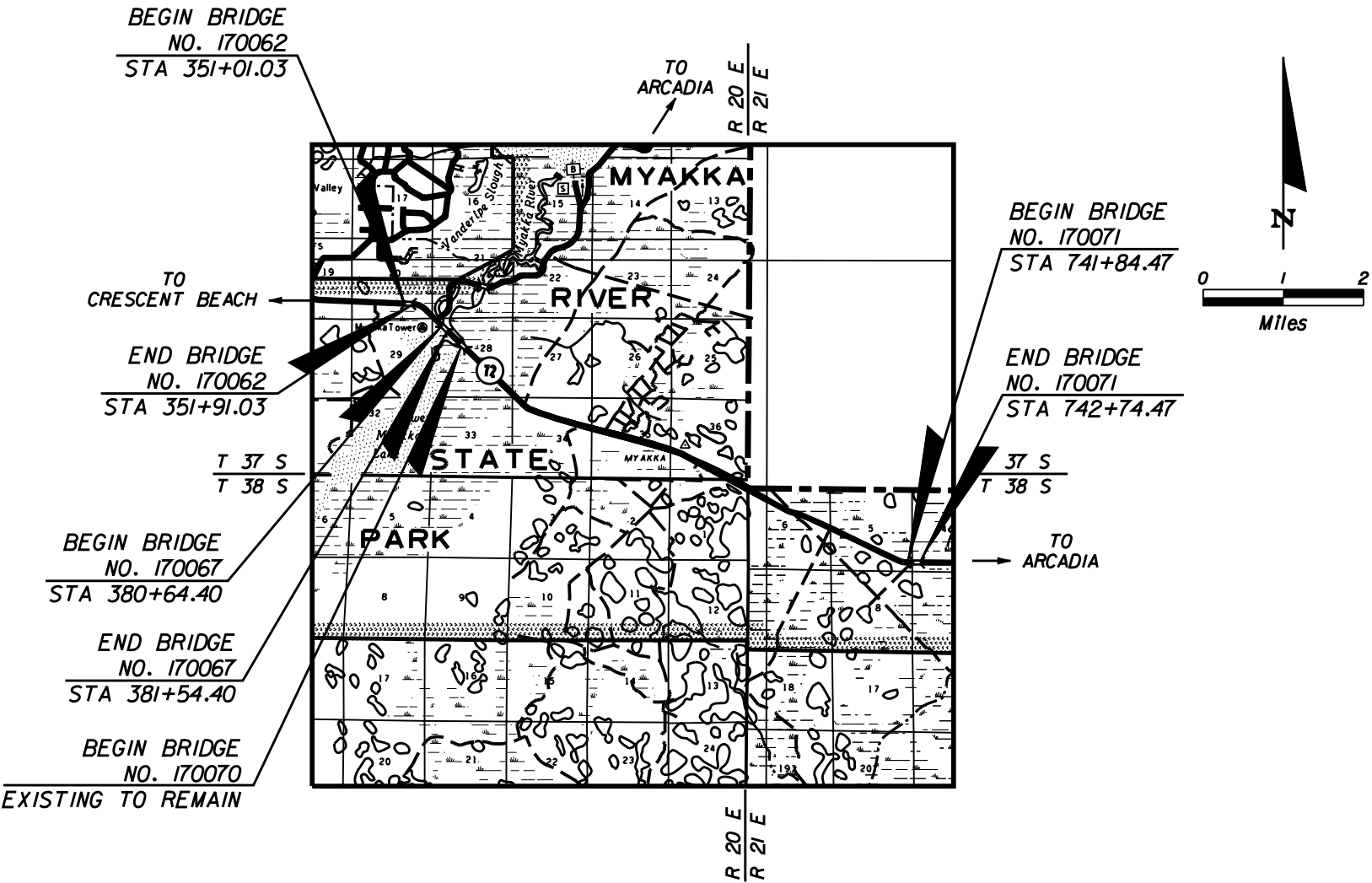
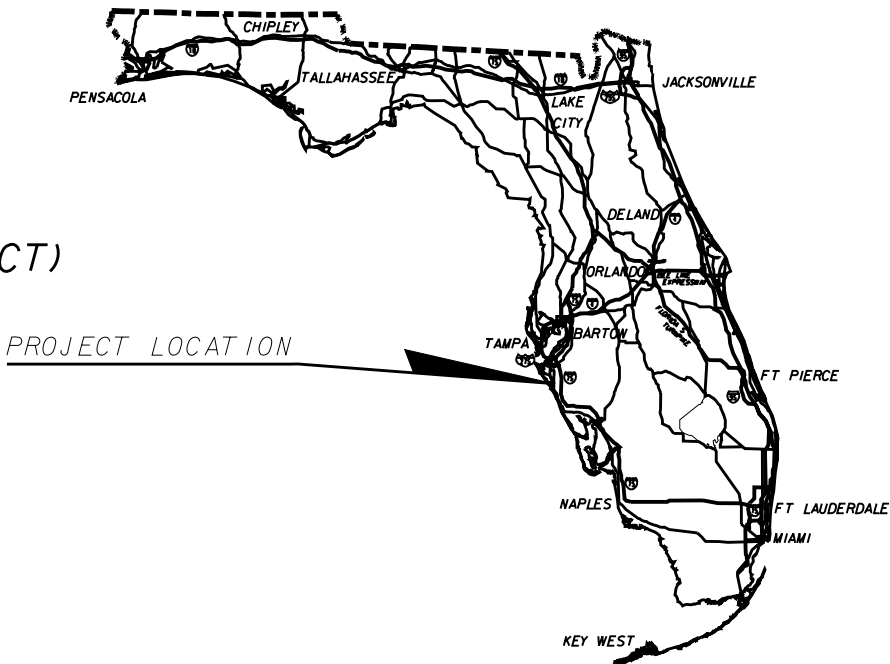


STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 415569-1-52-01 (LEAD PROJECT)
FINANCIAL PROJECT ID
FINANCIAL PROJECT ID 413887-2-52-01
SARASOTA COUNTY (17070)
STATE ROAD NO. 72



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.

APPLICABLE DESIGN STANDARDS MODIFICATIONS: 1-1-06
For Design Standards Modifications click on
"Design Standards" at the following web site:
<http://www.dot.state.fl.us/rddesign/>

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

ENGINEER OF RECORD: _____

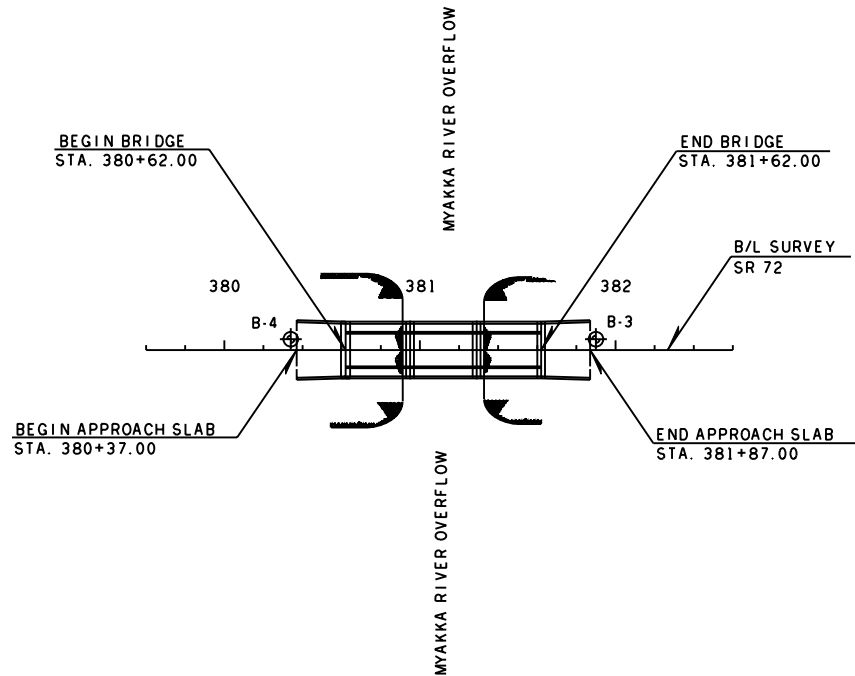
P.E. NO. _____

FDOT PROJECT MANAGER: _____

FISCAL YEAR	SHEET NO.
06	S-1

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

1. BORING LOCATIONS (INCLUDING STATIONS AND OFFSETS) PRESENTED HEREIN WERE ESTIMATED MEASURING DISTANCES FROM STATION REFERENCES AS INDICATED ON THE DRAWINGS PROVIDED BY FDOT, ALONG WITH THE USE OF THE EXISTING FDOT BENCHMARKS. BORING ELEVATIONS WERE ALSO ESTIMATED USING THE EXISTING BENCHMARKS AND INFORMATION PROVIDED BY FDOT. THESE BORING LOCATIONS AND ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE SINCE THEY WERE NOT PRECISELY SURVEYED BY PSI.
2. CORROSION TEST RESULTS WERE PROVIDED BY FDOT.

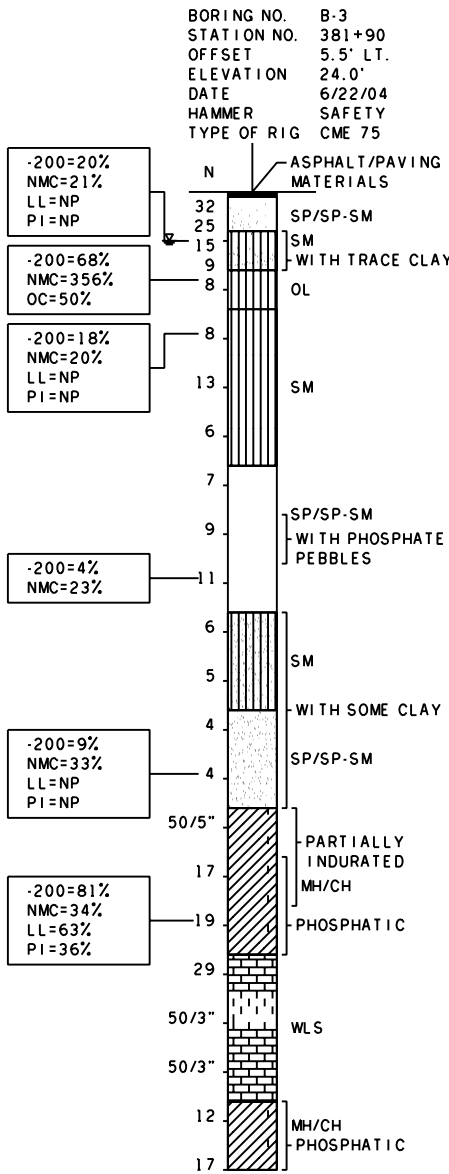
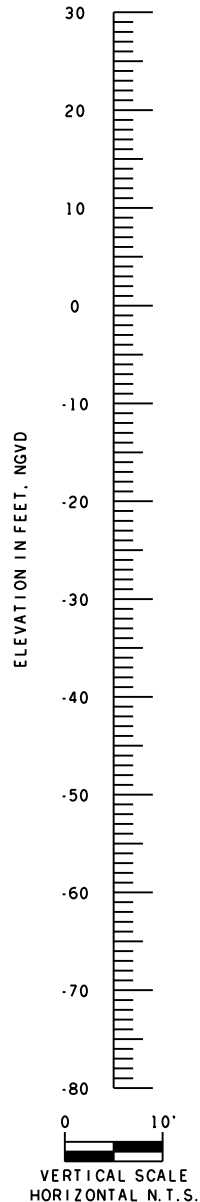


BORING LOCATION PLAN

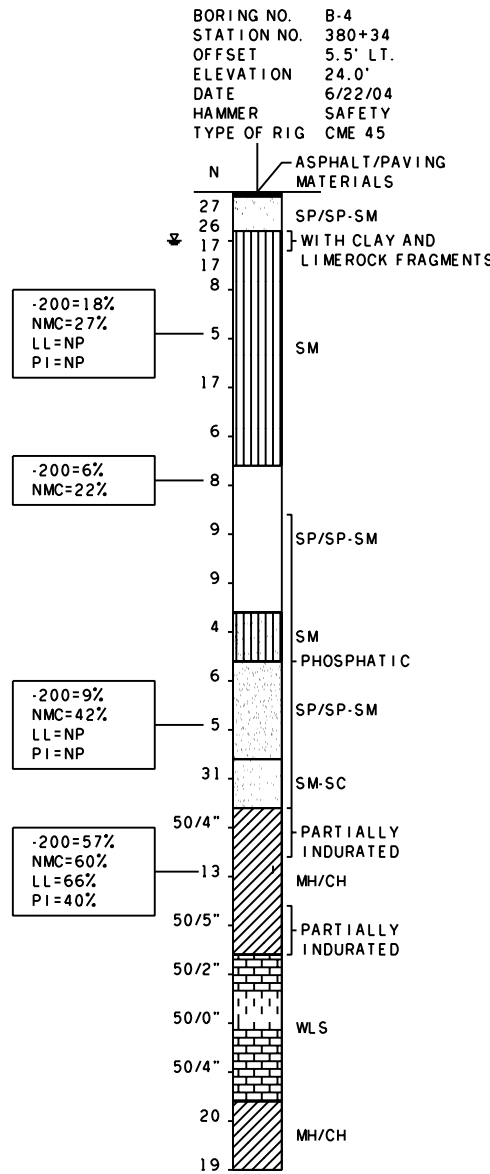


LOCATION	
TOWNSHIP:	37 S
RANGE:	20 E
SECTION:	28

Latitude: 27.23766544 North
Longitude: -82.31485172 West



BORING TERMINATED @
ELEVATION -76.0' (NGVD)



BORING TERMINATED @
ELEVATION -76.0' (NGVD)

LEGEND

- (SP/SP-SM), LIGHT BROWN/BROWN/GRAY/DARK GRAY/
GREEN FINE SAND TO SLIGHTLY SILTY FINE SAND
- (SM), BROWN/DARK BROWN/GRAY/GREEN SILTY FINE SAND
- (SM-SC), GRAY/GREEN SILTY TO CLAYEY FINE SAND
- (SC), BROWN/DARK BROWN/GRAY/GREEN CLAYEY FINE SAND
- (OL), BROWN ORGANIC SILT WITH WOOD FRAGMENTS
- (ML), BROWN CLAYEY SILT
- (CL), BROWN SILTY CLAY
- (MH/CH), GRAY/GREEN CLAYEY SILT TO SILTY CLAY
- (WLS), LIGHT BROWN/GRAY HIGHLY WEATHERED LIMESTONE,
FREQUENTLY WITH CALCAREOUS CLAY
- GRAY/GREEN CEMENTED CALCAREOUS SANDS AND SHELLS

NOTES:

- WATER TABLE
- NUMBERS TO THE LEFT OF BORINGS INDICATE
SPT VALUE FOR 12" PENETRATION.
(UNLESS OTHERWISE NOTED.)
- 50/6" FIFTY BLOWS FOR SIX INCHES
- WH FELL UNDER WEIGHT OF ROD AND HAMMER
- LOSS OF CIRCULATION (%)
- CASING USED
- 200 FINES PASSING NO. 200 SIEVE (%)
- NMC NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- LL LIQUID LIMIT (%)
- PI PLASTICITY INDEX (%)
- NP NON PLASTIC
- APPROXIMATE SPT BORING LOCATION

ENVIRONMENTAL CLASSIFICATION

WATER	SUBSTRUCTURE:	MODERATELY AGGRESSIVE (pH=6.2)	RESISTIVITY: 3200 OHMS-CM
	SUPERSTRUCTURE:	SLIGHTLY AGGRESSIVE	CHLORIDES: 40 PPM SULFATES: 282 PPM pH: 6.2
SOIL	SUBSTRUCTURE:	MODERATELY AGGRESSIVE (CONCRETE) (pH=5.4) EXTREMELY AGGRESSIVE (STEEL) (pH=5.4)	RESISTIVITY: 1500 OHMS-CM
	SUPERSTRUCTURE:	SLIGHTLY AGGRESSIVE	CHLORIDES: 60 PPM SULFATES: 1074 PPM pH: 5.4

GRANULAR MATERIALS- RELATIVE DENSITY	SPT (BLOWS/FT.)
VERY LOOSE	LESS THAN 4
LOOSE	5-10
MEDIUM	11-30
DENSE	31-50
VERY DENSE	GREATER THAN 50
SILTS AND CLAYS CONSISTENCY	SPT (BLOWS/FT.)
VERY SOFT	LESS THAN 2
SOFT	3-4
FIRM	5-8
STIFF	9-15
VERY STIFF	16-30
HARD	GREATER THAN 30

MYAKKA RIVER OVERFLOW (BRIDGE NO. 170043)

REVISIONS					
Date	By	Description	Date	By	Description

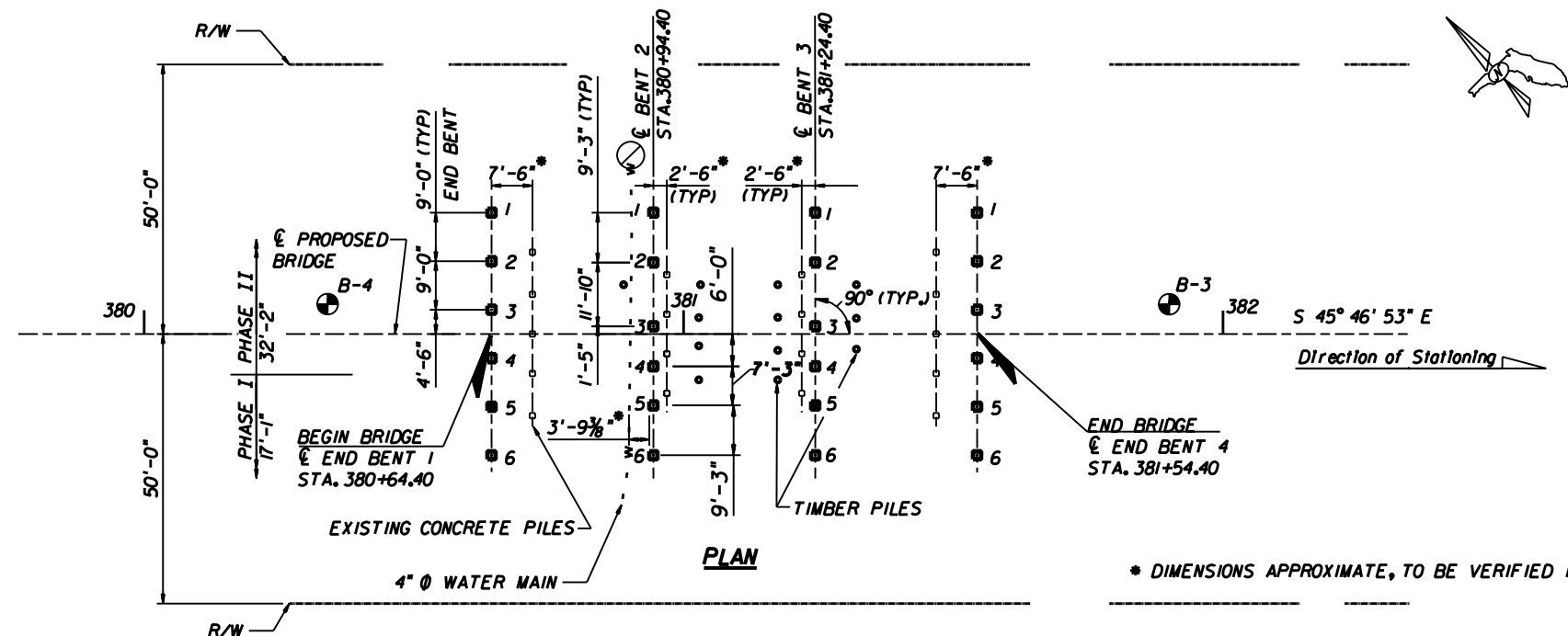
Drawn by	Name	Date
Checked by	KL	7/04
Designed by		
Checked by		
Approved by	KEVIN W-K LOPEZ	



PROFESSIONAL SERVICE INDUSTRIES, INC.
5801 BENJAMIN CENTER DR., SUITE 112
TAMPA, FL 33634
(813)-886-1075
FLORIDA ENGINEERING CERTIFICATE
OF AUTHORIZATION No. 3684

FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID.
SR 72	SARASOTA	413887-2-52-01

SHEET TITLE: REPORT OF CORE BORINGS	
PROJECT NAME: SR 72 BRIDGE REPLACEMENT	SHEET NO.



- LEGEND**
- 18" SQ. PRESTRESSED PILE
 - EXISTING PILE
 - TEST PILE
 - APPROXIMATE LOCATION OF SPT BORING
 - EXISTING TIMBER PILES

* DIMENSIONS APPROXIMATE, TO BE VERIFIED IN THE FIELD

PILE INSTALLATION TABLE													
INSTALLATION CRITERIA								DESIGN CRITERIA					
BENT	PILE SIZE (IN.)	ULTIMATE BEARING CAPACITY (TONS)	TENSION CAPACITY (TONS)	MIN. TIP ELEV. (FT., NGVD)	TEST PILE LENGTH (FT)	REQ'D. JET ELEV. (FT., NGVD)	REQ'D. PREFORM ELEV. (FT., NGVD)	FACTORED DESIGN LOAD (TONS)	TOTAL DOWN-DRAG (TONS)	TOTAL SCOUR RESIST. (TONS)	NET SCOUR RESIST. (TONS)	100 YEAR SCOUR ELEV. (FT., NGVD)	RESISTANCE FACTOR ϕ
END BENT 1	18	200	N/A	N.A.	90	N.A.	N.A.	130	---	N.A.	N.A.	N.A.	0.65
INT BENT 2	18	220	N/A	-20	---	N.A.	N.A.	143	N.A.	---	---	7.6	0.65
INT BENT 3	18	220	N/A	-20	90	N.A.	N.A.	143	N.A.	---	---	7.6	0.65
END BENT 4	18	200	N/A	N.A.	---	N.A.	N.A.	130	---	N.A.	N.A.	N.A.	0.65

- NOTES:**
- ALL PILES SHALL BE DRIVEN PLUMB.
 - TEST PILES SHALL BE DRIVEN IN THE POSITION OF A PERMANENT PILE AS SHOWN ON THE FOUNDATION LAYOUT SHEET OR AS SPECIFIED BY THE ENGINEER.
 - ALL TEST PILES ARE TO BE DYNAMICALLY MONITORED USING THE PILE DRIVING ANALYZER, OR EQUIVALENT, IN ACCORDANCE WITH SPECIFICATION 455-5J3.
 - ALL PILES ARE TO BE DRIVEN TO A NOMINAL BEARING CAPACITY EQUAL TO (FACTORED DESIGN LOAD + NET SCOUR + DOWN DRAG) / ϕ .
 - MINIMUM TIP ELEVATION IS REQUIRED TO PROVIDE LATERAL STABILITY. UNDER NO CIRCUMSTANCES SHALL THE PILE BE INSTALLED ABOVE THE MINIMUM TIP ELEVATION. IF N.A., THE MINIMUM TIP SHALL BE IN ACCORDANCE WITH SPECIFICATION 455-5J8.
 - IF JETTING OR PREFORMING DIFFER FROM THOSE ON THE TABLE, THE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIRED NOMINAL BEARING RESISTANCE. NO JETTING, EXCEPT SHOWN IN THE TABLE, SHALL BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.
 - THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO ANY PILE DRIVING.
 - SCOUR HAS BEEN CONSIDERED IN THE DESIGN, WITH SCOUR ELEVATIONS SHOWN IN THE TABLE.

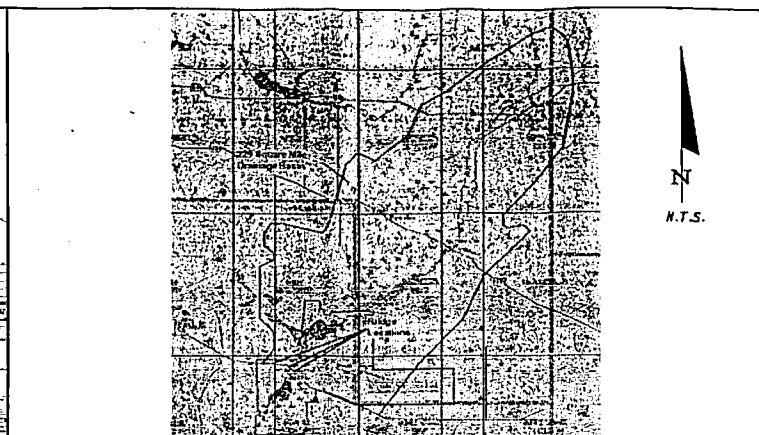
REVISIONS						BRIDGE 170067			
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	FOUNDATION LAYOUT			
						SR 72 OVER MYAKKA RIVER OVERFLOW			
						SHEET NO. B2-7			

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DRWN BY	ASA	07-04
CHECKED BY	ASA	07-04
DESIGNED BY	ADR/ASA	07-04
CHECKED BY	MSG	07-04
APPROVED BY	G. MOLIERE	

ENGINEER OF RECORD, STRUCTURES DESIGN OFFICE DISTRICT 1 801 N. Broadway Bartow, Florida 33830-3809 Gerard Moliere, P.E., No. 46735	FLORIDA DEPARTMENT OF TRANSPORTATION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
		SR-72	SARASOTA	415569-1-52-01

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 605-23.003, F.A.C.



BRIDGE NO. 170067

EXISTING GROUND LINE

PROFILE GRADE LINE

LOW MEMBER ELEV. 22.51

PROPOSED RUBBLE RIPRAP 1:2 SLOPED ABUTMENT

PROPOSED RUBBLE RIPRAP 1:2 SLOPED ABUTMENT

W = 25.0

STATIONING: 379+00, 380+00, 381+00, 382+00, 383+00

GRADES: (+) 0.200 %, (-) 0.200 %

VERTICAL CURVE DATA: $DTM(00) = 20.5$, $DTM(25) = 19.5$

SCALE: 1" = 40' HORIZ., 1" = 3' VERT.

REFERENCE:	EXISTING STRUCTURES			PROPOSED
	111	121	131	STRUCTURE
FOUND: LOW	PILES			PILES
OVERALL LENGTH	75 FT.			30
SPAN LENGTH:	25 FT.			CONC. SLAB
TYPE CONSTRUCTION	CONCRETE			208 SF
AREA OF OPENING @ 100 Y'	406 SQ.			48 SF
UNIQUE WIDTH	20 FT.			P2-S7
ELEV. LOW. NUMBER	2103			

TERMS:
Design Flood: Utilized to assure a desired level of hydraulic performance.
Basis Flood: Has a 1% chance of being exceeded in any given year (100 year frequency).
Overlapping Flood: Causes flow over the highway, over a watershed divide, or thru emergency relief structures.
Greatest Flood: The most severe that can be predicted where overlapping is not practicable.

WATER SURFACE ELEVATIONS: H.W.R. (MOVD 177)		19.0	H.W.R. (TIDE)	
CONTROL (MOVD 178)			H.W.R. (TIDE)	
☐ OVERTOPPING or ☒ GREATEST FLOOD				
FLOOD DATA:	MAX. EVENT OF RECORD	DESIGN FLOOD	BASE FLOOD	
STAGE ELEV. MOVD 177	20.4 (2003)	19.8	20.6	21.0
DISCHARGE (CFS)	11,000	7,500 (14.3)	12,000 (27.0)	19,500 (460)
AVERAGE VELOCITY (177)		0.39	0.53	0.3
CELESTIAL PROB. (2)		1	1	0.2
FREQUENCY (yr.)		25	100	500
SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:				
PIER INFORMATION		LONG TERM	TOTAL SCOUR ELEVATION	
NUMBERS	SIZE AND TYPE	SCOUR ELEV.	WORST CASE < 100 yr.	WORST CASE < 500 yr.
2	1.5 FT. SQUARE		FREQ. 4yr. 100 YR.	FREQ. 4yr. 500 YR.
			7.6	7.6

HYDRAULIC RECOMMENDATIONS			
BEGIN BRIDGE STATION	<u>380+54.40</u>	<u>381+54.40</u>	SKEW ANGLE <u>0.0</u>
CLEARANCE PROVIDED:	NAV. HORIZ. <u> </u> VERT. <u> </u> ABOVE EL. <u> </u>	DRIFT. HORIZ. <u>25</u> VERT. <u>2.0</u> ABOVE EL. <u>19.6</u>	
3. MINIMUM CLEARANCE:	NAV. HORIZ. <u> </u> VERT. <u> </u> ABOVE EL. <u> </u>	DRIFT. HORIZ. <u> </u> VERT. <u> </u> ABOVE EL. <u> </u>	
4. ABUTMENTS:			
BEGIN BRIDGE		END BRIDGE	
RUBBLE GRADE: <u>BANK AND SHORE</u>		RUBBLE GRADE: <u>BANK AND SHORE</u>	
SLOPE: <u>1:2</u>		SLOPE: <u>1:2</u>	
BURIED OR NON-BURIED HORIZ. TOE: <u>BURIED HORIZ. TOE</u>		BURIED OR NON-BURIED HORIZ. TOE: <u>BURIED HORIZ. TOE</u>	
TOE HORIZ. DISTANCE: <u>10 FT.</u>		TOE HORIZ. DISTANCE: <u>10 FT.</u>	
LIMIT OF PROTECTION: <u> </u>		LIMIT OF PROTECTION: <u> </u>	
5. DECK DRAINAGE: <u>TO BRIDGE ENDS</u>			

REMARKS: FLOWS SHOWN ARE FOR ALL THREE BRIDGES AT MYAKKA RIVER.
PARENTHESES INDICATE FLOW THROUGH BRIDGES.

PBS 5300 West Cypress Street
Suite 200
Tampa, Florida 33607-1768
FBPR Certificate of
Authorization No. 24
Shayne Painter, P.E. #58136

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FPID NO.
S.R. 72	SARASOTA	413887-2

MYAKKA RIVER OVERFLOW BRIDGE HYDRAULIC RECOMMENDATIONS	SHEET NO.
	82-2