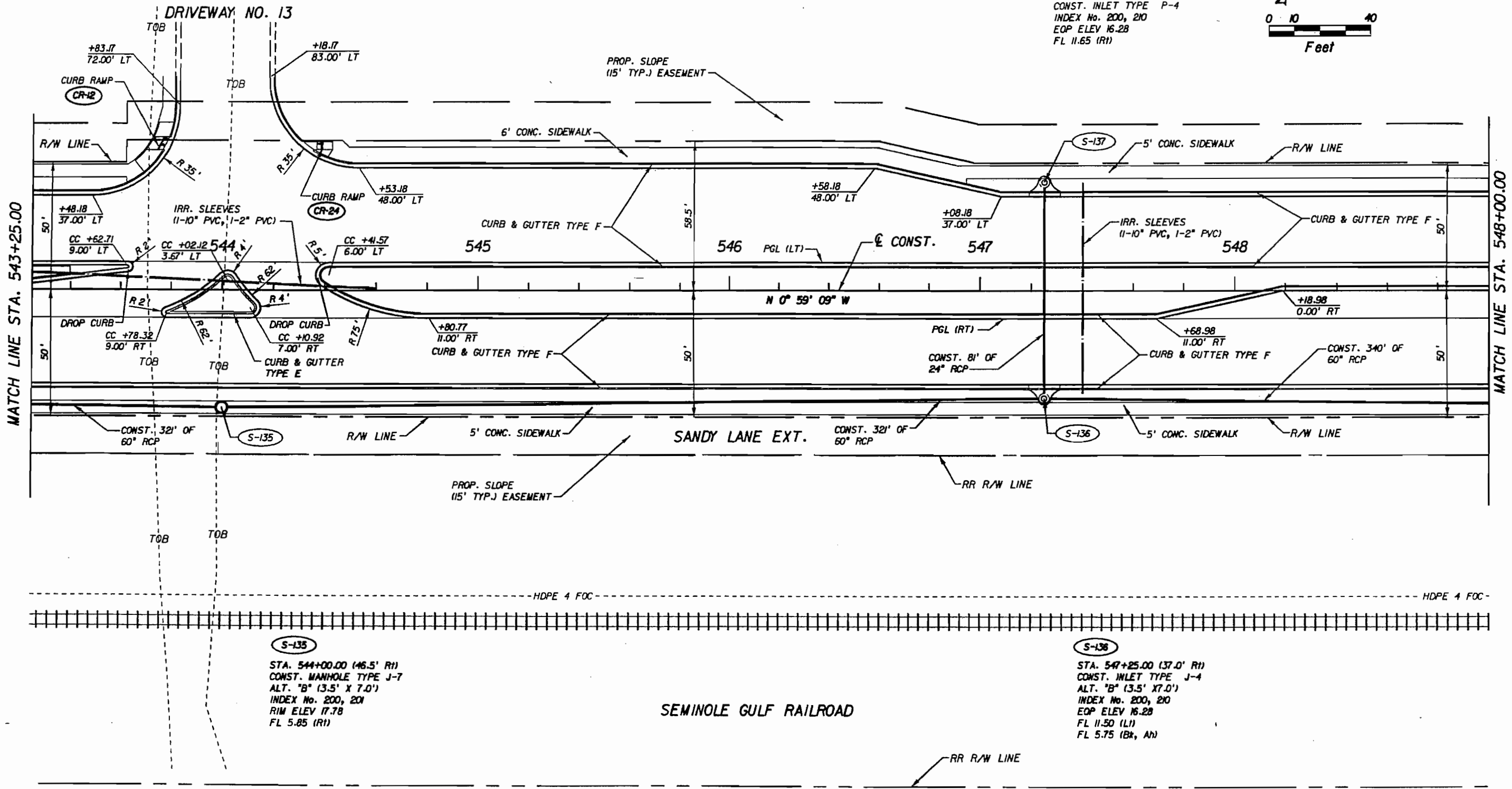
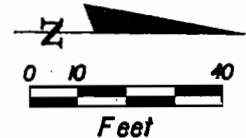
DAVID PLUMMER & ASSOCIATES, INC.
 FORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33908
 TELEPHONE (888) 330-8617 FAX (888) 330-8648
 ED 9698
TODD SEYMOUR P.E. NO. 52098

ROADWAY PLAN

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED BELOW: FLORIDA PROFESSIONAL ENGINEERING REGISTRATION # 00000 DATE _____	REFERENCE NO. PROJECT NO.	DRAWING NO. SHEET NO.
--	----------------------------------	------------------------------

S-137

STA. 547+25.00 (37.0' LI)
CONST. INLET TYPE P-4
INDEX No. 200, 210
EOP ELEV 16.28
FL 11.65 (R1)



S-135

STA. 544+00.00 (46.5' R1)
CONST. MANHOLE TYPE J-7
ALT. "B" (3.5' X 7.0')
INDEX No. 200, 201
RIM ELEV 17.78
FL 5.85 (R1)

S-136

STA. 547+25.00 (37.0' R1)
CONST. INLET TYPE J-4
ALT. "B" (3.5' X 7.0')
INDEX No. 200, 210
EOP ELEV 16.28
FL 11.50 (L1)
FL 5.75 (Bk, AN)

FOR CONSTRUCTION

PHASE I

APR 05 2005

SANDY LANE EXT.
FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

SANDY LANE EXT.

ROADWAY PLAN

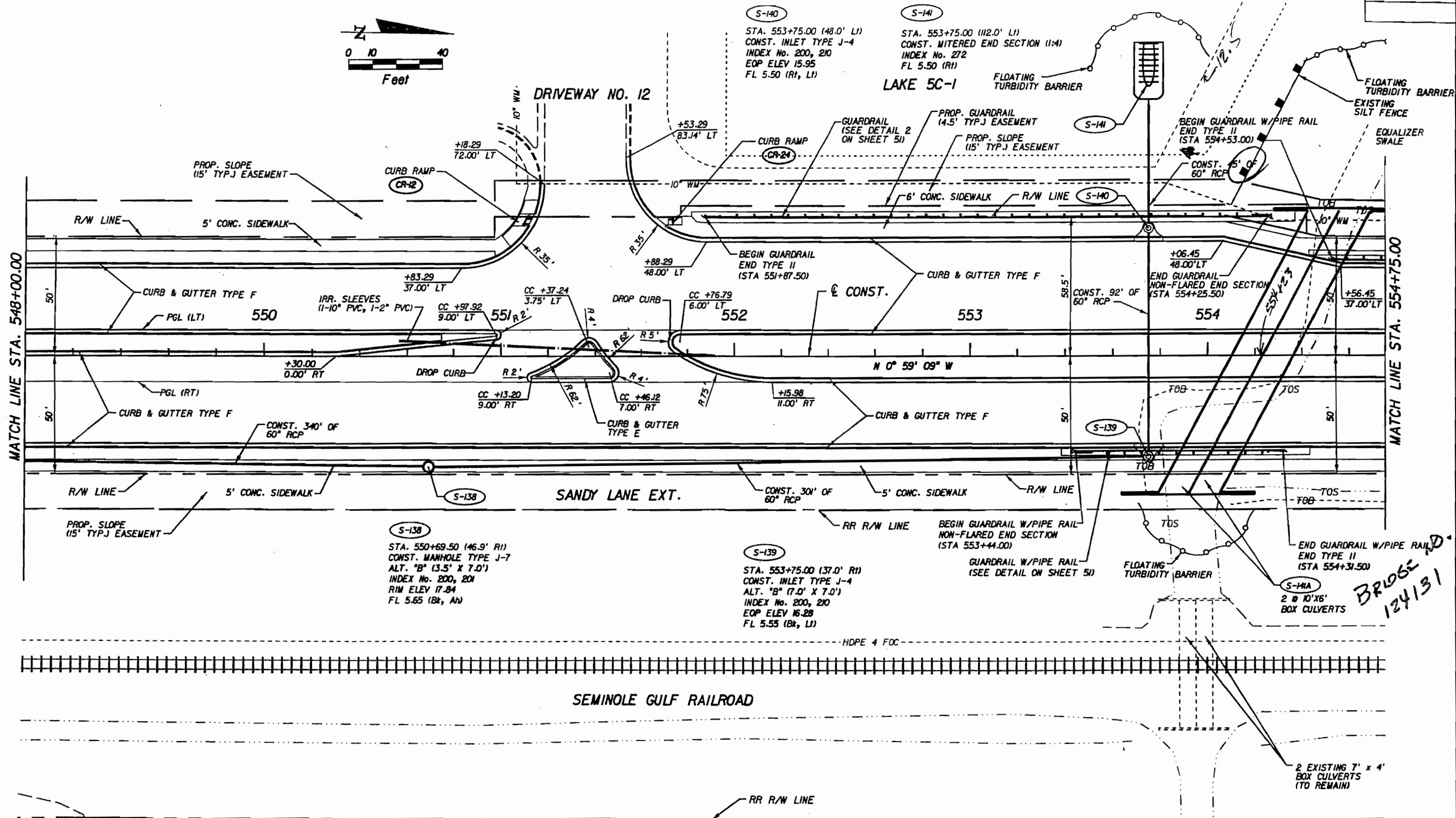
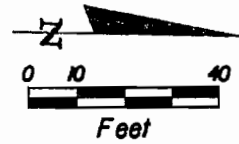
1	SKT FENCE REMOVED PER LCOOT	1/11/05

DESIGNED BY	JB	DATE	10/04
DRAWN BY	JC	DATE	10/04
CHECKED BY	TS	DATE	10/04
VERTICAL SCALE	40	HORIZONTAL SCALE	40

DAVID PLUMMER & ASSOCIATES, INC.
 FORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE 823-230-2017 FAX 823-230-2640
 EB 2590
TODD SEYMOUR P.E. NO. 52098

PROJECT NO.	
DATE	

REFERENCE NO.	
PROJECT NO.	
SHEET NO.	BX367



FOR CONSTRUCTION

APR 05 2005

SANDY LANE EXT.
FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

PHASE I

1	REVISED SILT FENCE LOCATIONS PER LC DOT	1/11/05
<p>BX-8</p>		
NUMBER	REVISION	DATE

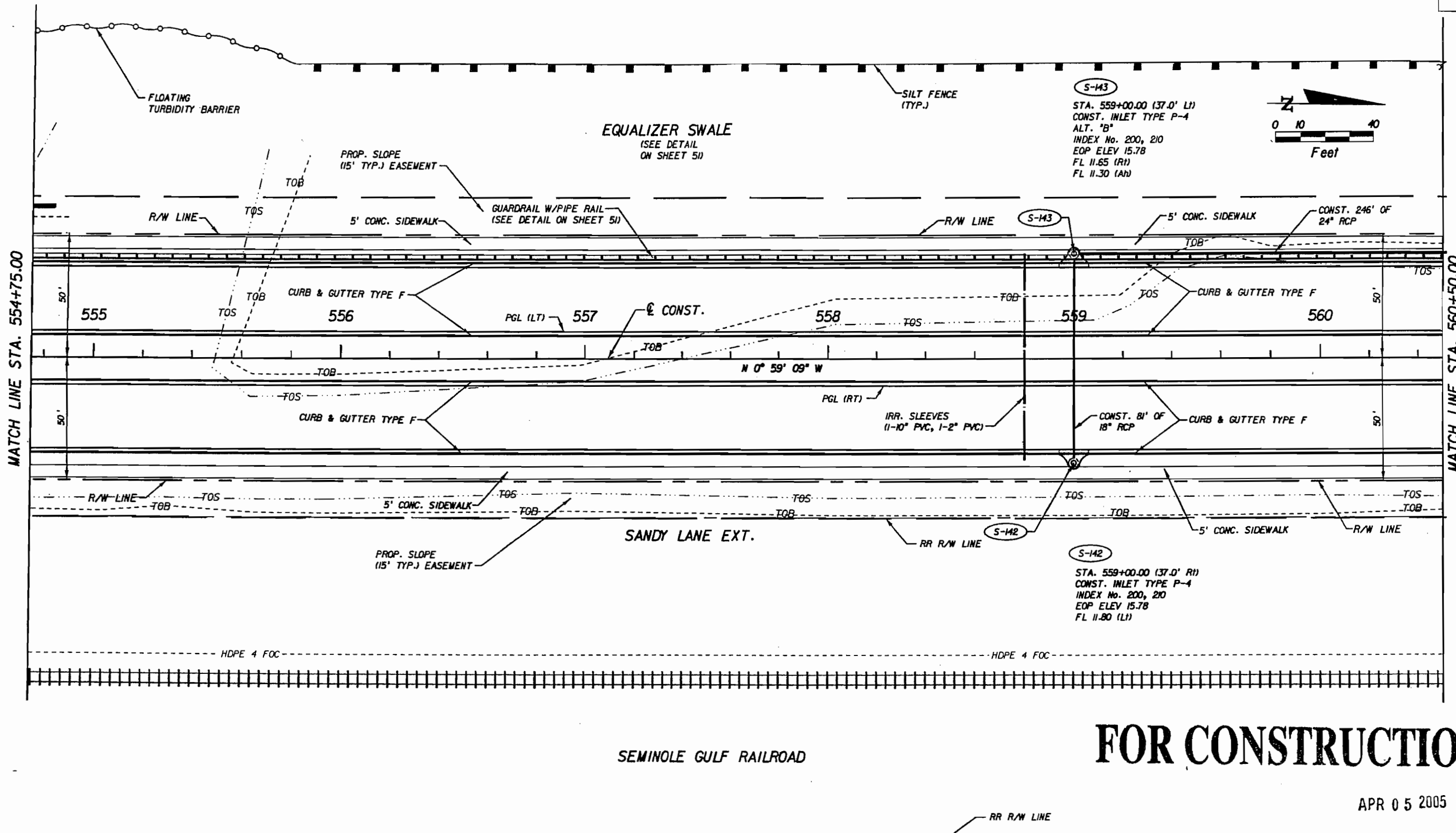
DESIGNED BY: JB DATE: 10/04		
DRAWN BY: JC DATE: 10/04		
CHECKED BY: JS DATE: 10/04		
VERTICAL SCALE:	HORIZONTAL SCALE:	
1" = 10'	1" = 40'	

DAVID PLUMMER & ASSOCIATES, INC.
 FORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (823) 330-0017 FAX (823) 330-0045
 ED 3690

TODD REYMOUR P.E. NO. 52098

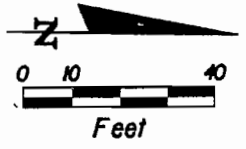
ROADWAY PLAN

<p>THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED DELONGE</p> <p>FLORIDA PROFESSIONAL ENGINEERING REGISTRATION # 30000</p> <p>DATE: _____</p>	<p>REFERENCE NO.</p> <p>PROJECT NO.</p>	<p>DRAWING NO.</p> <p>BX-8</p>
---	---	---------------------------------------



S-143

STA. 559+00.00 (37.0' LI)
 CONST. INLET TYPE P-4
 ALT. "B"
 INDEX No. 200, 210
 EOP ELEV 15.78
 FL 11.65 (RI)
 FL 11.30 (AI)



S-143

S-142

STA. 559+00.00 (37.0' RI)
 CONST. INLET TYPE P-4
 INDEX No. 200, 210
 EOP ELEV 15.78
 FL 11.80 (LI)

FOR CONSTRUCTION

APR 05 2005

PHASE I

SANDY LANE EXT.
 FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

DATE PLOTTED: 04/05/05 10:00 AM

SANDY LANE EXT.

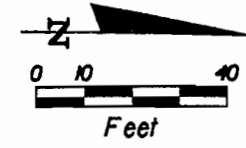
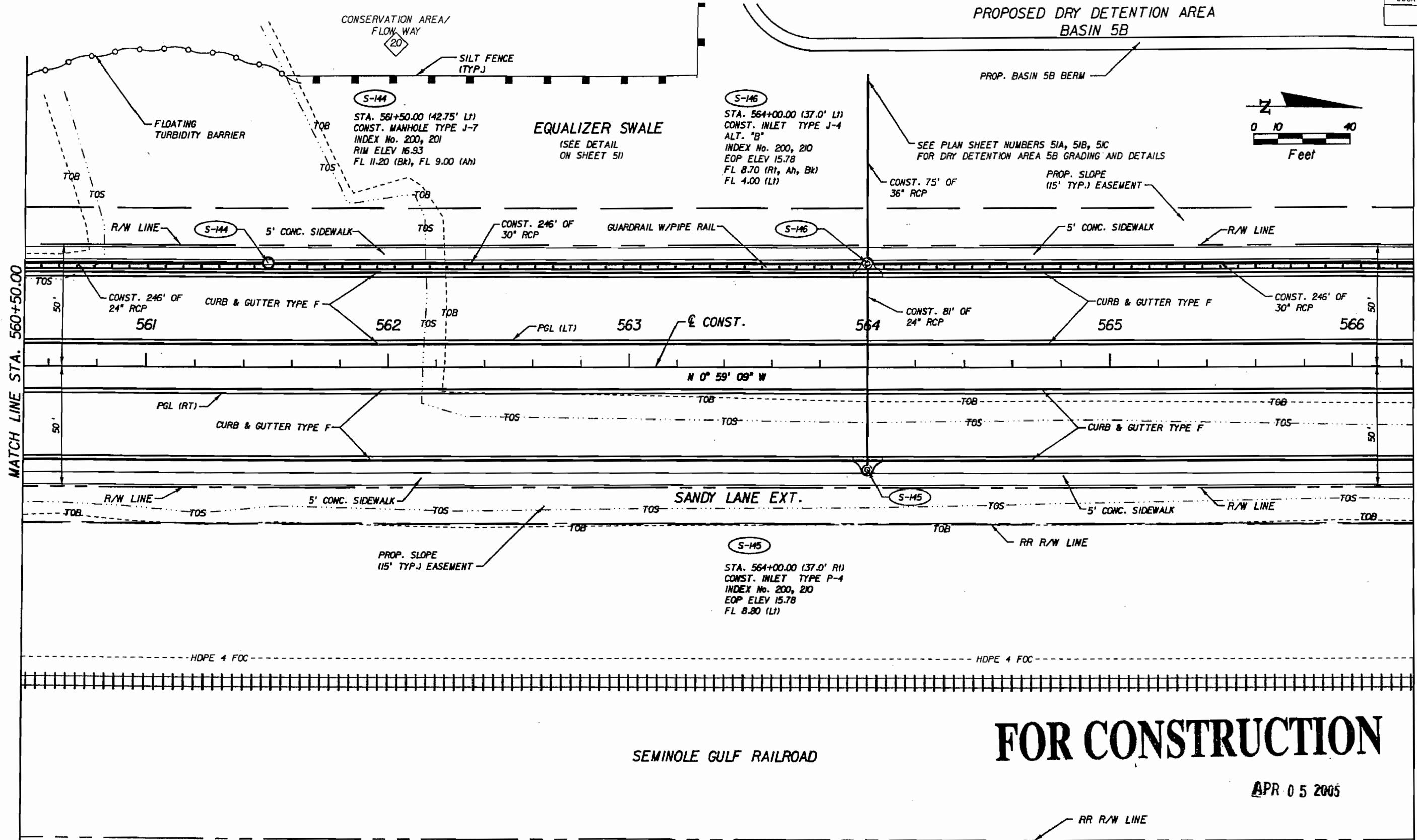
ROADWAY PLAN

DESIGNED BY	RB	DATE	10/04
DRAWN BY	JC	DATE	10/04
CHECKED BY	TS	DATE	10/04
VERTICAL SCALE	1" = 4'	HORIZONTAL SCALE	1" = 40'

DAVID PLUMMER & ASSOCIATES, INC.
 PORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (888) 330-0017 FAX (888) 330-0045
 ED 2690
TODD REYMOUR P.E. NO. 33088

REVISIONS	DATE

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED BELOW:	REFERENCE NO.	DRAWING NO.
FLORIDA PROFESSIONAL ENGINEERING REGISTRATION #52008	PROJECT NO.	BX-9
DATE		



FOR CONSTRUCTION

APR 05 2005

PHASE I

SANDY LANE EXT.
FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

SANDY LANE EXT.

ROADWAY PLAN

1	REVISED SILT FENCE LOCATIONS PER LC DOT	1/11/05
REVISIONS		
NO.	DATE	

DESIGNED BY	AD	DATE	10/04
DRAWN BY	JC	DATE	10/04
CHECKED BY	TS	DATE	10/04
VERTICAL SCALE	1" = 4'	HORIZONTAL SCALE	1" = 40'

DAVID PLUMMER & ASSOCIATES, INC.
 FORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE 889-2300 FAX 889-2300
 ED 3690

TODD REYNOLDS P.E. NO. 52098

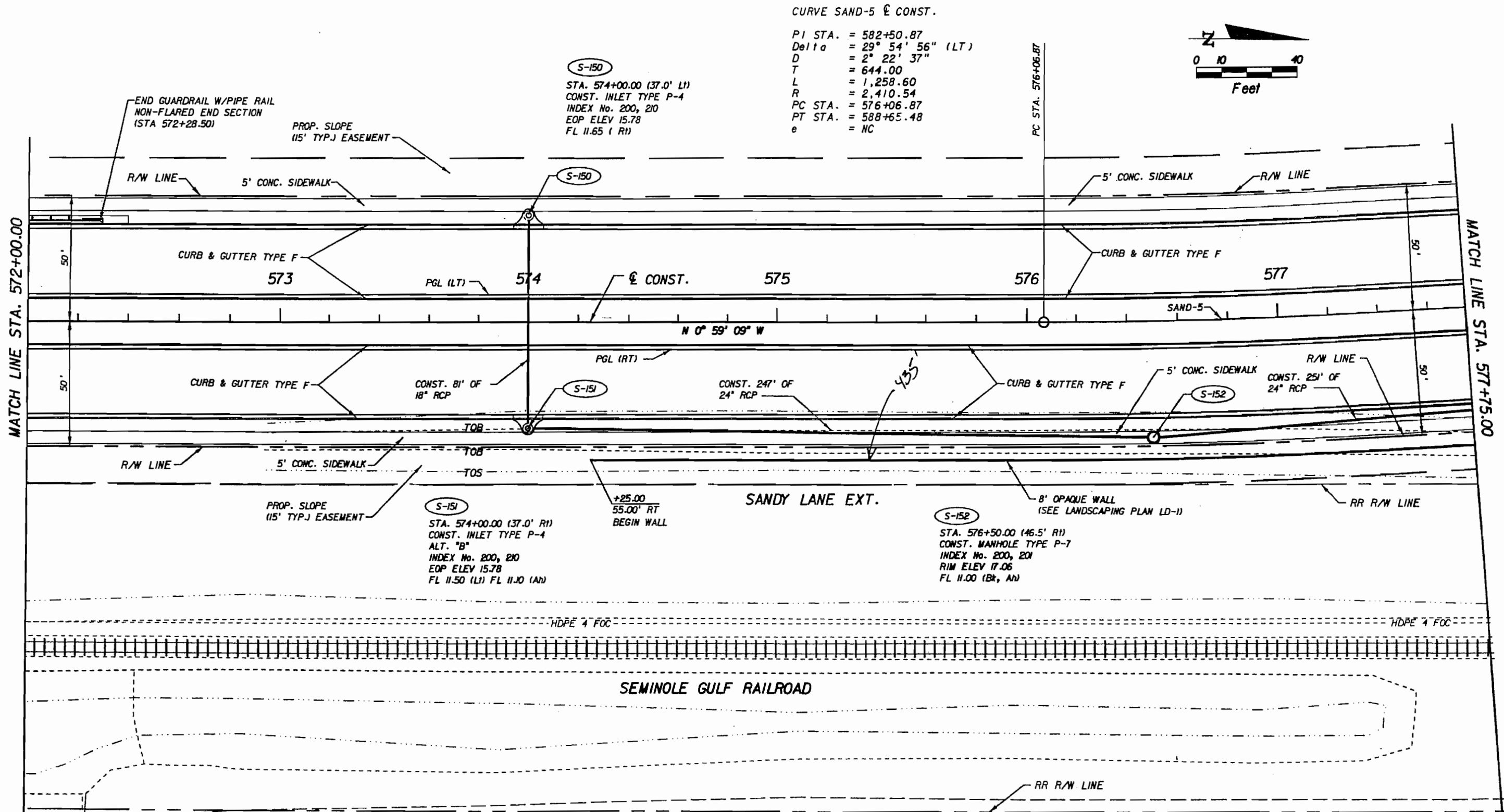
THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED BELOW:

FLORIDA PROFESSIONAL ENGINEERING REGISTRATION BOARD

DATE

REFERENCE NO.	DRAWING NO.
PROJECT NO.	SHEET NO.
	BX-10
	39

DATE PLOTTED: 11/11/05 10:58 AM



CURVE SAND-5 & CONST.

PI STA. = 582+50.87
 Delta = 29° 54' 56" (LT)
 D = 2° 22' 37"
 T = 644.00
 L = 1,258.60
 R = 2,410.54
 PC STA. = 576+06.87
 PT STA. = 588+65.48
 e = NC

S-150
 STA. 574+00.00 (37.0' LI)
 CONST. INLET TYPE P-4
 INDEX No. 200, 210
 EOP ELEV 15.78
 FL 11.65 (RI)

S-151
 STA. 574+00.00 (37.0' RI)
 CONST. INLET TYPE P-4
 ALT. "B"
 INDEX No. 200, 210
 EOP ELEV 15.78
 FL 11.50 (LI) FL 11.10 (RI)

S-152
 STA. 576+50.00 (46.5' RI)
 CONST. MANHOLE TYPE P-7
 INDEX No. 200, 201
 RIM ELEV 17.06
 FL 11.00 (Bk, An)

FOR CONSTRUCTION

PHASE I

APR 05 2005

SANDY LANE EXT.
 FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

1	S&T FENCE REMOVED PER LOGS	L/R/VS

SANDY LANE EXT.

DESIGNED BY	RS	DATE	10/04
DRAWN BY	JC	DATE	10/04
CHECKED BY	TS	DATE	10/04
VERTICAL SCALE	40	HORIZONTAL SCALE	40

DAVID PLUMMER & ASSOCIATES, INC.
 FORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (888) 330-9617 FAX (888) 330-9648
 ED 2690

dpa

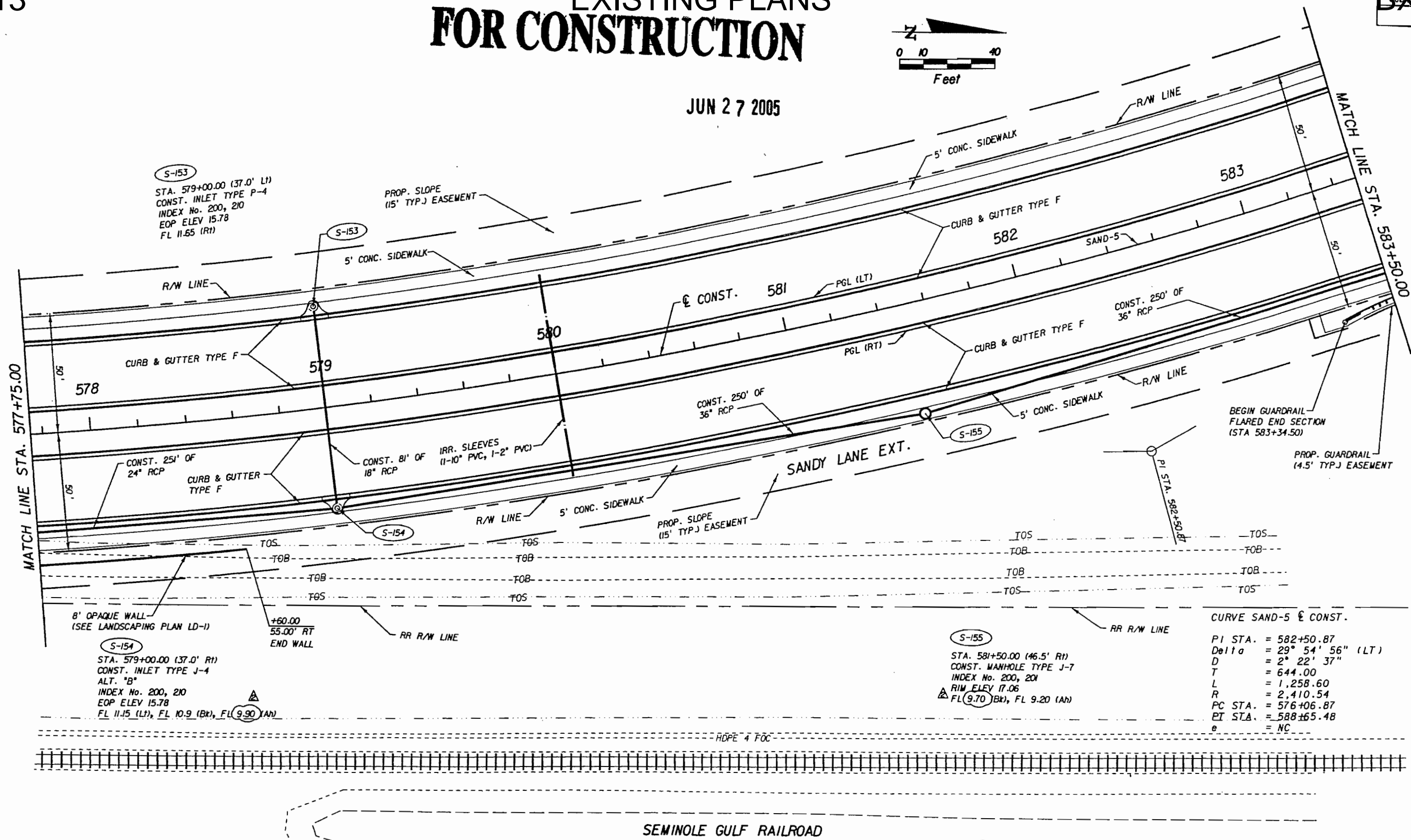
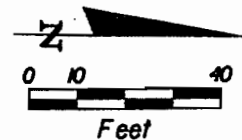
TODD SEYMOUR P.E. NO. 32098

ROADWAY PLAN

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED BELOW: FLORIDA PROFESSIONAL ENGINEERING REGISTRATION # 46096 DATE	REFERENCE NO. PROJECT NO.	DRAWING NO. SHEET NO.

EXISTING PLANS FOR CONSTRUCTION

JUN 27 2005



S-153
STA. 579+00.00 (37.0' L)
CONST. INLET TYPE P-4
INDEX No. 200, 210
EOP ELEV 15.78
FL 11.65 (RT)

CONST. 251' OF
24" RCP
CURB & GUTTER
TYPE F

CONST. 81' OF
18" RCP
IRR. SLEEVES
(1-10" PVC, 1-2" PVC)

S-154
STA. 579+00.00 (37.0' RT)
CONST. INLET TYPE J-4
ALT. "B"
INDEX No. 200, 210
EOP ELEV 15.78
FL 11.15 (LT), FL 10.9 (Bk), FL 9.90 (AN)

S-155
STA. 581+50.00 (46.5' RT)
CONST. MANHOLE TYPE J-7
INDEX No. 200, 201
RIM ELEV 17.06
FL 9.70 (Bk), FL 9.20 (AN)

CURVE SAND-5 & CONST.
PI STA. = 582+50.87
Delta = 29° 54' 56" (LT)
D = 2° 22' 37"
T = 644.00
L = 1,258.60
R = 2,410.54
PC STA. = 576+06.87
PT STA. = 588+65.48
e = NC

NUMBER	REVISIONS	DATE
1	SILT FENCE REMOVED PER LCOOT	1/11/05
2	LOWER INV. OF S-154 & S-155	6/27/05

SANDY LANE EXT.

DESIGNED BY	RB	DATE	10/04
DRAWN BY	JC	DATE	10/04
CHECKED BY	TS	DATE	10/04
VERTICAL SCALE	40	HORIZONTAL SCALE	40



DAVID PLUMMER & ASSOCIATES, INC.
FORT MYERS • CORAL GABLES • FORT LAUDERDALE
1531 HENDRY STREET FT. MYERS FL 33901
TELEPHONE (889) 332-2817 FAX (889) 332-2845
EB 3690
TODD SEYMOUR P.E. NO. 52098

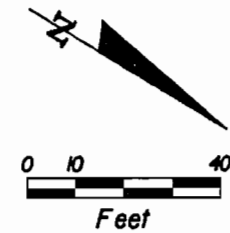
ROADWAY PLAN

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED BELOW:
FLORIDA PROFESSIONAL ENGINEERING REGISTRATION #52098
DATE

REFERENCE NO.	DRAWING NO.
PROJECT NO.	SHEET NO.

CURVE SAND-5 & CONST.

PI STA. = 582+50.87
 Delta = 29° 54' 56" (LT)
 D = 2° 22' 37"
 T = 644.00
 L = 1,258.60
 R = 2,410.54
 PC STA. = 576+06.87
 PT STA. = 588+65.48
 e = NC



S-156
 STA. 584+00.00 (37.0' L)
 CONST. INLET TYPE P-4
 INDEX No. 200, 210
 EOP ELEV 15.78
 FL 9.20 (R1)

S-157
 STA. 584+00.00 (37.0' R1)
 CONST. INLET TYPE J-4
 ALT "B"
 INDEX No. 200, 210
 EOP ELEV 15.78
 FL 9.00 (Bt, L), FL 7.20 (R1)

S-158
 STA. 584+00.00 (199.0' R1)
 CONST. MITERED END SECTION (1:4)
 INDEX No. 272
 FL 7.00 (R1)

S-159
 STA. 584+00.00 (199.0' R1)
 CONST. MITERED END SECTION (1:4)
 INDEX No. 272
 FL 7.00 (R1)

LAKE 5A-1

FOR CONSTRUCTION

APR 05 2005

PHASE I

SANDY LANE EXT. FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

SANDY LANE EXT.

ROADWAY PLAN

NO.	REVISIONS	DATE
1	S&T FENCE REMOVED PER LCOOT	1/11/05

DESIGNED BY	RB	DATE	10/04
DRAWN BY	JC	DATE	10/04
CHECKED BY	TS	DATE	10/04
VERTICAL SCALE	40	HORIZONTAL SCALE	40

DAVID PLUMMER & ASSOCIATES, INC.
 FORT MYERS • CONAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (829) 330-0017 FAX (829) 330-0040
 ED 2690
TODD SEYMOUR P.E. NO. 52098

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED BELOW: FLORIDA PROFESSIONAL ENGINEERING REGISTRATION # 52098 DATE	REFERENCE NO. PROJECT NO.	DRAWING NO. SHEET NO.
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PROJECT NO. SHEET NO.	BX-14
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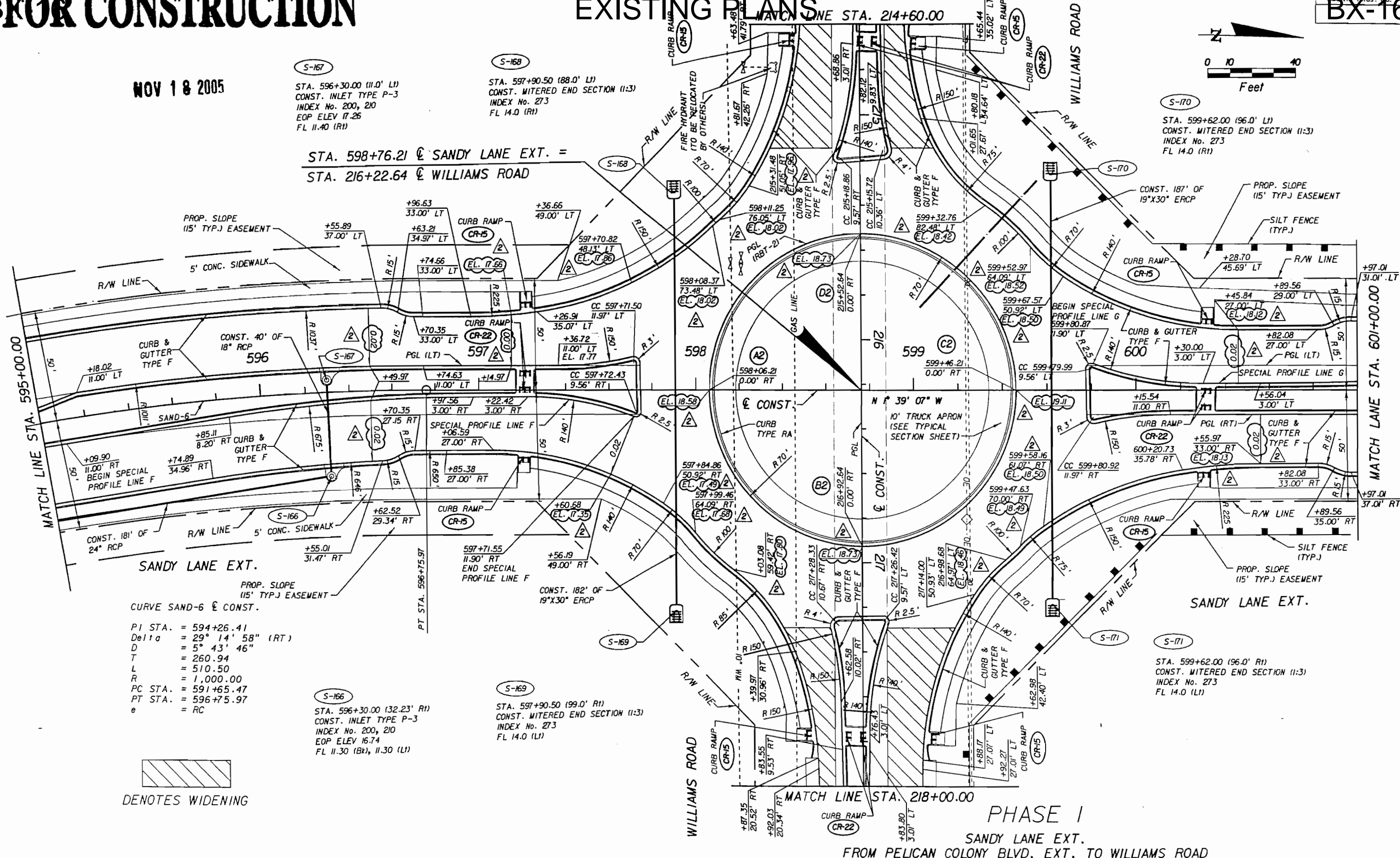
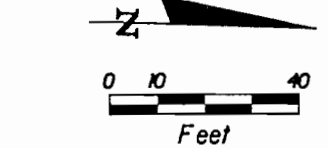
DATE PLOTTED: 03/27/05 10:58 AM

NOV 18 2005

S-167
 STA. 596+30.00 (11.0' LI)
 CONST. INLET TYPE P-3
 INDEX No. 200, 210
 EOP ELEV 17.26
 FL 11.40 (RI)

S-168
 STA. 597+90.50 (88.0' LI)
 CONST. MITERED END SECTION (1:3)
 INDEX No. 273
 FL 14.0 (RI)

STA. 598+76.21 @ SANDY LANE EXT. =
 STA. 216+22.64 @ WILLIAMS ROAD



PROP. SLOPE (15' TYP.) EASEMENT

5' CONC. SIDEWALK

CONST. 40' OF 18" RCP

CONST. 181' OF 24" RCP

SANDY LANE EXT.

PROP. SLOPE (15' TYP.) EASEMENT

CURVE SAND-6 @ CONST.

PI STA. = 594+26.41
 Delta = 29° 14' 58" (RT)
 D = 5° 43' 46"
 T = 260.94
 L = 510.50
 R = 1,000.00
 PC STA. = 591+65.47
 PT STA. = 596+75.97
 e = RC



PHASE I
 SANDY LANE EXT.
 FROM PELICAN COLONY BLVD. EXT. TO WILLIAMS ROAD

L:\CADD\PROJ\03\03125\SEND\H-CR-05\planr21.dgn

NO.	REVISIONS	DATE
1	REVISED SILT FENCE LOCATIONS PER LC DOT	11/11/05
2	ADDED SLOPES & ELEVATIONS	11/07/05

SANDY LANE EXT.

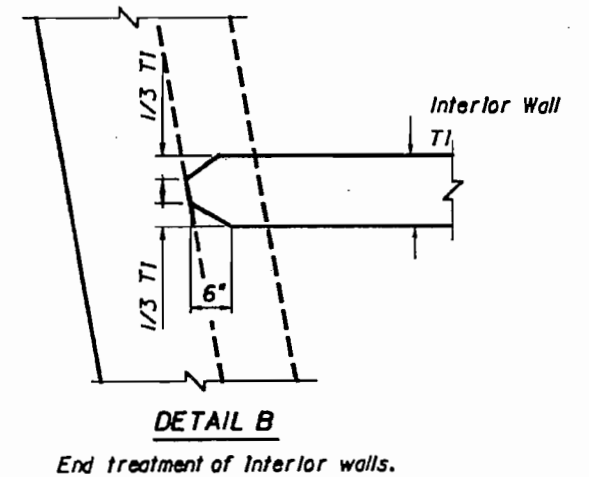
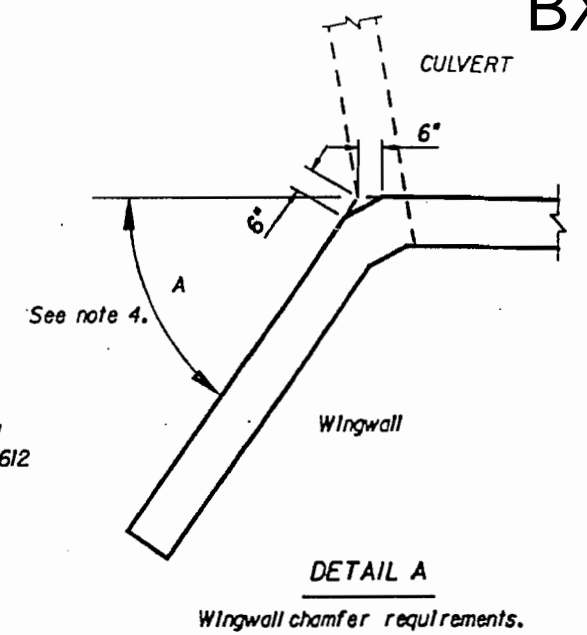
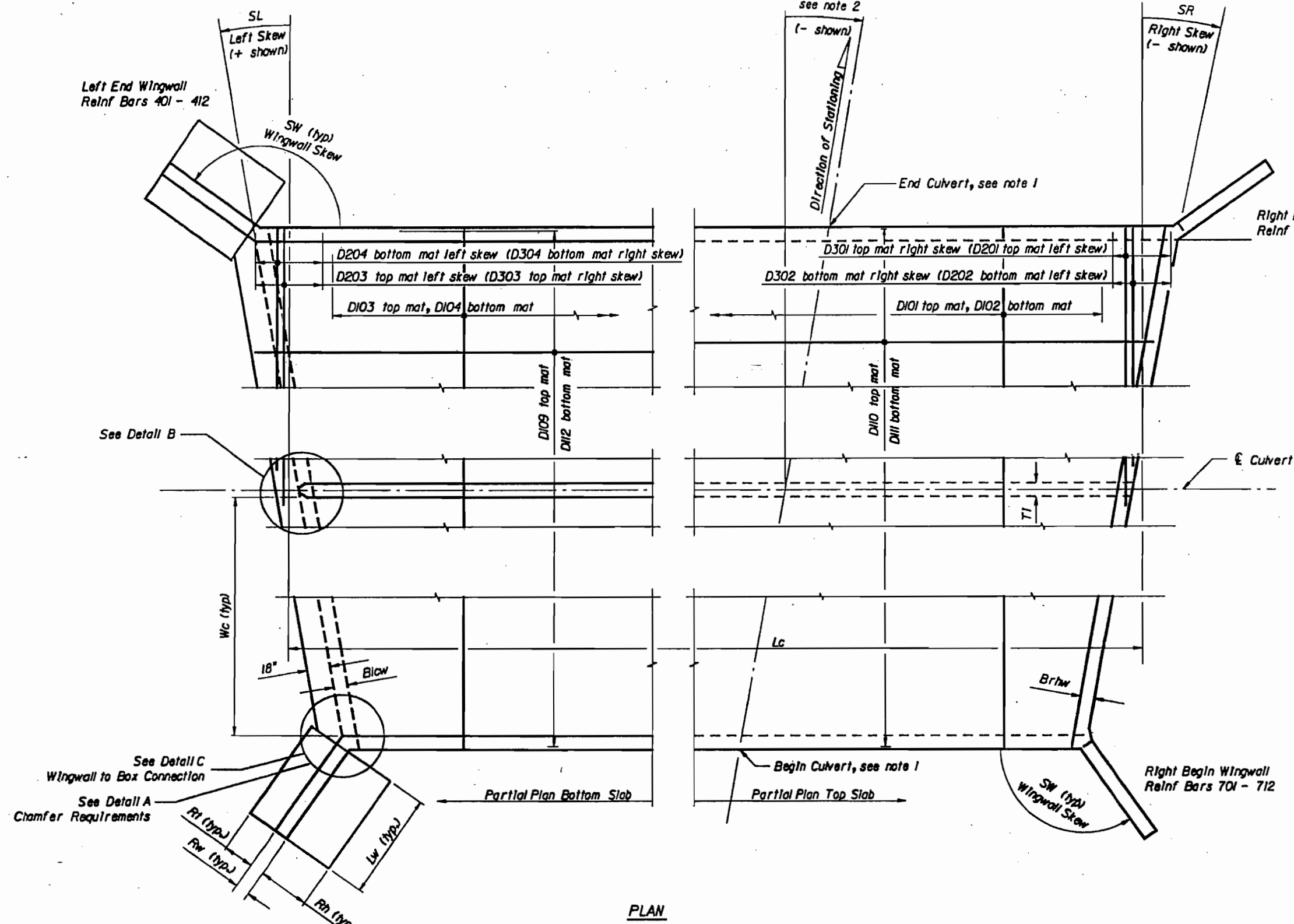
DESIGNED BY: RB	DATE: 10/04
DRAWN BY: JC	DATE: 10/04
CHECKED BY: TS	DATE: 10/04
VERTICAL SCALE: 40	HORIZONTAL SCALE: 40

DAVID PLUMMER & ASSOCIATES, INC.
 FORT MYERS • CORAL GABLES • FORT LAUDERDALE
 1531 HENDRY STREET FT. MYERS FL 33901
 TELEPHONE (239) 332-2617 FAX (239) 332-2645
 EB 2690

TODD SEYMOUR P.E. NO. 52098

ROADWAY PLAN

THESE DRAWINGS ARE NOT APPROVED UNLESS SIGNED AND SEALED BELOW: FLORIDA PROFESSIONAL ENGINEERING REGISTRATION #52098 DATE:	REFERENCE NO.	DRAWING NO.
	PROJECT NO.	SHEET NO. 45



- NOTES:
- Design specifications: AASHTO LRFD 1999 Design Loadings HL-93
Reinforcing Steels: ASTM A615/A615-96a
Surface Treatment: All concrete surfaces shall receive a general surface finish.
 - See Roadway Plans for Culvert Location, Roadway Skew Angle, and Roadway Cross Section.
 - During construction provide support for loads in excess of AASHTO HL-93.
 - Provide a 6" chamfer when angle "A" is greater than 45°. Maintain min. wall thickness. Field adjust reinforcing to maintain cover.

FOR CONSTRUCTION

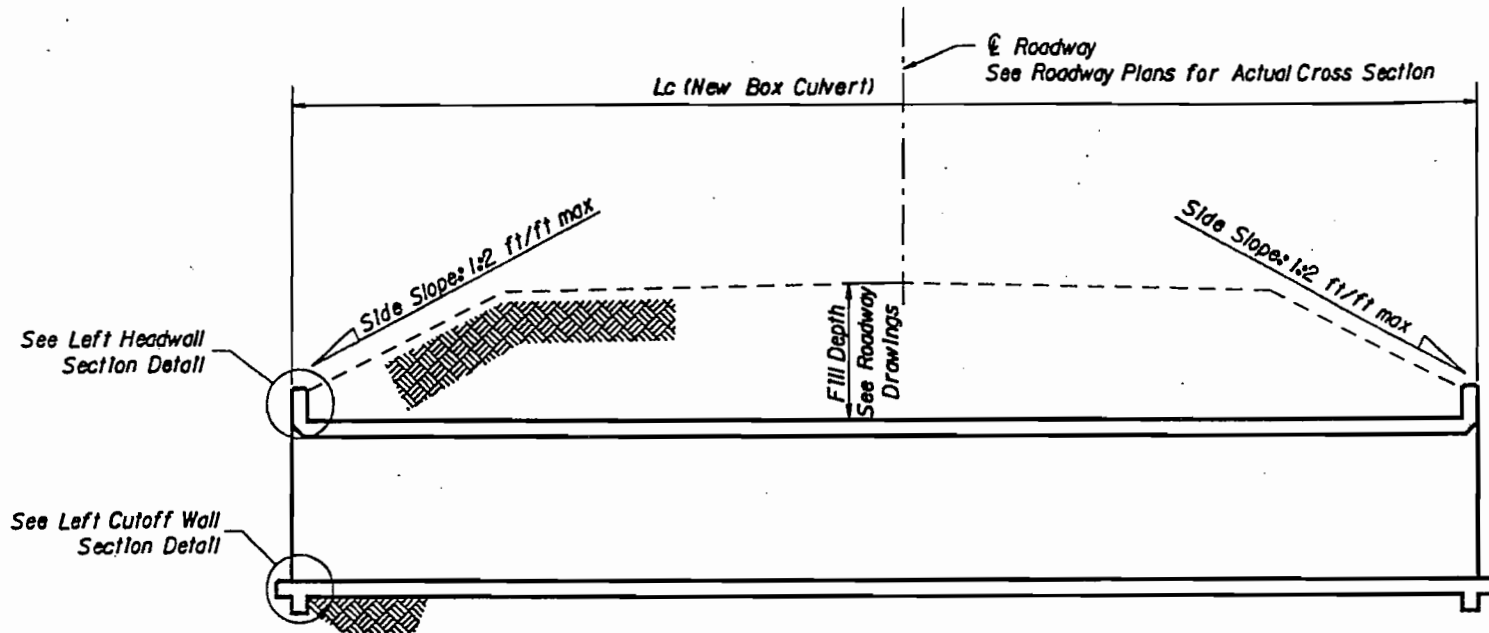
DOTAS ENGINEERING, Inc.
 7125 NW 12th Street, Suite # 110
 Miami, Florida 33126
 305 750 7000
 Florida State Engineer
 P.L. No. 4828

APR 05 2005

WFS

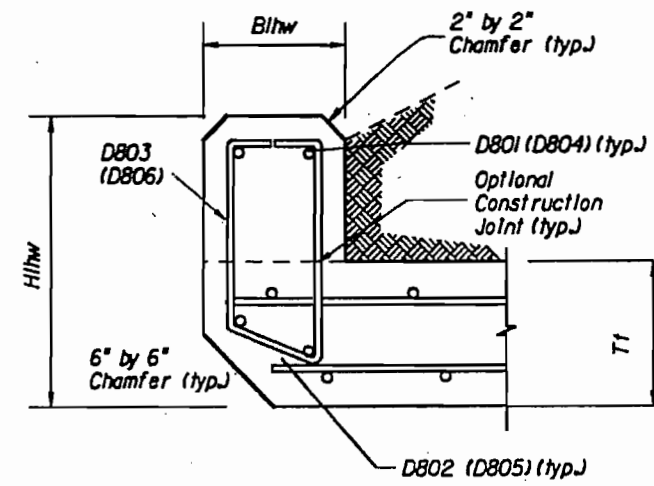
REVISIONS				DATE		DESCRIPTION		BY	
02/15	J.F.	CULVERT ELEVATION MODIFICATION							

DRAWN BY: J.F. CHECKED BY: P.M.B. DESIGNED BY: J.F. CHECKED BY: P.M.B. APPROVED BY: P.M.B.	ENGINEER OF RECORD: DAVID PLUMMER & ASSOCIATES, INC.	FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO.: COUNTY: LEE PROJECT NO.:	SHEET TITLE: CONCRETE BOX CULVERT TYPICAL PLAN AT STA. 554+00 PROJECT NAME: SANDY LANE EXT. - BOX CULVERT DETAILS SHEET NO.:
--	--	--	--

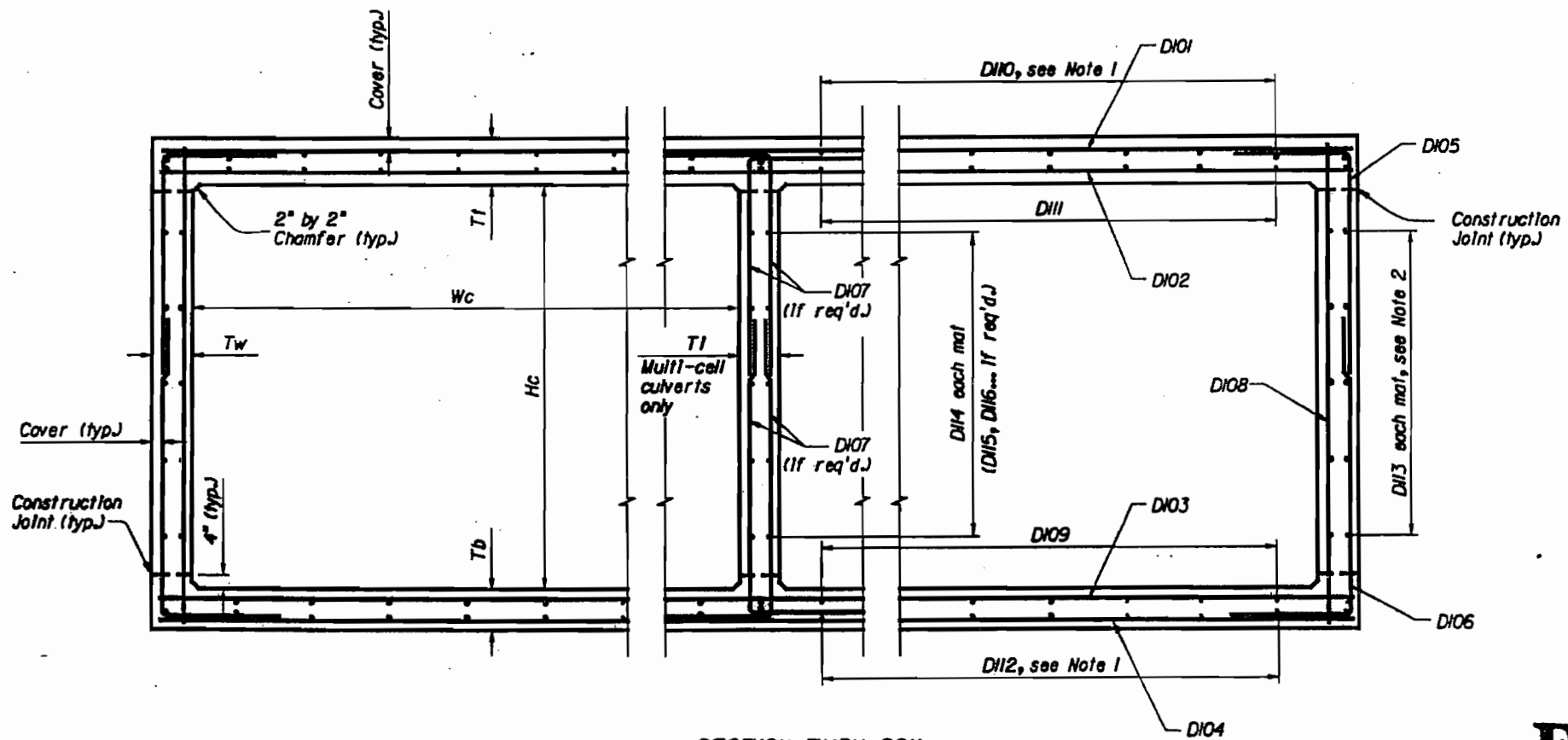


LONGITUDINAL SECTION

Handwritten calculation:
 $2Tw + 2Wc + T1$
 $2(0.83) + 2(10) + 0.83$
 $1.67 + 20 + 0.83 = 22.5$

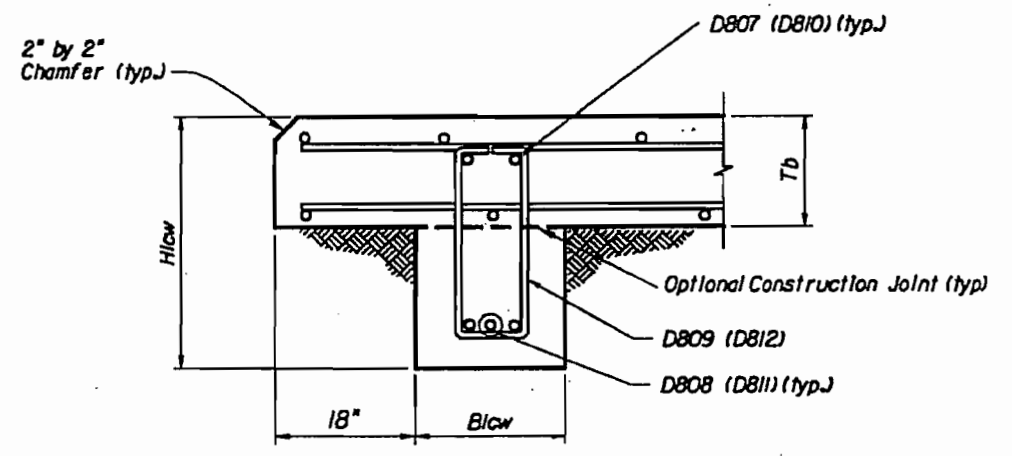


LEFT HEADWALL SECTION (Right Headwall Similar)



SECTION THRU BOX

Handwritten note: $6'4 \times 10' W$



LEFT CUTOFF WALL SECTION (Right Cutoff Wall Similar)

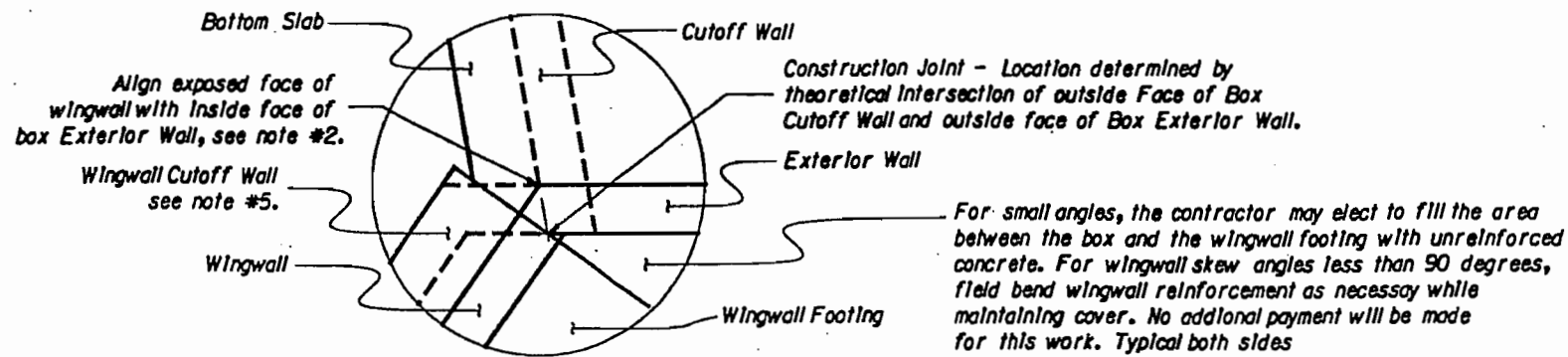
- NOTES:
1. Space Bars D10 and D112 with a bar in each corner and the remaining bars placed at equal spacing.
 2. Place Bars D113 at even spaces between corner Bars D10 and D112.

FOR CONSTRUCTION NOTAS ENGINEERING, Inc.
 7925 NW 12th Street, Suite # 110
 Miami, Florida 33226
 Tel. 786 7926

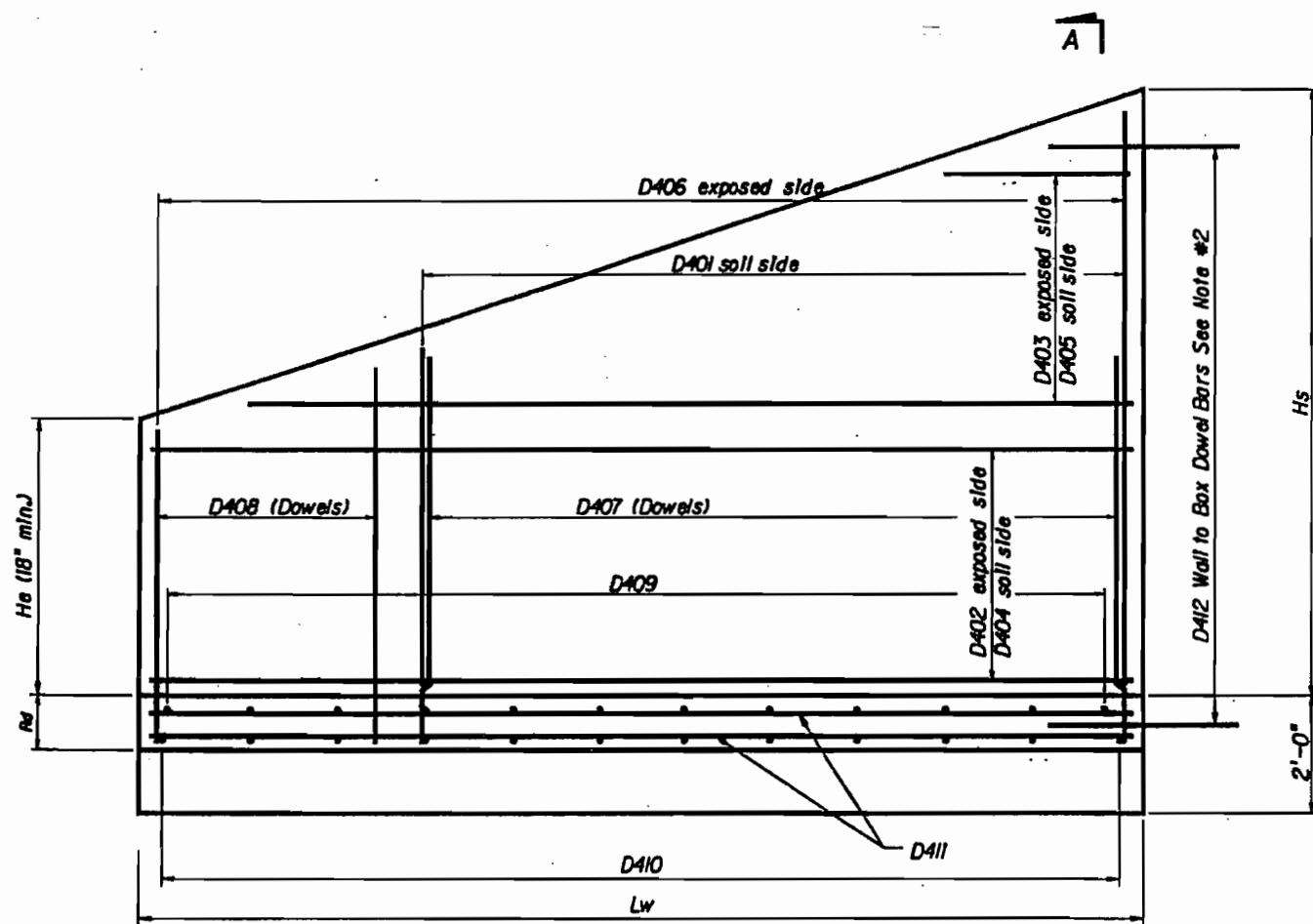
APR 05 2005

REVISIONS				DATE		DESCRIPTION		DATE		DESCRIPTION	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
02/15	J.F.	CULVERT ELEVATION MODIFICATION									

DRAWN BY: J.F. CHECKED BY: P.M.B. DESIGNED BY: J.F. APPROVED BY: P.M.B.	DATES: 08/2004 08/2004 08/2004 08/2004	ENGINEER OF RECORD: DAVID PLUMMER & ASSOCIATES, INC.	FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO.: COUNTY: LEE PROJECT NO.:	SHEET TITLE: CONCRETE BOX CULVERT ELEVATION, SECTION, AND WALL DETAILS STA. 554+00 PROJECT NAME: SANDY LANE EXT. - BOX CULVERT DETAILS	SHEET NO.: BX-19
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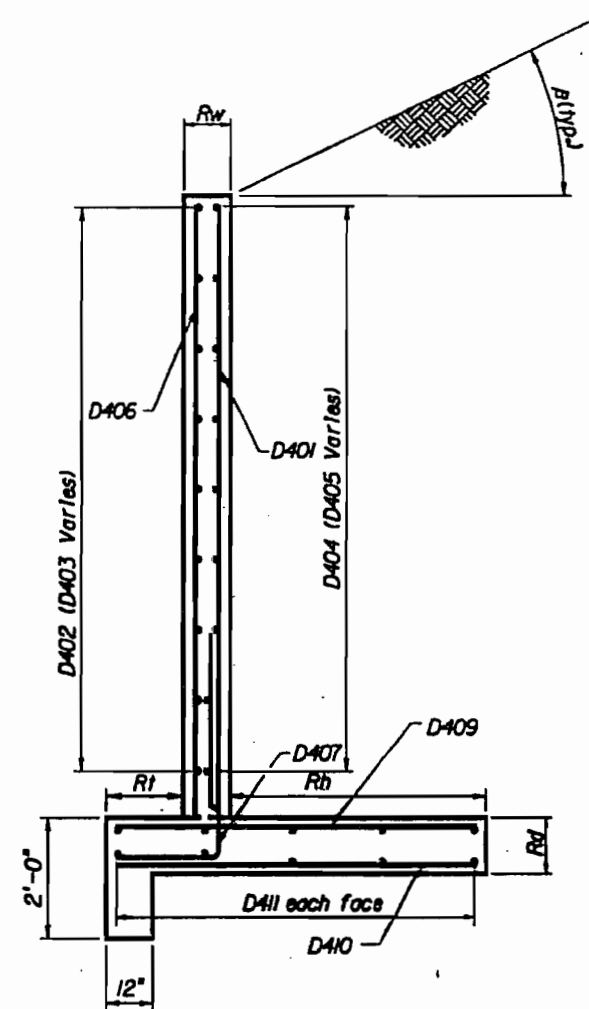


DETAIL C - BOTTOM SLAB PLAN VIEW
WINGWALL TO BOX CONNECTION
(Left Begin Corner Shown - Other Corners Similar)



WINGWALL ELEVATION -Variable Height
(Left End Shown - Other Corners Similar)

- Notes:
1. Wingwall Construction Joint perpendicular to Wingwall.
 2. In the vicinity of the Construction Joint, field bend reinforcement as necessary to maintain minimum reinforcement cover.
 3. For constant height wingwalls, variable length bars D403, D405, and D408 are not needed.
 4. Wingwall Skew Angles are measures from the adjacent box exterior wall to the wingwall.
 5. Turn Wingwall Cutoff Wall as necessary to meet Box Cutoff Wall.



Section A-A

FOR CONSTRUCTION

BOTAS ENGINEERING, Inc.
7525 NW 12th Street, Suite # 30
Miami, Florida 33126
305 798 7998

APR 05 2005

[Signature]
Florida E.C. Board # 12
P.E. No. 42829

REVISIONS				DATE		NAME		ENGINEER OF RECORD: DAVID PLUMMER & ASSOCIATES, INC.	FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE:		
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	NAME		ROAD NO.	COUNTY	PROJECT NO.	CONCRETE BOX CULVERT WINGWALL DETAILS STA. 554+00		
02/05	J.F.	CULVERT ELEVATION MODIFICATION				08/2004	J.F.						SANDY LANE EXT. - BOX CULVERT DETAILS	
						08/2004	P.M.B.						SHEET NO. BX-20	

V:\data\engineering\log\borop\20023_culverts.dwg\pview 2005.Dwg soil cap & utility pipe 2-Dwg culvert\spw\valerr13.dgn

TABLE OF BOX CULVERT VARIABLES (Inches unless shown otherwise)

LOCATION	STRUCTURE NUMBER	BOX									HEADWALL and CUTOFF WALL									
		Wd(f)	Hd(f)	Tl	Tw	Tb	Tl	#cells	Ld(f)	Cover	Blhw	Hlhw	Brhw	Hrhw	Blcw	Hlcw	Brcw	Hrcw	Sl(deg)	SR(deg)
STA. 554+00 (±)		10	6	12.5	10	9.5	10	2	137	2	15	33	15	24	12	24	12	24	28	28

TABLE OF BOX CULVERT VARIABLES (CONT.) (Inches unless shown otherwise)

STRUCTURE NUMBER	LEFT END WINGWALL									LEFT BEGIN WINGWALL								
	Rl	Rw	Rh	Rd	SW(deg)	B(deg)	Hd(f)	Hs(f)	Lw(f)	Rl	Rw	Rh	Rd	SW(deg)	B(deg)	Hd(f)	Hs(f)	Lw(f)
20	10	36	12	118	18.4	8.05	8.05	15.8	20	10	36	12	62	18.4	8.05	8.05	15.8	

TABLE OF BOX CULVERT VARIABLES (CONT.) (Inches unless shown otherwise)

STRUCTURE NUMBER	RIGHT END WINGWALL									RIGHT BEGIN WINGWALL								
	Rl	Rw	Rh	Rd	SW(deg)	B(deg)	Hd(f)	Hs(f)	Lw(f)	Rl	Rw	Rh	Rd	SW(deg)	B(deg)	Hd(f)	Hs(f)	Lw(f)
20	10	36	12	62	18.4	8.05	8.05	15.8	20	10	36	12	118	18.4	8.05	8.05	15.8	

NOTES:

1. Environmental Class - Moderately Aggressive
2. Reinforcing Steel, Grade 60
3. Concrete Class IV, f'c = 5,500 ksi
4. Soil Properties:
Friction Angle - 30°
Nominal Bearing Capacity - 3,000 psf
5. Total Quantity of Reinforcing Steel (lbs) - 70,711
6. Work this Drawing With Sheet Nos. B-1 thru B-3 and B-5 thru B-6.

CONCRETE QUANTITIES (yd3)

STRUCTURE NUMBER	BOX																				Culvert Total																
	LEFT END WINGWALL									LEFT BEGIN WINGWALL									RIGHT END WINGWALL									RIGHT BEGIN WINGWALL									
	Left Cutoff Wall	Right Cutoff Wall	Bottom Slab	Walls	Top Slab	Left Head Wall	Right Head Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total																	
1J4	1J4	92.36	76J1	118.92	2.02	1J3	293.39	3.80	3.93	7.73	3.71	3.93	7.64	3.71	3.93	7.64	3.80	3.93	7.73	324J3																	

FOR CONSTRUCTION

MAIN STEEL REINFORCEMENT SPACING (in)

STRUCTURE#	D101	D102	D103	D104	D105	D106	D107	D108	D401	D501	D601	D701
	6	6	6	6	6	6	9	9	6	6	6	6

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITIES
Concrete Class IV (Culverts) (400-4-1)	CY	324J
Reinforcing Steel (Miscellaneous) (415-1-6)	LBS	70,711

APR 05 2005

ROTAS ENGINEERING, Inc.
7925 NW 12th Street, Suite # 110
Miami, Florida 33126
Tel: 788 7898

[Signature]
Florida Lic. Engr. No. 4829

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
02/05	J.F.	CULVERT ELEVATION MODIFICATION			

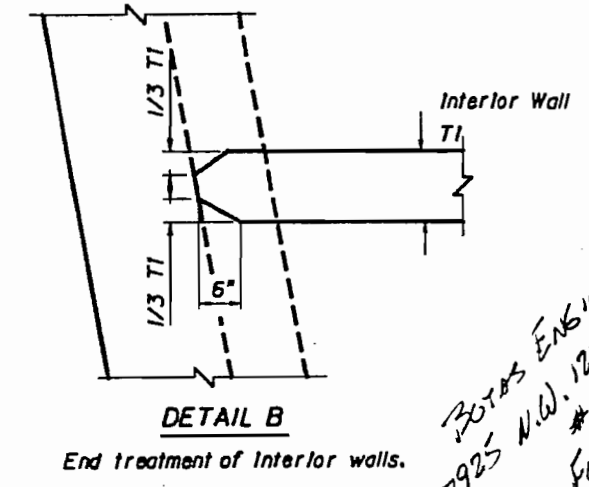
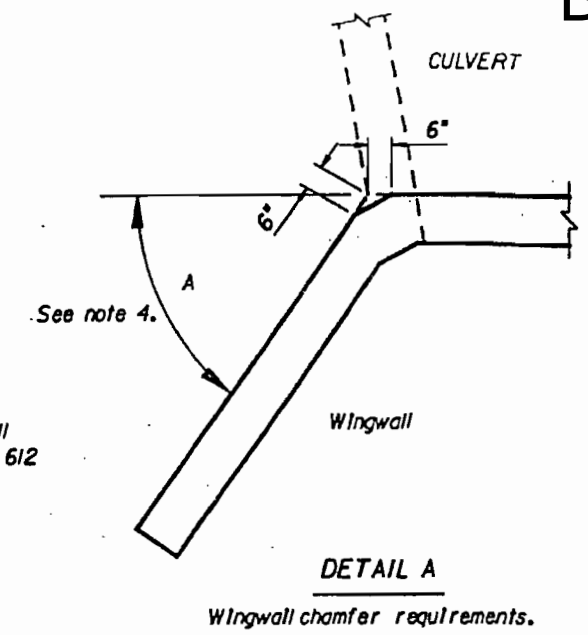
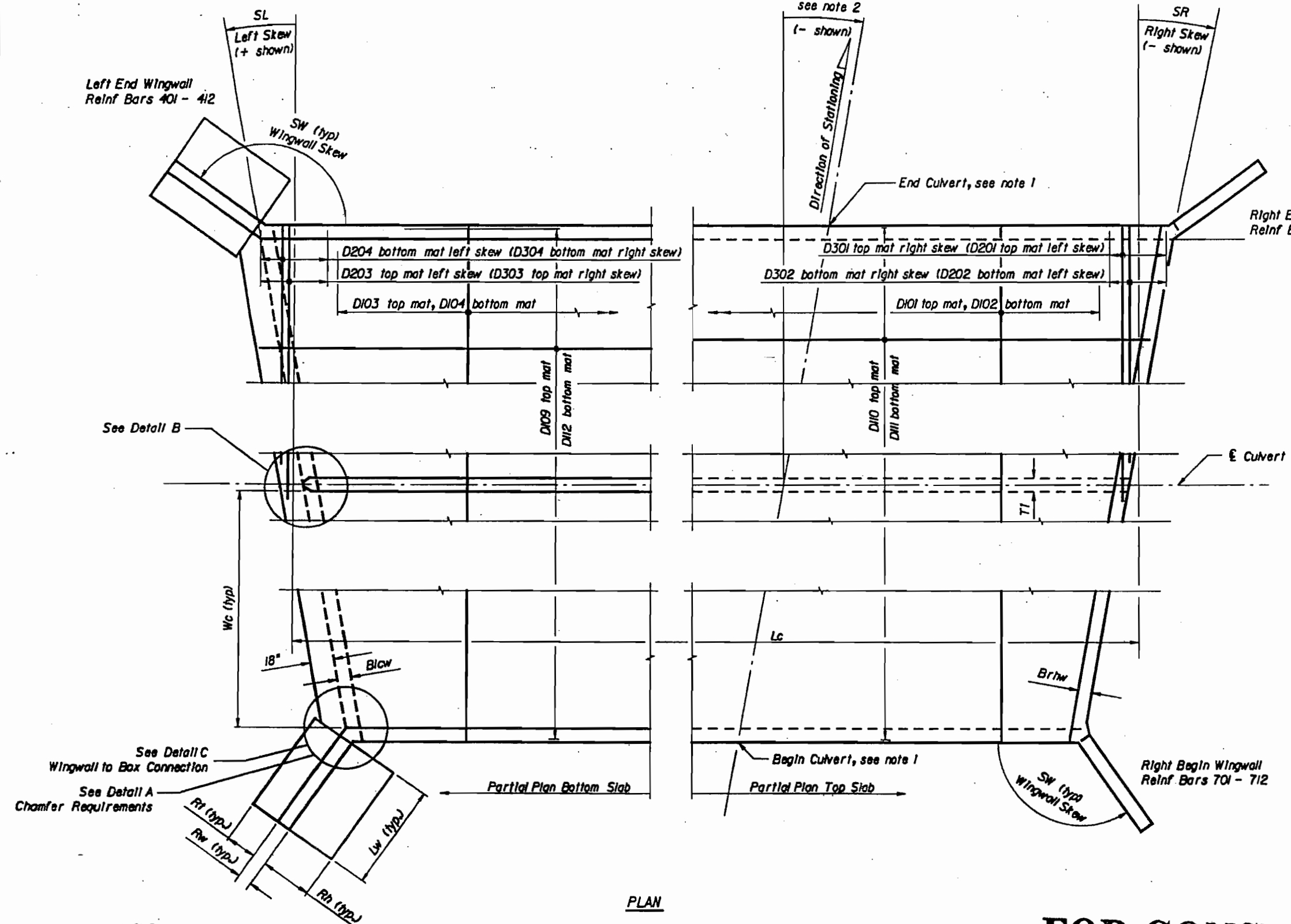
DRAWN BY	DATE
J.F.	8-6-04
CHECKED BY	DATE
PMB.	8-6-04
DESIGNED BY	DATE
J.F.	8-6-04
CHECKED BY	DATE
PMB.	8-6-04
APPROVED BY	DATE
PMB.	

ENGINEER OF RECORD:
DAVID PLUMMER & ASSOCIATES, INC.

FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	LEE	

SHEET TITLE:		SHEET NO.
CONCRETE BOX CULVERT, SUMMARY DIMENSION AND QUANTITIES TABLES STA. 554+00		5-1
PROJECT NAME:		
SANDY LANE EXT. - BOX CULVERT DETAILS		

s:\JSTN_MACHINERY\eng\in\p\2005\2005_01_B_soil cap & utility pipe2-0x6 culvert\dwg\culvert14.dgn
 02 FEB 2005 10:52:13



BOTAS ENGINEERING
 7925 N.W. 12TH ST.
 MIAMI, FL 33126

NOTES:

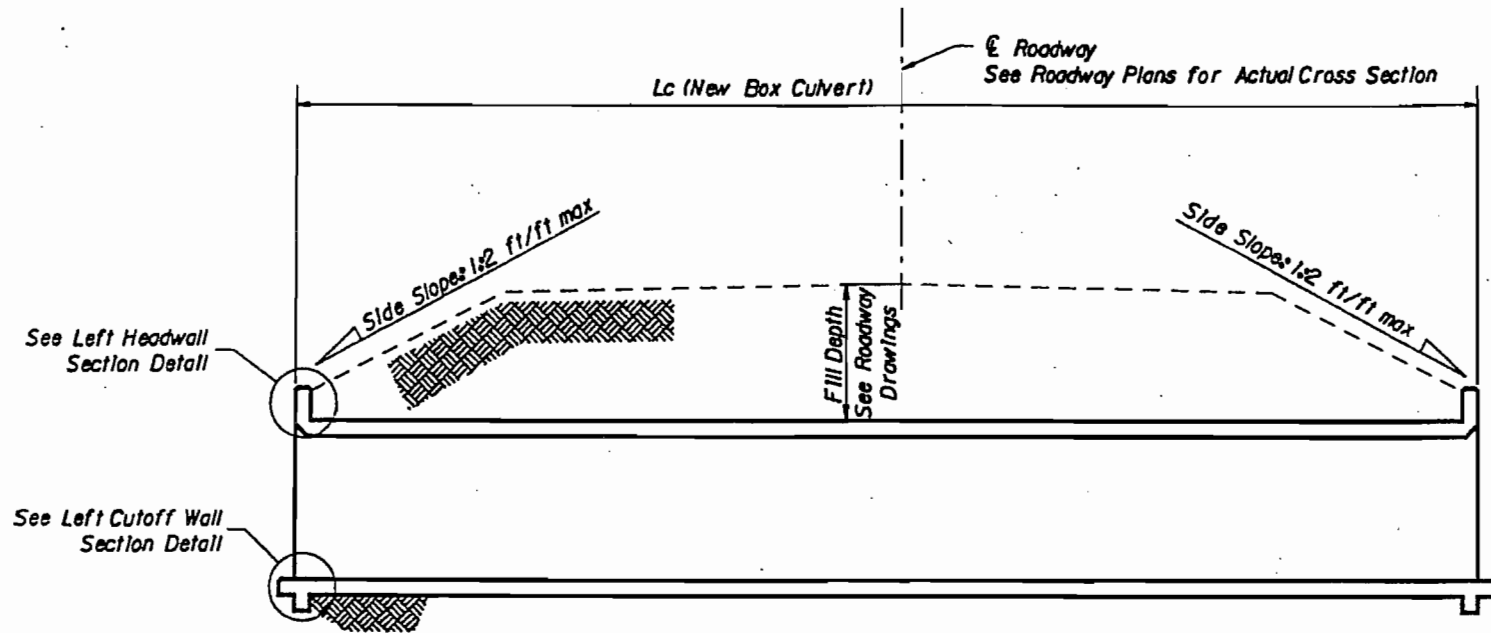
1. Design specifications: AASHTO LRFD 1999
 Design Loading: HL-93
 Reinforcing Steel: ASTM A615/A615-96a
 Surface Treatments: All concrete surfaces shall receive a general surface finish.
2. See Roadway Plans for Culvert Location, Roadway Skew Angle, and Roadway Cross Section.
3. During construction provide support for loads in excess of AASHTO HL-93.
4. Provide a 6" chamfer when angle "A" is greater than 45°. Maintain min. wall thickness. Field adjust reinforcing to maintain cover.

FOR CONSTRUCTION

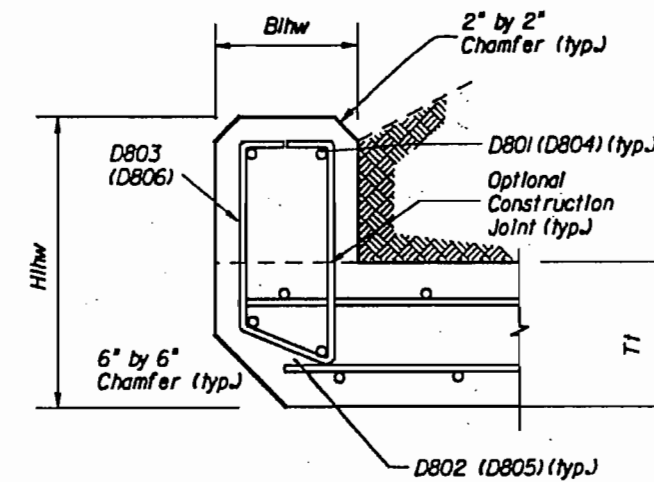
APR 05 2005

BOTAS ENGINEERING, Inc.
 7925 NW 12th Street, Suite # 330
 Miami, Florida 33126
 FL P.E. No. 4829

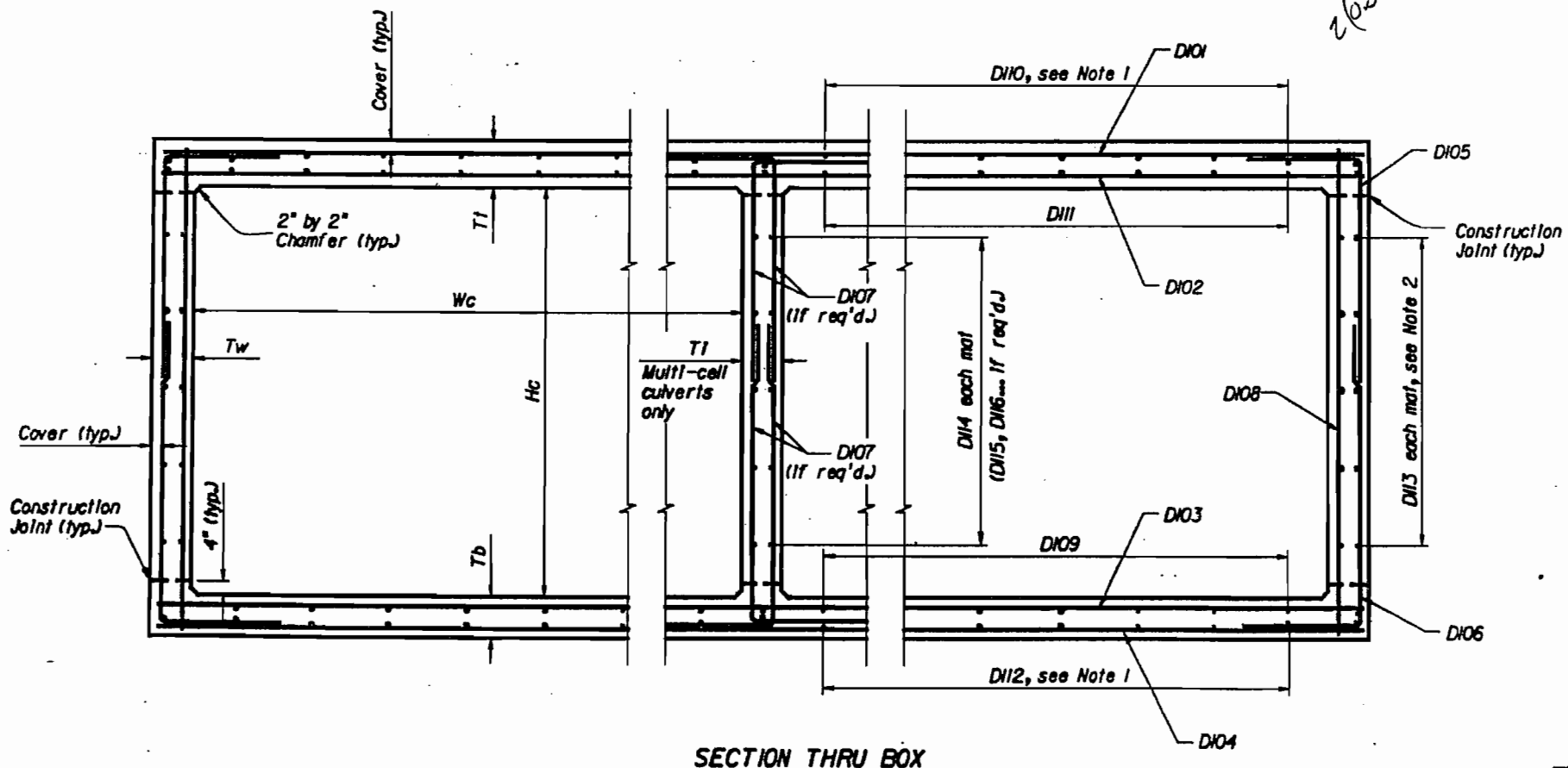
DATE		BY		DESCRIPTION		REVISIONS		ENGINEER OF RECORD		FLORIDA DEPARTMENT OF TRANSPORTATION		SHEET TITLE	
02/05	J.F.			CULVERT ELEVATION MODIFICATION				DAVID PLUMMER & ASSOCIATES, INC.	ROAD NO.	COUNTY	PROJECT NO.	CONCRETE BOX CULVERT TYPICAL PLAN AT STA. 57+00	
										LEE		SANDY LANE EXT. - BOX CULVERT DETAILS	
DRAWN BY		CHECKED BY		DESIGNED BY		APPROVED BY		PROJECT NO.		PROJECT NAME		SHEET NO.	
J.F.		P.M.B.		J.F.		P.M.B.		LEE		SANDY LANE EXT. - BOX CULVERT DETAILS		BX-23	



LONGITUDINAL SECTION



LEFT HEADWALL SECTION
(Right Headwall Similar)



SECTION THRU BOX



LEFT CUTOFF WALL SECTION
(Right Cutoff Wall Similar)

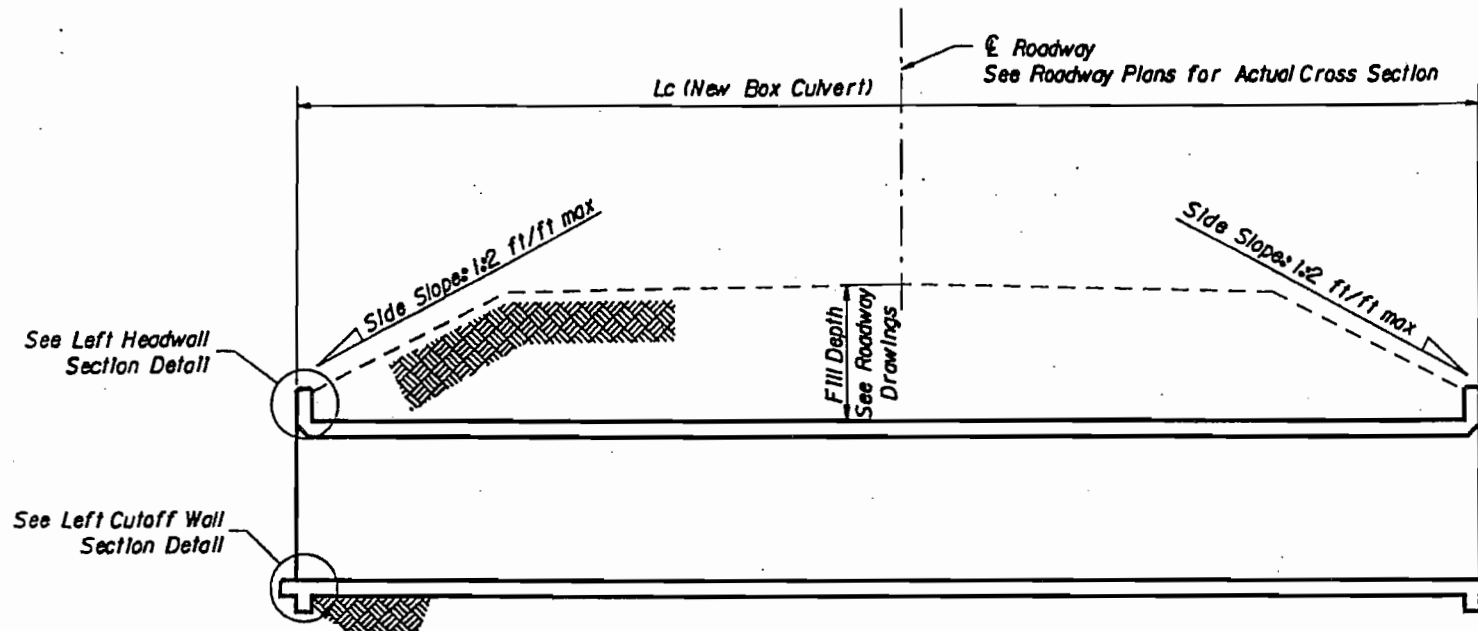
- NOTES:
1. Space Bars D10 and D12 with a bar in each corner and the remaining bars placed at equal spacing.
 2. Place Bars D13 at even spaces between corner Bars D10 and D12.

FOR CONSTRUCTION  ROTAS ENGINEERING, Inc.
7505 NW 12th Street, Suite # 130
Miami, Florida 33126
Tel. 770 799 4800

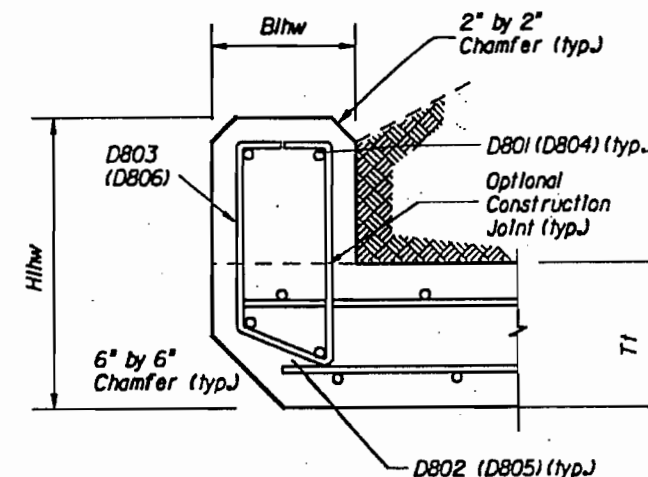
APR 05 2005

[Signature]
Florida Lic. No. 94865
FL. P.E. No. 4880

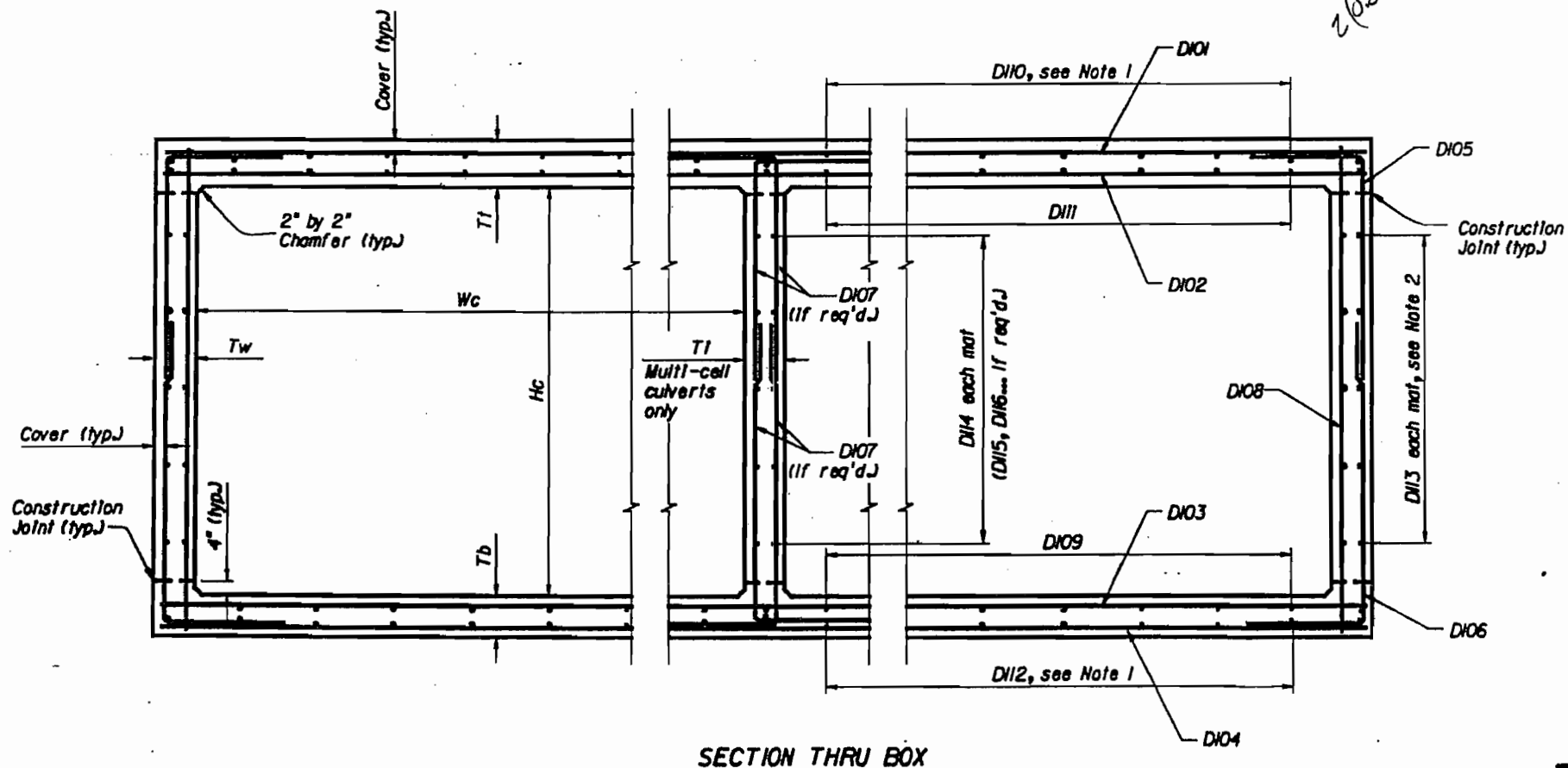
REVISIONS				DATE		DESCRIPTION		ENGINEER OF RECORD		FLORIDA DEPARTMENT OF TRANSPORTATION		SHEET TITLE	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DRAWN BY	DATE	ENGINEER OF RECORD	ROAD NO.	COUNTY	PROJECT NO.	PROJECT NAME	SHEET NO.
02/05	J.F.	CULVERT ELEVATION MODIFICATION				J.F.	08/2004	DAVID PLUMMER & ASSOCIATES, INC.		LEE		CONCRETE BOX CULVERT ELEVATION, SECTION, AND WALL DETAILS STA. 571+00	
						P.M.B.	08/2004					SANDY LANE EXT. - BOX CULVERT DETAILS	
						J.F.	08/2004						
						P.M.B.	08/2004						
						P.M.B.							



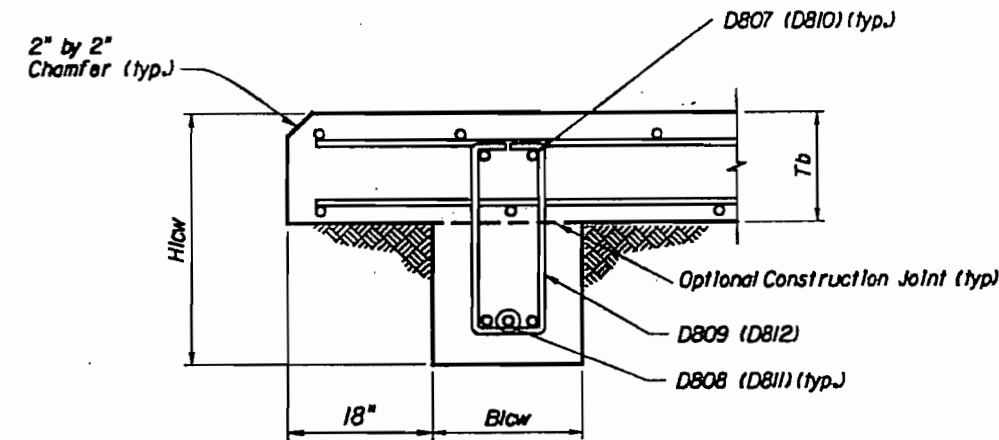
LONGITUDINAL SECTION



LEFT HEADWALL SECTION (Right Headwall Similar)



SECTION THRU BOX



LEFT CUTOFF WALL SECTION (Right Cutoff Wall Similar)

NOTES:

- 1. Space Bars D10 and D12 with a bar in each corner and the remaining bars placed at equal spacing.
- 2. Place Bars D13 at even spaces between corner Bars D10 and D12.

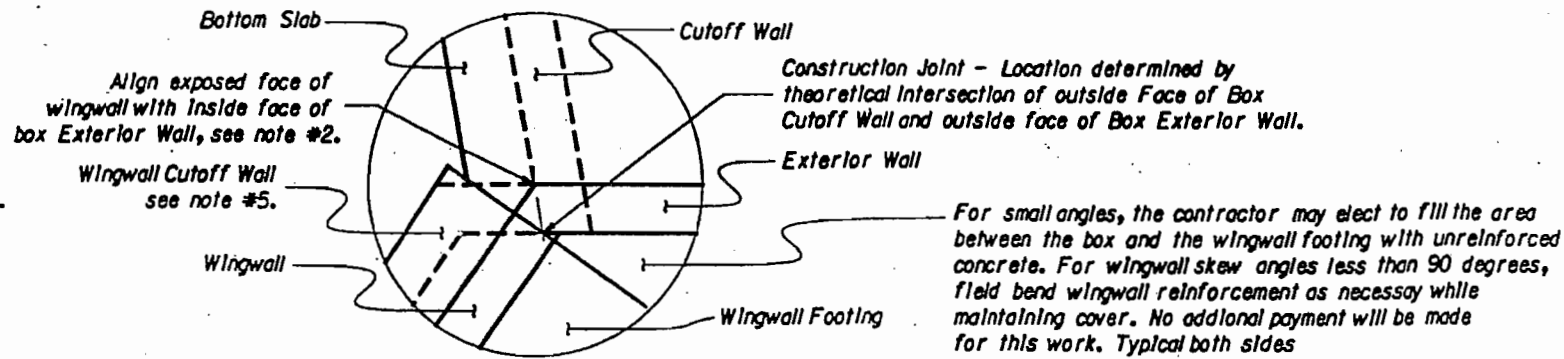
$2T_2 + 4W_c + 3T_1$
 $2(83) + 4(10) + 3(83)$

FOR CONSTRUCTION NOTAS ENGINEERING, Inc.
 7345 NW 12th Street, Suite # 110
 Miami, Florida 33126
 Tel. 788 7888

APR 05 2005

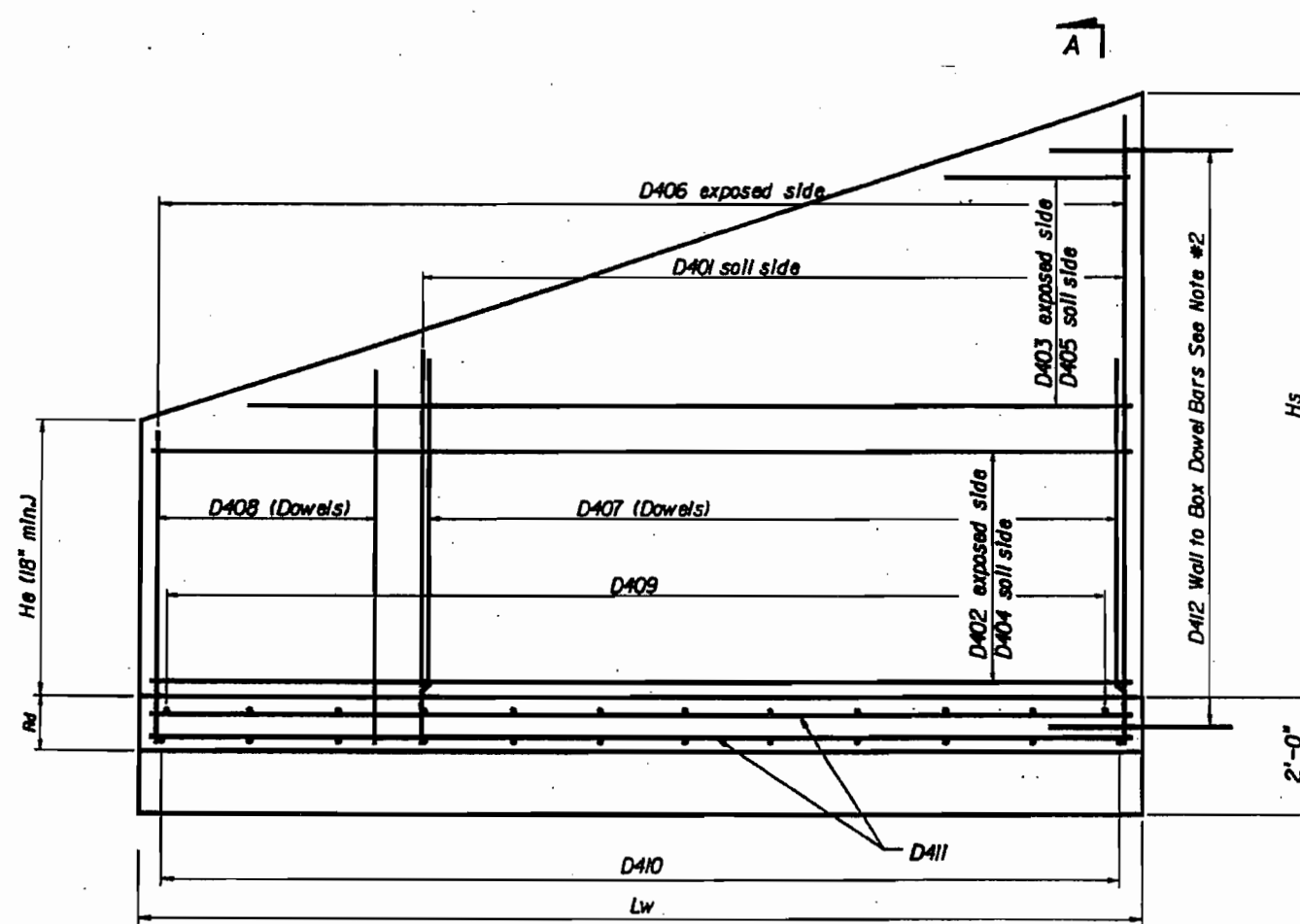
P.J.B.
 P.E. No. 4828

REVISIONS				DATE		DESCRIPTION		DRAWN BY		CHECKED BY		DESIGNED BY		ENGINEER OF RECORD		FLORIDA DEPARTMENT OF TRANSPORTATION		SHEET TITLE	
02/05	J.F.	CULVERT ELEVATION MODIFICATION						J.F.	08/2004	P.J.B.	08/2004	J.F.	08/2004	DAVID PLUMMER & ASSOCIATES, INC.		ROAD NO.		CONCRETE BOX CULVERT ELEVATION, SECTION, AND WALL DETAILS STA. 571+00	
								P.J.B.	08/2004					LEE		PROJECT NO.		SANDY LANE EXT. - BOX CULVERT DETAILS	
																PROJECT NAME:		SHEET NO.	

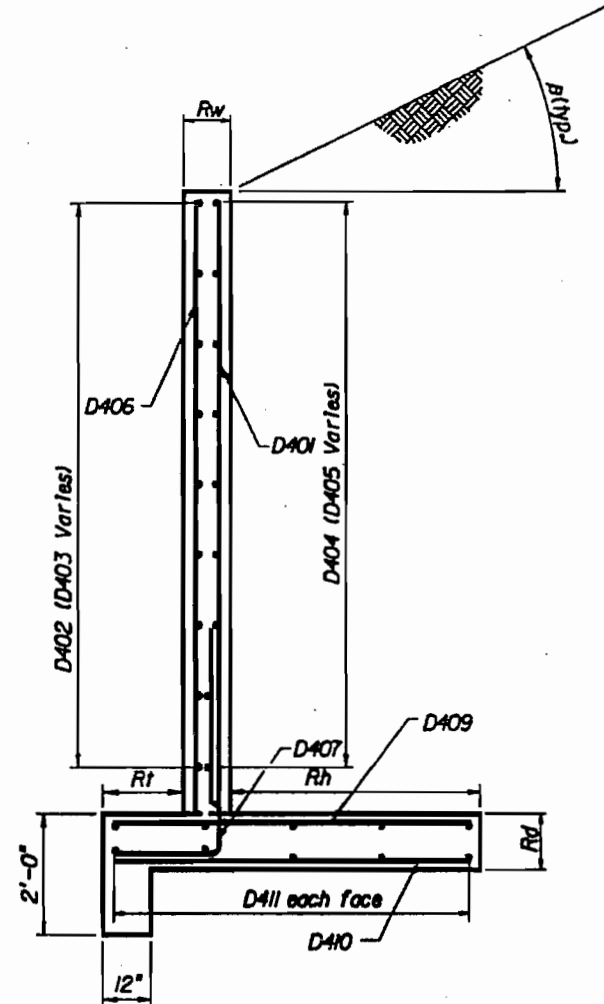


- Notes:
1. Wingwall Construction Joint perpendicular to Wingwall.
 2. In the vicinity of the Construction Joint, field bend reinforcement as necessary to maintain minimum reinforcement cover.
 3. For constant height wingwalls, variable length bars D403, D405, and D408 are not needed.
 4. Wingwall Skew Angles are measured from the adjacent box exterior wall to the wingwall.
 5. Turn Wingwall Cutoff Wall as necessary to meet Box Cutoff Wall.

DETAIL C - BOTTOM SLAB PLAN VIEW
WINGWALL TO BOX CONNECTION
(Left Begin Corner Shown - Other Corners Similar)



WINGWALL ELEVATION -Variable Height
(Left End Shown - Other Corners Similar)



Section A-A

FOR CONSTRUCTION

APR 05 2005

DOTAS ENGINEERING, Inc.
725 NW 12th Street, Suite # 110
Miami, Florida 33136
Tel: 788 7888

[Signature]
Francis M. Dotas, P.E.
FL. P.E. No. 48220

DATE		BY	DESCRIPTION	DATE	BY	DESCRIPTION	DRAWN BY	CHECKED BY	DESIGNED BY	CHECKED BY	APPROVED BY	ENGINEER OF RECORD	FLORIDA DEPARTMENT OF TRANSPORTATION	ROAD NO.	COUNTY	PROJECT NO.	SHEET TITLE	PROJECT NAME	SHEET NO.
02/05		J.F.	CULVERT ELEVATION MODIFICATION				J.F.	P.M.B.	J.F.	P.M.B.	P.M.B.	DAVID PLUMMER & ASSOCIATES, INC.	FLORIDA DEPARTMENT OF TRANSPORTATION		LEE		CONCRETE BOX CULVERT WINGWALL DETAILS STA. 571+00	SANDY LANE EXT. - BOX CULVERT DETAILS	C-3

TABLE OF BOX CULVERT VARIABLES (Inches unless shown otherwise)

LOCATION	STRUCTURE NUMBER	BOX									HEADWALL and CUTOFF WALL									
		Wd(f)	Hd(f)	Tt	Tw	Tb	Tl	#cells	Ld(f)	Cover	Blhw	Hlhw	Brhw	Hrhw	Blcw	Hlcw	Brcw	Hrcw	SL(deg)	SR(deg)
STA. 571+00 (B)		10	6	13	10	9.5	10	4	123	2	15	30	15	24	12	24	12	24	0	0

TABLE OF BOX CULVERT VARIABLES (CONT.) (Inches unless shown otherwise)

STRUCTURE NUMBER	LEFT END WINGWALL									LEFT BEGIN WINGWALL								
	Rt	Rw	Rh	Rd	SW(deg)	B(deg)	Hd(f)	Hs(f)	Lw(f)	Rt	Rw	Rh	Rd	SW(deg)	B(deg)	Hd(f)	Hs(f)	Lw(f)
20	10	36	12	90	14	8	8	15	20	10	36	12	90	14	8	8	15	

TABLE OF BOX CULVERT VARIABLES (CONT.) (Inches unless shown otherwise)

STRUCTURE NUMBER	RIGHT END WINGWALL									RIGHT BEGIN WINGWALL								
	Rt	Rw	Rh	Rd	SW(deg)	B(deg)	Hd(f)	Hs(f)	Lw(f)	Rt	Rw	Rh	Rd	SW(deg)	B(deg)	Hd(f)	Hs(f)	Lw(f)
20	10	36	12	90	14	8	8	15	20	10	36	12	90	14	8	8	15	

NOTES:

1. Environmental Class - Moderately Aggressive
2. Reinforcing Steel, Grade 60
3. Concrete Class IV, f'c = 5,500 ksi
4. Soil Properties:
Friction Angle - 30°
Nominal Bearing Capacity - 3,000 psf
5. Total Quantity of Reinforcing Steel (lbs) - 109,979
6. Work this Drawing With Sheet Nos. C-1 thru C-3 and C-5 thru C-6.

CONCRETE QUANTITIES (yd³)

STRUCTURE NUMBER	BOX									LEFT END WINGWALL			LEFT BEGIN WINGWALL			RIGHT END WINGWALL			RIGHT BEGIN WINGWALL			Culvert Total
	Left Cutoff Wall	Right Cutoff Wall	Bottom Slab	Walls	Top Slab	Left Head Wall	Right Head Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total		
	1.98	1.98	163.77	113.89	217.97	2.9	1.87	503.75	3.61	3.7	7.31	3.61	3.7	7.31	3.61	3.7	7.31	3.61	3.7	7.31	534.03	

FOR CONSTRUCTION

MAIN STEEL REINFORCEMENT SPACING (in)

STRUCTURE #	D101	D102	D103	D104	D105	D106	D107	D108	D101	D501	D601	D701
6	9	9	6	6	6	9	9	6	6	6	6	6

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITIES
Concrete Class IV (Culverts) (400-4-1)	CY	534J
Reinforcing Steel (Miscellaneous) (415-1-6)	LBS	109,979

APR 05 2005

BE BOTAS ENGINEERING, Inc.
 7925 NW 12th Street, Suite # 336
 Miami, Florida 33126
 Tel: 773-7158
 2/3/05
 Project: SANDY LANE EXT. - BOX CULVERT DETAILS
 FL. P.E. No. 45280

REVISIONS				ENGINEER OF RECORD		FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	PROJECT NAME	SHEET NO.
02/05	JF.	CULVERT ELEVATION MODIFICATION					LEE		SANDY LANE EXT. - BOX CULVERT DETAILS	5-1

M. JUSTIN JACOBSON, P.E., ENGINEER IN CHARGE, SANDY LANE EXT. BOX CULVERTS, DP&AV/LEW, 2005.01.28, Soil cap & utility pipe 4'-D6 culvert/CONSCulvert14.dwg

EXISTING PLANS

M A R K	LENGTH	NO	TYP	STY	B	C	D	E	F	G	H	I	J	K	N	O	
SIZE	DES	FT	IN	BAR	BAR	AG	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
LOCATION MAIN BOX NO. REQUIRED = 1																	
6	101	43-10	246	1			43-9 1/2										
6	102	43-10	164	1			43-9 1/2										
6	103	43-10	168	1			43-9 1/2										
6	104	43-10	252	1			43-9 1/2										
6	105	8-1	492	10			2-10	5-2 1/4									
6	106	8-1	492	10			2-10	5-2 1/4									
5	107	9-11	1970	10			5-0	4-10 1/4									
10	0	0-0	0	0													
5	108	7-7	328	1			7-6 1/2										
4	109	67-0	67	41			60-0	7-0					2-2			2	
4	110	67-0	67	41			60-0	7-0					2-2			2	
4	111	66-5	67	41			60-0	6-4 1/4					2-2			2	
4	112	67-0	67	41			60-0	7-0					2-2			2	
4	113	67-0	40	41			60-0	7-0					2-2			2	
4	114	66-5	60	41			60-0	6-4 1/4					2-2			2	
LOCATION LEFT END WINGWALL NO. REQUIRED = 1																	
4	401	7-10	30	1			7-10										
3	402	14-9	8	1			14-8 1/2										
3	404	14-9	8	1			14-8 1/2										
3	406	7-10	15	1			7-10										
4	407	6-0	30	10			2-2	3-10									
3	409	5-2	20	1			5-2										
3	410	5-2	15	1			5-2										
3	411	14-9	12	1			14-8 1/2										
5	412	2-0	12	1			2-0										
LOCATION LEFT BEGIN WINGWALL NO. REQUIRED = 1																	
4	501	7-10	30	1			7-10										
3	502	14-9	8	1			14-8 1/2										
3	504	14-9	8	1			14-8 1/2										
3	506	7-10	15	1			7-10										
4	507	6-0	30	10			2-2	3-10									
3	509	5-2	20	1			5-2										
3	510	5-2	15	1			5-2										
3	511	14-9	12	1			14-8 1/2										
5	512	2-0	12	1			2-0										
LOCATION RIGHT END WINGWALL NO. REQUIRED = 1																	
4	601	7-10	30	1			7-10										
3	602	14-9	8	1			14-8 1/2										
3	604	14-9	8	1			14-8 1/2										
3	606	7-10	15	1			7-10										
4	607	6-0	30	10			2-2	3-10									
3	609	5-2	20	1			5-2										
3	610	5-2	15	1			5-2										
3	611	14-9	12	1			14-8 1/2										
5	612	2-0	12	1			2-0										
LOCATION RIGHT BEGIN WINGWALL NO. REQUIRED = 1																	
4	701	7-10	30	1			7-10										
3	702	14-9	8	1			14-8 1/2										
3	704	14-9	8	1			14-8 1/2										
3	706	7-10	15	1			7-10										
4	707	6-0	30	10			2-2	3-10									

FOR CONSTRUCTION

APR 05 2005

DOTAS ENGINEERING, Inc.
 7925 NW 12th Street, Suite # 330
 Miami, Florida 33208
 Tel: 788

[Signature]
 PROJECT NO. 212/01
 FL. P.E. No. 4828

REVISIONS	DATE	BY	DESCRIPTION

DESCRIPTION	DATE	BY	DESCRIPTION
CULVERT ELEVATION MODIFICATION			

ENGINEER OF RECORD:
DAVID PLUMMER & ASSOCIATES, INC.

FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	LEE	

PROJECT NAME:
SANDY LAKE EXT. - BOX CULVERT DETAILS

SHEET NO. **C-5**

04:JSTN_MACHINERD... 2005.01.08... 04:JSTN_MACHINERD... 2005.01.08...

