

INDEX OF STRUCTURE PLANS

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B-4A	General Notes (2 of 2)

WEeping WILLOW WAY

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B1-3A	Foundation Layout
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B1-19A	Reinforcing Bar List
B1-20A	Load Rating Chart

EAST WINDWOOD WAY


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GOLDEN PHEASANT DRIVE


SHEET NO.	SHEET DESCRIPTION
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B3-20A	Load Rating Chart
BS1-1A	Auger Cast Pile Detail
BS1-2A	Pipe Casing Detail

REVISIONS		DATE	BY	DESCRIPTION

INITIAL	CJA
DRAWN BY	
CHECKED BY	
DESIGN BY	
DATE	5/20/19



ENGINEER OF RECORD:
 JOHN F. SLIGER II, P.E.
 P.E. #120

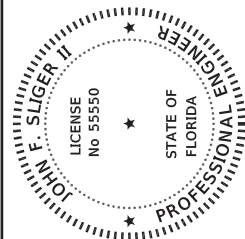


REGISTE: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 3692
 3370 CORP. CENTER BLVD., SUITE 100
 TALLAHASSEE, FLORIDA 32308
 PHONE (850) 894-4521 - FAX (850) 224-0505
 PROJECT NUMBER: 120

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 808-1500 * FAX (850) 808-1501

INDEX OF SHEETS
 PROJECT NAME: **RAYMOND TUCKER DRAINAGE IMPROVEMENTS**

SHEET NO. **B-2A**



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:
John F Sliger II
 2019.09.30 11:26:45 -04'00'
 ON THE DATE ADJACENT TO THE SEAL
 PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED, SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

REGISTE, SLIGER ENGINEERING, INC.
 3370 CAPITAL CIRCLE NE, SUITE J
 TALLAHASSEE, FL 32308
 CERTIFICATE OF AUTHORIZATION: 9292
 JOHN F. SLIGER II, P.E., NO. 55550

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 6065-23.004, F.A.C.

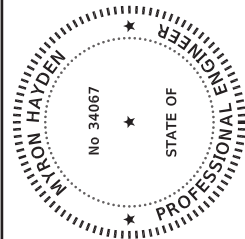
STRUCTURAL PLANS SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
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B-2A	Index of Sheets	B2-1A	Plan And Elevation
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B3-17A		B3-18A	
B3-18A		B3-19A	
B3-19A		B3-20A	
B3-20A		BSI-1A	
BSI-1A		BSI-2A	

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:
 ON THE DATE ADJACENT TO THE SEAL
 PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED, SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

ENVIRONMENTAL & GEOTECHNICAL SPECIALISTS, INC.
 104 NORTH MAGNOLIA DRIVE
 TALLAHASSEE, FLORIDA 32301
 CERTIFICATE OF AUTHORIZATION: 6222
 MYRON HAYDEN, P.E. NO. 34067

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 6065-23.004, F.A.C.

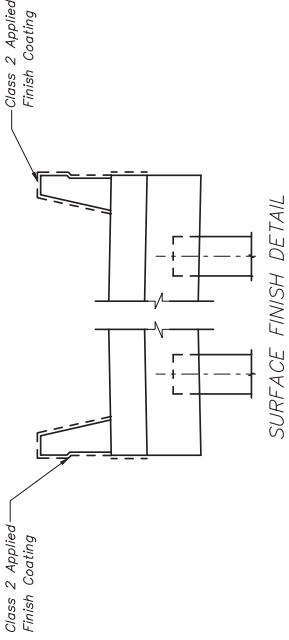
STRUCTURAL PLANS SHEET NO.	DESCRIPTION	SHEET NO.	DESCRIPTION
BS-1A	Signature Sheet	BS-1A	Signature Sheet
BI-2A	Report of Core Borings	BI-2A	Report of Core Borings
BI-2A	Report of Core Borings	BI-2A	Report of Core Borings
BI-2A	Report of Core Borings	BI-2A	Report of Core Borings



Myron Hayden
 2019.09.30 11:00:34 -04'00'

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 6065-23.004, F.A.C.

DATE		BY		REVISIONS		INITIAL		DRAWN BY		CHECKED BY		DESIGN BY		DATE	
LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 606-1500 * FAX (850) 606-1501															
REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT 3370 CAPITAL CIRCLE NE, SUITE J TALLAHASSEE, FLORIDA 32308 PHONE (850) 894-4521 - FAX (850) 824-0505 PROJECT NUMBER: 120															
SIGNATURE SHEET PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS															
SHEET NO. BS-1A															

<p>GENERAL NOTES</p> <p>A. GENERAL SPECIFICATIONS: 1. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction (July 2017 Edition) and supplements thereto. 2. Leon County Supplemental Specifications to FDOT Road and Bridge Construction Standard Specifications.</p> <p>B. DESIGN SPECIFICATIONS: 1. FDOT Structures Manual dated January 2017. 2. American Association of State Highway and Transportation Officials. (AASHTO). LRFD Bridge Design Specifications (7th Edition) and all subsequent interims. 3. FDOT Plans Preparation Manual, dated January 2017.</p> <p>C. VERTICAL DATUM: All elevations refer to North American Vertical Datum of 1988 (NAVD 88).</p> <p>D. ENVIRONMENT: Superstructure - Moderately Aggressive Substructure - Moderately Aggressive</p> <p>E. DESIGN LOADINGS: 1. Live Loads: HL-93 With Dynamic Load Allowance FL-120 Permit Truck with Dynamic Load Allowance 2. Dead Loads: 36" Single-Slope Traffic Railing 430 pcf Reinforced Concrete 145 pcf Future Wearing Surface 35 pcf 3. Utilities: No allowance for utility loads has been included in the design.</p> <p>F. CONSTRUCTION LOADING: It is the construction Contractor's responsibility to provide for supporting construction loads that exceed AASHTO HL-93.</p> <p>G. DESIGN METHODOLOGY: Load Resistance and Factor Design (LRFD) method using strength, service, and fatigue limit states.</p> <p>H. MATERIALS: 1. Concrete: All concrete shall be in accordance with FDOT Standard Specifications Section 346.</p>	<p>I. APPLIED FINISH COATING: A (Class 2 Finish Coating) shall be applied to the portions of the structures shown on the Surface Finish Detail, this sheet.</p> <p>J. UTILITIES: For locations of existing utilities. See Plan And Elevation sheet. Locations of utilities shown in plans are approximate. (For disposition of utilities, See Roadway Plans.)</p> <p>K. PLAN DIMENSIONS: All dimensions in these plans are measured in feet either horizontally or vertically unless otherwise noted.</p> <p>L. BRIDGE NAME: Place the following bridge name and number on the traffic railings in accordance with the Traffic Railing Design Standards:</p> <p style="text-align: center;">Bridge Names:</p> <p style="text-align: center;">1. WEEPING WILLOW 2. EAST WINDWOOD 3. GOLDEN PHEASANT</p> <p>M. JOINTS IN CONCRETE: Construction joints will be permitted only at locations indicated in the plans. Additional construction joints or alterations to those shown shall require approval of the Engineer.</p> <p>N. SPREADING DECK SLABS: Spread the riding surface of the bridge deck and Approach Slabs to achieve the finish grade elevations shown in the plans. Account for theoretical deflections due to self-weight, deck casting sequence, deck forming systems, construction loads, overlays and temporary shoring, etc. as required.</p> <p>O. TRAFFIC CONTROL PLANS For Temporary Traffic Control, refer to the Roadway Plans</p> <p>P. PHASING OF WORK Work phasing and progression of the work shall conform to the Traffic Control Plans located in the Roadway Plans.</p>	<p>2. Concrete Cover:</p> <table border="1" data-bbox="1117 1285 1198 1801"> <tr> <td>Cast-In-Place Superstructure</td> <td>2"</td> </tr> <tr> <td>Cast-In-Place Substructure (Cast Against Earth)</td> <td>4"</td> </tr> <tr> <td>Cast-In-Place Substructure (Formed Surfaces)</td> <td>3"</td> </tr> </table> <p>Concrete cover dimensions shown in the plans does not include reinforcement placement and fabrication tolerances unless shown as "minimum cover". See FDOT Standard Specifications Section 415 for allowable tolerances. All dimensions pertaining to the location of reinforcing steel are to centerline of bar except where clear dimensions is noted to face of concrete.</p> <p>3. Reinforcing Steel: All reinforcing steel shall be ASTM A615, Grade 60 steel.</p>	Cast-In-Place Superstructure	2"	Cast-In-Place Substructure (Cast Against Earth)	4"	Cast-In-Place Substructure (Formed Surfaces)	3"	<p>Class 2 Applied Finish Coating</p>  <p style="text-align: center;">SURFACE FINISH DETAIL</p>	<p>REGISTE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9692 FL 32-308 3370 CORP. AVENUE, SUITE 200 TALLAHASSEE, FLORIDA 32308 PHONE (850) 894-4521 - FAX (850) 224-0505 PROJECT NUMBER: 120</p>	<p>ENGINEER OF RECORD:</p> <p>JOHN F. SLIGER, II, P.E. P.E. #20508</p>	<p>REVISIONS</p> <table border="1" data-bbox="1356 1543 1453 1988"> <tr> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	DATE	BY	DESCRIPTION													<p>GENERAL NOTES (1 of 2)</p> <p>PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS</p>	<p>LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 808-1500 • FAX (850) 808-1801</p>	<p>SHEET NO. B-3A</p>
Cast-In-Place Superstructure	2"																													
Cast-In-Place Substructure (Cast Against Earth)	4"																													
Cast-In-Place Substructure (Formed Surfaces)	3"																													
DATE	BY	DESCRIPTION																												

0. FIBER REINFORCED CONCRETE:

Additionally, this specification includes material, labor, equipment, and services requirements necessary to complete the work for fiber reinforced concrete used in concrete bridge decks on prestressed concrete slab units. Based on the superstructure environmental classification, use the following type of fiber reinforcement:

1. polymeric fiber reinforced concrete (PFRC) in all superstructure environments.
2. steel fiber reinforced concrete (SFRC) in moderately and slightly aggressive superstructure environments.
3. basalt fiber reinforced concrete in all superstructure environments.

Polymeric Fibers** *.....ASTM C 1116, Type III
 Steel Fibers*** *.....ASTM C 1116, Type I
 Basalt Fibers**** *.....ASTM C 1116, Type IV

** Use a synergistic blend of high performance macro-monomer fibers with sinusoidal deformations and collated-fibrillated polypropylene fibers. Package the blend of fibers in degradable bags with a volume of one bag per cubic yard. Produce an Average Residual Strength (ARS) of no less than 215 psi from a test set of 5 beams in accordance with ASTM C 1399. Test Method for Determining Average Residual Strength of Fiber Reinforced Concrete.

*** Use steel fibers made with low-carbon steel and with a minimum ultimate tensile strength of 120,000 psi. Meet the following requirements: length equal to 2 inches, plus or minus 5%, average equivalent diameter equal to 0.035 inch with an aspect ratio of 60, plus or minus 15%. Ensure the material is a continuously deformed circular segment, clean and free of rust, oil and deleterious materials and corrugated full length for increased mechanical anchorage. Produce an ARS of no less than 215 psi from a test set of 5 beams in accordance with ASTM C 1399.

**** Use reinforcing basalt fibers made from 1.00% pure basalt fiber. Produce an ARS of no less than 215 psi from a test set of five beams in accordance with ASTM C 1399. Basalt micro fibers are not required to meet the provisions of ASTM C 1399 S.

When polymeric fiber or steel fiber reinforced concrete is required, Size No. 89 coarse aggregate may be used.

In fiber reinforced concrete mixes, use Type D water-reducing and retarding admixture, and shrinkage reducing admixture (SRA) meeting the requirements of ASTM C494, Type S. The SRA must be approved by the department prior to its use.


For fiber reinforced concrete, start the finishing and curing process prior to the drying of the concrete surface. Include the details of the mixing, batching, delivery, placement, finishing and curing methods of the polymeric or steel fiber reinforced concrete in the quality control plan.

For fiber reinforced concrete, submit the following information with the mix design to Leon County for approval:

1. Manufacturer's printed product data to indicate proposed polymeric or steel fiber reinforced concrete materials including application rate per cubic yard of concrete.
2. Manufacturer's printed batching and mixing instructions.
3. Manufacturer's Certification or performance meeting the requirements of ASTM C 1116.

Fiber Reinforced Concrete Mixing: Follow the requirements of the manufacturer's recommendation for mixing sequence, number of revolutions at mixing speed, and mixing procedure. Do not exceed the limits defined in Chapter 9.2 of the Materials Manual. Batch fiber reinforced concrete in whole cubic yard quantities. Add fibers at the concrete plant. Limit the batch volume to three-quarters of the rated method of introducing the polymeric fibers into the mixture during the field demonstration batch.

Fiber Reinforced Concrete Placement and Curing: Ensure fiber reinforced concrete delivered to the project conforms to the applicable provisions of ASTM C 1116. Place and cure the fiber reinforced concrete in accordance with FDOT Standard Specifications Section 400.

REVISIONS		ENGINEER OF RECORD:		REGISTERED ENGINEERING CONSULTANT		GENERAL NOTES (2 of 2)		SHEET NO.	
DATE	BY	DESCRIPTION	INITIAL	CHECKED BY	DESIGN BY	DATE	PROJECT NAME		
						5/2/2019	RAYMOND TUCKER DRAINAGE IMPROVEMENTS	B-4A	
			 JOHN F. SLIGER II, P.E. P.E. #65558		 REGISTRE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 36308 3378 CORP. BLVD. # 300 TALLAHASSEE, FL 32308 PHONE: (850) 894-4521 - FAX: (850) 224-0505 PROJECT NUMBER: 120		LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 808-1500 * FAX (850) 808-1801		

NOTES

- NUMBERS LEFT OF BORINGS INDICATE STANDARD PENETRATION TEST (SPT) VALUES FOR 6-INCH PENETRATION (UNLESS OTHERWISE NOTED).
- WATER ELEVATIONS SHOWN ARE THE WATER ELEVATIONS ENCOUNTERED. FLUCTUATIONS IN THE ELEVATION OF WATER SHOULD BE EXPECTED.
- SOIL DESCRIPTIONS, TEST DATA, AND STANDARD PENETRATION VALUES LOCATIONS EXCEPT AT THE LOCATION OF THE SOIL BORING - EXTRAPOLATION OF SOIL BORING DATA TO OTHER LOCATIONS IS THE SOLE RESPONSIBILITY OF THE PERSON PERFORMING THE EXTRAPOLATION.

AUTOMATIC HAMMER		SPT		Sits and Cops	
Relative Density	(blows/12 in.)	Consistency	(blows/12 in.)	Consistency	(blows/12 in.)
Very Loose	Less than 3	Very Soft	Less than 1		
Loose	3 - 6	Firm	3 - 6		
Medium or Compact	6 - 10	Stiff	10 - 15		
Dense	10 - 15	Very Stiff	15 - 24		
Very Dense	Greater than 15	Hard	Greater than 24		

SPLIT-SPOON: INSIDE DIAMETER: 1.375 IN
 OUTSIDE DIAMETER: 1.75 IN
 AVG. HAMMER DROP: 30.0 IN
 HAMMER WEIGHT: 140 LBS

LEGEND

MEASURED GROUNDWATER

LABORATORY RESULTS

SOIL BORING LOCATION

WATER CONTENT (%)
 Wc=

ORGANIC CONTENT (%)
 Oc=

-200 SIEVE (%)
 L=

LIQUID LIMIT
 Ll=

PLASTICITY INDEX
 Pi=

FLUID LOSS (%)
 Fl=

ASPHALT

BASE

SILTY FINE SAND (SM)

CLAYEY FINE TO PLASTIC CLAYEY SAND (SC)

(SM) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

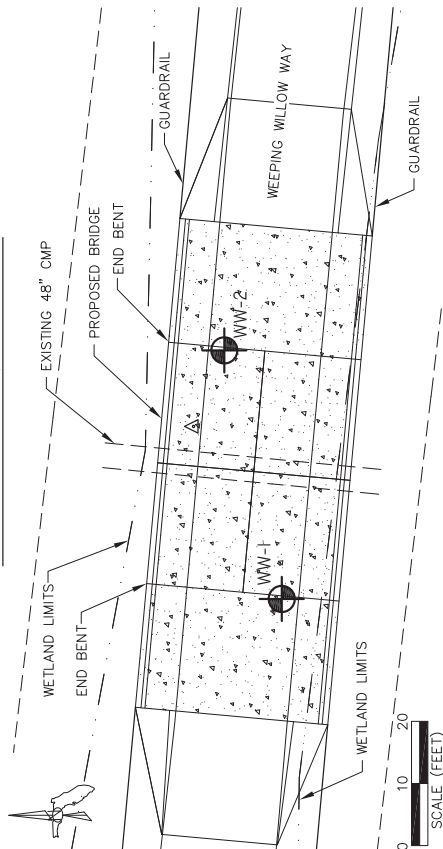
ORGANIC SILT (OL/MUCK)

HIGHLY PLASTIC CLAY (CH)

WEATHERED LIMESTONE

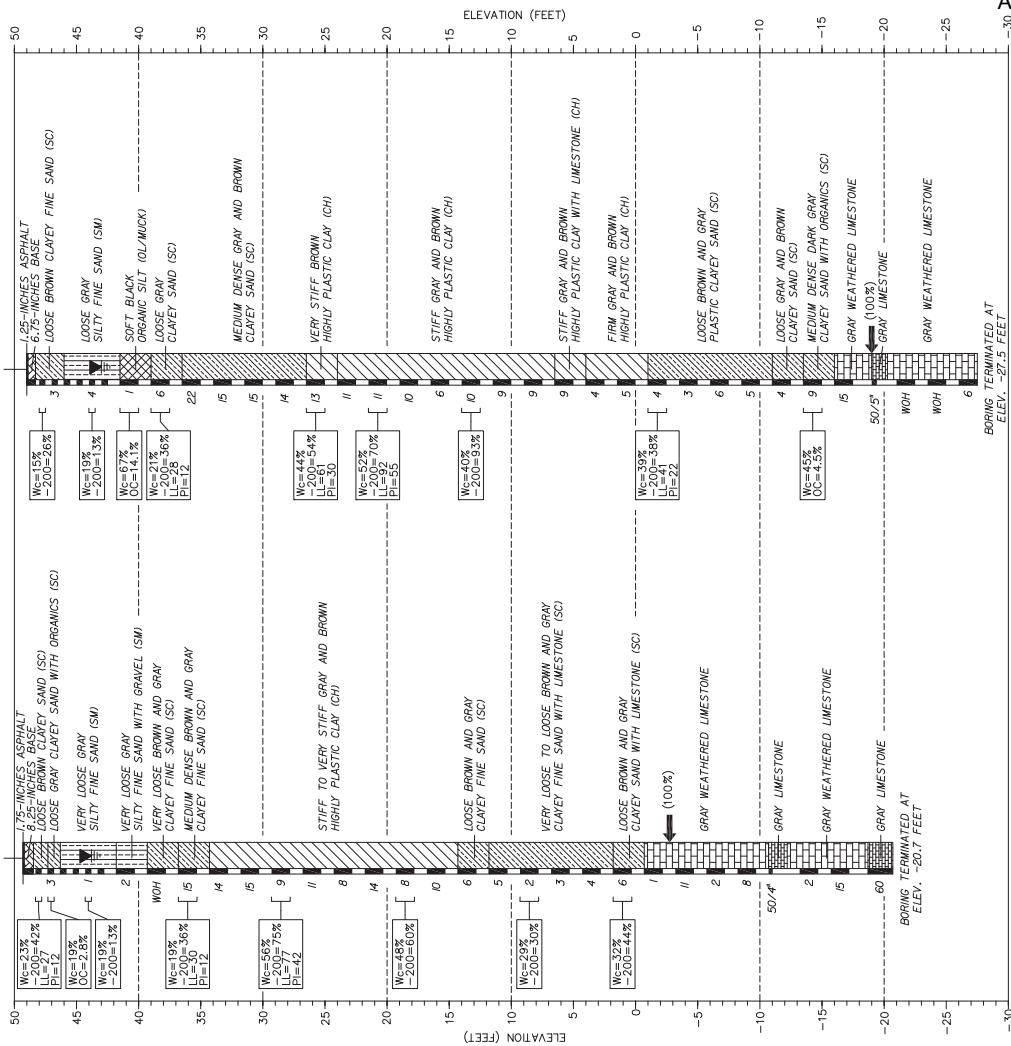
LIMESTONE

BORING LOCATION MAP



BORING WW-1
 DATE: 10/23/2012
 NORTHING: 2071714
 EASTING: 2071754
 ELEV: 49.3 FEET
 DRILLER: B. GUERRA
 HAMMER: ONE-75

BORING WW-2
 DATE: 10/23/2012
 NORTHING: 2071714
 EASTING: 2071754
 ELEV: 49.3 FEET
 DRILLER: B. GUERRA
 HAMMER: ONE-75



Attachment B
B1-2A

REPORT OF CORE BORINGS

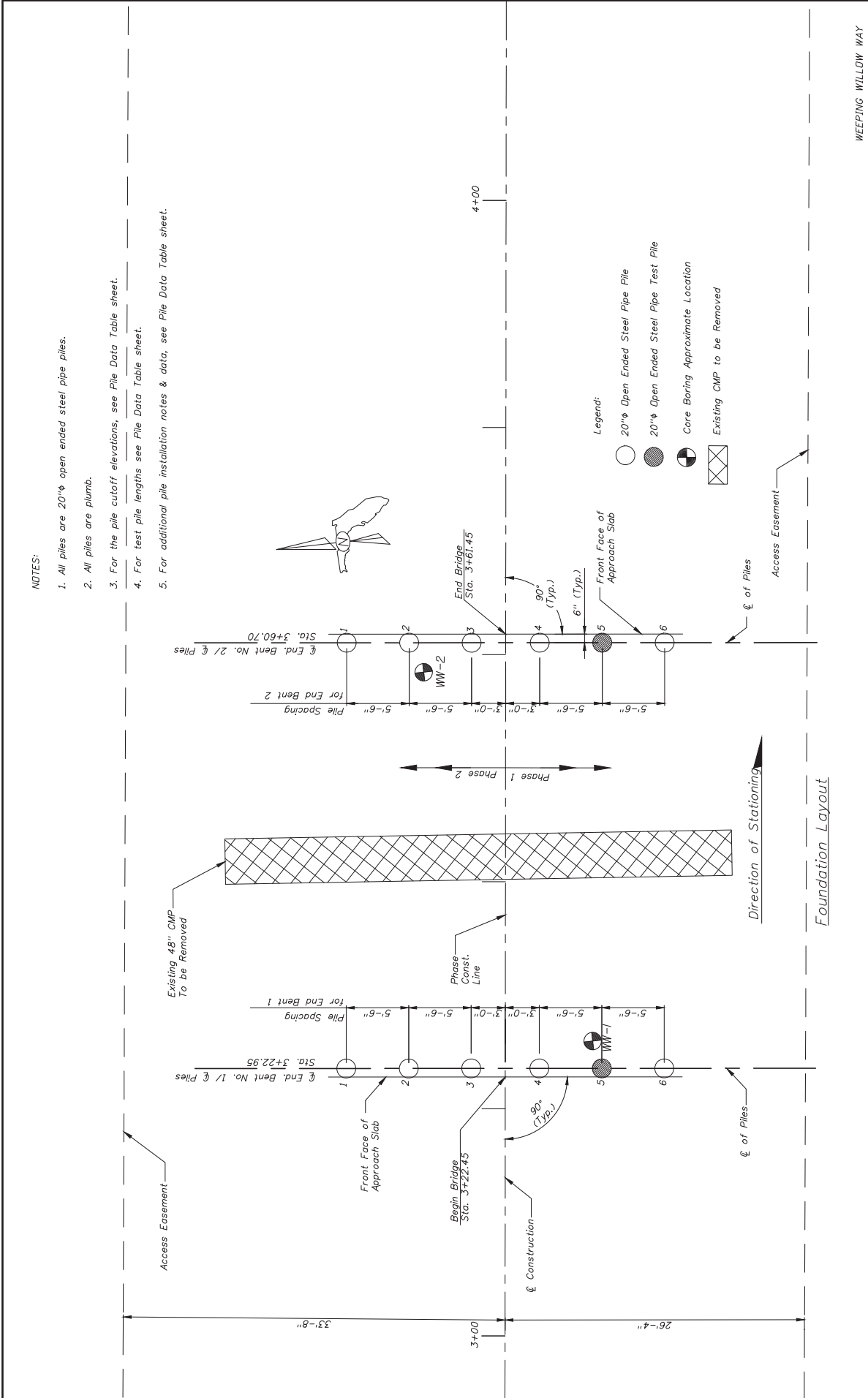
LEON COUNTY

PROJECT TITLE
 WEEPING WILLOW WAY - CULVERT REPLACEMENT

Environmental & Geotechnical Specialists, Inc.
 104 NORTH MAGNOLIA DRIVE
 TALLAHASSEE, FLORIDA 32301
 OFFICE: (850) 846-6233
 FAX: (850) 846-6868
 Cert. of Auth.: 6222

SEAL: MYRON HAYDEN, P.E.
 P.E. NO.: 34007

REVISIONS



NOTES:

1. All piles are 20" open ended steel pipe piles.
2. All piles are plumb.
3. For the pile cutoff elevations, see Pile Data Table sheet.
4. For test pile lengths see Pile Data Table sheet.
5. For additional pile installation notes & data, see Pile Data Table sheet.

REVISIONS		INITIAL		ENGINEER OF RECORD:		PROJECT NAME:		SHEET NO.	
DATE	BY	CHKD	APP	NAME	DATE	PROJECT NAME	PROJECT NO.	ROW	
		JCS	JCS	JOHN F. SLIGER, II, P.E.	5/20/19	FOUNDATION LAYOUT	BL-3A		
		JCS	JCS			RAYMOND TUCKER DRAINAGE IMPROVEMENTS			

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
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REGISTRE, SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9692 FL 36308
 3370 CORP. CENTER BLVD. TALLAHASSEE, FLORIDA 32308
 PHONE (850) 894-4321 - FAX (850) 824-0505
 PROJECT NUMBER: 120

ENGINEER OF RECORD:
 JOHN F. SLIGER, II, P.E.
 P.E. #20588

WEeping Willow Way

PILE DATA TABLE													Table Date 07-01-14							
INSTALLATION CRITERIA						DESIGN CRITERIA						PILE CUT-OFF ELEVATIONS								
PIER OR BENT NUMBER	PILE BEARING RESISTANCE (tons)	NOMINAL BEARING RESISTANCE (tons)	TENSION RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	LONG TERM SCOUR ELEVATION (ft.)	RESISTANCE FACTOR- ϕ	PILE 1	PILE 2	PILE 3	PILE 4	PILE 5	PILE 6
End Bent 1	20	63	N/A	20.6	50	N/A	N/A	41	0	N/A	N/A	N/A	N/A	0.65	45.3	45.3	45.3	45.3	45.3	45.3
End Bent 2	20	63	N/A	20.6	50	N/A	N/A	41	0	N/A	N/A	N/A	N/A	0.65	45.4	45.4	45.4	45.4	45.4	45.4

PILE INSTALLATION NOTES:
 Under no circumstances shall pile be driven above the Minimum Tip Elevation specified. Minimum Tip Elevation is required for lateral stability. No jelling will be allowed without the approval of the Engineer.
 Tip Protection shall be provided for all piles. The point protection shall be commercially available weld-on open type pile protector.
 All pipe piles shall be driven open ended. Remove the existing soil inside of the pipe pile and fill with reinforced concrete down to the limits shown on the Steel Pipe Pile Detail sheet. In the event that the pipe pile plugs and the top soil within the pipe is below the limits of the reinforced concrete, the void shall be filled with unreinforced concrete.

PILE DYNAMIC ANALYSIS NOTES:
 A Dynamic Load Test shall be performed at the test pile locations. A dynamically load tested redrive of each test pile will be required following the removal of soil inside the pile and prior to concrete placement.
 If the pile driving equipment is different in Phase II than in Phase I, the contractor shall provide a detailed report of the activities for each pile of Phase II, prior to any other pile driving activities in order to reestablish driving criteria.

REVISIONS

DATE	BY	DESCRIPTION

ENGINEER OF RECORD:
 JOHN F. SLIGER II, P.E.
 P.E. #25558

REGISTE: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 3692 FL 36308
 3370 CORP. CENTER BLVD. - SUITE 200
 PHOENIX, AZ 85018-4521 - FAX: (602) 224-0505

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801

PROJECT NUMBER: 120

PILE DATA TABLE
 PROJECT NAME: **RAYMOND TUCKER DRAINAGE IMPROVEMENTS**

WEEPING WILLOW WAY

SHEET NO. BI-4A

DESIGN NOTE:
 The Pipe Piles with reinforced concrete fill are designed such that the steel pipe shell can corrode completely. The pile capacity is based upon the remaining concrete core acting as a cast-in-place reinforced pile column, after corrosion of the steel pipe shell.

STEEL PIPE PILES:
 Pipe for piles shall be new, straight steel pipe conforming to FDOT Standard Specifications Section 362 welded and seamless steel pipe piles. Ends of pipe section shall be perpendicular to the longitudinal axis. Pipe wall thickness to be 1/2".

SLICES:
 The ends of all pile sections to be spliced shall be beveled and full butt-welded as shown on the plans. All splices shall be watertight.

INSPECTION:
 The Contractor shall have available at all times a suitable drop light for inspecting the entire length of the driven pipe pile before placing reinforcing steel and concrete.

PILE CUT OFF:
 Steel Pipe Piles shall be cut off at the required elevations along a plane normal to the axis of the pile. Methods used in cutting off piles shall meet with the approval of the Engineer.

REINFORCING STEEL:
 All reinforcing steel shall conform to ASTM A615, Grade 60.

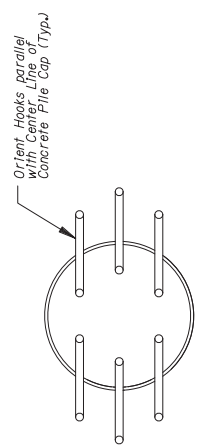
CONCRETE:
 Concrete for piles and columns shall be CLASS IV (Drilled Shaft) $f_c = 4,000$ psi, and shall conform to Section 346 of FDOT Standard Specifications. The final installed pipe piles shall be clean and free of water before placing reinforcing steel and concrete. Concrete placement shall conform to section 455-7J of FDOT Standard Specifications.

MILL TEST REPORTS:
 Notarized mill test report shall be required for all steel pipe piles, and submitted to Leon County for Approval.

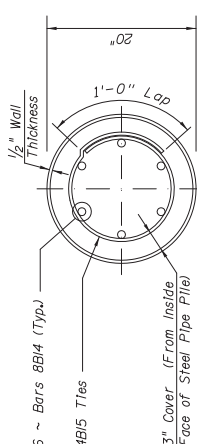
WELDING:
 All welding shall conform to AMERICAN WELDING SOCIETY (AWS) Bridge Welding Code.

OPEN ENDED DRIVING TIPS/CUTTING SHOES:
 Open ended driving tips shall be provided for all piles. The contractor shall submit pile tip protection shop drawings to Leon County Public Works for Review. Pile Tips/Cutting shoes shall be provided by Associated Pile & Piling LLC (APF) or approved equal. APF can be contacted at www.associatedpile.com or at 1-800-526-9047. The pile tip protection shall be included in the cost of the steel pipe piles.

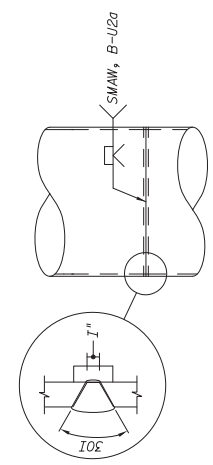
PAYMENT NOTE:
 All costs associated with furnishing and installing the Steel Pipe Piles are to be included in the Contract Unit Price for STEEL PILING, (455-35-21) or TEST PILES STEEL (455-144-21), whichever applies. Cost shall include but not be limited to furnishing and driving the steel pipe piles with pile tip protection, removing soil from inside of the pile, furnishing and placing the concrete and reinforcing steel.



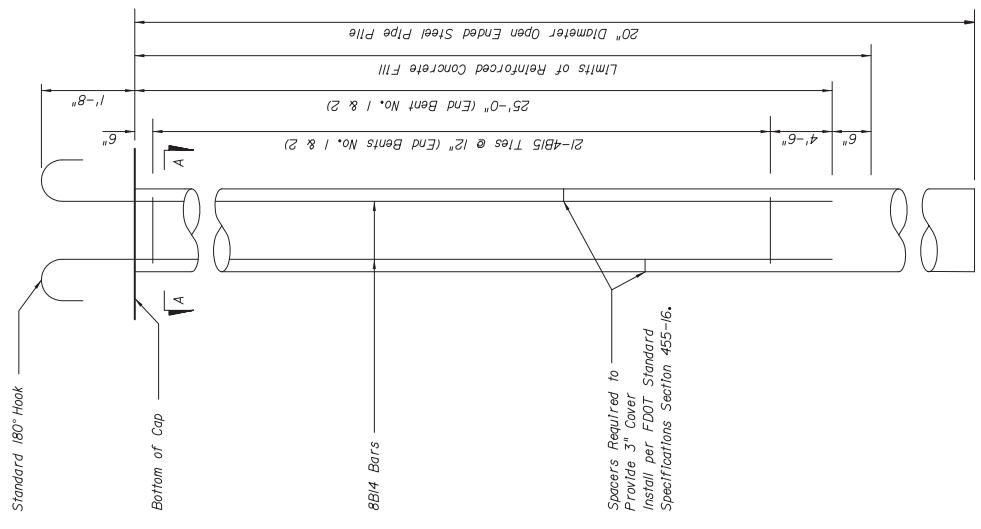
PLAN VIEW OF PIPE PILE
 (Showing Orientation of Bars 8B14)



SECTION A-A



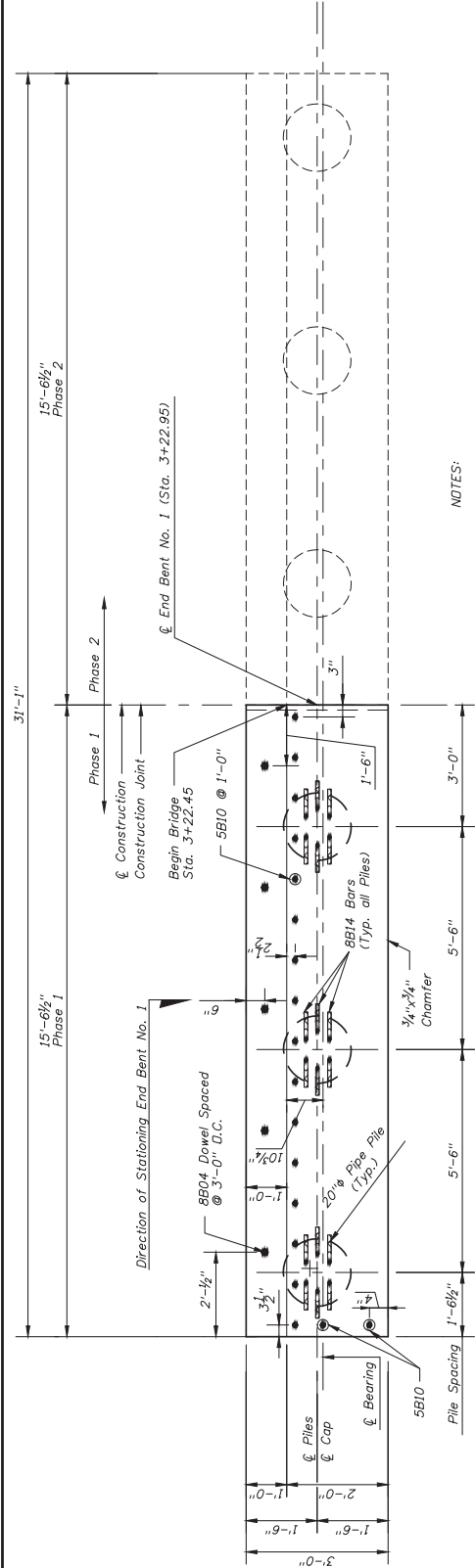
PIPE PILE SPLICE DETAIL



ELEVATION OF PIPE PILE

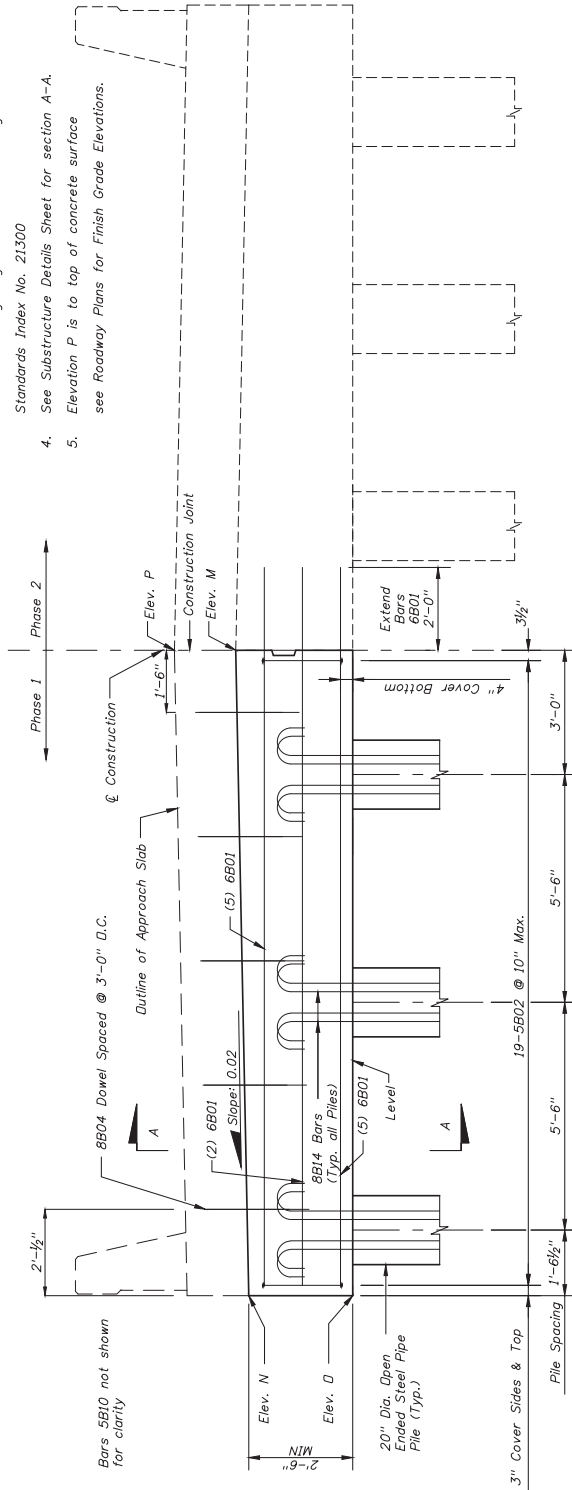
REVISIONS		ENGINEER OF RECORD:		PROJECT NAME:		SHEET NO.	
DATE	BY	INITIAL	DESCRIPTION	DATE	PROJECT NO.	PROJECT NAME	
		C.A.		5/2019	30308	STEEL PIPE PILE DETAIL	
		J.C.			2280	RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
		J.R.			30308	LEON COUNTY DEPARTMENT OF PUBLIC WORKS	
		J.P.			2280	2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA	
		J.E.			30308	PHONE (850) 606-1500 * FAX (850) 606-1501	
		J.S.			30308	REGISTERED PROFESSIONAL ENGINEER CONSULTANT	
		J.T.			30308	CIVIL AND STRUCTURAL ENGINEERING CONSULTANT	
		J.W.			30308	3370 CORNFIELD AVENUE, SUITE 100, TALLAHASSEE, FLORIDA 32308	
		J.X.			30308	PHONE (850) 894-4521 - FAX (850) 824-0505	
		J.Y.			30308	PROJECT NUMBER: 120	
		J.Z.			30308	JOHN F. SLIGER II, P.E. FL 05530	

WEEPING WILLOW WAY



- NOTES:**
1. All piles are plumb.
 2. For pile loads see Pile Data Table.
 3. For bar bending diagrams see FDOT Design Standards Index No. 21300
 4. See Substructure Details Sheet for section A-A.
 5. Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

Bent 1	
Point	Elevation
Elev. M	48.12
Elev. N	47.81
Elev. O	45.31
Elev. P	49.81



WEPPING WILLOW WAY

END BENT No. 1 - PHASE 1
 PROJECT NAME: **RAYMOND TUCKER DRAINAGE IMPROVEMENTS**

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801

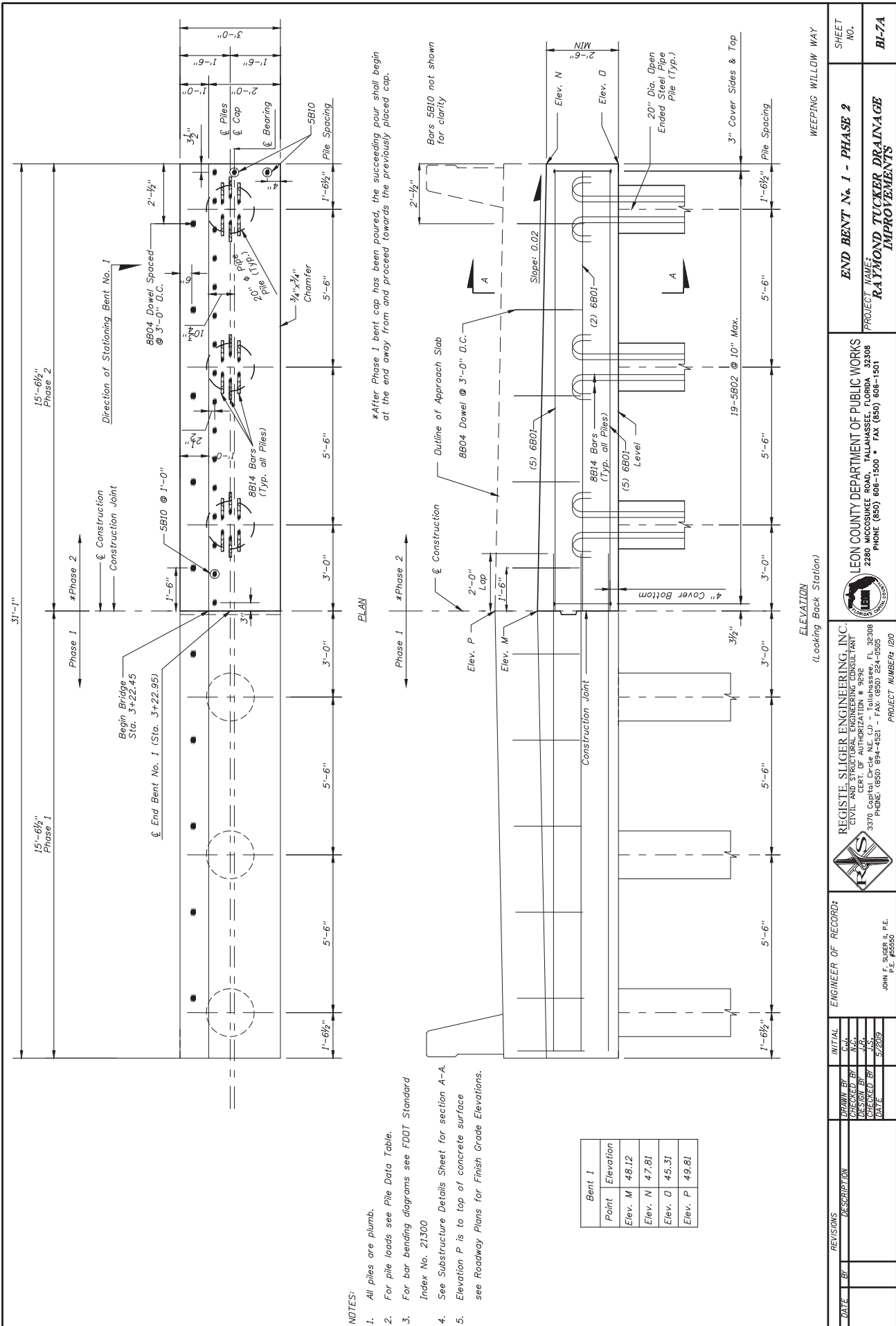
REGISTE: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9692 FL 36308
 3370 CORP. BLVD. #421 - FAX (850) 224-9505
 PHONE (850) 894-4321

ENGINEER OF RECORD:
 JOHN F. SLIGER, II, P.E.
 P.E. #2558

DATE	BY	DESCRIPTION

INITIAL	DESCRIPTION
CJA	DRAWN BY
MG	CHECKED BY
JR	DESIGN BY
	DATE

PROJECT NUMBER: 120



- NOTES:
- All piles are plumb.
 - For pile loads see Pile Data Table.
 - For bar bending diagrams see FDOT Standard Index No. 21300
 - See Substructure Details Sheet for section A-A.
 - Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

END BENT No. 1 - PHASE 2
 PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

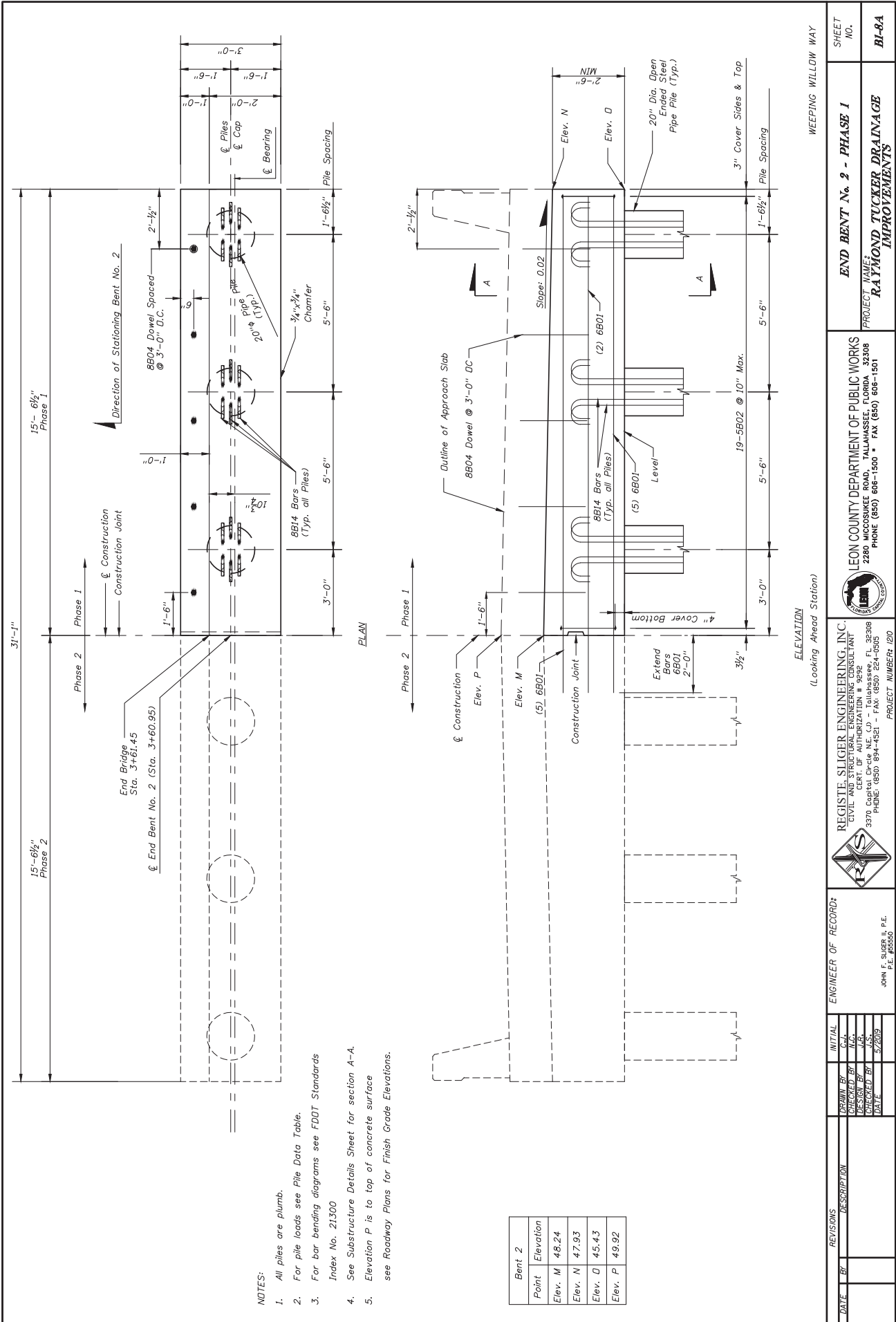
LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801

REGISTERED SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9692 FL 38308
 3370 CORP. CENTER BLVD. TALLAHASSEE, FLORIDA 32308
 PHONE (850) 894-4521 - FAX (850) 224-0505
 PROJECT NUMBER: 120

ENGINEER OF RECORD:
 JOHN F. SLIGER II, P.E.
 P.E. #2558

DATE	BY	INITIALS	DESCRIPTION

WEPPING WILLOW WAY



- NOTES:
1. All piles are plumb.
 2. For pile loads see Pile Data Table.
 3. For bar bending diagrams see FDOT Standards Index No. 21300
 4. See Substructure Details Sheet for section A-A.
 5. Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

Bent 2	
Point	Elevation
Elev. M	48.24
Elev. N	47.93
Elev. O	45.43
Elev. P	49.92

REVISIONS		DATE	BY	DESCRIPTION

ENGINEER OF RECORD:	REGISTERED ENGINEERING CONSULTANT	INITIAL	DATE
JOHN F. SLIGER, II, P.E.	CIVIL AND STRUCTURAL ENGINEERING CONSULTANT	C.S.	5/22/09
	CERT. OF AUTHORIZATION # 9692	J.C.	
	3370 CORP. (850) 894-4321 - FAX (850) 224-0505	J.R.	
		J.P.	

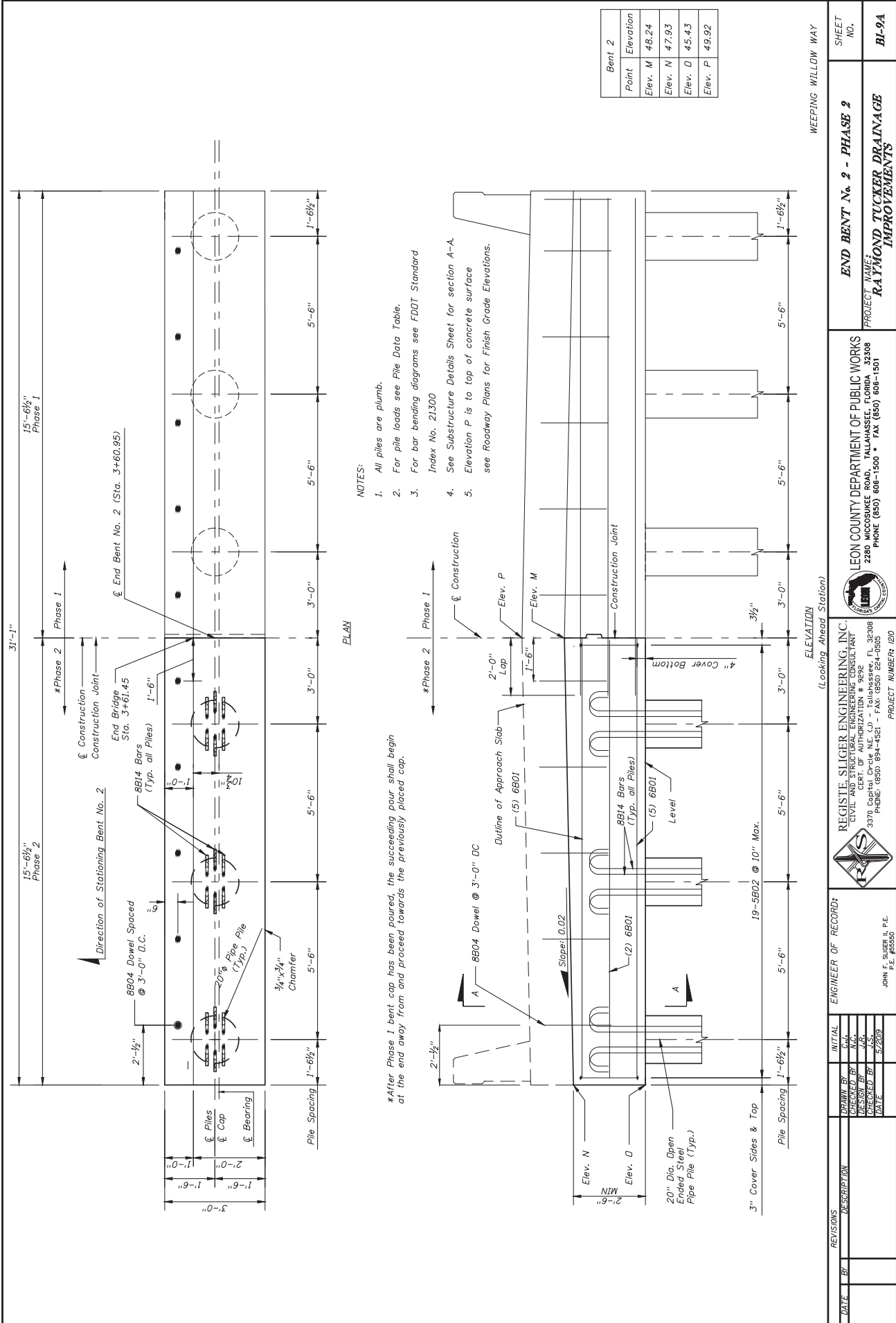
REGISTE: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9692
 3370 CORP. (850) 894-4321 - FAX (850) 224-0505
 PROJECT NUMBER: 120

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801

END BENT No. 2 - PHASE 1
 PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS

WEPPING WILLOW WAY

Sheet No. B1-8A



- NOTES:
1. All piles are plumb.
 2. For pile loads see File Data Table.
 3. For bar bending diagrams see FDOT Standard Index No. 21300
 4. See Substructure Details Sheet for section A-A.
 5. Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

*After Phase 1 bent cap has been poured, the succeeding pour shall begin at the end away from and proceed towards the previously placed cap.

Bent 2	
Point	Elevation
Elev. M	48.24
Elev. N	47.93
Elev. D	45.43
Elev. P	49.92

WEAVING WILLOW WAY

END BENT No. 2 - PHASE 2
 PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801



REGISTER: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9692 FL 36308
 3378 CORP. CENTER BLVD. SEBASTIAN, FLORIDA 32958
 PHONE (850) 894-4321 - FAX (850) 224-0505
 PROJECT NUMBER: 120

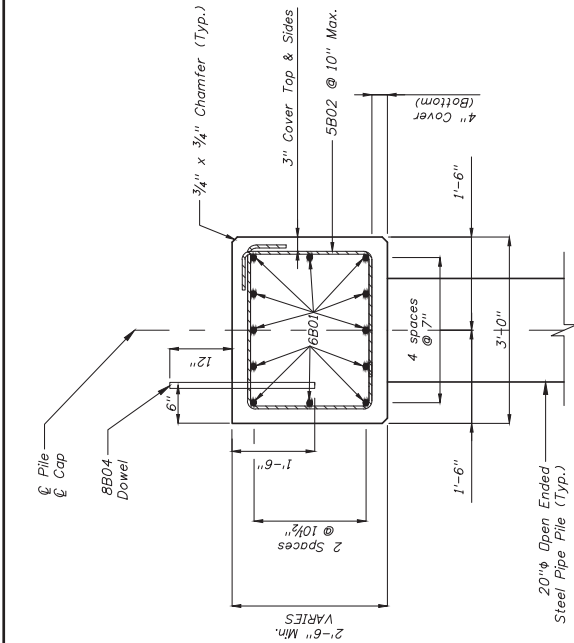


ENGINEER OF RECORD:
 JOHN F. SLIGER II, P.E.
 P.E. #25558

DATE	BY	DESCRIPTION

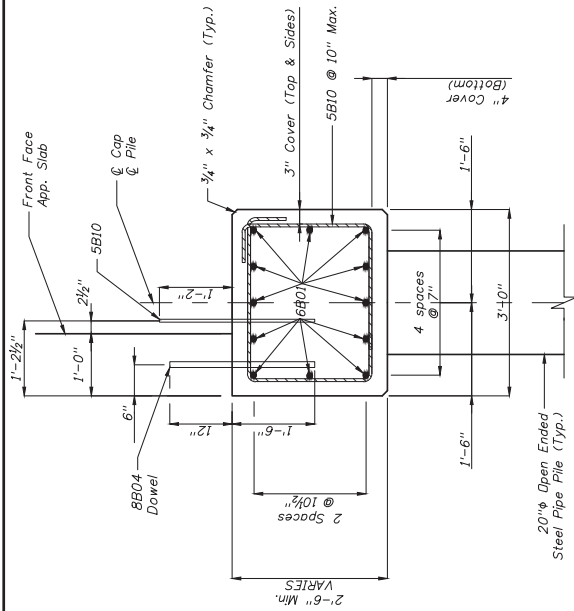
INITIAL	DATE

REVISIONS



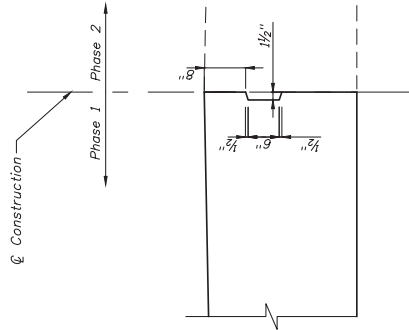
SECTION A-A
BENT No. 1

(Pile Reinforcement Not Shown for Clarity)



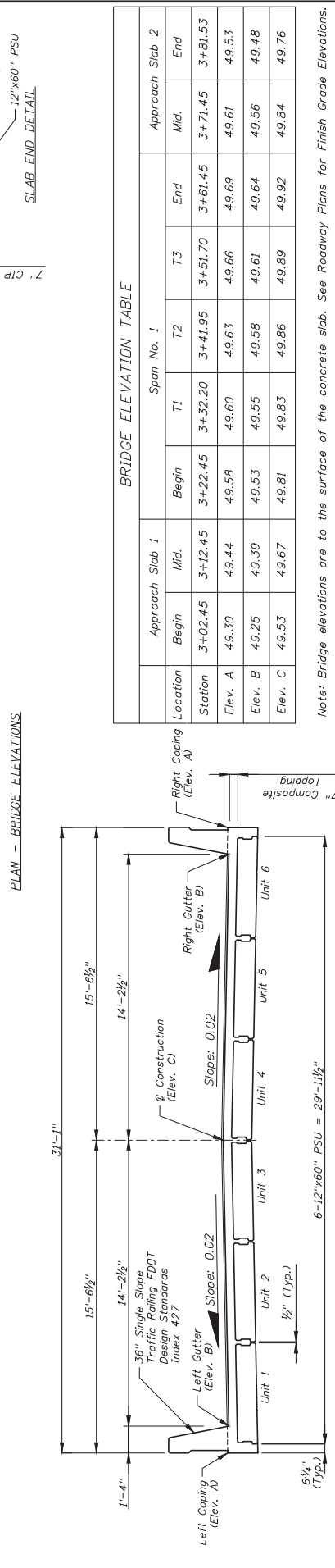
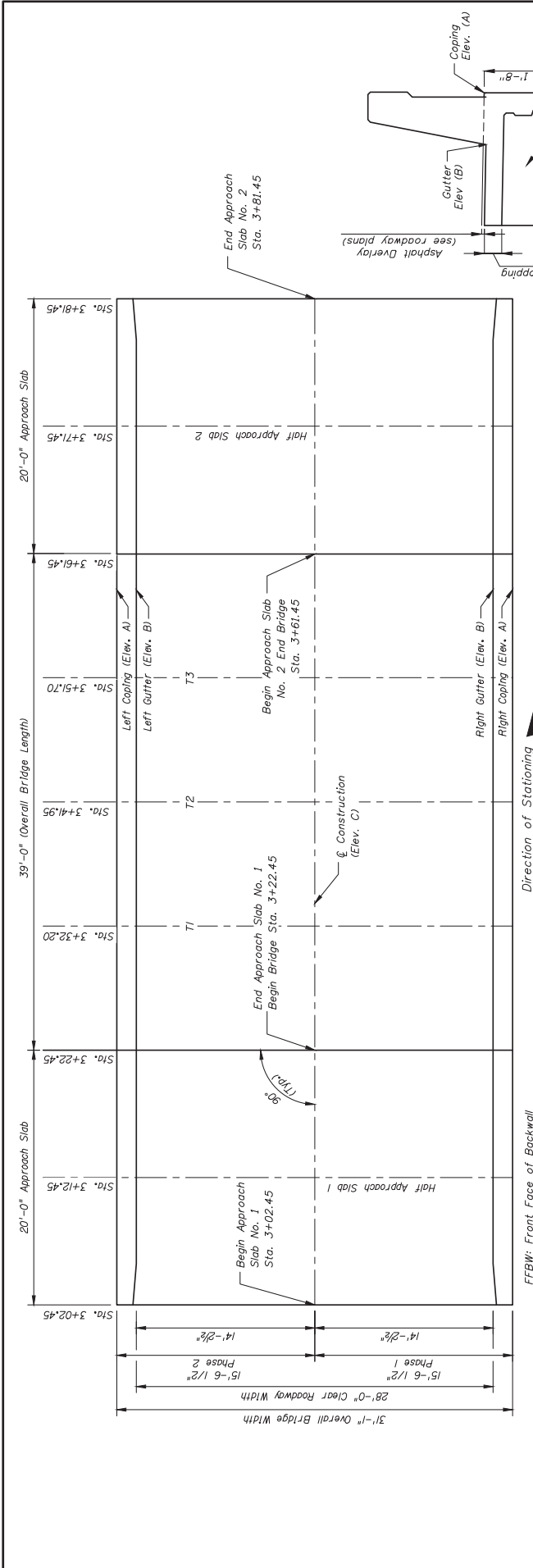
SECTION A-A
BENT No. 2

(Pile Reinforcement Not Shown for Clarity)



CONSTRUCTION JOINT DETAIL

REVISIONS		ENGINEER OF RECORD:		REGISTERED ENGINEERING CONSULTANT		PROJECT NAME:		SHEET NO.	
DATE	BY	DESCRIPTION	INITIAL	C.A.	N.C.	J.R.	DATE	NO.	
							RAYMOND TUCKER DRAINAGE IMPROVEMENTS	BL-10A	
							LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 * FAX (850) 608-1501		
							REGISTRE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9592 FL 32-308 3370 CORNER 894-4521 - FAX (850) 824-9595 PHONE (850) 894-4521 - FAX (850) 824-9595 PROJECT NUMBER: 120		
							LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 * FAX (850) 608-1501		
							WEERING WILLOW WAY		

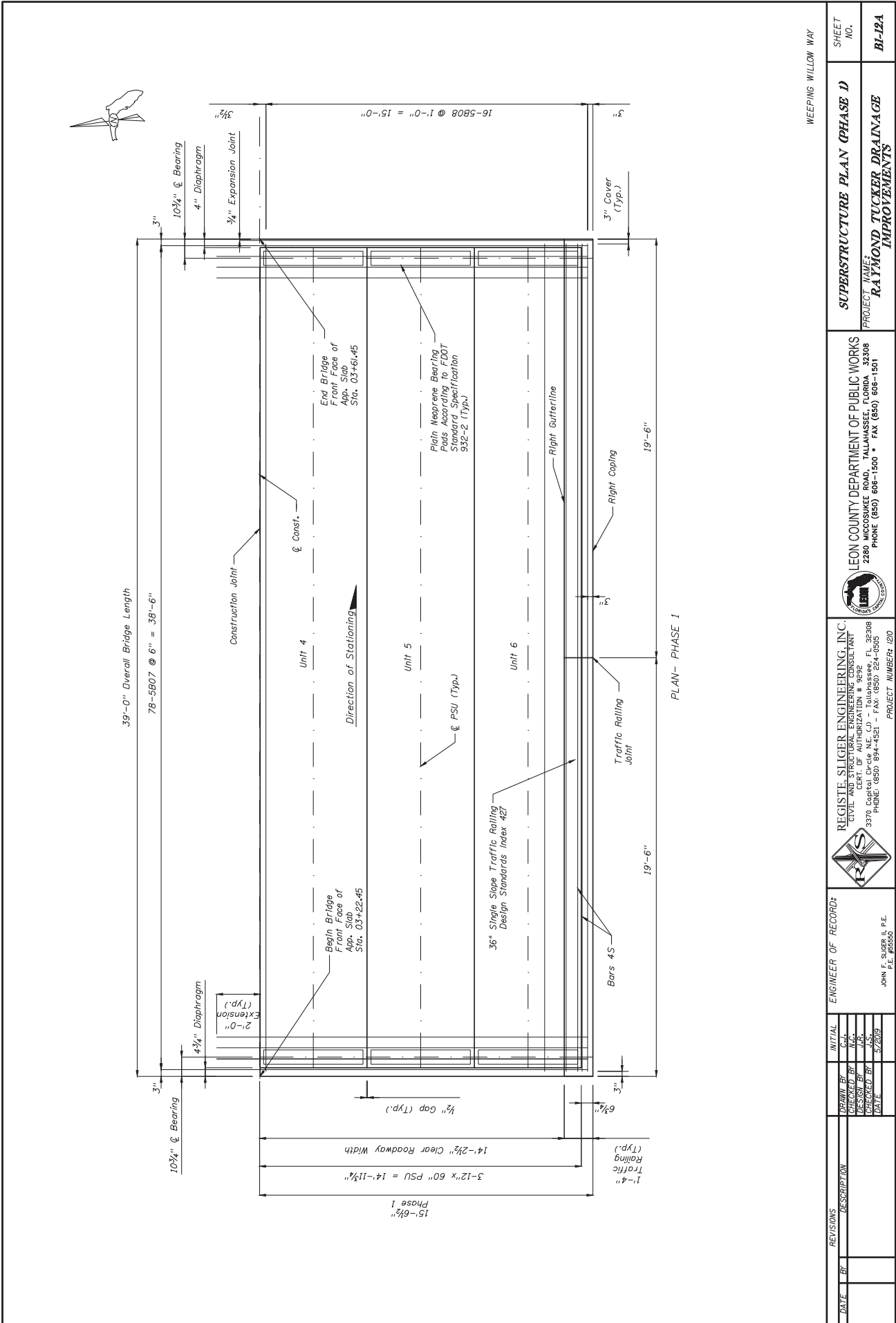


BRIDGE ELEVATION TABLE

Location	Approach Slab 1			Span No. 1			Approach Slab 2		
	Begin	Mid.	End	T1	T2	T3	Begin	Mid.	End
Station	3+02.45	3+12.45	3+22.45	3+32.20	3+41.95	3+51.70	3+61.45	3+71.45	3+81.53
Elev. A	49.30	49.44	49.58	49.60	49.63	49.66	49.69	49.61	49.53
Elev. B	49.25	49.39	49.53	49.55	49.58	49.61	49.64	49.56	49.48
Elev. C	49.53	49.67	49.81	49.83	49.86	49.89	49.92	49.84	49.76

Note: Bridge elevations are to the surface of the concrete slab. See Roadway Plans for Finish Grade Elevations.

REVISIONS		ENGINEER OF RECORD:		WEEPING WILLOW WAY	
DATE	BY	DESCRIPTION	INITIAL	SHEET NO.	BRIDGE ELEVATIONS
			C.M.		
			C.C.		
			J.R.		
			J.R.		
			DATE		
			5/22/19		
			PROJECT NUMBER: 120		
			REGISTER: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9592 FL 32-308 3370 CARTER RD. SEBASTIAN, FL 32958 PHONE (850) 894-4521 - FAX (850) 824-9595	LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 * FAX (850) 608-1501	
			JOHN F. SLIGER, P.E. P.E. #25530	PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
				BI-11A	



WEEPING WILLOW WAY

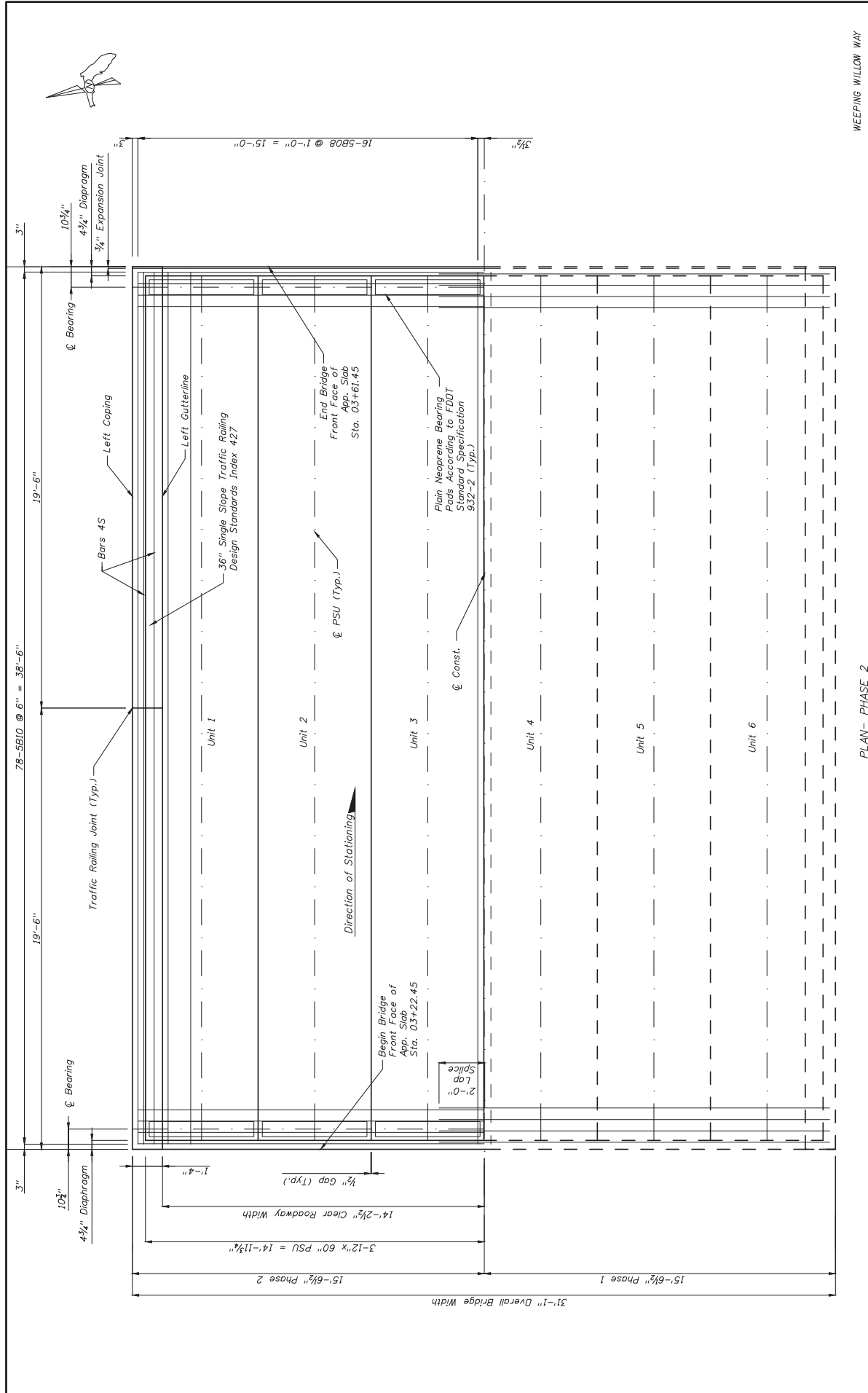
DATE	BY	REVISIONS DESCRIPTION

INITIAL	
DRAWN BY	CJA
CHECKED BY	JCG
DESIGN BY	JCR
PREPARED BY	JCR
DATE	5/28/09

ENGINEER OF RECORD:	REGISTE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 2692 FL 26308 3370 CORP. BLVD. SUITE 200 PHON: (850) 894-4321 - FAX: (850) 224-0505
PROJECT NUMBER:	120

LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 808-1500 • FAX (850) 808-1801

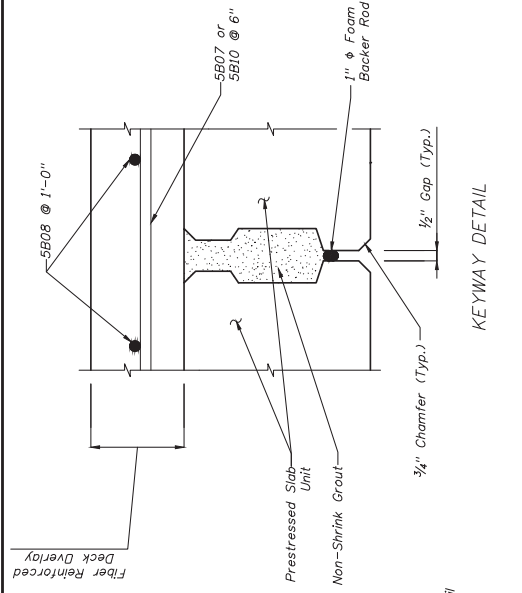
SUPERSTRUCTURE PLAN (PHASE 1)	SHEET NO.
RAYMOND TUCKER DRAINAGE IMPROVEMENTS	BL-12A



WEeping Willow Way

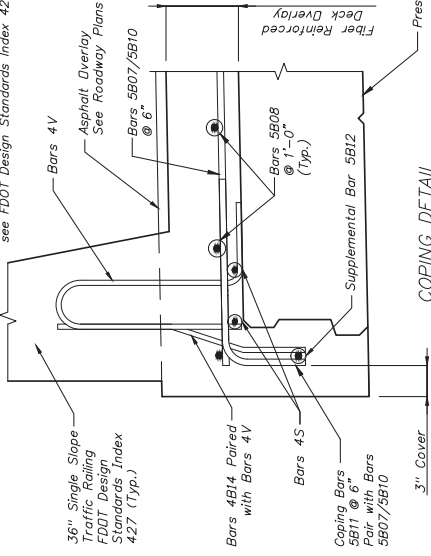
PLAN - PHASE 2

DATE	BY	REVISIONS	DESCRIPTION	INITIAL	ENGINEER OF RECORD	REGISTERED PROFESSIONAL ENGINEERING CONSULTANT	LEON COUNTY DEPARTMENT OF PUBLIC WORKS	SHEET NO.
					JOHN F. SLIGER, II, P.E. P.E. #20580	REGISTRE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 2692 FL 32-308 3370 CORP. BLVD. #421 - FAX (850) 224-0505 PHONE (850) 894-4321	2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 808-1500 * FAX (850) 808-1801	BI-161A
							PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	

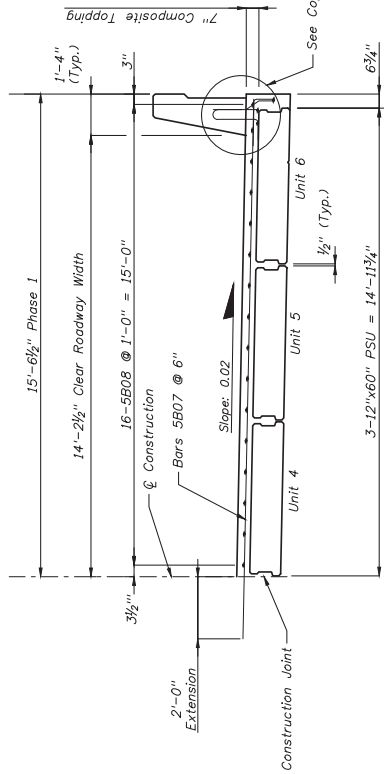


KEYWAY DETAIL

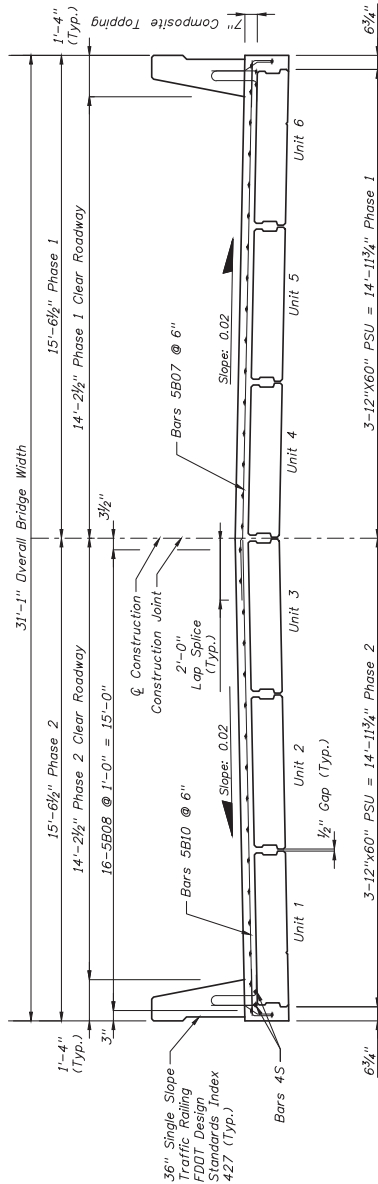
* For additional reinforcing details, see FDOT Design Standards Index 427



COPING DETAIL



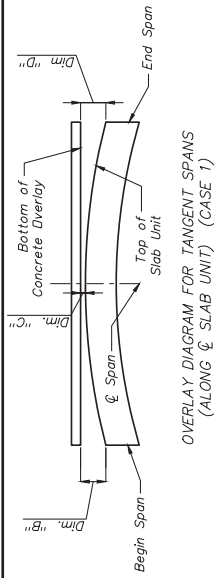
PHASE 1 SUPERSTRUCTURE SECTION



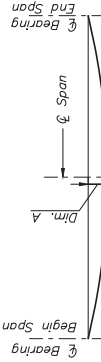
PHASE 2 SUPERSTRUCTURE SECTION

WEAVING WILLOW WAY

DATE	BY	REVISIONS	DESCRIPTION	INITIALS	ENGINEER OF RECORD:	REGISTERED PROFESSIONAL ENGINEERING CONSULTANT	LEON COUNTY DEPARTMENT OF PUBLIC WORKS	PROJECT NAME:	SHEET NO.
					JOHN F. SLIGER II, P.E. P.E. #20558	CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CENT. OF AUTHORIZATION # 3692 FL 32-308 3370 CORP. BLVD. #421 - FAK (850) 224-0505 PHONE (850) 894-4521 - FAX (850) 224-0505 PROJECT NUMBER: 120	2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 808-1500 * FAX (850) 808-1801	RAYMOND TUCKER DRAINAGE IMPROVEMENTS	BL-141
								1 OF 2	



OVERLAY DIAGRAM FOR TANGENT SPANS (ALONG ϕ SLAB UNIT) (CASE 1)



DEAD LOAD DEFLECTION DIAGRAM

PRESTRESSED SLAB UNIT CAMBER AND BUILD-UP NOTES:

The overlay values given in the table are based on theoretical unit cambers. The contractor shall monitor unit cambers for the purpose of predicting camber values at the time of the deck pour. If the predicted cambers based on field measurements differ more than $\pm 1/2$ " from the theoretical "Net Unit Camber @ 120 Days," shown in the table, propose modified build-up dimensions as required and submit to Leon County for approval a minimum of 21 days prior to casting overlay concrete.

POURED EXPANSION JOINT DATA TABLE			Table Date 1-01-09	
INDEX NO.	TOTAL DESIGN @ 70° F MOVEMENT	*DIM. "A" ADJUSTMENT PER 10° F		
Bent 2	3/4"	0.31"	+/- 0.028"	

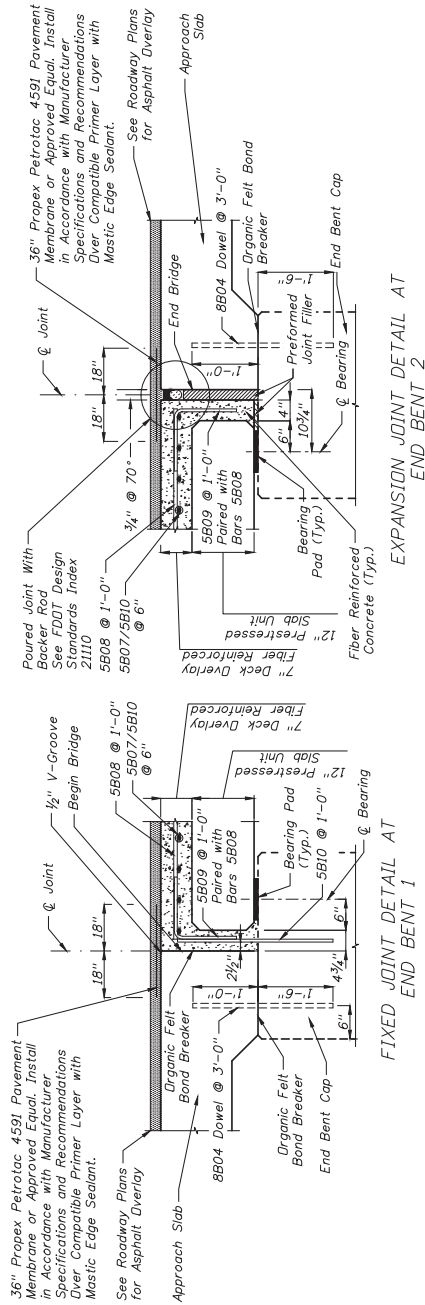
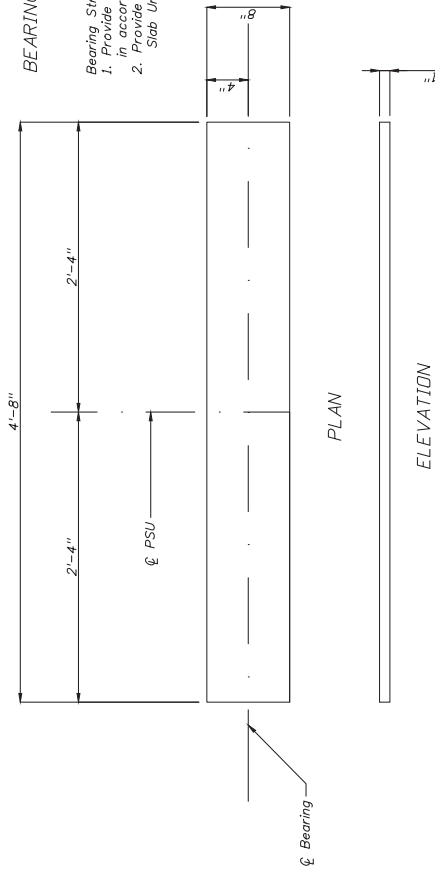
*For temperature above 70° F reduce the opening.
 *For temperature below 70° F increase the opening.
 NOTE: Dim. "A" adjustment per 10° F shown is measured perpendicular to ϕ Expansion Joint. Work this table with FDOT Design Standards Index No. 21110.

OVERLAY & DEFLECTION DATA TABLE						Table Date 11-19-08	
FOR PRESTRESSED SLAB UNITS			NET BEAM DEFLECTION OVERLAY CASE				
LOCATION	REQUIRED THEORETICAL OVERLAY OVER ϕ BEAM *	AT END OF BEAM AT ϕ DIM "B"	AT END OF BEAM AT ϕ DIM "C"	AT END OF BEAM AT ϕ DIM "D"	DEAD LOAD DEFLECTION @ 120 DAYS DIM "A"	OVERLAY CASE NO.	
1	1	0.23	0	0.23	0.66	0.43	1
1	2	0.23	0	0.23	0.66	0.43	1
1	3	0.23	0	0.23	0.66	0.43	1
1	4	0.23	0	0.23	0.66	0.43	1
1	5	0.23	0	0.23	0.66	0.43	1
1	6	0.23	0	0.23	0.66	0.43	1

NOTES: Work this table with FDOT Developmental Design Standard Index No. D20399.

BEARING PAD DETAILS

- Bearing Strip Notes:
 1. Provide Bearing Strips (Shear Modulus G = 110 Psi) in accordance with FDOT Standard Specification, Section 932
 2. Provide matching Bearing Strips at each end of Prestressed Slab Units



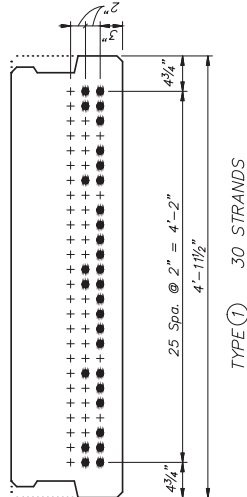
* Add Preformed Joint Filler Between Bearing Pads

DATE		BY	REVISIONS	DESCRIPTION
ENGINEER OF RECORD: REGISTE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9292 FL 32-308 3370 CARLTON ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 894-4521 - FAX (850) 824-9595 PROJECT NUMBER: 120				
JOHN F. SLIGER, P.E. P.E. #25520				
LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 • FAX (850) 608-1501				
SUPERSTRUCTURE DETAILS # OF 2 PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS				
SHEET NO. BL-15A				WEEPING WILLOW WAY

Table Date 1-01-09

PRESTRESSED STANDARD SLAB UNITS -- TABLE OF VARIABLES

LOCATION SPAN / SLAB UNIT NO. / TYPE	CONCRETE PROPERTIES		STND. PTRN.		PLAN VIEW		END OF UNIT **		UNIT		REINFORCING STEEL																					
	CLASS	STRENGTHS (psi)	28 Day	Release	END 1	END 2	END 1	END 2	ANGLE ϕ	END 1	END 2	DIM J	DIM K1	DIM K2	DIM L	DIM R	DIM C	4D1	4D2	4D3	5Y1	5Y2	4K	NO. S1	S2	S3	VI	V2	V3	BAR SPACING *	INDEX NO.	RAILING REINF. CASE
1	1/12"x60"	VI	8,500	6,000	1	1	1	1	90°	90°	6"	10 3/4"	10 3/4"	38"-2 1/2"	1/4"	3'-3"	3'-3"	62	3'-3"	62	3'-3"	4'-4 1/2"	156	15	1	18	12"	8 1/4"	12"	N/A	N/A	N/A
1	2/12"x60"	VI	8,500	6,000	1	1	1	1	90°	90°	6"	10 3/4"	10 3/4"	38"-2 1/2"	1/4"	3'-3"	3'-3"	62	3'-3"	62	3'-3"	4'-4 1/2"	156	15	1	18	12"	8 1/4"	12"	N/A	N/A	N/A
1	3/12"x60"	VI	8,500	6,000	1	1	1	1	90°	90°	6"	10 3/4"	10 3/4"	38"-2 1/2"	1/4"	3'-3"	3'-3"	62	3'-3"	62	3'-3"	4'-4 1/2"	156	15	1	18	12"	8 1/4"	12"	N/A	N/A	N/A
1	4/12"x60"	VI	8,500	6,000	1	1	1	1	90°	90°	6"	10 3/4"	10 3/4"	38"-2 1/2"	1/4"	3'-3"	3'-3"	62	3'-3"	62	3'-3"	4'-4 1/2"	156	15	1	18	12"	8 1/4"	12"	N/A	N/A	N/A
1	5/12"x60"	VI	8,500	6,000	1	1	1	1	90°	90°	6"	10 3/4"	10 3/4"	38"-2 1/2"	1/4"	3'-3"	3'-3"	62	3'-3"	62	3'-3"	4'-4 1/2"	156	15	1	18	12"	8 1/4"	12"	N/A	N/A	N/A
1	6/12"x60"	VI	8,500	6,000	1	1	1	1	90°	90°	6"	10 3/4"	10 3/4"	38"-2 1/2"	1/4"	3'-3"	3'-3"	62	3'-3"	62	3'-3"	4'-4 1/2"	156	15	1	18	12"	8 1/4"	12"	N/A	N/A	N/A



STRAND DESCRIPTION: Use 1/2" Diameter, Grade 270, Low Relaxation Strands stressed at 30,975 kips each. Area per strand equals .153 sq. in.

STRAND PATTERNS

NOTE: Work this sheet with Developmental Design Standards Index Nos. D20350 and D20355.

STRAND DEBONDING LEGEND

- - fully bonded strands.
- - strands debonded " " from end of beam.
- ◐ - strands debonded " " from end of beam.
- ◑ - strands debonded " " from end of beam.
- ◒ - strands debonded " " from end of beam.

NOTE: On slab units with skewed ends the debonded length shall be measured along the debonded strand.

DIMENSION NOTES

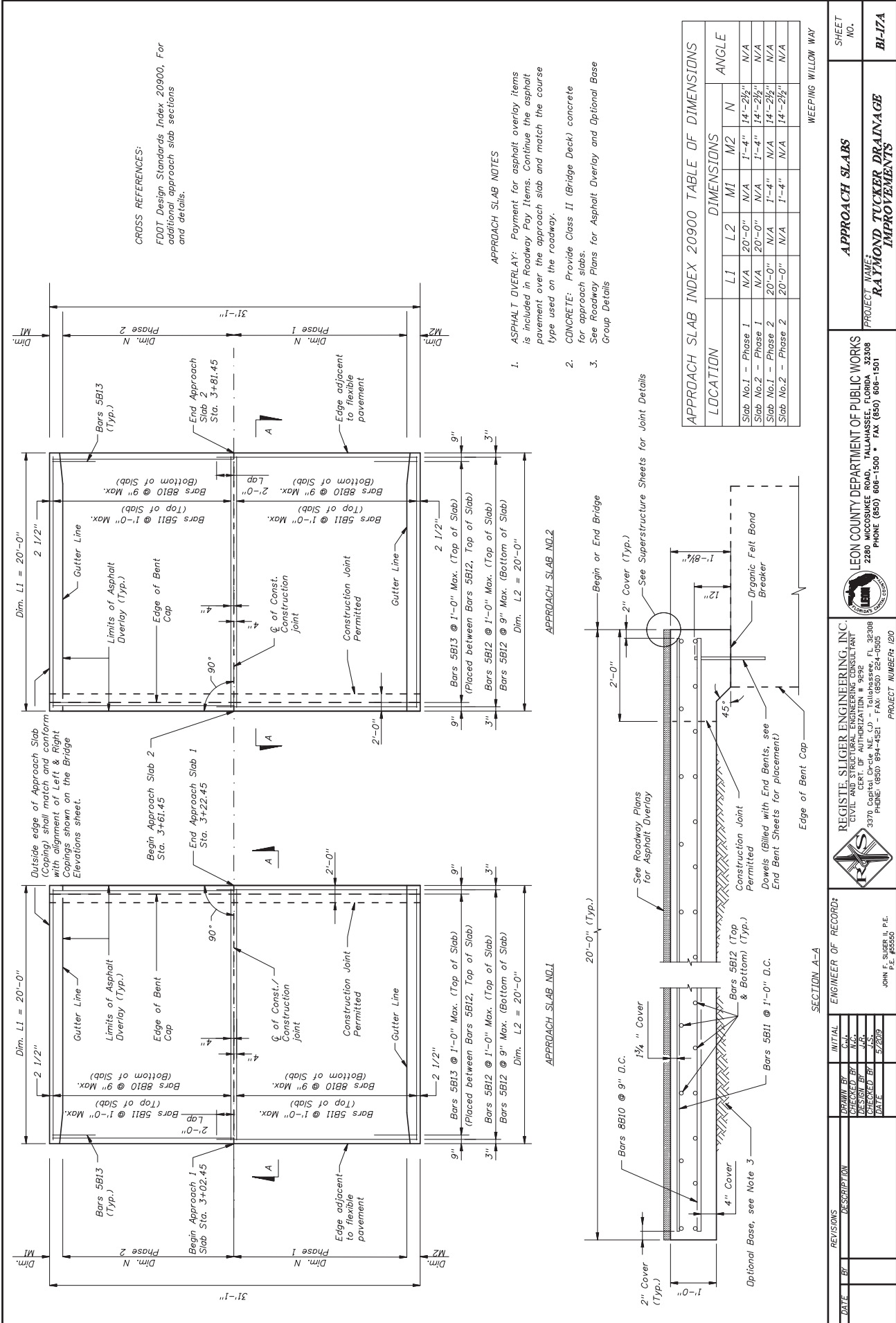
* All longitudinal slab unit dimensions shown on this sheet with a single asterisk (*) are measured along the top of unit at the centerline of slab unit.

** End of slab unit bearing dimensions "J" and "K" are measured along the bottom of the slab unit.

*** See Index No. 20350 for modified reinforcement. See "Prestressed Slab Units - Traffic Railing Reinforcing Layout Table" for railing placement on horizontal curves.

KEEPING WILLOW WAY

DATE	BY	DESCRIPTION	INITIAL	ENGINEER OF RECORD:	REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 3692 EL 36308 3370 CORP. CENTER, SUITE 200 PHOENIX, AZ 85018 PHONE (602) 994-4521 - FAX (602) 244-0505 PROJECT NUMBER: 120	LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 * FAX (850) 608-1801	PRESTRESSED STANDARD SLAB UNIT TABLE	SHEET NO.
				JOHN F. SLIGER, P.E. E.C. #2050		PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	BL-16A	



CROSS REFERENCES:
 FOOT Design Standards Index, 20900, For
 additional approach slab sections
 and details.

- APPROACH SLAB NOTES
1. ASPHALT OVERLAY: Payment for asphalt overlay items is included in Roadway Pay Items. Continue the asphalt pavement over the approach slab and match the course type used on the roadway.
 2. CONCRETE: Provide Class II (Bridge Deck) concrete for approach slabs.
 3. See Roadway Plans for Asphalt Overlay and Optional Base Group Details

REVISIONS		DATE	BY	DESCRIPTION

ENGINEER OF RECORD:
 JOHN F. SLIGER, II, P.E.
 P.E. #20558

REGISTERED ENGINEERING CONSULTANT
 CIVIL AND STRUCTURAL ENGINEERING
 CERT. OF AUTHORIZATION # 3692 FL 36308
 3370 CORTLAND AVENUE, SUITE 204
 PALM BEACH, FLORIDA 33410
 PHONE (561) 844-4321 FAX (561) 844-4325
 PROJECT NUMBER: 120

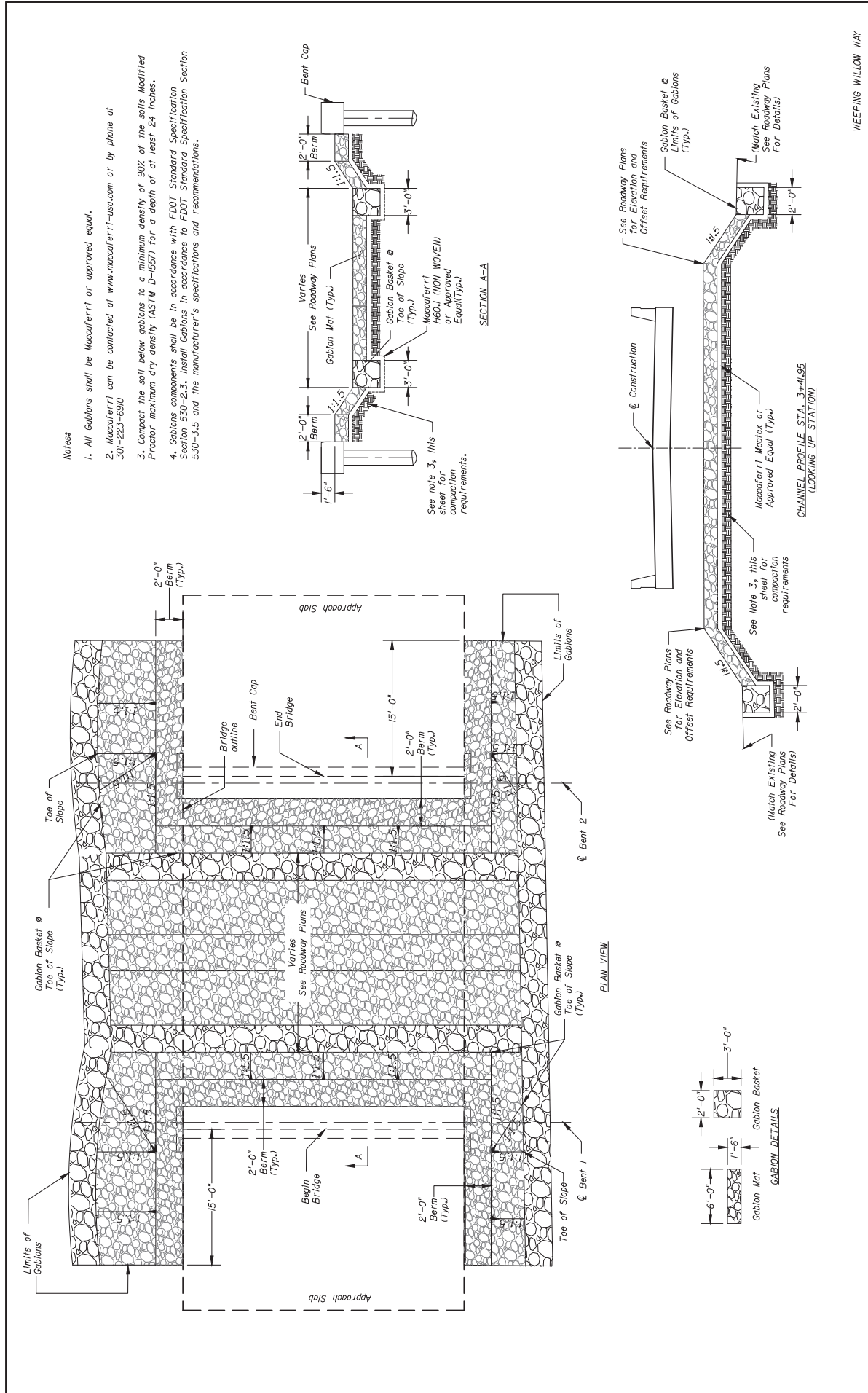
LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 808-1500 * FAX (850) 808-1801

PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

APPROACH SLABS

SHEET NO.
B-17A

WEEPING WILLOW WAY



Notes:

1. All Gabions shall be Maccaferri or approved equal.
2. Maccaferri can be contacted at www.maccaferri-usa.com or by phone at 301-223-6900
3. Compact the soil below gabions to a minimum density of 90% of the soils Modified Proctor maximum dry density (ASTM D-1557) for a depth of at least 24 inches.
4. Gabions components shall be in accordance with FOOT Standard Specification Section 530-2.3. Install Gabions in accordance to FOOT Standard Specification Section 530-3.5 and the manufacturer's specifications and recommendations.

SECTION A-A

PLAN VIEW

REVISIONS		DATE	BY	DESCRIPTION

INITIAL	
DRAWN BY	CJA
CHECKED BY	JCG
DESIGN BY	JCR
DATE	5/22/09

ENGINEER OF RECORD:	
REGISTERED PROFESSIONAL ENGINEER CONSULTANT	
CERT. OF AUTHORIZATION # 9692	EL 32308
3770 CAPITAL CENTER BLVD., SUITE 200	PHOENIX, AZ 85018
PHONE: (602) 994-4321	FAX: (602) 244-0505
PROJECT NUMBER: 120	

LEON COUNTY DEPARTMENT OF PUBLIC WORKS	
2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308	
PHONE: (850) 608-1500	FAX: (850) 608-1801

GABION BANK PROTECTION DETAILS	SHEET NO.
PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	BI-18A

WEeping WILLOW WAY

MARK	LENGTH	NO	TYP	STY	B	C	D	E	F	H	J	K	N	Ø		
SIZE (DES)	FT IN	IN	BAR#	BAR A G	FT IN	FR	FT IN	FR	FT IN	FR	FT IN	FR	FT IN	FR	NO	ANG
LOCATION END BENT NO. 1 PHASE 1																
6	B01	17-4	12	1	17-3 1/2											
5	B02	9-10	19	4	4	2-6										
8	B04	2-6	5	1	2-6											
5	B10	2-8	16	1	2-8											
LOCATION END BENT NO. 2 PHASE 1																
6	B01	17-4	12	1	17-3 1/2											
5	B02	9-10	19	4	4	2-6										
8	B04	2-6	5	1	2-6											
LOCATION END BENT NO. 1 PHASE 2																
6	B01	15-4	12	1	15-3 1/2											
5	B02	9-10	19	4	4	2-6										
8	B04	2-6	5	1	2-6											
LOCATION END BENT NO. 2 PHASE 2																
6	B01	15-4	12	1	15-3 1/2											
5	B02	9-10	19	4	4	2-6										
8	B04	2-6	5	1	2-6											
LOCATION SUPERSTRUCTURE PHASE 1																
5	B07	17-5	78	1	17-4 1/2											
5	B08	38-8	16	1	38-8											
5	B09	2-0	16	10	1-0											
5	B11	3-2	78	10	2-6	0-8										
5	B12	38-8	1	1	38-8											
4	B14	2-1	78	28	0-11	0-6	0-7	0-2 1/4								
LOCATION SUPERSTRUCTURE PHASE 2																
5	B10	15-5	78	1	15-4 1/2											
5	B08	38-8	16	1	38-8											
5	B09	2-0	16	10	1-0											
5	B11	3-2	78	10	2-6	0-8										
5	B12	38-8	1	1	38-8											
4	B14	2-1	78	28	0-11	0-6	0-7	0-2 1/4								
LOCATION APPROACH SLAB NO. 1 & 2 PHASE 1																
8	B10	19-6	21	1	19-6											
5	B11	19-6	16	1	19-6											
5	B12	17-4	48	1	17-4											
5	B13	7-8	20	1	7-8											
LOCATION APPROACH SLAB NO. 1 & 2 PHASE 2																
8	B10	19-6	21	1	19-6											
5	B11	19-6	16	1	19-6											
5	B12	15-4	48	1	15-4											
5	B13	7-8	20	1	7-8											
LOCATION PIPE PILE PHASE 1																
8	B14	27-7	6	17	1	26-8										

END OF LIST

NOTES:

1. Work this sheet with FDOT Design Standards Index 21300.
2. Reinforcement for pipe piles is to be included on separate sheet for pipe piles. See Steel Pipe Pile Detail sheet for details.

WEERING WILLOW WAY

REVISIONS DATE BY DESCRIPTION _____ _____ _____		INITIAL DRAWN BY CHECKED BY DESIGN BY REVISION BY DATE		ENGINEER OF RECORD:  JOHN F. SLIGER, P.E. P.E. #2058		REGISTERED ENGINEERING CONSULTANT CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9692 FL 32308 3370 CORP. BLVD. #421 - FAK (850) 224-0505 PHONE (850) 894-4521 - FAX (850) 224-0505 PROJECT NUMBER: 120		LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 808-1500 * FAX (850) 808-1501		REINFORCING BAR LIST PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS		SHEET NO. BI-19A
---	--	---	--	--	--	--	--	---	--	--	--	----------------------------

Table Date 01-01-11

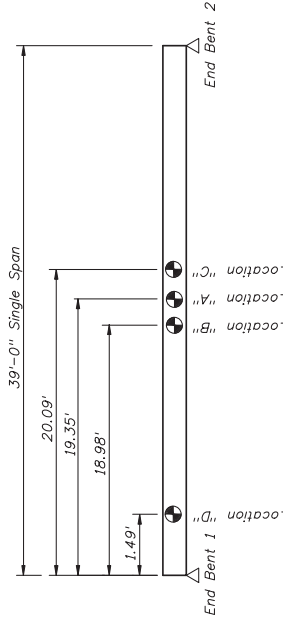
Load Rating Summary Details for Reinforced Concrete Bridges

Table 2 - LRFR

Level	Limit State	Vehicle	Weight (tons)	Load Factors			Moment (Strength)			Shear (Strength)			Dimension	Comments:			
				LL	DC	DW	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension	Distribution Factor (DF)			Rating Factor	Tons	Location
Design Load Rating	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.45	1.72	N/A	A	19.35'	0.71	3.69	N/A	D	1.49	Exterior Beam
	Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.45	2.23	N/A	A	19.35'	0.71	4.79	N/A	D	1.49	Exterior Beam
	Service III (Inv)	HL-93	N/A	0.80	1.00	1.00	0.45	1.17	N/A	B	18.98'	N/A	N/A	N/A	N/A	N/A	Exterior Beam
Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	0.45	1.68	115.79	C	20.09'	0.71	3.33	199.67	D	1.49	Exterior Beam

General Notes:
 1. This table is based on the requirements established in the January 2017 "Structures Manual".

Table 2 Notes:
 1. Permit capacity is determined by using the permit vehicle in all lanes.
 2. Service III Design Inventory tensile stress limit= 6√f'_c
 3. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? Yes No
 4. Load Rating Performed using FDOT LRFD Prestressed Beam Program V5.2.

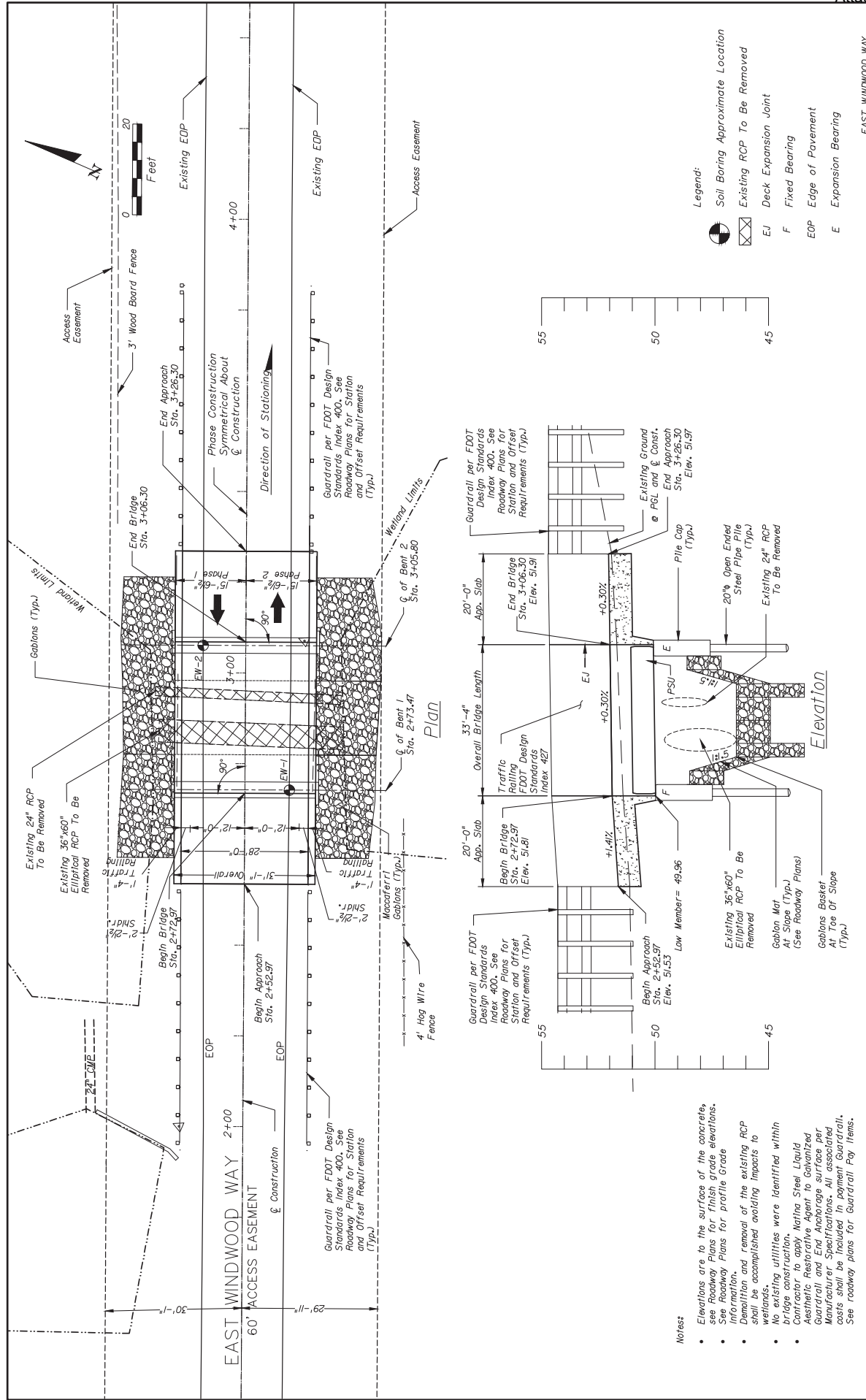


RATING LOCATIONS

Abbreviations:
 Inv - Inventory
 Op - Operating

WEEPING WILLOW WAY

DATE	BY	REVISIONS	DESCRIPTION	INITIAL	ENGINEER OF RECORD:	PROJECT NUMBER: 120	PROJECT NAME:	SHEET NO.
					JOHN F. SLIGER, II, P.E. P.E. #20588	REGISTE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 2692 FL 32-308 3370 CORP. BLVD. # 200 PHOENIX (602) 994-4521 - FAX (602) 224-0505	LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 808-1500 * FAX (850) 808-1801	BL-201
							RAYMOND TUCKER DRAINAGE IMPROVEMENTS	



- Notes:**
- Elevations are to the surface of the concrete. See Roadway Plans for finish grade elevations.
 - Information.
 - Demolition and removal of the existing RCP shall be accomplished avoiding impacts to existing utilities.
 - No existing utilities were identified within bridge construction.
 - Contractor to apply Natina Steel Liquid Asphaltic Restorative Agent to Galvanized Guardrail and End Anchorage surface per Manufacturer Specifications. All associated costs shall be included in payment Guardrail. See roadway plans for Guardrail Pay Items.

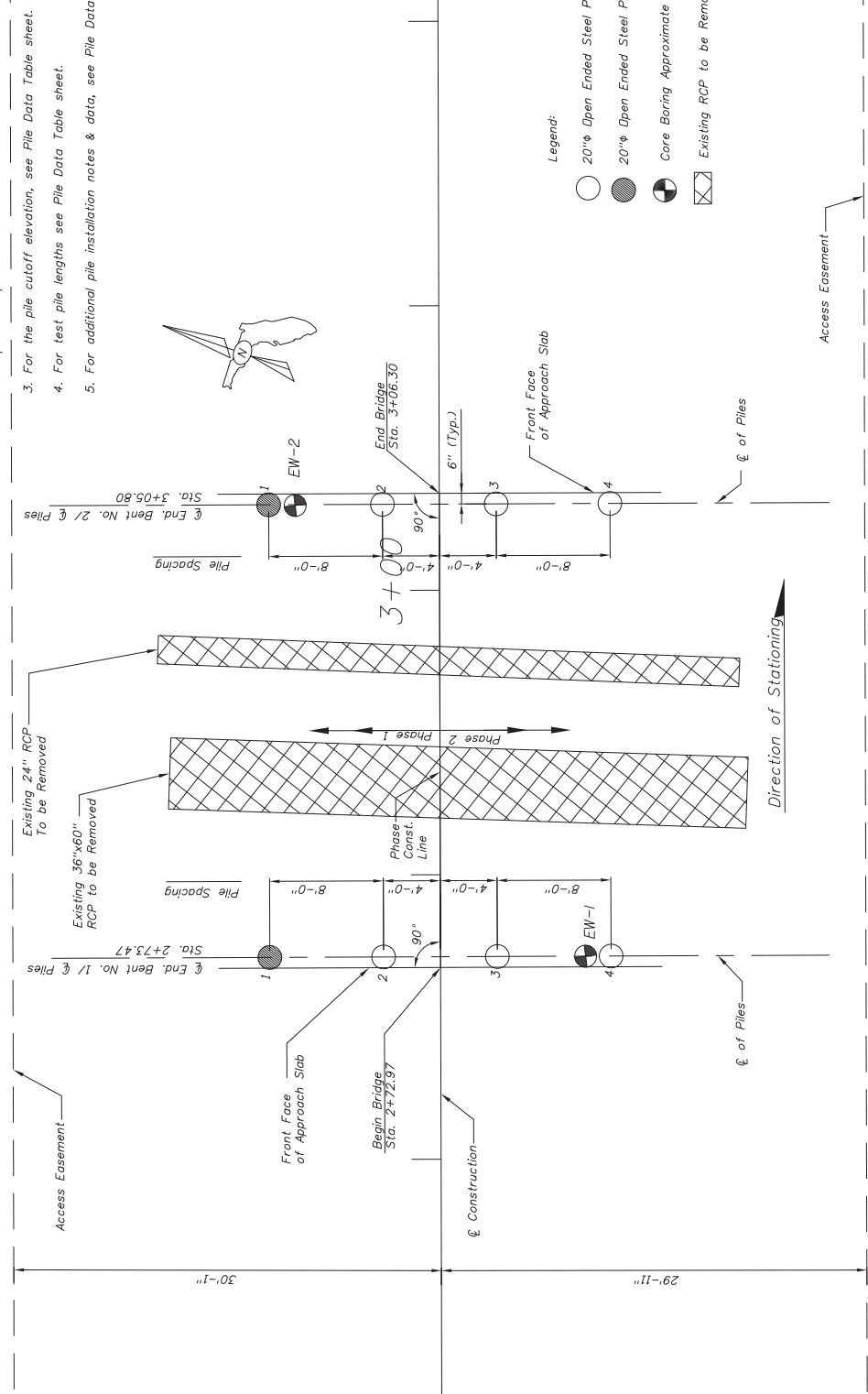
DATE	BY	REVISIONS DESCRIPTION

INITIAL	
DESIGNED BY	J.F.S.
CHECKED BY	J.F.S.
DATE	5/2/2009

ENGINEER OF RECORD:	REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9292 3370 Capital Circle NE, C.J. - Tallahassee, FL 32308 PHONE: (905) 894-4521 - FAX: (905) 224-1905
PROJECT NUMBER:	LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (905) 800-1500 - FAX (905) 800-1501
PROJECT NAME:	RAYMOND TUCKER DRAINAGE IMPROVEMENTS
PLAN AND ELEVATION	
SHEET NO.	B2-1A

NOTES:

1. All piles are 20" dia. open ended steel pipe piles.
2. All piles are plumb.
3. For the pile cutoff elevation, see Pile Data Table sheet.
4. For test pile lengths see Pile Data Table sheet.
5. For additional pile installation notes & data, see Pile Data Table sheet.



EAST WINDWOOD WAY

DATE	BY	REVISIONS	DESCRIPTION	INITIAL	ENGINEER OF RECORD:	PROJECT NAME:	SHEET NO.
					REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9592 3376 Capital Circle, N.E., Tallahassee, FL 32308 PHONE (904) 934-4401 - FAX (904) 934-4405 PROJECT NUMBER: 120	FOUNDATION LAYOUT	BB-3A
					JOHN F. SLIGER II, P.E. P.E. #5550	RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
						LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MCCUSKIE BOUL., TALLAHASSEE, FLORIDA 32308 PHONE (904) 606-1500 * FAX (904) 606-1501	

PILE DATA TABLE												Table Date 07-01-14					
INSTALLATION CRITERIA						DESIGN CRITERIA						PILE CUT-OFF ELEVATIONS					
PIER OR BENT NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	TENSION RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREDFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	LONG TERM SCOUR ELEVATION (ft.)	PILE 1	PILE 2	PILE 3	PILE 4
End Bent 1	20	83	N/A	20.1	57	N/A	N/A	54	0	N/A	N/A	N/A	N/A	47.4	47.4	47.4	47.4
End Bent 2	20	83	N/A	20.1	57	N/A	N/A	54	0	N/A	N/A	N/A	N/A	47.5	47.5	47.5	47.5

Factored Design Load + Net Scour Resistance + Down Drag ≤ Nominal Bearing Resistance


- TENSION RESISTANCE** - The ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires tension capacity).
- TOTAL SCOUR RESISTANCE** - An estimate of the ultimate static side friction resistance provided by the scourable soil.
- NET SCOUR RESISTANCE** - An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.
- 100-YEAR SCOUR ELEVATION** - Estimated elevation of scour due to the 100 year storm event.
- LONG TERM SCOUR ELEVATION** - Estimated elevation of scour used in design for extreme event loading.

PILE INSTALLATION NOTES:

- Contractor to verify location of all utilities prior to any pile driving.
- Minimum Tip Elevation is required for lateral stability.
- No jetting will be allowed without the approval of the Engineer.
- Tip protection shall be provided for all pipe piles. The point protection shall be commercially available weld-on open type pile protector.
- All pipe piles shall be driven open ended. Remove the existing soil inside of the pipe pile and fill with reinforced concrete down to the limits shown on the Steel Pipe Pile Detail Sheet. In the event that the pipe pile plugs and the top soil within the pipe is below the limits of the reinforced concrete, the void shall be filled with unreinforced concrete.

PILE DYNAMIC ANALYSIS NOTES:

- A Dynamic Load Test shall be performed at the test pile locations.
- A dynamically load test re-drive of each test pile will be required following the removal of soil inside the pile and prior to concrete placement.
- If the pile driving equipment is different in Phase II than in Phase I, the contractor shall conduct an additional test for each bent at the location of Pile 3, prior to any other pile driving activities in order to reestablish driving criteria.

DATE		BY		REVISIONS		DESCRIPTION		ENGINEER OF RECORD:		PROJECT NUMBER: 1210		PROJECT NAME:		SHEET NO.	
								 REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9592 3376 Capital Circle N.E., Ft. Lauderdale, FL 33308 PHONE: (954) 974-4401 - F: (954) 974-4405		LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MCCUSKIE BOUL., TALLAHASSEE, FLORIDA 32308 PHONE (950) 606-1500 * FAX (950) 606-1501		PILE DATA TABLE RAYMOND TUCKER DRAINAGE IMPROVEMENTS		BB-1A	

EAST WINDWOOD WAY

DESIGN NOTE:

The Pipe Piles with reinforced concrete fill are designed such that the steel pipe shell can corrode completely. The pile capacity is based upon the remaining concrete core acting as a cast-in-place reinforced pile column, after corrosion of the pipe shell.

STEEL PIPE PILES:

Pipe for piles shall be new, straight steel pipe conforming to Section 962 of FDOT Standard Specifications for Road and Bridge Construction welded and seamless steel pipe piles. Ends of pipe section shall be perpendicular to the longitudinal axis. Pipe wall thickness to be 1/2".

SPLICES:

The ends of all pile sections to be spliced shall be beveled and full butt-welded as shown on the plans. All splices shall be watertight.

INSPECTION:

The Contractor shall have available at all times a suitable drop light for inspecting the entire length of the driven pipe pile before placing reinforcing steel and concrete.

PILE CUT OFF:

Steel Pipe Piles shall be cut off at the required elevations along a plane normal to the axis of the pile. Methods used to cut piles shall meet with the approval of the Engineer.

REINFORCING STEEL:

All reinforcing steel shall conform to ASTM A615, Grade 60.

CONCRETE:

Concrete for piles and columns shall be CLASS IV (Drilled Shaft) f'c = 4,000 psi, and shall conform to Section 346 of the Specifications. The final installed pipe piles shall be clean and free of water before placing reinforcing steel and concrete.

MILL TEST REPORTS:

Notarized mill test report shall be required for all steel pipe piles, and submitted to Leon County for Approval.

WELDING:

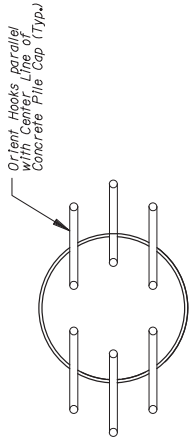
All welding shall conform to AMERICAN WELDING SOCIETY (AWS) Bridge Welding Code.

OPEN ENDED DRIVING TIPS/CUTTING SHOES:

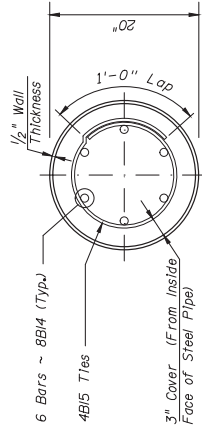
Open ended driving tips shall be provided for all piles. The contractor shall submit pile tip protection shop drawings to Leon County Public Works for Review. Pile Tips/Cutting shoes shall be provided by Associated Pile & Fitting LLC (APF) or approved equal. APF can be contacted at www.associatedpile.com or at 1-800-526-9047. The pile tip protection shall be included in the cost of the steel pipe piles.

PAYMENT NOTE:

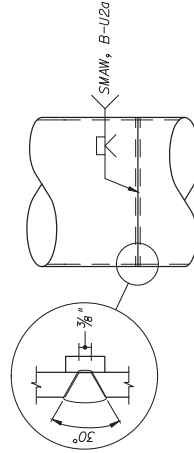
All costs associated with furnishing and installing the Steel Pipe Piles are to be included in the Contract Unit Price for STEEL PILING, (455-35-21) or TEST PILES STEEL (455-144-21), whichever applies. Cost shall include but not be limited to furnishing and driving the steel pipe piles, removing soil from inside of the pile, furnishing and placing the concrete and reinforcing steel.



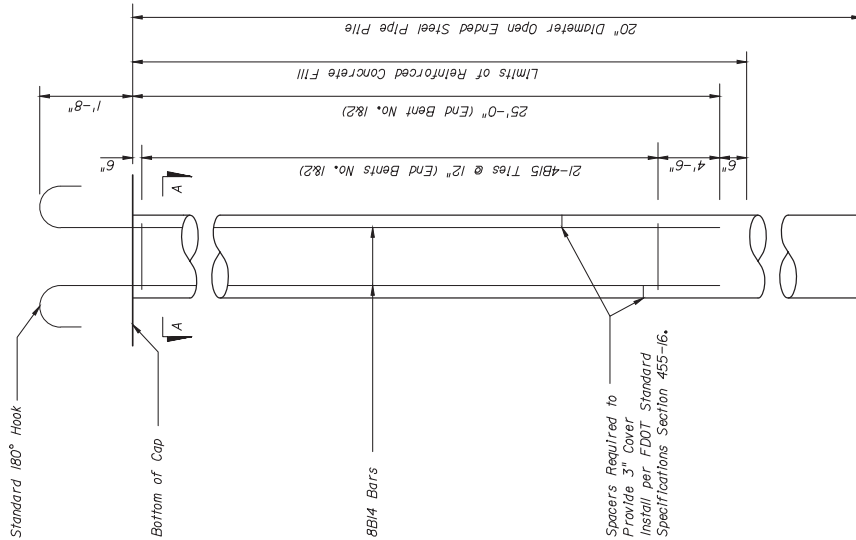
PLAN VIEW OF PIPE PILE
(Showing Orientation of Bars 8B14)



SECTION A-A



PIPE PILE SPLICE DETAIL

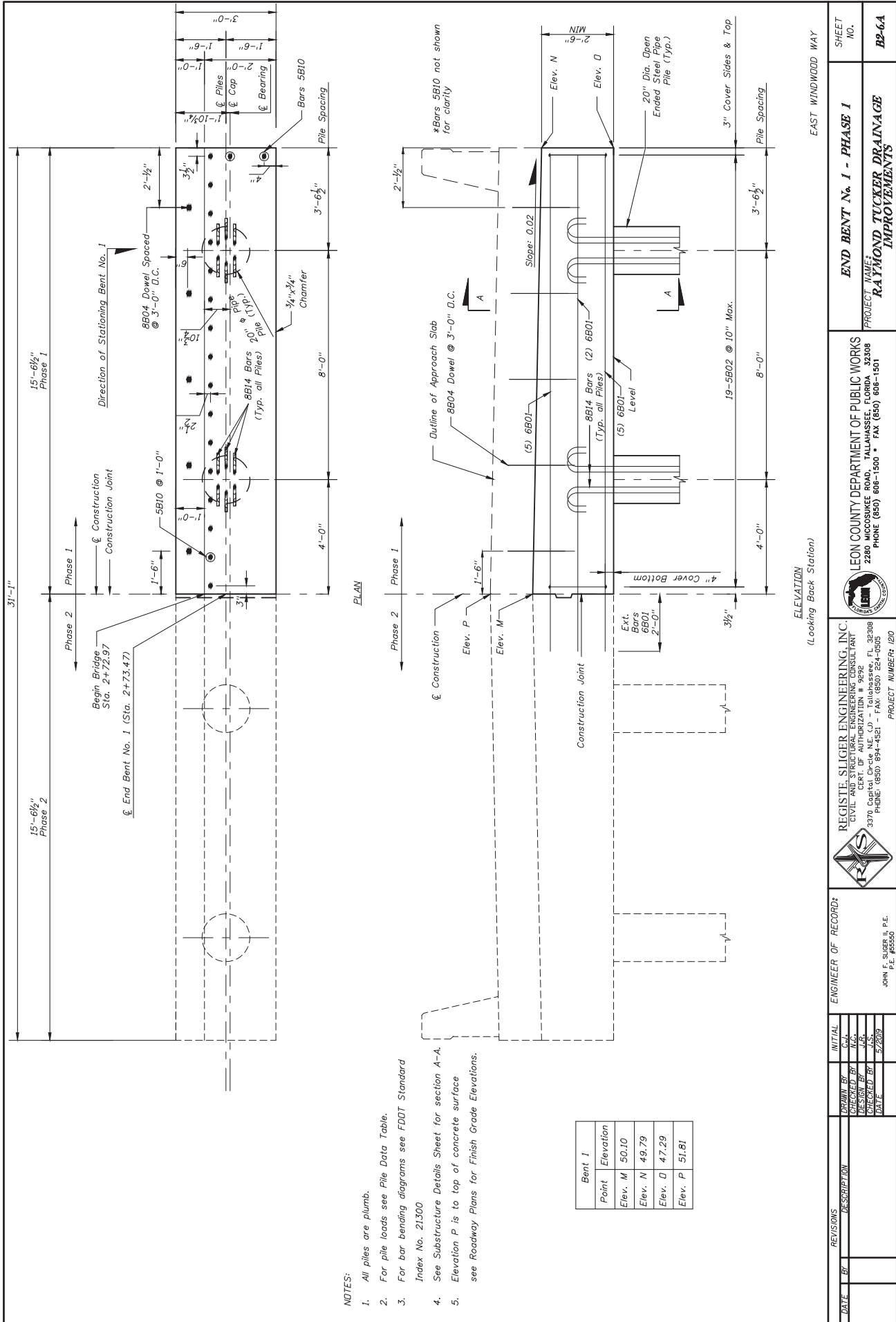


ELEVATION OF PIPE PILE

DATE	REVISIONS	DESCRIPTION	INITIAL	ENGINEER OF RECORD:	PROJECT NUMBER	SHEET NO.
	BY			REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9292 3370 Capital Circle NE, C.J. - Tallahassee, FL 32308 PHONE: (904) 894-4521 - FAX: (904) 224-0905	LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (904) 800-1500 - FAX (904) 800-1501	B2-5A
	CHECKED BY			JOHN F. SLIGER II, P.E. P.E. #5550	RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
	DESIGN BY					
	CHECKED BY					
	DATE					


EAST WINDWOOD WAY

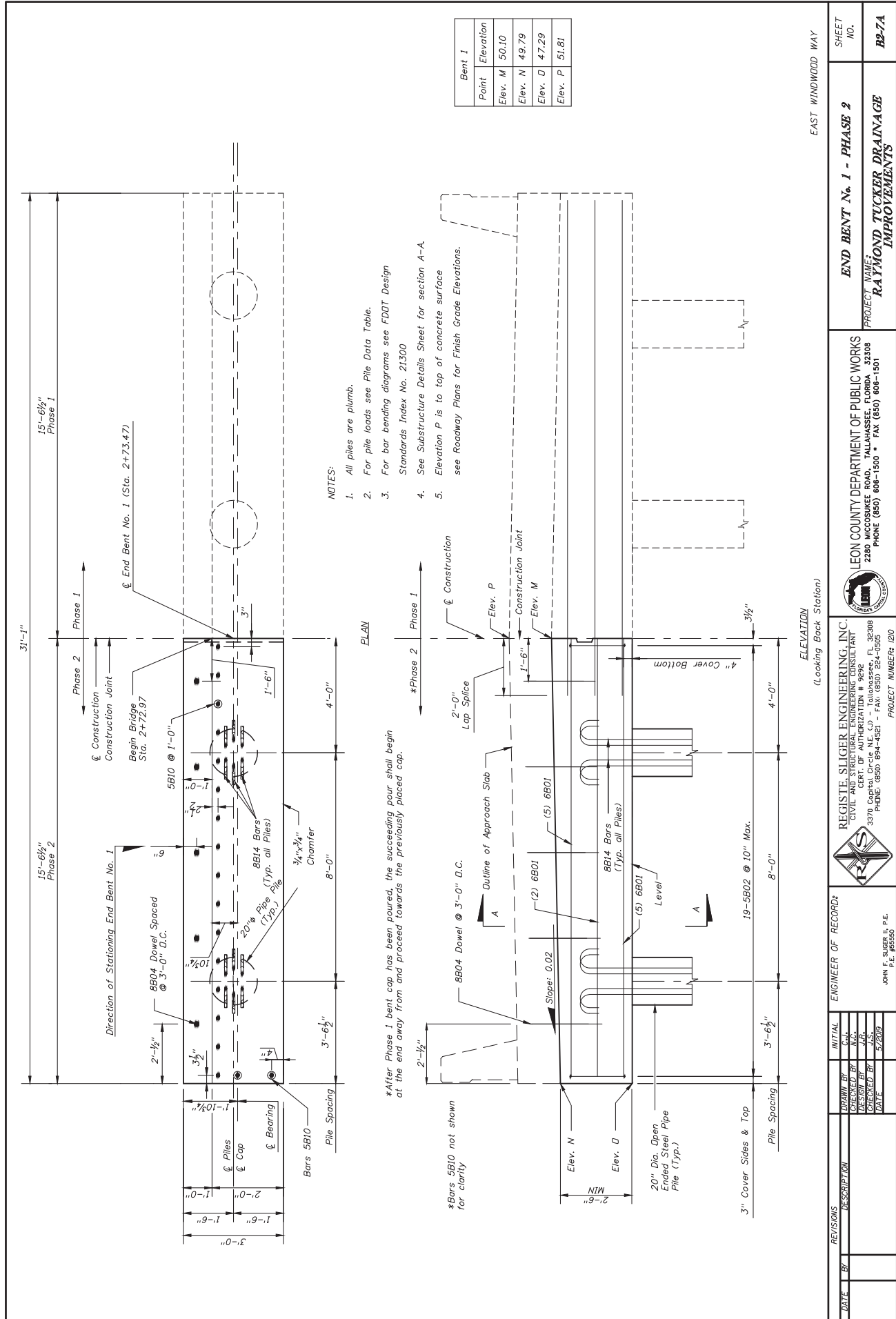
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



- NOTES:
- All piles are plumb.
 - For pile loads see Pile Data Table.
 - For bar bending diagrams see FDOT Standard Index No. 21300
 - See Substructure Details Sheet for section A-A.
 - Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

Bent 1	
Point	Elevation
Elev. M	50.10
Elev. N	49.79
Elev. D	47.29
Elev. P	51.81

DATE	BY	INITIALS	REVISIONS	DESCRIPTION
ENGINEER OF RECORD:  JOHN F. SLIGER, P.E. P.E. #2050				
REGISTERED ENGINEERING CONSULTANT CIVIL AND STRUCTURAL ENGINEERING CERT. OF AUTHORIZATION # 9692 FL 36308 3370 CORP. AVENUE, SUITE 200 PALM BEACH GARDENS, FL 33418 PHONE (561) 894-4321 - FAX (561) 224-0505 PROJECT NUMBER: 120				
LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 * FAX (850) 608-1801				
END BENT No. 1 - PHASE 1 PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS				
EAST WINDWOOD WAY SHEET NO. B2-6A				



NOTES:

1. All piles are plumb.
2. For pile loads see Pile Data Table.
3. For bar bending diagrams see FDOT Design Standards Index No. 21300
4. See Substructure Details Sheet for section A-A.
5. Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

*After Phase 1 bent cap has been poured, the succeeding pour shall begin at the end away from and proceed towards the previously placed cap.

*Bars 5B10 not shown for clarity

Bent	Point	Elevation
1	M	50.10
	N	49.79
	O	47.29
	P	51.81

ELEVATION
(Looking Back Station)

REGISTE: SLIGER ENGINEERING, INC.
CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
CERT. OF AUTHORIZATION # 3692 EL 36308
3370 CORP. BLVD. SUITE 200
TALLAHASSEE, FLORIDA 32308
PHONE: (850) 894-4321 - FAX: (850) 824-0505
PROJECT NUMBER: 120

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
PHONE: (850) 808-1500 * FAX: (850) 808-1801



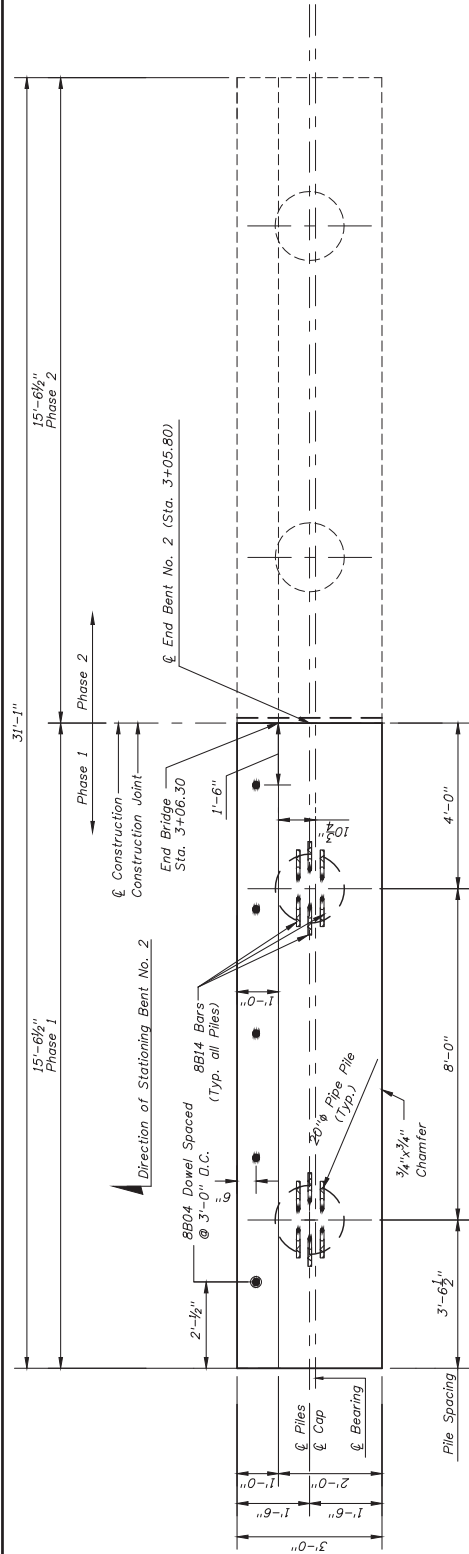
ENGINEER OF RECORD:
JOHN F. SLIGER, P.E.
P.E. #25558

DATE	BY	DESCRIPTION

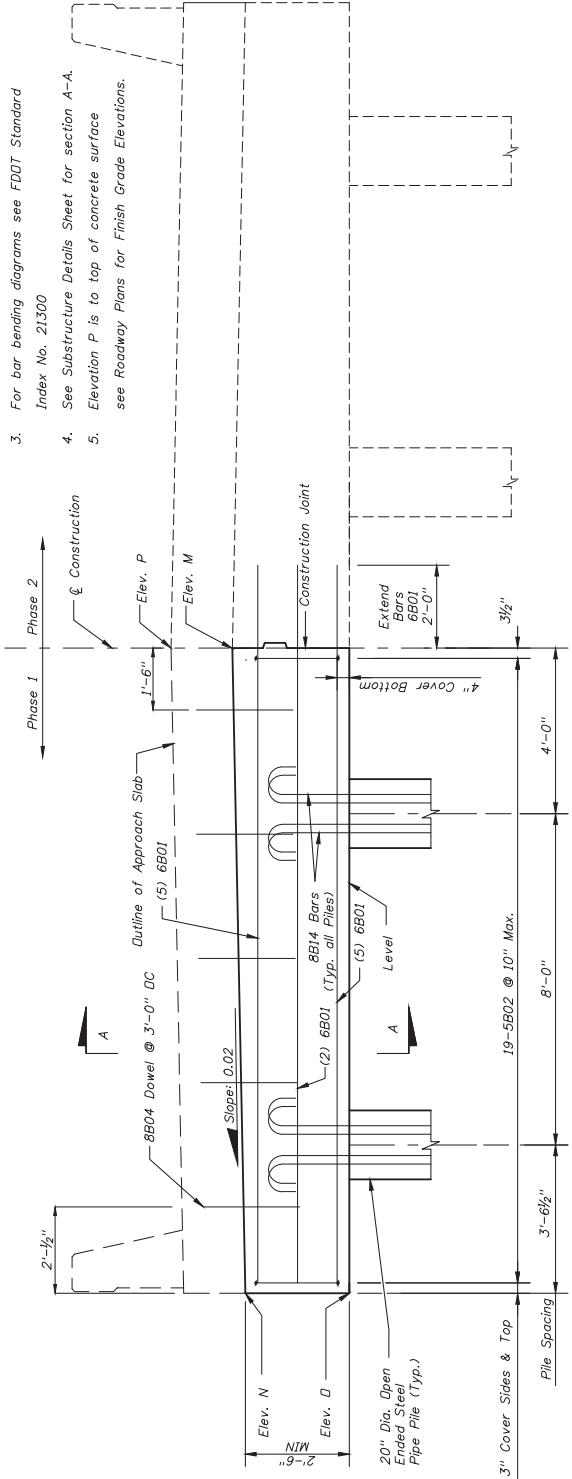
INITIAL	DATE

END BENT No. 1 - PHASE 2
PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS
SHEET NO. B2-7A

EAST WINDWOOD WAY



- NOTES:**
1. All piles are plumb.
 2. For pile loads see Pile Data Table.
 3. For bar bending diagrams see FDOT Standard Index No. 21300
 4. See Substructure Details Sheet for section A-A
 5. Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.



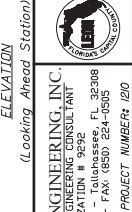
Bent 2	
Point	Elevation
Elev. M	50.20
Elev. N	49.89
Elev. D	47.39
Elev. P	51.91

EAST WINDWOOD WAY

END BENT No. 2 - PHASE 1

PROJECT NAME: **RAYMOND TUCKER DRAINAGE IMPROVEMENTS**

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
PHONE (850) 608-1500 * FAX (850) 608-1801



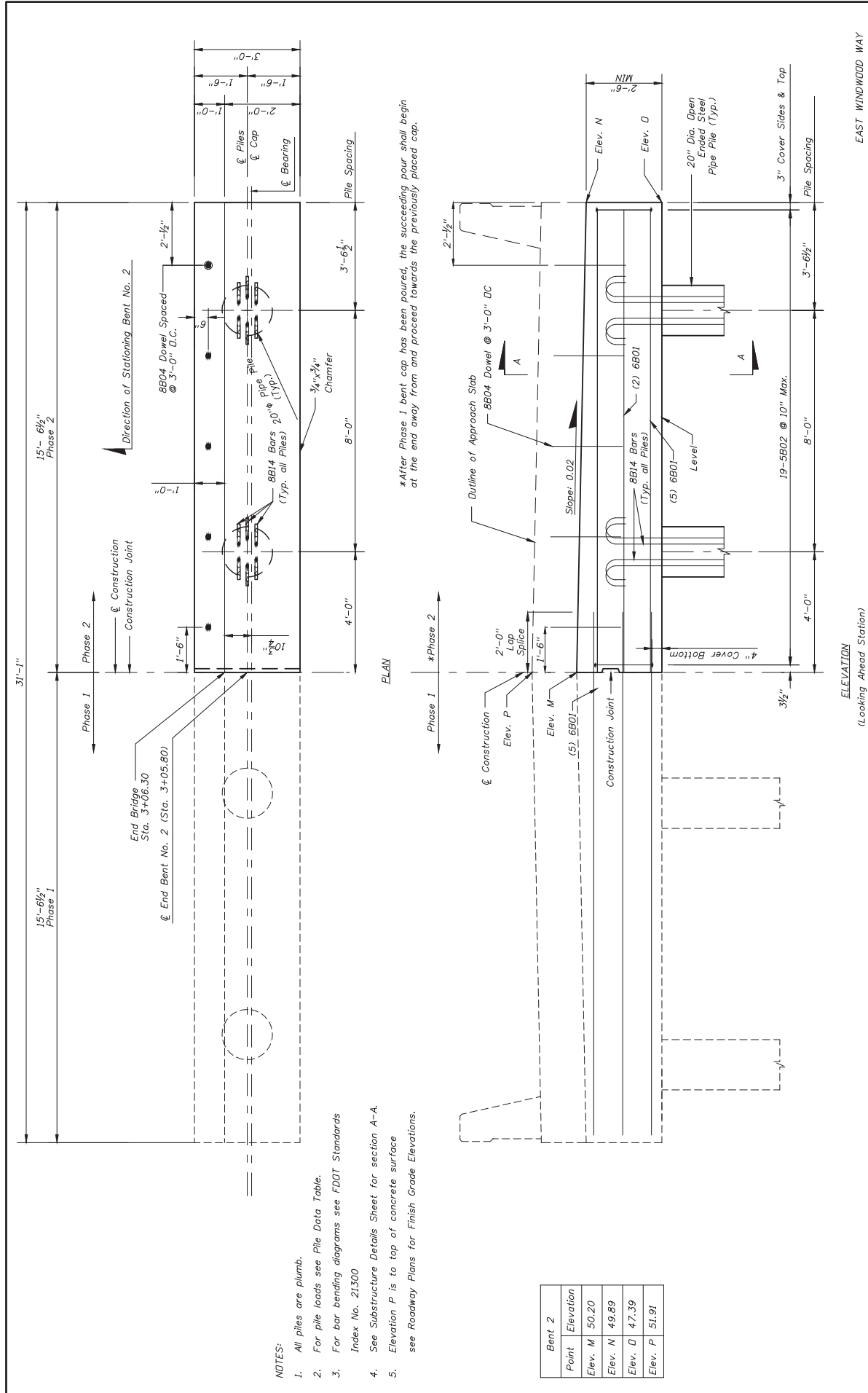
REGISTERED ENGINEERING CONSULTANT
CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
CERT. OF AUTHORIZATION # 9692 FL 32-308
3370 CORP. AVENUE, SUITE 204, TALLAHASSEE, FLORIDA 32308
PHONE (850) 894-4321 - FAX (850) 224-0505
PROJECT NUMBER: 120

ENGINEER OF RECORD:
JOHN F. SLIGER, II, P.E.
P.E. #20588

DATE	BY	INITIALS	DESCRIPTION

DATE	BY	INITIALS	DESCRIPTION

REGISTRE, SLIGER ENGINEERING, INC.
CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
CERT. OF AUTHORIZATION # 9692 FL 32-308
3370 CORP. AVENUE, SUITE 204, TALLAHASSEE, FLORIDA 32308
PHONE (850) 894-4321 - FAX (850) 224-0505
PROJECT NUMBER: 120



NOTES:

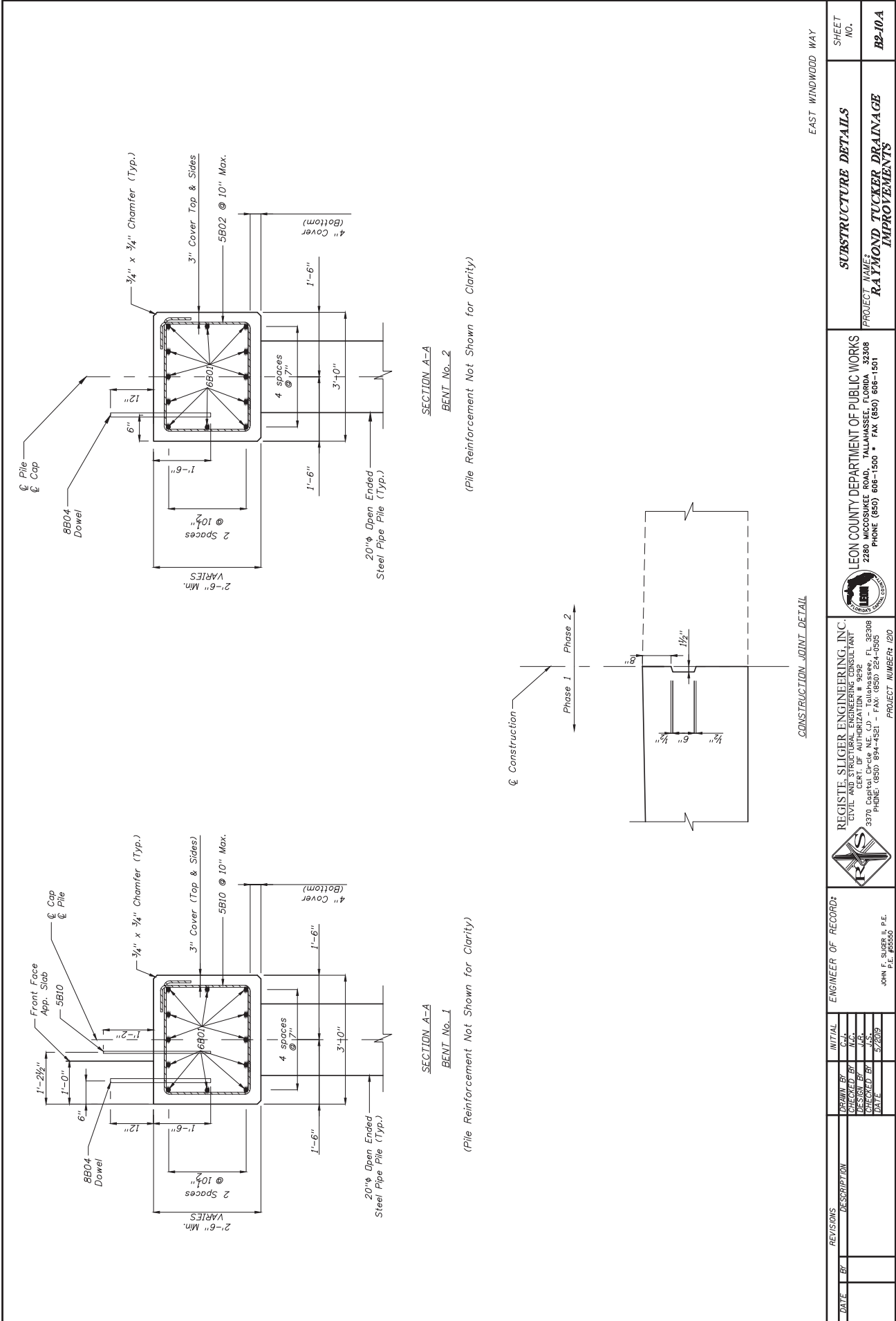
- All piles are plumb.
- For pile loads see Pile Data Table.
- For bar bending diagrams see FDOT Standards Index No. 21300
- See Substructure Details Sheet for section A-A.
- Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

Bent 2	
Point	Elevation
Elev. M	50.20
Elev. N	49.89
Elev. D	47.39
Elev. P	51.91

REVISIONS DATE BY DESCRIPTION		INITIAL C.A. J.C. J.R. J.P. DATE 5/22/09		ENGINEER OF RECORD: JOHN F. SLIGER II, P.E. P.E. #25558		REGISTE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 3692 EL 36308 3370 CORP. CENTER BLVD. SUITE 204 - TAMPA, FL 33613 PHONE (813) 834-4321 - FAX (813) 834-0505 PROJECT NUMBER: 120		LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 * FAX (850) 608-1801		END BENT No. 2 - PHASE 2 PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS		SHEET NO. B2-9A	
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ELEVATION
(Looking Ahead Station)

EAST WINDWOOD WAY



EAST WINDWOOD WAY

REVISIONS	DATE	BY	DESCRIPTION

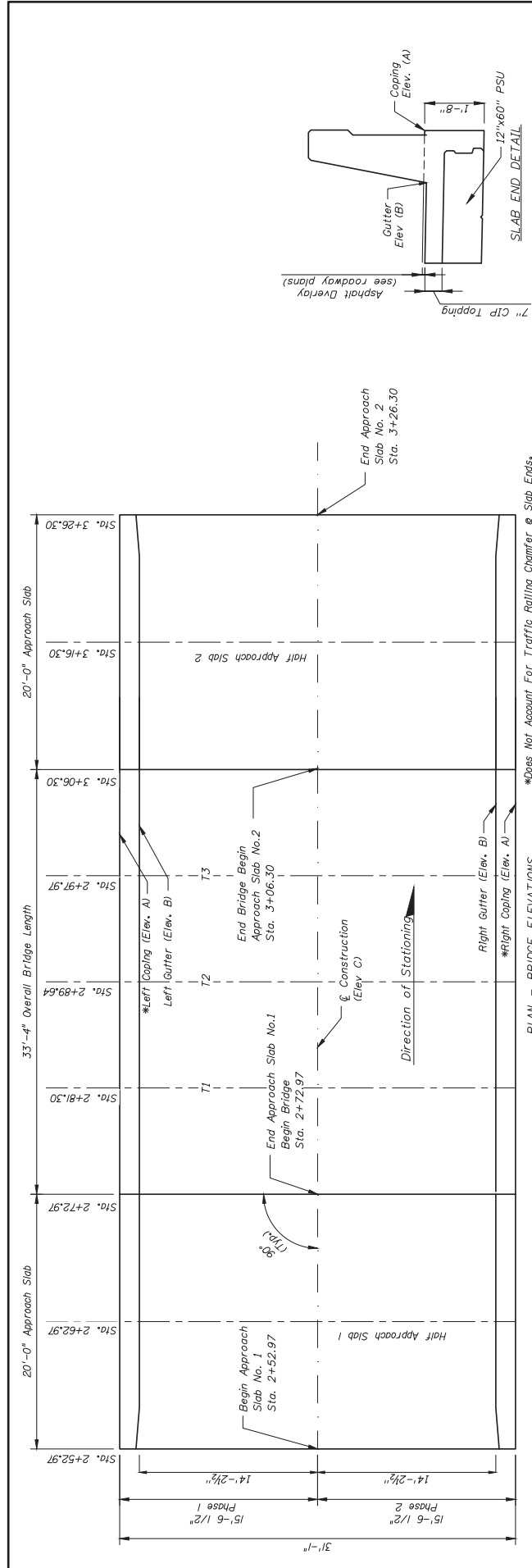
ENGINEER OF RECORD:
 JOHN F. SLIGER II, P.E.
 P.E. #25558

REGISTERED ENGINEERING CONSULTANT:
 REGISTRE, SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 3692 EL 32-308
 3370 CORP. CENTER BLVD. SUITE 200
 TALLAHASSEE, FLORIDA 32308
 PHONE (850) 894-4321 - FAX (850) 224-0505
 PROJECT NUMBER: 120

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 808-1500 * FAX (850) 808-1801

SUBSTRUCTURE DETAILS
PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

SHEET NO.
BB-10A

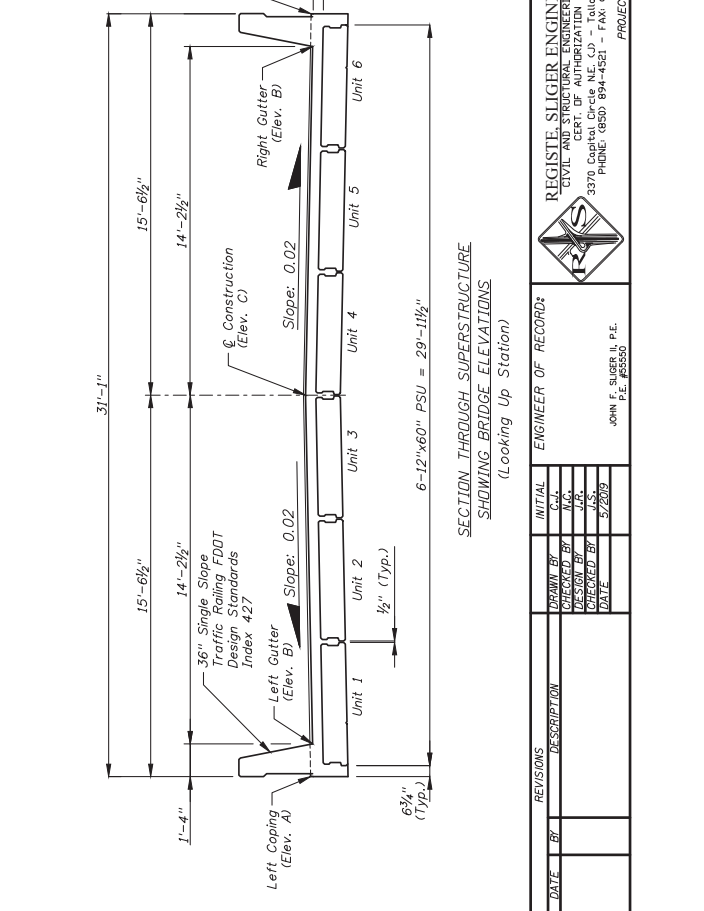


PLAN - BRIDGE ELEVATIONS
*Does Not Account For Traffic Rolling Chamber @ Slab Ends, See FDOT Design Standards Index 420.

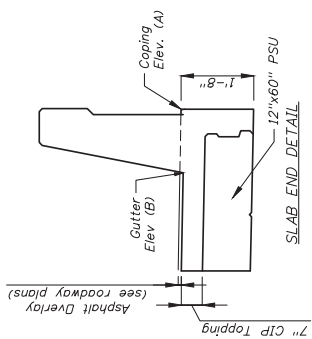
BRIDGE ELEVATION TABLE

Location	Approach Slab 1			Span No. 1			Approach Slab 2			
	Begin	Half	End	Begin	T1	T2	T3	End	Half	End
Station	2+52.97	2+62.97	2+72.97	2+72.97	2+81.30	2+89.64	2+97.97	3+06.30	3+16.30	3+26.30
Elev. A	51.30	51.44	51.58	51.60	51.60	51.63	51.65	51.68	51.71	51.74
Elev. B	51.25	51.39	51.53	51.55	51.55	51.58	51.60	51.63	51.66	51.69
Elev. C	51.53	51.67	51.81	51.83	51.83	51.86	51.88	51.91	51.94	51.97

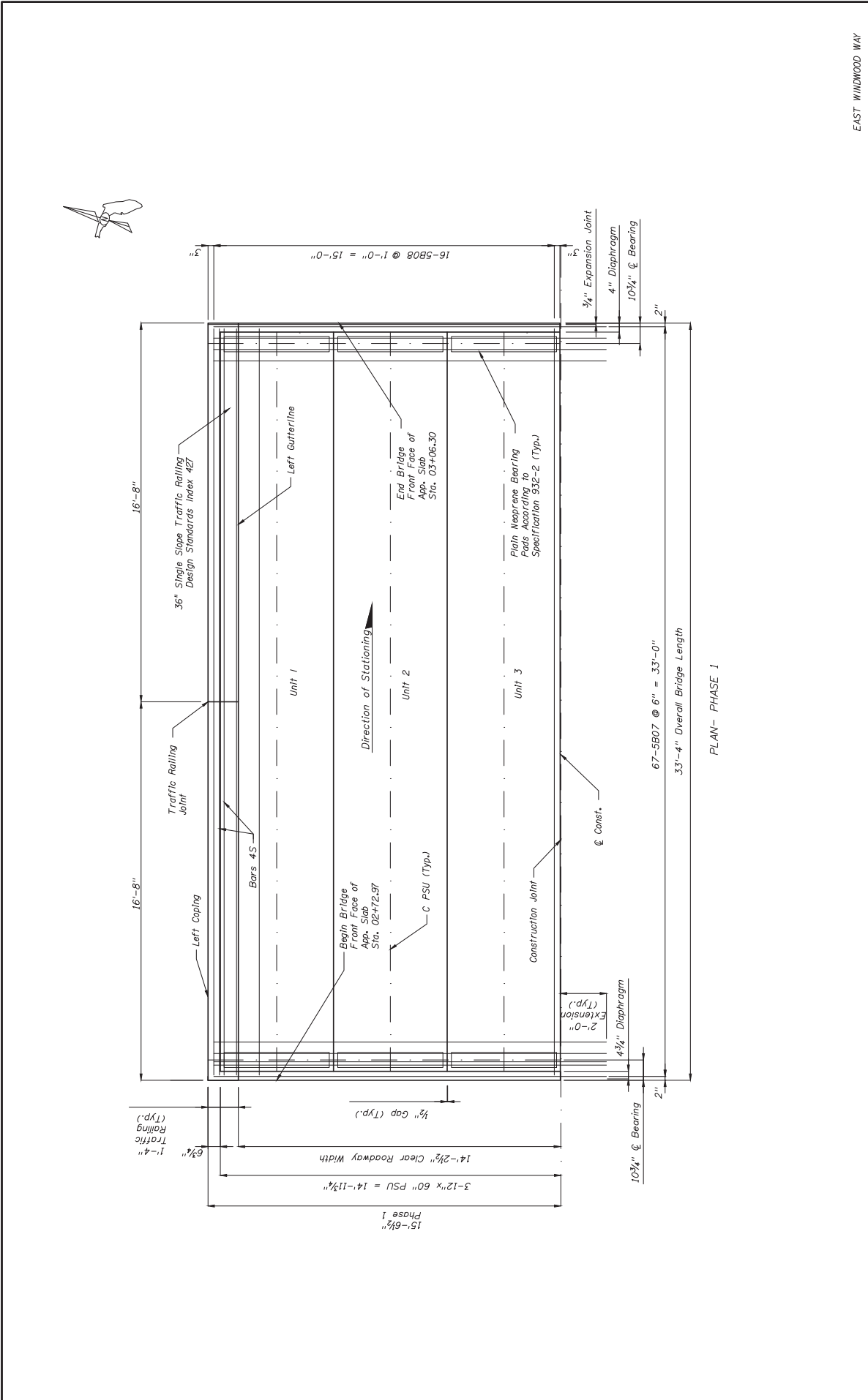
Note: Bridge Elevations are to the Surface of the Concrete Slab. See Roadway Plans for Finish Grade Elevations.



SECTION THROUGH SUPERSTRUCTURE
SHOWING BRIDGE ELEVATIONS
(Looking Up Station)



REVISIONS DATE BY DESCRIPTION		ENGINEER OF RECORD: JOHN F. SLIGER, II, P.E. P.E. #5550		PROJECT NUMBER: 120	
CHECKED BY: JAS. DATE: 5/20/19		REGISTERED PROFESSIONAL ENGINEER: JOHN F. SLIGER, II, P.E. P.E. #5550		PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
DESIGN BY: JAS.		LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (904) 600-1500 • FAX (904) 600-1501		PROJECT NUMBER: BRIDGE ELEVATIONS	
DRAWN BY: JAS.		EAST WINDWOOD WAY		SHEET NO. BB-11A	



DATE	BY	REVISIONS DESCRIPTION

INITIAL	DATE
C.M.	
J.C.	
J.R.	
J.P.	
J.E.	
J.B.	
J.D.	
J.F.	
J.G.	
J.H.	
J.I.	
J.K.	
J.L.	
J.M.	
J.N.	
J.O.	
J.P.	
J.Q.	
J.R.	
J.S.	
J.T.	
J.U.	
J.V.	
J.W.	
J.X.	
J.Y.	
J.Z.	

ENGINEER OF RECORD:	REGISTERED ENGINEERING CONSULTANT
JOHN F. SLIGER, II, P.E.	CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
P.E. #20588	CERT. OF AUTHORIZATION # 9692
	3370 CAPITAL AVENUE, SUITE 204
	ORLANDO, FLORIDA 32806
	PHONE: (407) 894-4321 FAX: (407) 894-4325
	PROJECT NUMBER: 120

ENGINEER OF RECORD:	REGISTERED ENGINEERING CONSULTANT
JOHN F. SLIGER, II, P.E.	CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
P.E. #20588	CERT. OF AUTHORIZATION # 9692
	3370 CAPITAL AVENUE, SUITE 204
	ORLANDO, FLORIDA 32806
	PHONE: (407) 894-4321 FAX: (407) 894-4325
	PROJECT NUMBER: 120

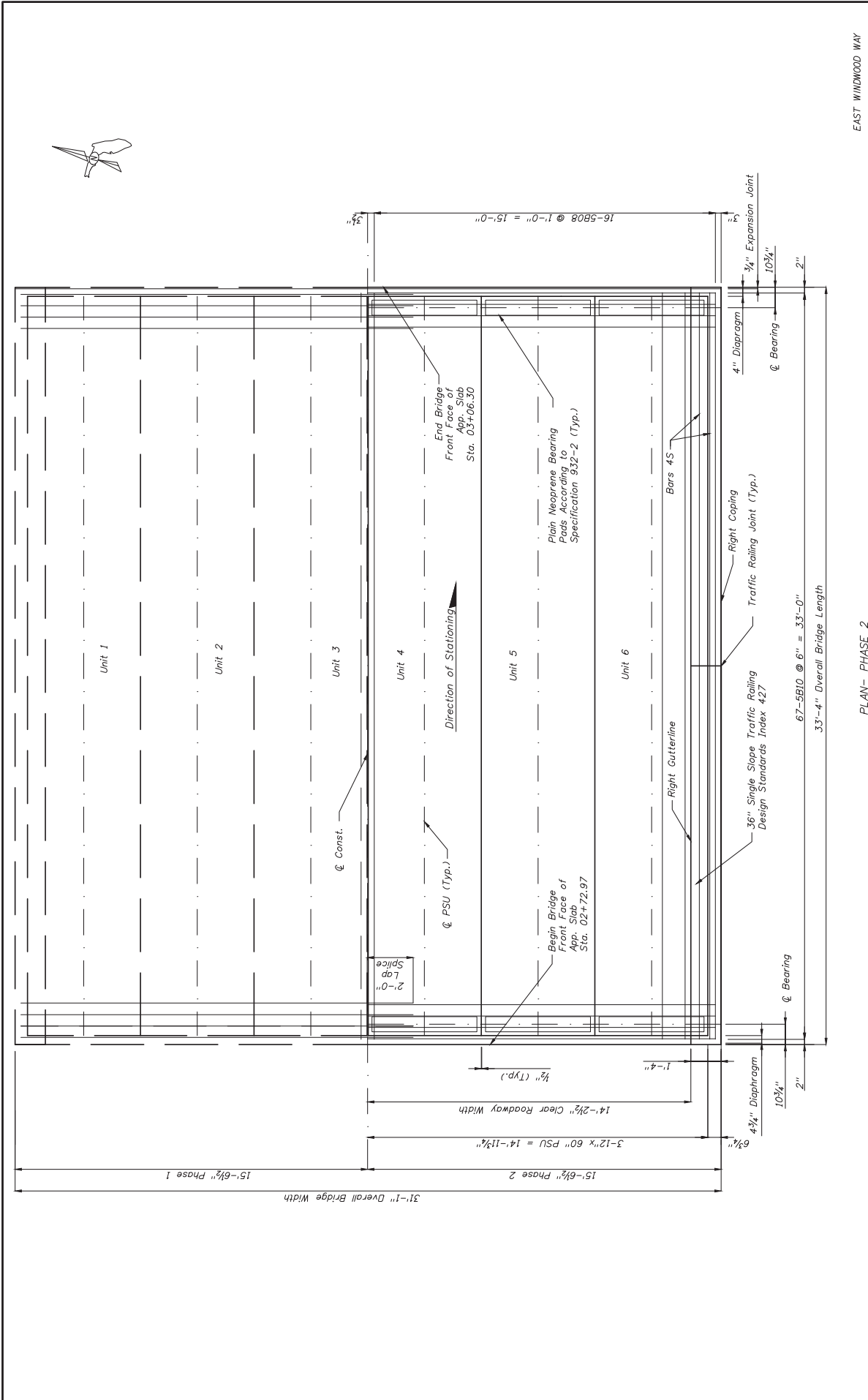
LEON COUNTY DEPARTMENT OF PUBLIC WORKS	LEON COUNTY DEPARTMENT OF PUBLIC WORKS
2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308	2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
PHONE (850) 608-1500 * FAX (850) 608-1501	PHONE (850) 608-1500 * FAX (850) 608-1501

SUPERSTRUCTURE PLAN (PHASE 1)	SHEET NO.
RAYMOND TUCKER DRAINAGE IMPROVEMENTS	BB-12A

EAST WINDWOOD WAY

PLAN - PHASE 1





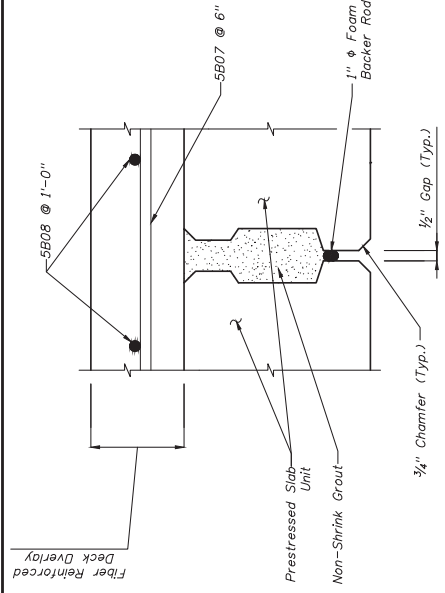
DATE	BY	REVISIONS	DESCRIPTION

ENGINEER OF RECORD: JOHN F. SLIGER II, P.E. P.E. #20588	REGISTERED ENGINEERING CONSULTANT CIVIL AND STRUCTURAL ENGINEERING CERT. OF AUTHORIZATION # 2692 3370 CORP. AVENUE, SUITE 200 PALM BEACH, FL 33408 PHONE: (561) 894-4321 - FAX: (561) 224-0505 PROJECT NUMBER: 120	LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE: (850) 608-1500 * FAX: (850) 608-1801	SUPERSTRUCTURE PLAN (PHASE 2) PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	SHEET NO. BB-161A
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EAST WINDWOOD WAY

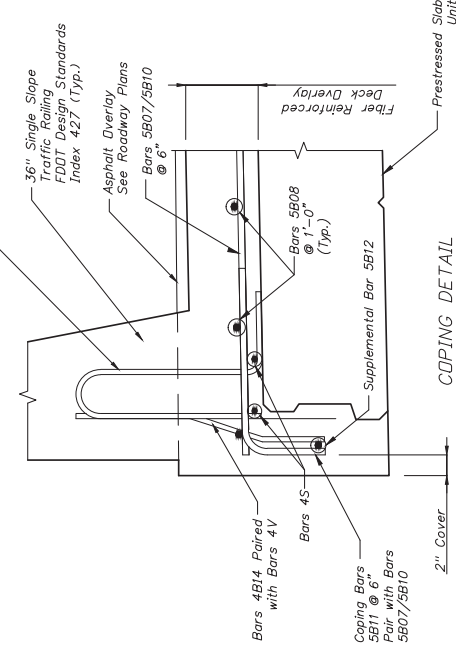
PLAN - PHASE 2



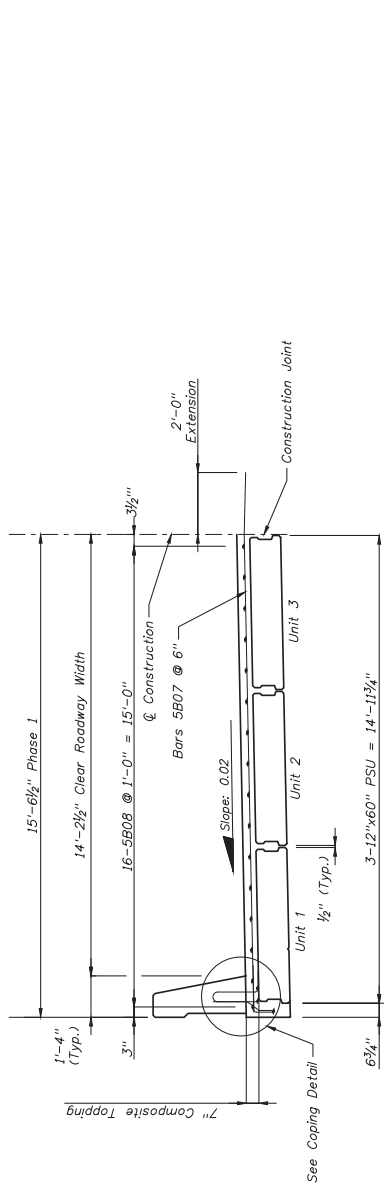


KEYWAY DETAIL

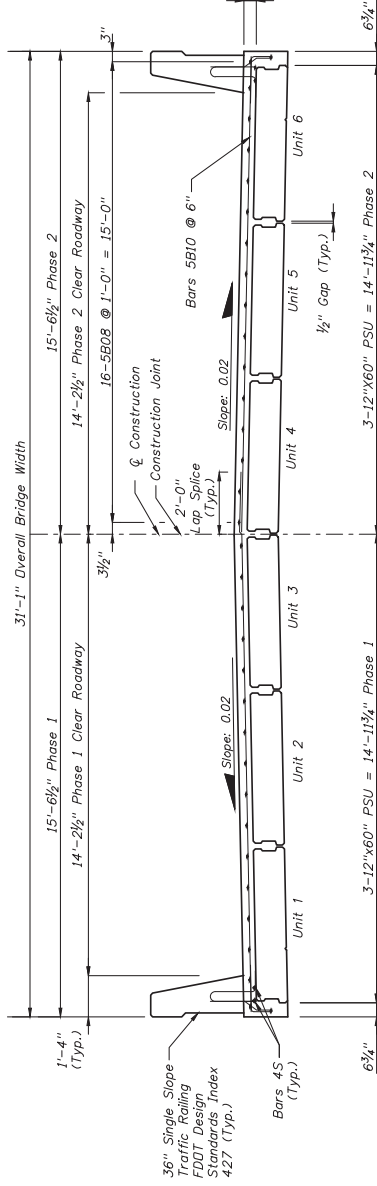
* For additional reinforcing details, see FDOT Design Standards Index 427



COPING DETAIL



PHASE 1 SUPERSTRUCTURE SECTION



PHASE 2 SUPERSTRUCTURE SECTION

EAST WINDWOOD WAY

REVISIONS	DATE	BY	DESCRIPTION

ENGINEER OF RECORD:
 JOHN F. SLIGER II, P.E.
 P.E. #25558

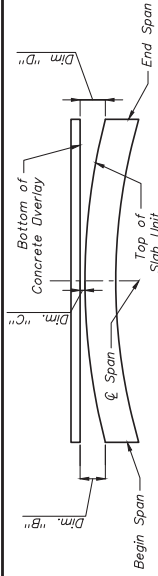
REGISTE: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9692 FL 32-308
 3370 CORTLAND AVENUE, SUITE 204
 PALM BEACH, FLORIDA 33410
 PHONE (561) 850-8944-4521 - FAX (561) 224-0505
 PROJECT NUMBER: 120



LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801

SUPERSTRUCTURE DETAILS (1 OF 2)
 PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

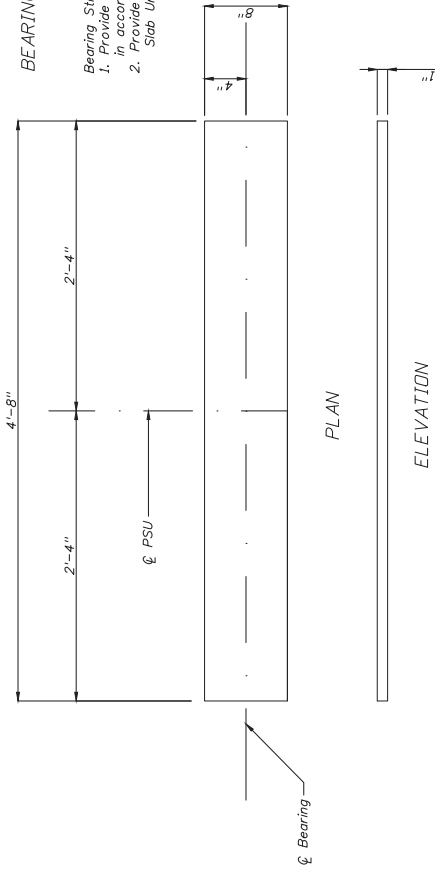
SHEET NO.
BB-14A



BUILD-UP DIAGRAM FOR TANGENT SPANS (ALONG ζ SLAB UNIT) (CASE 1)

BEARING PAD DETAILS

- Bearing Strip Notes:
1. Provide Bearing Strips (Shear Modulus $G=110$ Pst) in accordance with FDOT Standard Specification, Section 932
 2. Provide matching Bearing Strips at each end of Prestressed Slab Units



DEAD LOAD DEFLECTION DIAGRAM

PRESTRESSED SLAB UNIT CAMBER AND BUILD-UP NOTES:

The build-up values given in the table are based on theoretical unit cambers. The contractor shall monitor unit cambers for the purpose of predicting camber values at the time of the deck pour. If the predicted cambers based on field measurements differ more than $\pm 1/2"$ from the theoretical "Net Unit Camber @ 120 Days" shown in the table, propose modified build-up dimensions as required and submit to Leon County for approval a minimum of 21 days prior to casting overlay concrete.

POURED EXPANSION JOINT DATA TABLE Table Date 1-01-09

LOCATION	INDEX NO. 21110	TOTAL DESIGN @ 70°F MOVEMENT	*DIM. "A" ADJUSTMENT PER 10°F
Bent 2	3/4"	0.31"	+/- 0.028"

*For Temperature above 70°F reduce the opening.
 For Temperature below 70°F increase the opening.
 NOTE: Dim. "A" adjustment per 10°F F shown is measured perpendicular to ζ Expansion Joint. Work this table with FDOT Design Standards Index No. 21110.

BUILD-UP & DEFLECTION DATA TABLE Table Date 11-19-08

FOR PRESTRESSED SLAB UNITS

LOCATION	REQUIRED THEORETICAL BUILD-UP OVER ζ BEAM *			NET BEAM DEFLECTION BUILD-UP CAMBER (PRELIM.)		
	AT BEGIN SPAN DIM "B"	AT ζ SPAN DIM "C"	AT END SPAN DIM "D"	DEAD LOAD (OF BEAM) @ 120 DAYS DIM "A"	DEFLECTION @ 120 DAYS DIM "A"	DECK POUR CASE NO.
1	0.48	0	0.48	0.79	0.31	1
2	0.48	0	0.48	0.79	0.31	1
3	0.48	0	0.48	0.79	0.31	1
4	0.48	0	0.48	0.79	0.31	1
5	0.48	0	0.48	0.79	0.31	1
6	0.48	0	0.48	0.79	0.31	1

NOTES: Work this table with FDOT Developmental Design Standard Index No. D20399.

EAST WINDWOOD WAY

PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	SHEET NO. BB-16A
--	----------------------------

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801

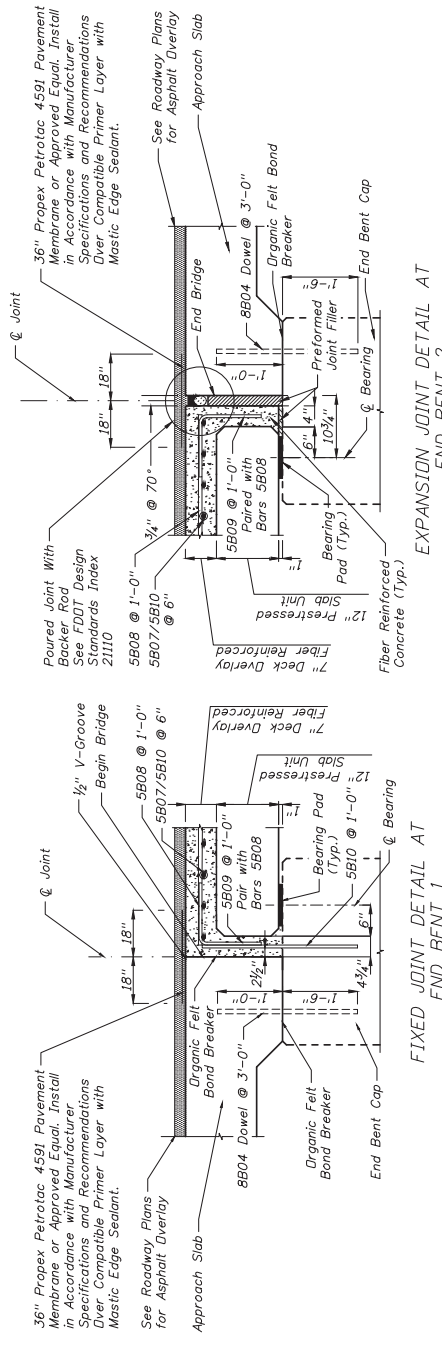


REGISTERED ENGINEERING CONSULTANT
 CIVIL AND STRUCTURAL ENGINEERING
 CERT. OF AUTHORIZATION # 9692 FL 38308
 3370 CAPITAL CENTER BLVD., SUITE 200
 TALLAHASSEE, FLORIDA 32310
 PHONE (850) 994-4321 - FAX (850) 224-0505
 PROJECT NUMBER: 120



ENGINEER OF RECORD:
 JOHN F. SILIGER, P.E.
 P.E. #20508

DATE	BY	DESCRIPTION

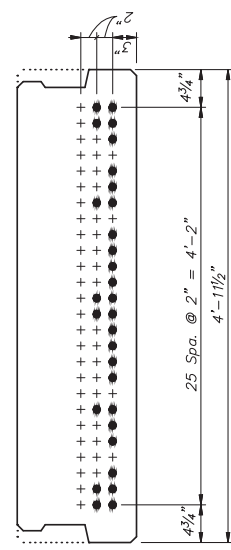


* Add Preformed Joint Filler Between Bearing Pads

Table Date 1-01-09

PRESTRESSED STANDARD SLAB UNITS - TABLE OF VARIABLES

LOCATION	CONCRETE PROPERTIES		PLAN VIEW		END OF UNIT **		UNIT		REINFORCING STEEL																							
	SPAN NO. / TYPE	CLASS	STRENGTHS (psi)	28 Day Release	STND. PTRK. TYPE	CASE	END 1	END 2	ANGLE ϕ	END 1	END 2	DIM J	DIM K1	DIM K2	DIM L	DIM R	DIM C	4D1	4D2	4D3	5Y1	5Y2	4K	NO. OF BAR SPACES	BAR SPACING *	V1	V2	V3	INDEX NO.	RAILING REINF. ***		
I	1/12"x60"	V1	8,500	6,000	I	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	32'-6 1/2"	1/4"	3'-3"	3'-3"	3'-3"	3'-3"	58	3'-3"	4'-4 1/2"	4'-4 1/2"	132	12	1	16	12"	10 1/2"	12"	N/A	N/A
I	2/12"x60"	V1	8,500	6,000	I	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	32'-6 1/2"	1/4"	3'-3"	3'-3"	3'-3"	3'-3"	58	3'-3"	4'-4 1/2"	4'-4 1/2"	132	12	1	16	12"	10 1/2"	12"	N/A	N/A
I	3/12"x60"	V1	8,500	6,000	I	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	32'-6 1/2"	1/4"	3'-3"	3'-3"	3'-3"	3'-3"	58	3'-3"	4'-4 1/2"	4'-4 1/2"	132	12	1	16	12"	10 1/2"	12"	N/A	N/A
I	4/12"x60"	V1	8,500	6,000	I	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	32'-6 1/2"	1/4"	3'-3"	3'-3"	3'-3"	3'-3"	58	3'-3"	4'-4 1/2"	4'-4 1/2"	132	12	1	16	12"	10 1/2"	12"	N/A	N/A
I	5/12"x60"	V1	8,500	6,000	I	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	32'-6 1/2"	1/4"	3'-3"	3'-3"	3'-3"	3'-3"	58	3'-3"	4'-4 1/2"	4'-4 1/2"	132	12	1	16	12"	10 1/2"	12"	N/A	N/A
I	6/12"x60"	V1	8,500	6,000	I	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	32'-6 1/2"	1/4"	3'-3"	3'-3"	3'-3"	3'-3"	58	3'-3"	4'-4 1/2"	4'-4 1/2"	132	12	1	16	12"	10 1/2"	12"	N/A	N/A



TYPE 1 30 STRANDS

STRAND DESCRIPTION: Use 1/2" Diameter, Grade 270, Low Relaxation Strands stressed at 30.975 kips each. Area per strand equals .153 sq. in.

STRAND PATTERNS

STRAND DEBONDING LEGEND

- - fully bonded strands.
- - strands debonded "----" from end of beam.
- ◐ - strands debonded "----" from end of beam.
- ◑ - strands debonded "----" from end of beam.
- ◒ - strands debonded "----" from end of beam.

NOTE: On slab units with skewed ends the debonded length shall be measured along the debonded strand.

DIMENSION NOTES

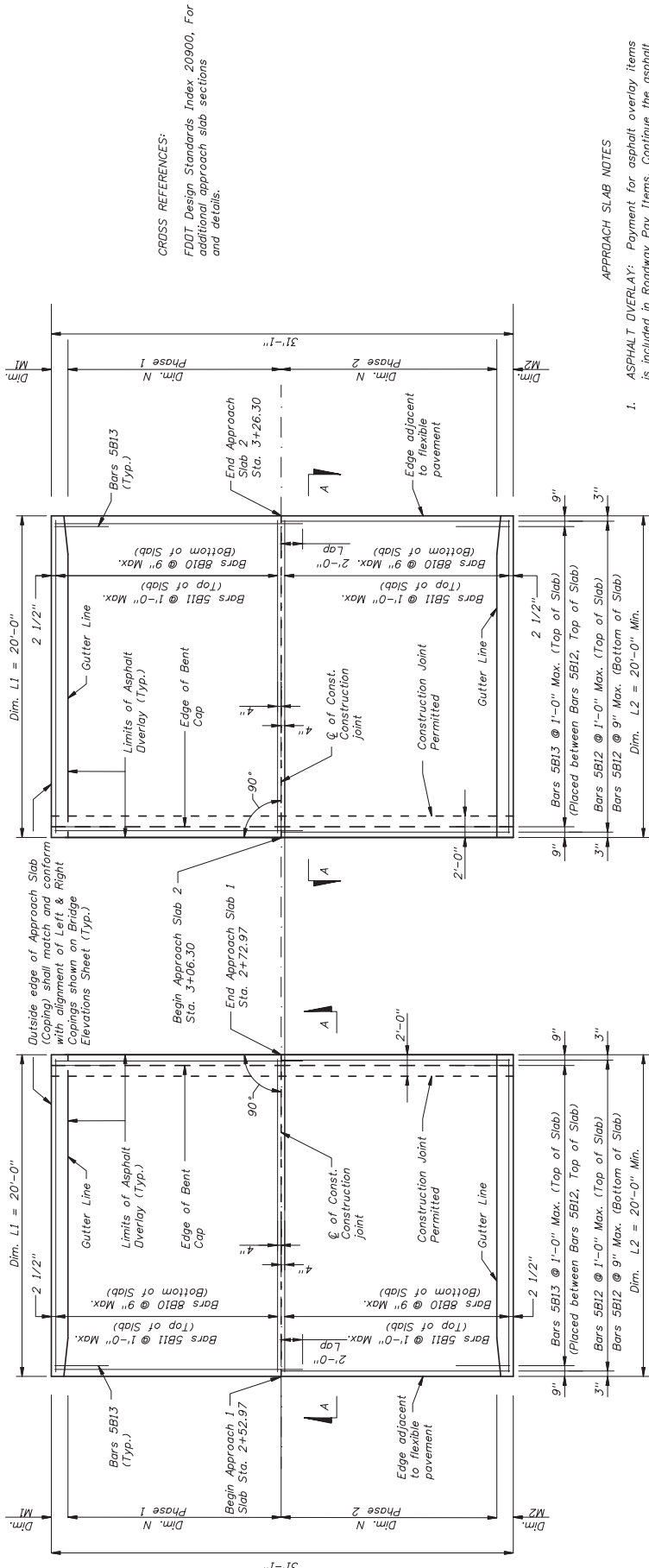
* All longitudinal slab unit dimensions shown on this sheet with a single asterisk (*) are measured along the top of unit at the centerline of slab unit.

** End of slab unit bearing dimensions "J" and "K" are measured along the bottom of the slab unit.

*** See Index No. 20350 for modified reinforcement. See "Prestressed Slab Units - Traffic Railing Reinforcing Layout Table" for railing placement on horizontal curves.

EAST WINDWOOD WAY

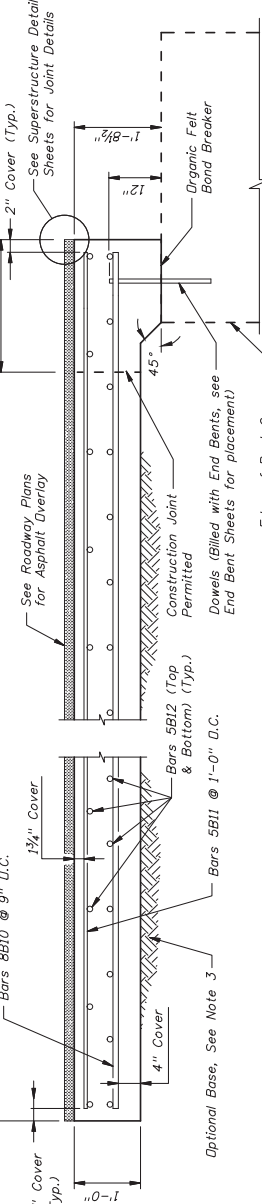
DATE	BY	REVISIONS	DESCRIPTION	INITIAL	ENGINEER OF RECORD:	REGISTRE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 2692 FL 32-308 3370 CORP. BLVD. SUITE 100 PHOENIX, AZ 85018-4521 - FAX (602) 224-0505	LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 * FAX (850) 608-1801	PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	SHEET NO. BB-16A
					JOHN F. SLIGER, II, P.E. P.E. #20508				



- APPROACH SLAB NOTES**
1. ASPHALT OVERLAY: Payment for asphalt overlay items is included in Roadway Pay Items. Continue the asphalt pavement over the approach slab and match the course type used on the roadway.
 2. CONCRETE: Provide Class II (Bridge Deck) concrete for approach slabs.
 3. See Roadway Plans for Asphalt Overlay and Optional Base Group Details

APPROACH SLAB INDEX 20900 TABLE OF DIMENSIONS

LOCATION	DIMENSIONS				ANGLE
	L1	L2	M1	M2	
Slab No.1 - Phase 1	20'-0"	N/A	1'-4"	N/A	14'-2 1/2"
Slab No.2 - Phase 1	20'-0"	N/A	1'-4"	N/A	14'-2 1/2"
Slab No.1 - Phase 2	N/A	20'-0"	N/A	1'-4"	14'-2 1/2"
Slab No.2 - Phase 2	N/A	20'-0"	N/A	1'-4"	14'-2 1/2"



APPROACH SLABS

DATE	REVISIONS	DESCRIPTION	INITIAL	DATE

SECTION A-A

ENGINEER OF RECORD:
 JOHN F. SUGER II, P.E.
 P.E. #5550

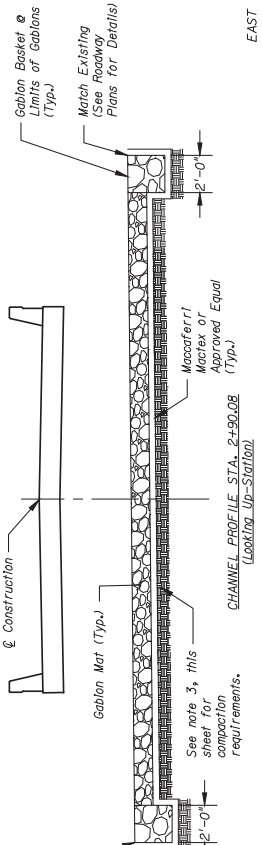
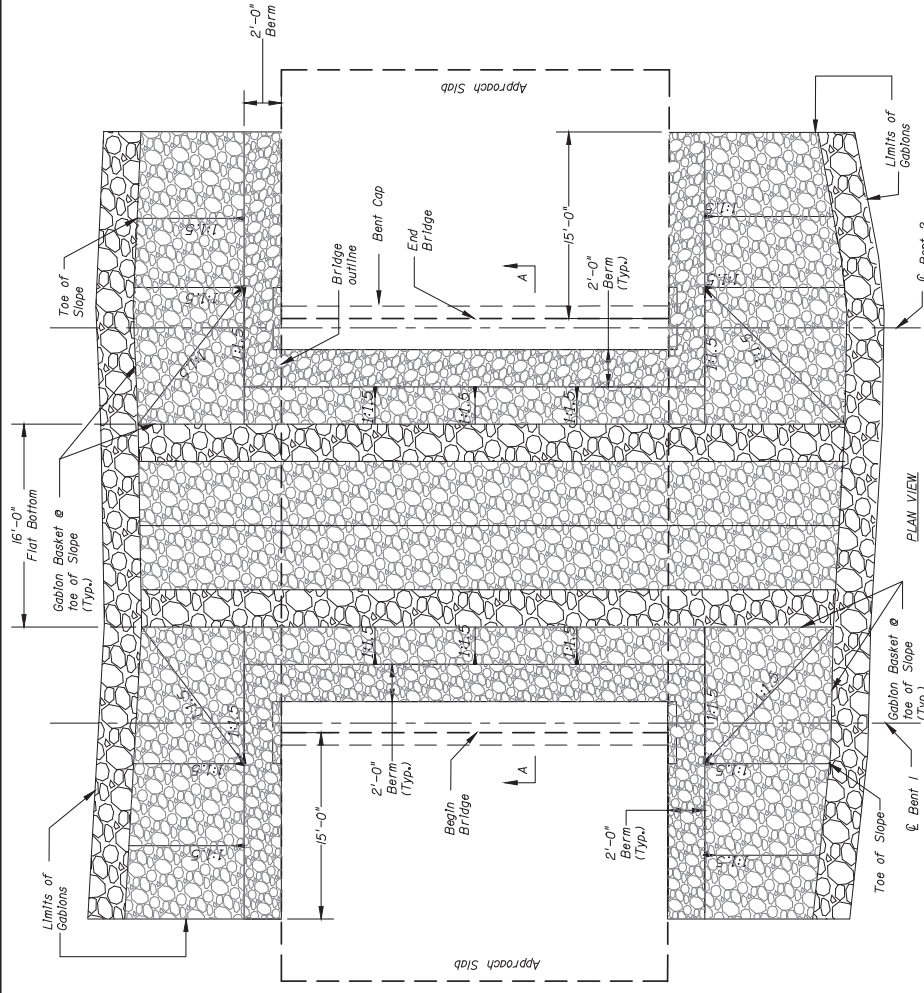
REGISTE SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9292
 3370 Capital Circle NE, C.J. - Tallahassee, FL 32308
 PHONE: (905) 894-4561 - FAX: (905) 224-0505

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (905) 800-1500 - FAX (905) 800-1501

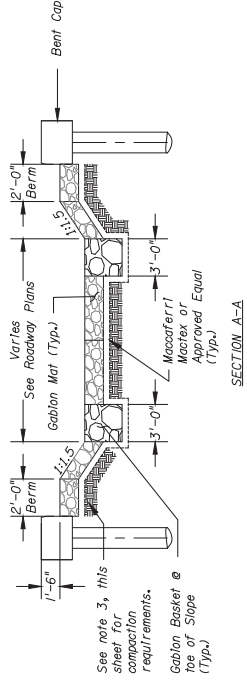
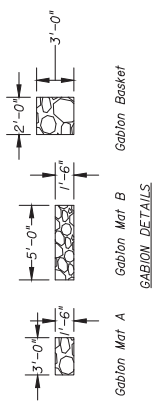
PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

EAST WINDWOOD WAY
 SHEET NO.
BB-17A

CROSS REFERENCES:
 FDOT Design Standards Index 20900, For additional approach slab sections and details.



- Notes**
- All Gabions shall be Maccferri or approved equal.
 - Maccferri can be contacted at www.maccferri-usa.com or by phone at 301-223-6910
 - Compact the soil below gabions to a minimum density of 90%. This shall be achieved by compacting at a depth of at least 24 inches.
 - Gabions components shall be in accordance with FDOT Standard Specification Section 530-2.3, install Gabions in accordance to FDOT Standard Specification Section 530-3.5 and the manufacturer's specifications and recommendations.



DATE	REVISIONS	DESCRIPTION	INITIAL	PROJECT NO.
	BY			89-18A
	CHECKED BY			
	DESIGNED BY			
	CHECKED BY			
	DATE			

ENGINEER OF RECORD: REGISTE SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9292 3370 Capital Circle NE, C.J. - Tallahassee, FL 32308 PHONE: (904) 894-4521 - FAX: (904) 224-0505		PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS
LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (904) 600-1500 - FAX (904) 600-1501		SHEET NO. 89-18A
PROJECT NUMBER: 120		EAST WINDWOOD WAY

MARK SIZE DES	LENGTH FT IN	TYP IBARS	STY BAR #	B	C	D	E	F	H	J	K	N	Ø
4 B15	4-5	21	24	1-0	0-6 1/2								
LOCATION PIPE PILE PHASE 2													
8 B14	27-7	6	17-1	26-8									
4 B15	4-5	21	24	1-0	0-6 1/2								
NO. REQUIRED = 4													
END OF LIST													

MARK SIZE DES	LENGTH FT IN	TYP IBARS	STY BAR #	B	C	D	E	F	H	J	K	N	Ø
6 B01	17-4	12	1	17-3 1/2									
5 B02	9-10	19	4-4	1-11	2-6								
8 B04	2-6	5	1	2-6									
5 B10	2-8	16	1	2-8									
LOCATION END BENT NO. 1 PHASE 1													
6 B01	17-4	12	1	17-3 1/2									
5 B02	9-10	19	4-4	1-11	2-6								
8 B04	2-6	5	1	2-6									
LOCATION END BENT NO. 1 PHASE 2													
6 B01	15-4	12	1	15-3 1/2									
5 B02	9-10	19	4-4	1-11	2-6								
8 B04	2-6	5	1	2-6									
5 B10	2-8	16	1	2-8									
LOCATION END BENT NO. 2 PHASE 2													
6 B01	15-4	12	1	15-3 1/2									
5 B02	9-10	19	4-4	1-11	2-6								
8 B04	2-6	5	1	2-6									
LOCATION SUPERSTRUCTURE PHASE 1													
5 B07	17-4	67	1	17-3 1/2									
5 B08	33-0	16	1	33-0									
5 B09	2-0	16	10	1-0	1-0								
5 B10	15-4	67	1	15-3 1/2									
5 B11	3-2	67	10	2-6	0-8								
5 B12	33-0	1	1	33-0	0-8								
4 B14	2-0	67	1	0-11	0-6								
LOCATION SUPERSTRUCTURE PHASE 2													
5 B08	33-0	16	1	33-0									
5 B09	2-0	16	10	1-0	1-0								
5 B10	15-4	67	1	15-3 1/2									
5 B11	3-2	67	10	2-6	0-8								
5 B12	33-0	1	1	33-0	0-8								
4 B14	2-0	67	1	0-11	0-6								
LOCATION APPROACH SLAB NO. 1 & 2 PHASE 1													
8 B10	19-6	21	1	19-6									
5 B11	19-6	16	1	19-6									
5 B12	17-4	48	1	17-4									
5 B13	7-8	20	1	7-8									
LOCATION APPROACH SLAB NO. 1 & 2 PHASE 2													
8 B10	19-6	21	1	19-6									
5 B11	19-6	16	1	19-6									
5 B12	15-4	48	1	15-4									
5 B13	7-8	20	1	7-8									
LOCATION PIPE PILE PHASE 1													
8 B14	27-7	6	17-1	26-8									
NO. REQUIRED = 4													

NOTES:

1. Work this sheet with FDOT Design Standards Index 21300.
2. Reinforcement for pipe piles is to be included in the payment for pipe piles. See Steel Pipe Pile Sheet for details.

EAST WINDWARD WAY

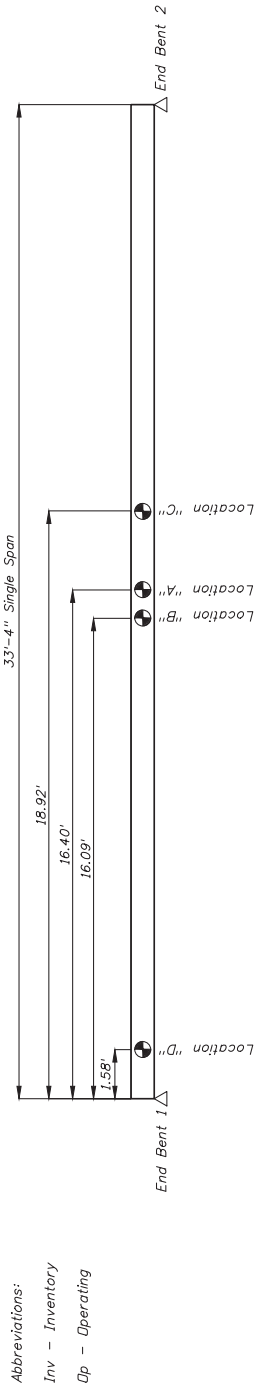
DATE		REVISIONS		DESCRIPTION		DRAWN BY		CHECKED BY		INITIAL		ENGINEER OF RECORD:		REGISTERED PROFESSIONAL ENGINEERING CONSULTANT		LEON COUNTY DEPARTMENT OF PUBLIC WORKS		REINFORCING BAR LIST		SHEET NO.	
												JOHN F. SLIGER II, P.E. FL # 65330		CIVIL AND STRUCTURAL ENGINEERING CONSULTANT FL REG. NO. 12421 3370 CORTLAND AVE., SUITE 100 TALLAHASSEE, FL 32308 PHONE (850) 894-4521 - FAX (850) 224-0505		2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 806-1500 * FAX (850) 806-1501		RAYMOND TUCKER DRAINAGE IMPROVEMENTS		BB-191	

Table 2 - LRFBR



Level	Limit State	Vehicle	Weight (tons)	Load Factors			Moment (Strength)			Shear (Strength)			Comments:				
				LL	DC	DW	Distribution (DF)	Rating Factor	Tons	Location	Dimension	Distribution (DF)		Rating Factor	Tons	Location	Dimension
Design	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.47	2.17	N/A	A	16.40'	0.72	4.07	N/A	D	1.58	Interior/exterior beam DF method if other than LRFBR. Other appropriate comments
	Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.47	2.82	N/A	A	16.40'	0.72	5.28	N/A	D	1.58	
Permit	Service III (Inv)	HL-93	N/A	1.35	1.25	1.50	0.47	2.21	N/A	B	16.09'	N/A	N/A	N/A	N/A	N/A	Exterior Beam
	Strength II	FL120	60.0	1.35	1.25	1.50	0.47	2.27	136.06	C	18.92'	0.72	3.61	216.76	D	1.58	Exterior Beam

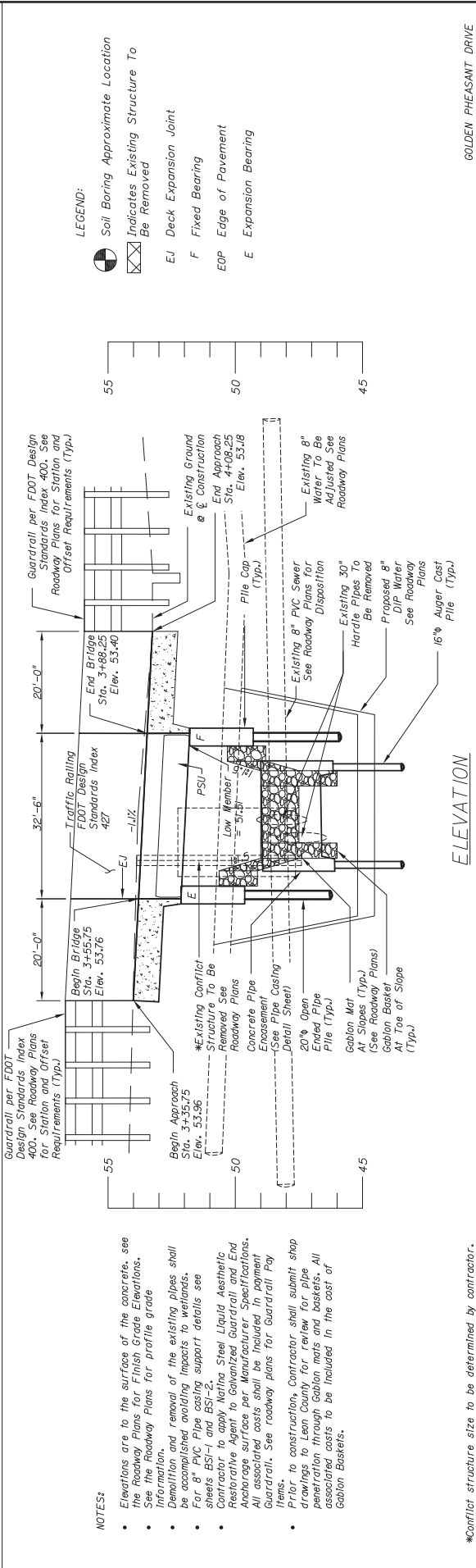
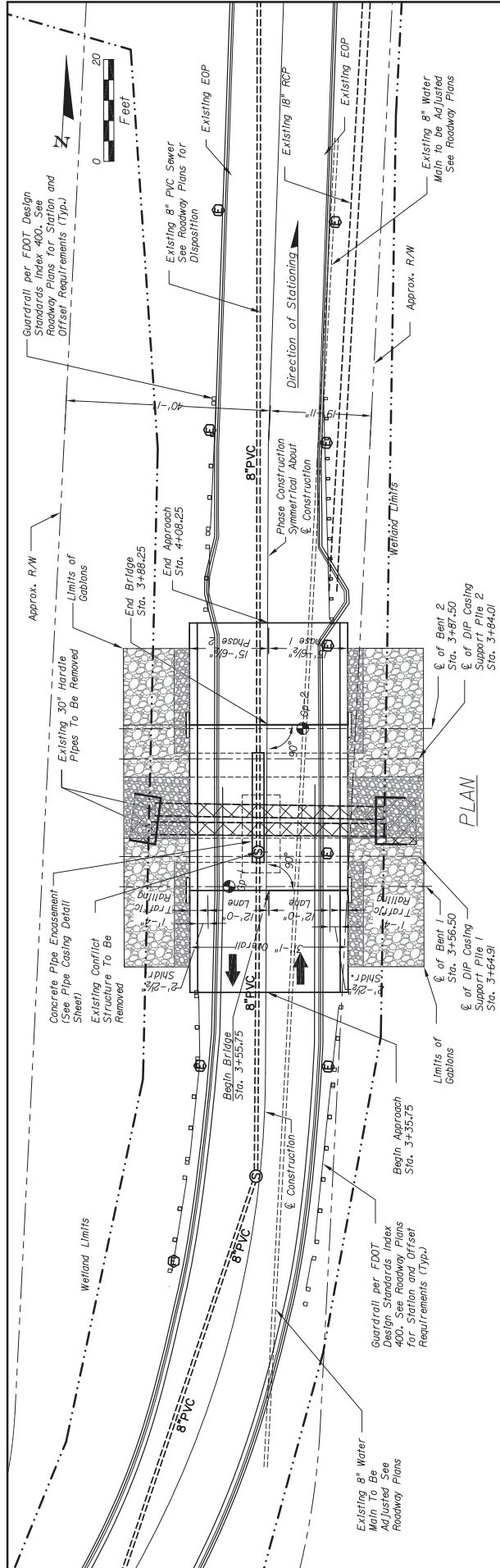
General Notes:
 1. This table is based on the requirements established in the January 2017 "Structures Manual".

Table 2 Notes:
 1. Permit capacity is determined by using the permit vehicle in all lanes.
 2. Service III Design Inventory tensile stress limit = $6\sqrt{f'c}$
 3. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? Yes No
 4. Load Rating Performed Utilizing FDOT LRFBR Prestressed Beam Program V5.2.



EAST WINDWOOD WAY

REVISIONS	DATE	BY	DESCRIPTION	INITIAL	DATE
ENGINEER OF RECORD:				 REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9292 3370 Capital Circle NE, C.J. - Tallahassee, FL 32308 PHONE: (905) 894-4261 - FAX: (850) 224-1005	
ENGINEER OF RECORD:				JOHN F. SLIGER II, P.E. P.E. #5550	
LEON COUNTY DEPARTMENT OF PUBLIC WORKS				 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (905) 800-1500 - FAX (850) 800-1501	
LOAD RATING CHART				PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
PROJECT NUMBER:				BS-30A	



- NOTES:**
- Elevations are to the surface of the concrete, see the Roadway Plans for Finish Grade Elevations.
 - See the Roadway Plans for Station and Offset Requirements (Typ.)
 - Demolition and removal of the existing pipes shall be accomplished avoiding impacts to wetlands.
 - For 8" PVC Pipe casing support details see sheets BS-1 and BS-2.
 - Contractor to apply Natina Steel Liquid Aesthetic Penetrance surface per Manufacturer's Specifications. All other surfaces shall be finished per Contractor's Plan.
 - Guardrail. See roadway plans for Guardrail Pay Items.
 - Prior to construction, Contractor shall submit shop drawings to Leon County for review for pipe penetration through Gabion mats and baskets. All associated costs to be included in the cost of Gabion Baskets.

REVISIONS		ENGINEER OF RECORD:		PROJECT NAME:	
DATE	BY	DESCRIPTION	REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9992 3376 Capital Circle N.E., Tallahassee, FL 32308 PHONE (904) 934-4461 • FAX (904) 934-4462	RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
				PROJECT NO. BS-1A	
				SHEET NO. BS-1A	

GOLDEN PHEASANT DRIVE

*Conflict structure size to be determined by contractor.

NOTES

- NUMBERS LEFT OF BORINGS INDICATE STANDARD PENETRATION TEST (SPT) VALUES FOR 14-INCH PENETRATION UNLESS OTHERWISE NOTED.
- WATER ELEVATIONS SHOWN ARE THE WATER ELEVATIONS ENCOUNTERED. VARIATIONS IN THE ELEVATION OF WATER SHOULD BE EXPECTED.
- SOIL DESCRIPTIONS, BORING DATA AND STANDARD PENETRATION VALUES LOCATIONS EXCEPT AT THE LOCATION OF THE SOIL BORING, EXTRAPOLATION OF SOIL BORING DATA TO OTHER LOCATIONS IS THE RESPONSIBILITY OF THE PERSON PERFORMING THE EXTRAPOLATION.

AUTOMATIC HAMMER

Granular Materials	SPT (blows/12 in.)	Sills and Grays Consistency (blows/12 in.)	SPT
Very Loose	Less than 3	Very Soft	Less than 1
Loose	3 - 6	Soft	1 - 3
Medium or Compact	6 - 24	Firm	3 - 6
Very Dense	Greater than 24	Very Stiff	6 - 12
		Hard	12 - 24
		Very Hard	Greater than 24

**SPLIT-SPOON: INSIDE DIAMETER: 1.375 IN
AVG. HAMMER DROP: 30.0 IN
HAMMER WEIGHT: 140 LBS**

LEGEND

MEASURED GROUNDWATER

LABORATORY RESULTS

SOIL BORING LOCATION

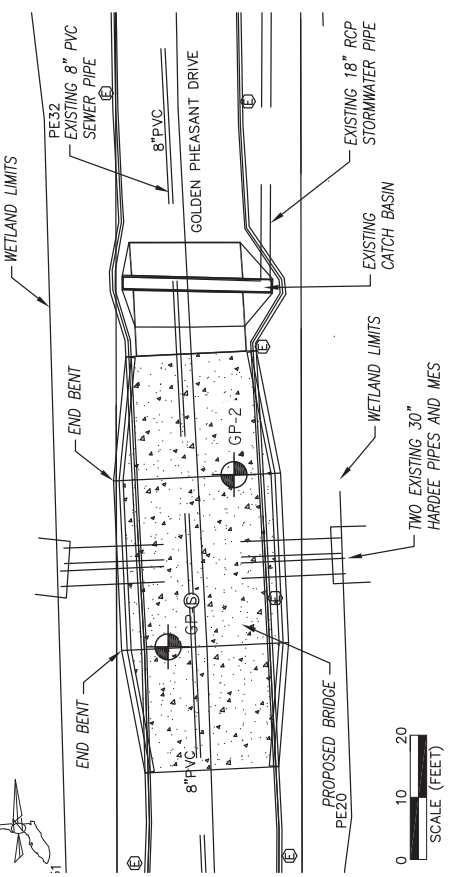
WATER CONTENT (%)
 OC =
 -200 =
LIQUID LIMIT
 LL =
PLASTICITY INDEX
 PI =
FLUID LOSS (%)

ASPHALT
BASE
SILTY FINE SAND (SM)
CLAYEY FINE TO PLASTIC SAND (SC)

ORGANIC SILT (OL/WICK)
HIGHLY PLASTIC CLAY (CH)
WEATHERED LIMESTONE
LIMESTONE

(SM) UNIFIED SOIL CLASSIFICATION GROUP SYMBOL

BORING LOCATION MAP

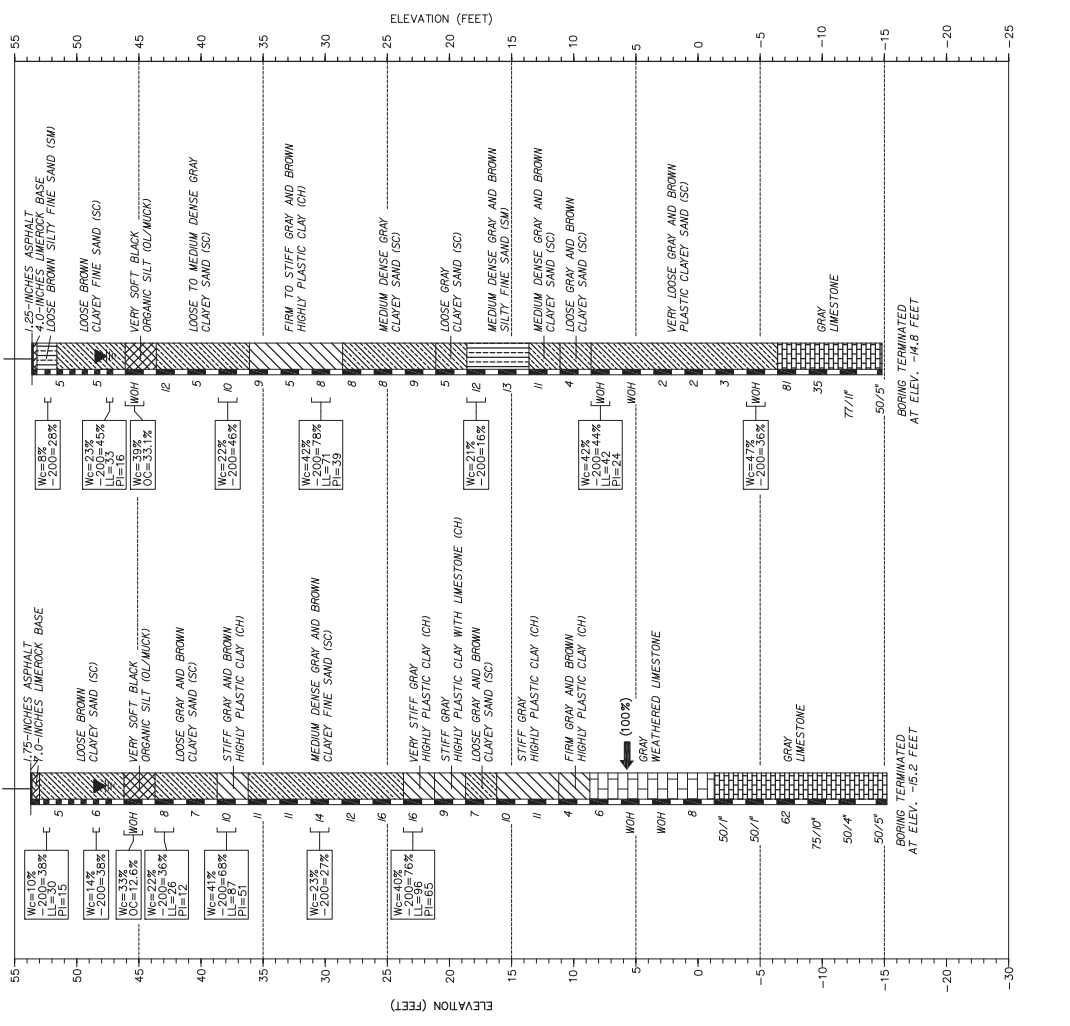


BORING GP-1

DATE 10/23/2012
 NORTHING 517930
 EASTING 303255
 ELEV. 53.7 FEET
 DRILLER B. GUERRA
 HAMMER AUTOMATIC
 RIG ONE-75

BORING GP-2

DATE 10/25/2012
 NORTHING 517930
 EASTING 303255
 ELEV. 53.6 FEET
 DRILLER B. GUERRA
 HAMMER AUTOMATIC
 RIG ONE-75



Environmental & Geotechnical Specialists, Inc.
 104 NORTH MAGNOLIA DRIVE
 TALLAHASSEE, FLORIDA 32301
 OFFICE: (850) 386-1253
 FAX: (850) 385-8050

EGS
 Cert. of Auth.: 6222

MYRON HAYDEN, P.E.
 P.E. NO.: 34087

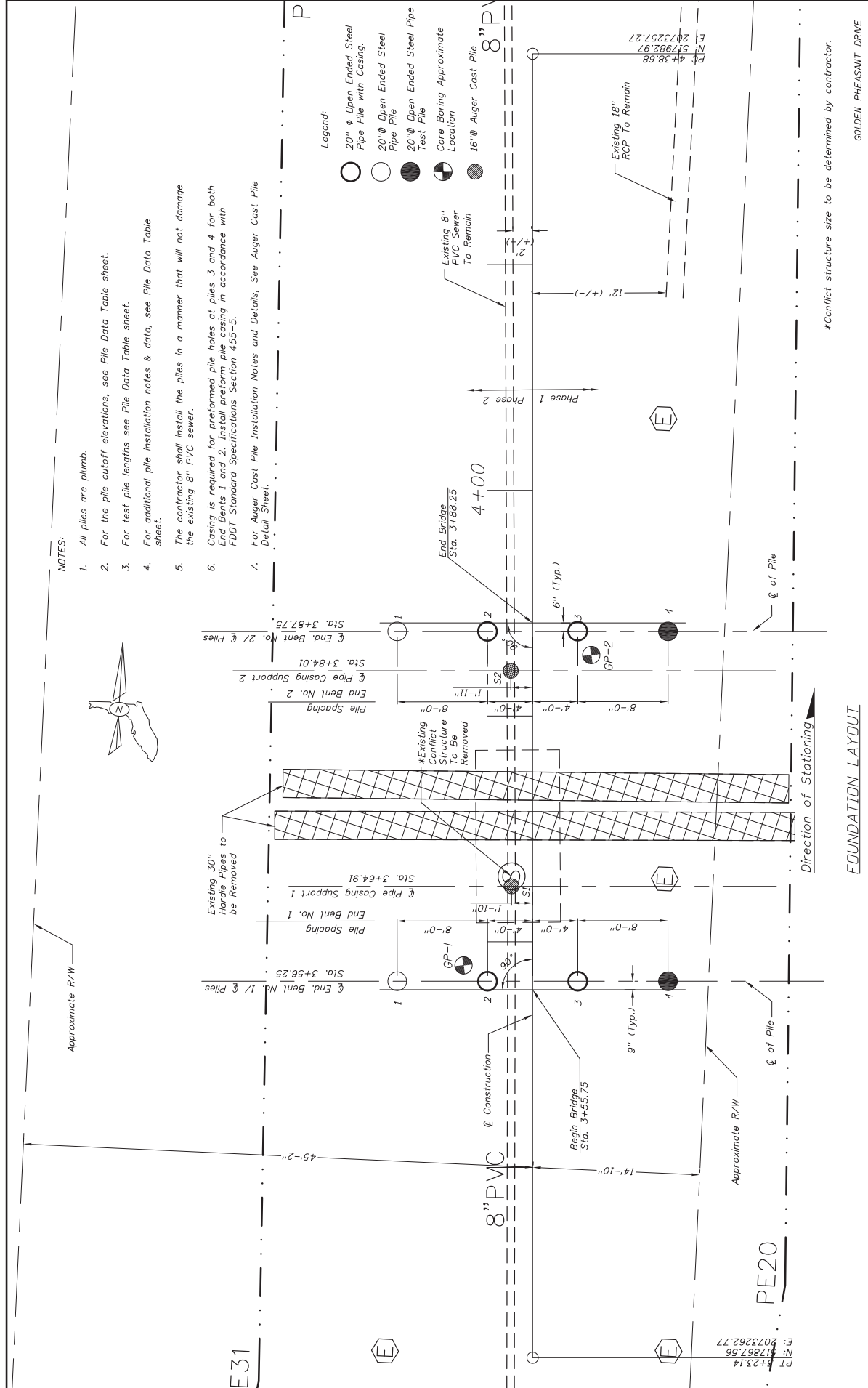
LEON COUNTY
 PROJECT TITLE
 GOLDEN PHEASANT DRIVE- CULVERT REPLACEMENT

REPORT OF CORE BORINGS

SHEET NO. **B3-2A**

REVISIONS

SCALE (FEET)
 0 10 20



NOTES:

1. All piles are plumb.
2. For the pile cutoff elevations, see Pile Data Table sheet.
3. For test pile lengths see Pile Data Table sheet.
4. For additional pile installation notes & data, see Pile Data Table sheet.
5. The contractor shall install the piles in a manner that will not damage the existing 8" PVC sewer.
6. Casing is required for preformed pile holes at piles 3 and 4 for both End Bents 1 and 2. Install preform pile casing in accordance with FDOT Standard Specifications Section 455-5.
7. For Auger Cast Pile Installation Notes and Details, See Auger Cast Pile Detail Sheet.

Legend:

- 20" ϕ Open Ended Steel Pipe Pile with Casing.
- 20" ϕ Open Ended Steel Pipe Pile
- 20" ϕ Open Ended Steel Pipe Test Pile
- ⊙ Core Boring Approximate Location
- ⊙ 16" ϕ Auger Cast Pile

DATE	BY	REVISIONS	DESCRIPTION
PT 8-23-14	E: 2073262.77		
N: 17867.56			
E: 2073262.77			

INITIAL	DATE
DRAWN BY	T.C.J.
CHECKED BY	A.G.
DESIGN BY	J.R.
CHECKED BY	J.S.
DATE	8/22/09

ENGINEER OF RECORD:	REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9992 3376 Capital Circle N.E., Ocala, Florida 34761 PHONE: (850) 834-4401 - FAX: (850) 834-4405
PROJECT NUMBER:	120

PROJECT NAME:	RAYMOND TUCKER DRAINAGE IMPROVEMENTS
PROJECT NO.:	85-5A

LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MCCUSKIE BOUL., TALLAHASSEE, FLORIDA 32308 PHONE (850) 606-1500 * FAX (850) 606-1501	GOLDEN PHEASANT DRIVE
--	-----------------------

*Conflict structure size to be determined by contractor.

PILE DATA TABLE		PILE CUT-OFF ELEVATIONS																				
		Table Date 07-01-14																				
PIER OR BENT NUMBER	PILE SIZE (in.)	INSTALLATION CRITERIA							DESIGN CRITERIA													
		NOMINAL BEARING RESISTANCE (tons)	TENSION RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	*REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	LONG TERM SCOUR ELEVATION (ft.)	RESISTANCE FACTOR-Φ	PILE 1	PILE 2	PILE 3	PILE 4	PILE 5	PILE 6		
End Bent 1	20	82	N/A	20.3	71	N/A	38	53	0	N/A	N/A	N/A	N/A	0.65	49.2	49.2	49.2	49.2	49.2	49.2	49.2	
End Bent 2	20	82	N/A	20.3	71	N/A	38	53	0	N/A	N/A	N/A	N/A	0.65	48.9	48.9	48.9	48.9	48.9	48.9	48.9	

*PREFORM ELEVATION REQUIRED AT PILES 3 AND 4 FOR END BENTS 1 AND 2.

Factored Design Load + Net Scour Resistance + Down Drag ≤ Nominal Bearing Resistance


- TENSION RESISTANCE
- The ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires tension capacity).
- TOTAL SCOUR RESISTANCE
- An estimate of the ultimate static side friction resistance provided by the scourable soil.
- NET SCOUR RESISTANCE
- An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.
- 100-YEAR SCOUR ELEVATION
- Estimated elevation of scour due to the 100 year storm event.
- LONG TERM SCOUR ELEVATION
- Estimated elevation of scour used in design for extreme event loading.

PILE INSTALLATION NOTES:

- Contractor to verify location of all utilities prior to any pile driving.
- Minimum Tip Elevation is required for lateral stability.
- No jetting will be allowed without the approval of the Engineer.
- Tip Protection shall be provided for all piles. The point protection shall be commercially available weld-on open type pile protector.
- All pipe piles shall be driven open ended. Remove the existing soil inside of the pipe pile and fill with reinforced concrete down to the limits shown on sheet B3-5. In the event that the pipe pile plugs and the top soil within the pipe is below the limits of the reinforced concrete, the void shall be filled with unreinforced concrete.
- To prevent a loss of soil confinement around the existing utility, casing or slurry shall be used to prevent cave-off of the preformed excavation. Casing shall not be installed by a driven method. All casing shall be left in place as to not impact the existing Sanitary Sewer Main.
- Preformed Pile Holes shall be constructed and backfilled in accordance with FDOT Standard Specification 455-5.9. The cost of installing preformed pile holes, including the cost of slurry and/or casing, shall be included in the cost of the piles.

PILE DYNAMIC ANALYSIS NOTES:

- A Dynamic Load Test shall be performed at the test pile locations.
- A dynamically load test re-drive of each test pile will be required following the removal of soil inside the pile and prior to concrete placement.
- If the pile driving equipment is different in Phase II than in Phase I, the contractor shall conduct an additional test for each bent at the location of Pile 2, prior to any other pile driving activities in order to reestablish driving criteria.

REVISIONS		DATE	BY	DESCRIPTION	ENGINEER OF RECORD:					 REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9992 3376 Capital Circle, N.E., Ft. Lauderdale, FL 33308 PHONE: (954) 974-4461 - FAX: (954) 974-4460		LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MCCUSKIE BOUL., TALLAHASSEE, FLORIDA 32308 PHONE (950) 606-1500 * FAX (950) 606-1501		PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS		SHEET NO.
					JOHN F. SLIGER II, P.E. P.E. #5550					PROJECT NUMBER: 120				GOLDEN PHEASANT DRIVE PILE DATA TABLE B3-4A		

DESIGN NOTE:

The Pipe Piles with reinforced concrete fill are designed such that the steel pipe shell can corrode completely. The pile capacity is based upon the remaining concrete core acting as a cast-in-place reinforced pile column, after corrosion of the pipe shell.

STEEL PIPE PILES:

Pipe for piles shall be new, straight steel pipe conforming to Section 962 of the FDOT Standard Specifications welded and seamless steel pipe piles. Ends of pipe section shall be perpendicular to the longitudinal axis. Pipe wall thickness to be 1/2".

SPICES:

The ends of all pile sections to be spliced shall be beveled and full butt-welded as shown on the plans. All splices shall be watertight.

INSPECTION:

The Contractor shall have available at all times a suitable drop light for inspecting the entire length of the driven pipe pile before placing reinforcing steel and concrete.

PILE CUT OFF:

Steel Pipe Piles shall be cut off at the required elevations along a plane normal to the axis of the pile. Methods used in cutting off piles shall meet with the approval of the Engineer.

REINFORCING STEEL:

All reinforcing steel shall conform to ASTM A615, Grade 60.

CONCRETE:

Concrete for piles and columns shall be CLASS IV (Drilled Shaft) f'c = 4,000 psi, and shall conform to Section 346 of the Specifications. The final installed pipe piles shall be clean and free of water before placing reinforcing steel and concrete.

MILL TEST REPORTS:

Notarized mill test report shall be required for all steel pipe piles, and submitted to Leon County for Approval.

WELDING:

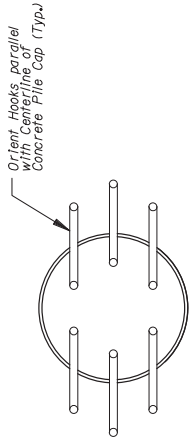
All welding shall conform to AMERICAN WELDING SOCIETY (AWS) Bridge Welding Code.

OPEN ENDED DRIVING TIPS/CUTTING SHOES:

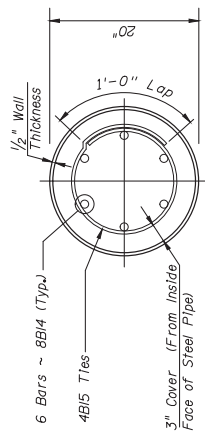
Open ended driving tips shall be provided for all piles. The contractor shall submit pile tip protection shop drawings to Leon County Public Works for Review. Pile Tips/Cutting shoes shall be provided by Associated Pile & Fitting LLC (APF) or approved equal. APF can be contacted at www.associatedpile.com or at 1-800-526-3047. The pile tip protection shall be included in the cost of the steel pipe piles.

PAYMENT NOTE:

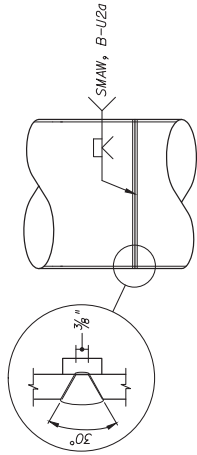
All cost associated with furnishing and installing the Steel Pipe Piles are to be included in the Contract Unit Price for STEEL PILING. Cost shall include but not be limited to furnishing and driving the steel pipe piles, removing soil from inside of the pile, furnishing and placing the concrete and reinforcing steel.



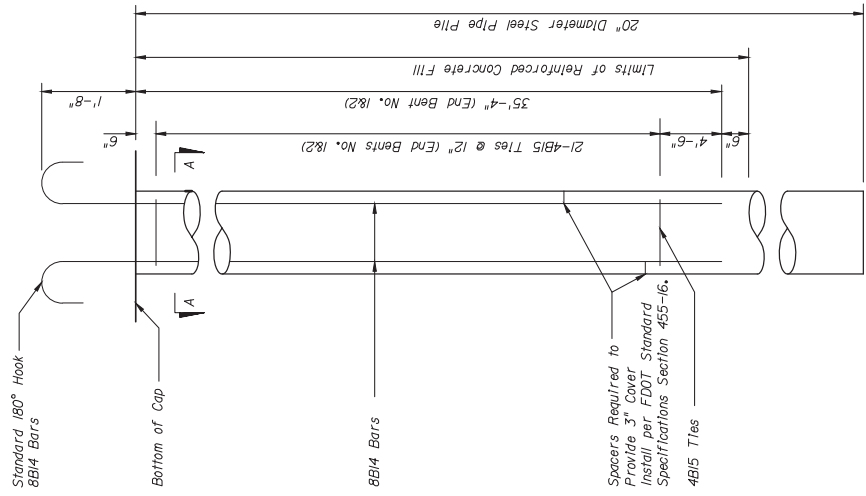
PLAN VIEW OF PIPE PILE (Showing Orientation of Bars 8B14)



SECTION A-A



PIPE PILE SPLICE DETAIL



ELEVATION OF PIPE PILE

DATE	REVISIONS	DESCRIPTION	INITIAL	ENGINEER OF RECORD*
	BY		DATE	
	CHECKED BY		DATE	
	DESIGNED BY		DATE	
	CHECKED BY		DATE	
	DATE			

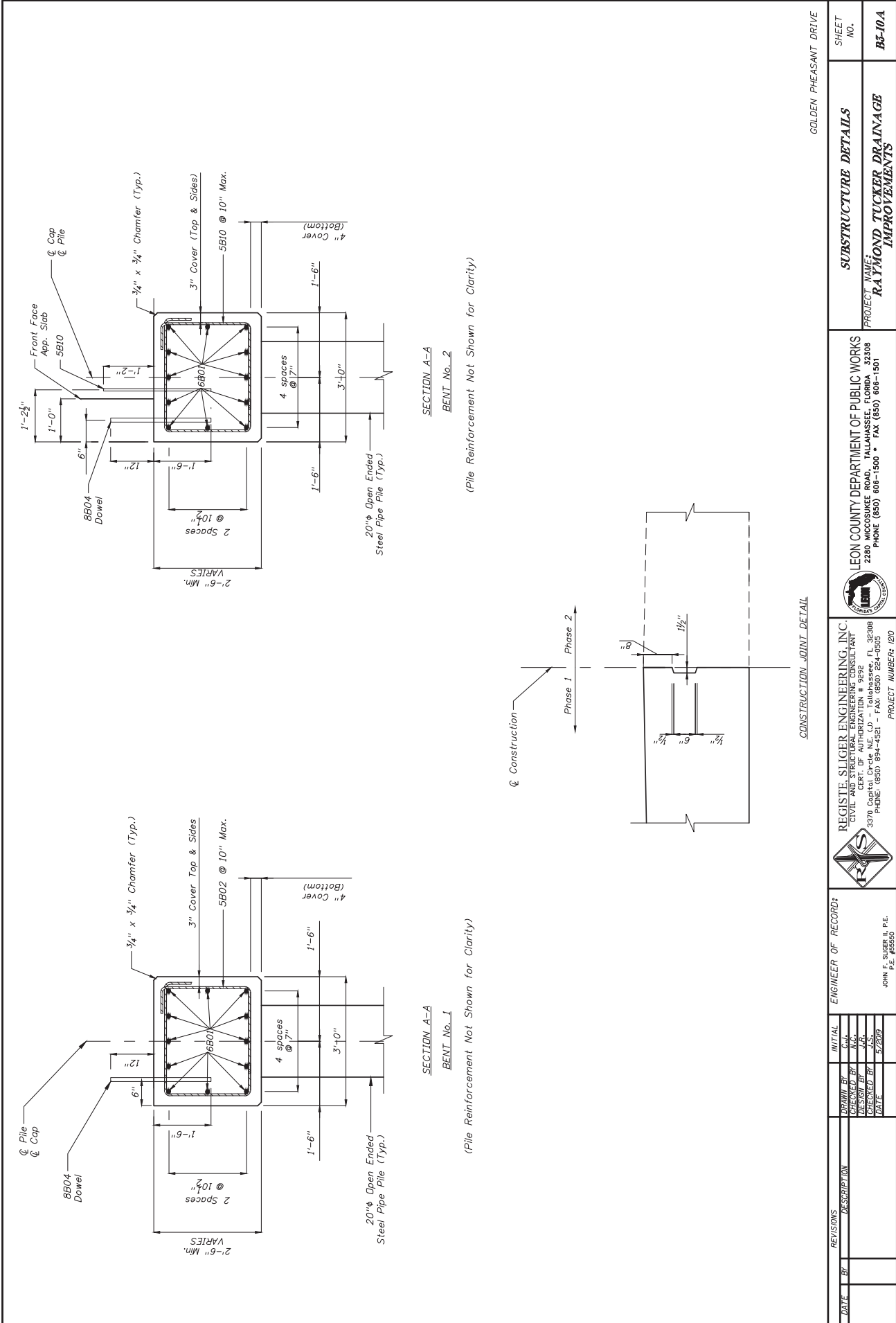
JOHN F. SLIGER, II, P.E.
P.E. #5530

REGISTE, SLIGER ENGINEERING, INC.
CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
CERT. OF AUTHORIZATION # 9696
3874 S. COUNTY ROAD 177 - FAY, GEORGIA 30214-1505
PHONE (850) 854-4551 - FAX (850) 854-1505
PROJECT NUMBER: 120

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
2208 MCCORMICK ROAD, TALLAHASSEE, FLORIDA 32306
PHONE (850) 606-1500 • FAX (850) 606-1501

PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

GOLDEN PHEASANT DRIVE
STEEL PIPE PILE DETAIL
SHEET NO.
B3-5.1A



GOLDEN PHEASANT DRIVE

SUBSTRUCTURE DETAILS		SHEET NO.
RAYMOND TUCKER DRAINAGE IMPROVEMENTS		BE-10A

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801



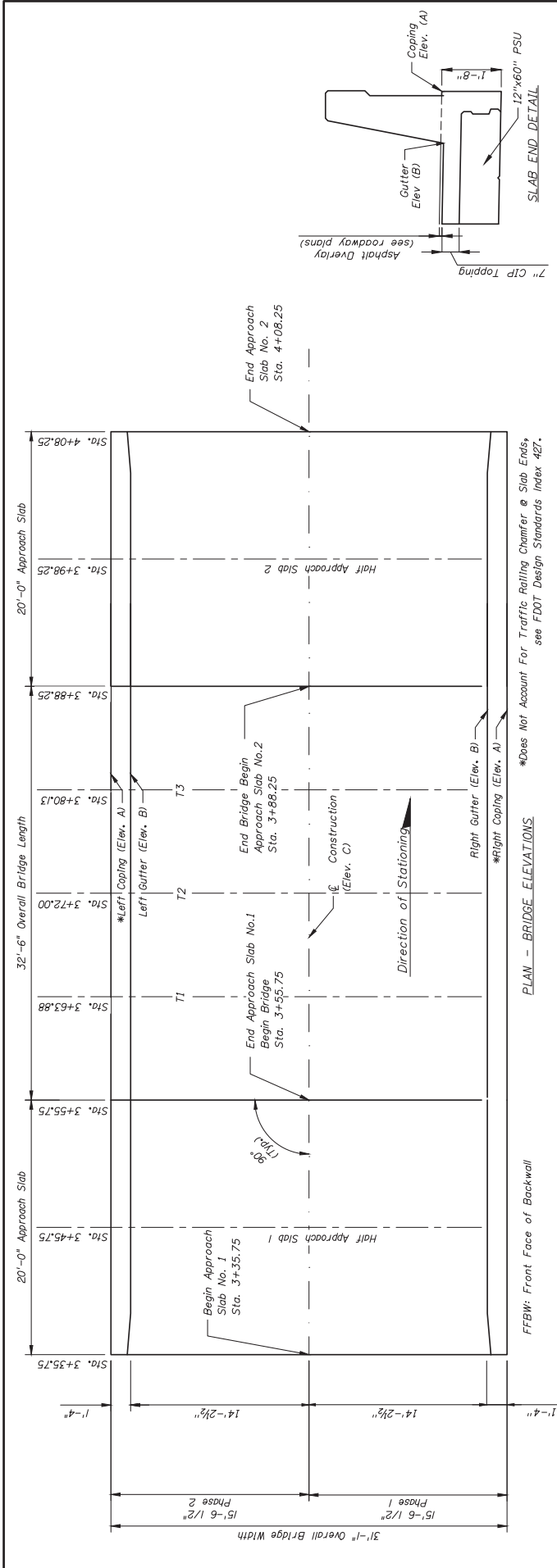
REGISTE: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 3692 FL 32-308
 3370 CORP. AVENUE, SUITE 100, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 894-4321 - FAX (850) 224-0505
 PROJECT NUMBER: 120



ENGINEER OF RECORD:
 JOHN F. SLIGER, II, P.E.
 P.E. #20588

DATE	BY	DESCRIPTION

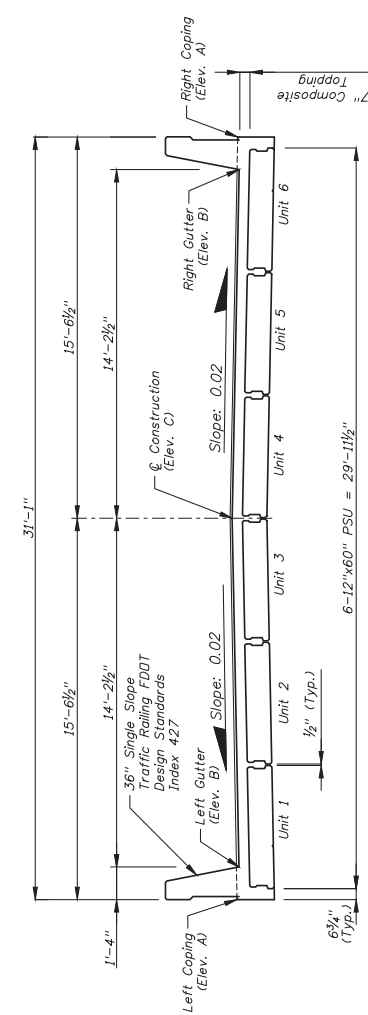
INITIAL	DATE



BRIDGE ELEVATION TABLE

Station	Approach Slab 1			Span No. 1			Approach Slab 2		
	Begin	Half	End	T1	T2	T3	End	Half	End
Elev. A	3+35.75	3+45.75	3+55.75	3+63.88	3+72.00	3+80.13	3+86.25	3+98.25	4+08.25
Elev. B	53.73	53.63	53.53	53.44	53.35	53.26	53.17	53.06	52.95
Elev. C	53.68	53.58	53.48	53.39	53.30	53.21	53.12	53.01	52.90
Elev. D	53.96	53.86	53.76	53.67	53.58	53.49	53.40	53.29	53.18

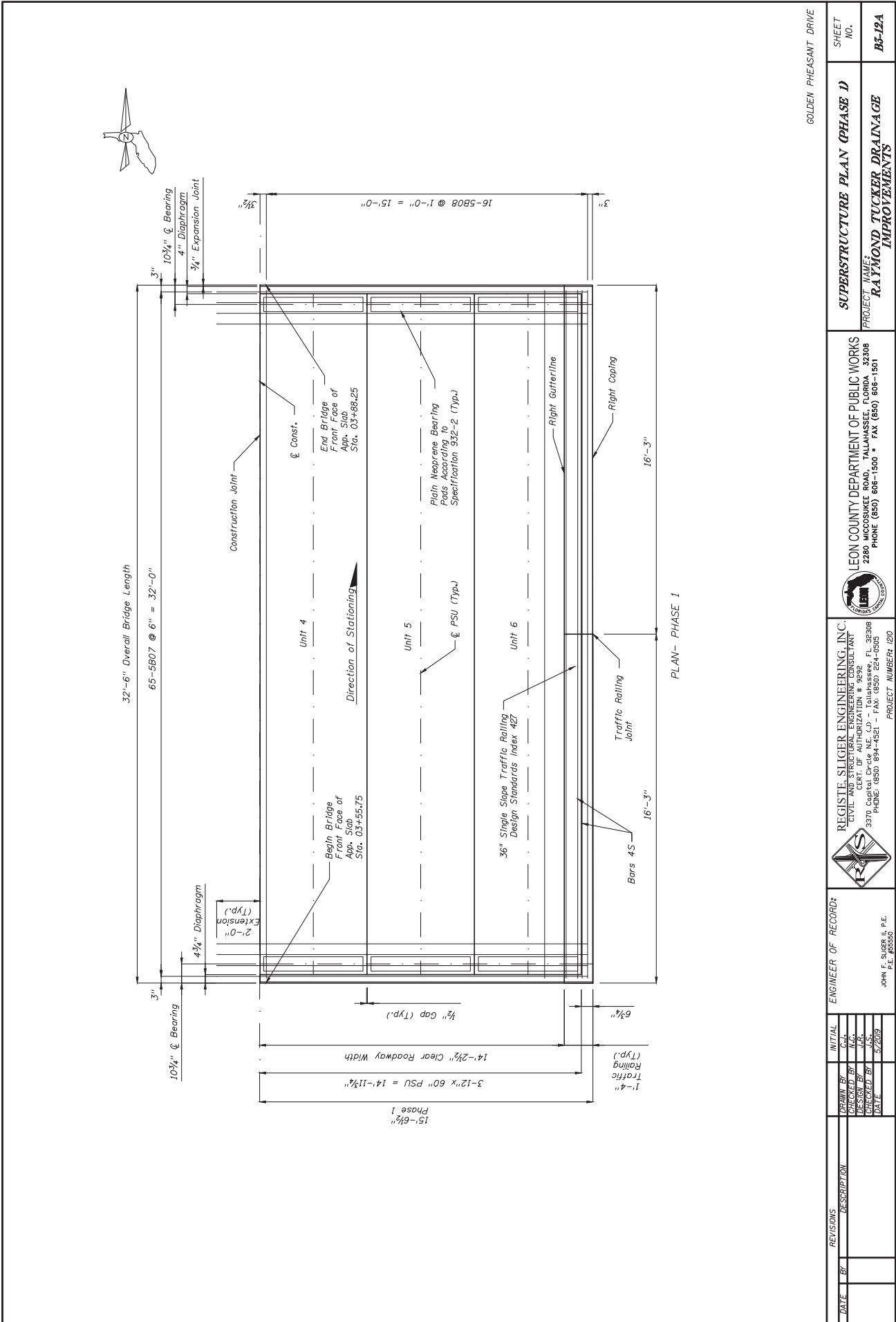
Note: Bridge Elevations are to the Surface of the Concrete Slab. See Roadway Plans for Finish Grade Elevations.



**SECTION THROUGH SUPERSTRUCTURE
SHOWING BRIDGE ELEVATIONS**

(Looking Up Station)

REVISIONS	DATE	BY	DESCRIPTION	INITIAL	ENGINEER OF RECORD:	PROJECT NAME:	SHEET NO.
						BRIDGE ELEVATIONS	
						RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
						LEON COUNTY DEPARTMENT OF PUBLIC WORKS	
						2280 MICCOSSUKEE ROAD, TALLAHASSEE, FLORIDA 32308	
						PHONE (850) 608-1500 • FAX (850) 608-1501	
						REGISTER: SLIGER ENGINEERING, INC.	
						CIVIL ENGINEERING CONSULTANT	
						CERT. OF AUTHORIZATION NO. 9893	
						3370 Capital Circle NE, C.J. - Tallahassee, FL 32308	
						PHONE (850) 894-4521 - FAX (850) 224-0905	
						PROJECT NUMBER: 120	
						JOHN F. SLIGER, P.E.	
						P.E. #55530	
						GOLDEN PHEASANT DRIVE	



GOLDEN PHEASANT DRIVE

SUPERSTRUCTURE PLAN (PHASE 1)
 PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 808-1500 * FAX (850) 808-1801



REGISTER: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 2692 FL 32-308
 3370 CORTLAND AVENUE, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 894-4321 - FAX (850) 224-0505
 PROJECT NUMBER: 120

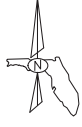
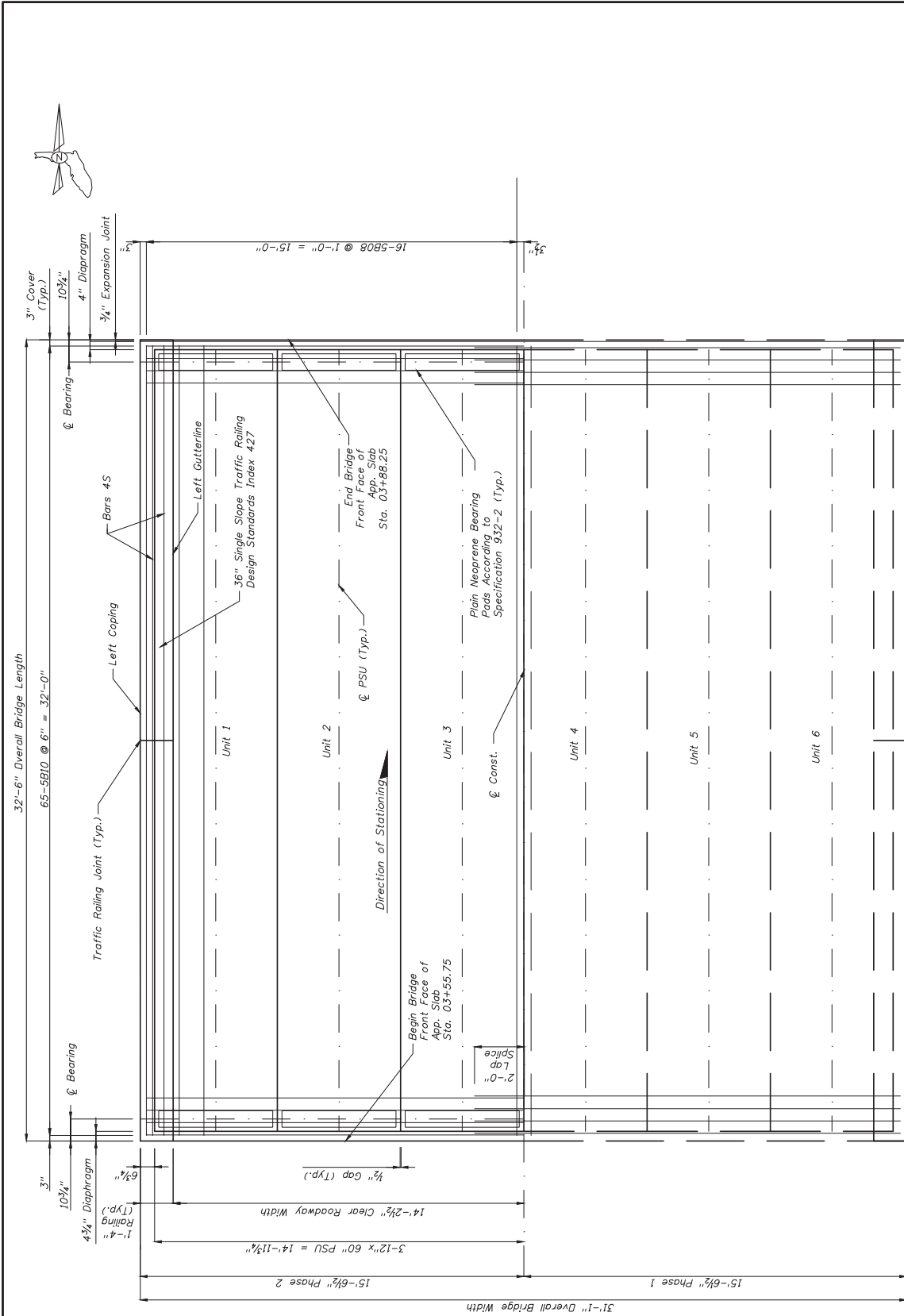


ENGINEER OF RECORD:
 JOHN F. SLIGER, II, P.E.
 P.E. #25558

DATE	BY	REVISIONS	DESCRIPTION

DATE	BY	REVISIONS	DESCRIPTION

INITIALS
 DRAWN BY: C.A.
 CHECKED BY: J.C.
 DESIGN BY: J.C.
 REVISIONS: J.C.
 DATE: 5/20/19




GOLDEN PHEASANT DRIVE

PLAN - PHASE 2

REVISIONS	DATE	BY	DESCRIPTION

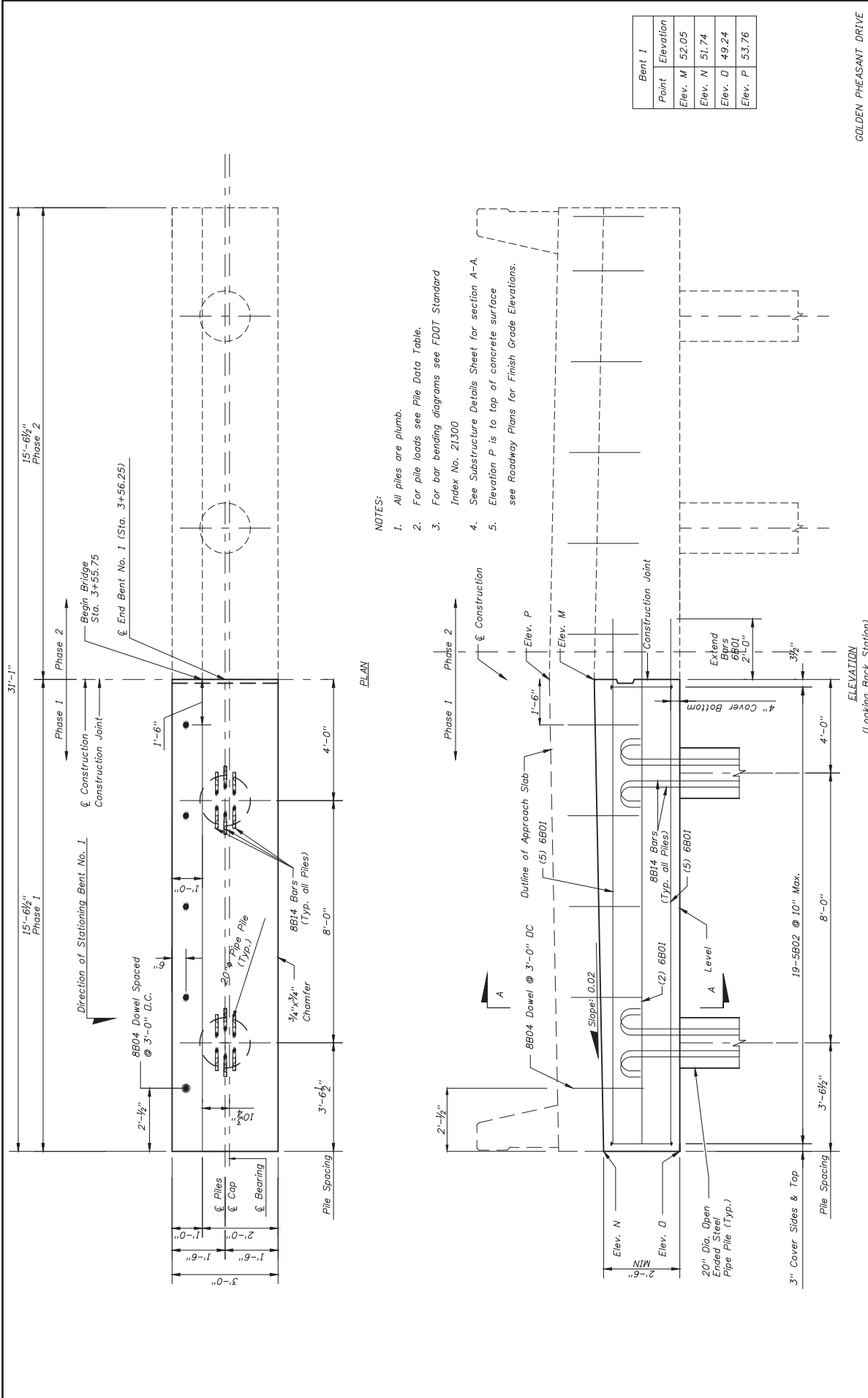
ENGINEER OF RECORD:	REGISTERED PROFESSIONAL ENGINEER
JOHN F. SLIGER, II, P.E.	FL. # 25550


REGISTERED PROFESSIONAL ENGINEERING CONSULTANTS OF FLORIDA
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 2692 FL. 32-308
 3370 CORP. AVENUE, SUITE 200, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 894-4321 - FAX (850) 224-0505
 PROJECT NUMBER: 120

REGISTE, SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 2692 FL. 32-308
 3370 CORP. AVENUE, SUITE 200, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 894-4321 - FAX (850) 224-0505
 PROJECT NUMBER: 120

LEON COUNTY DEPARTMENT OF PUBLIC WORKS	2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
PHONE (850) 808-1500 * FAX (850) 808-1501	

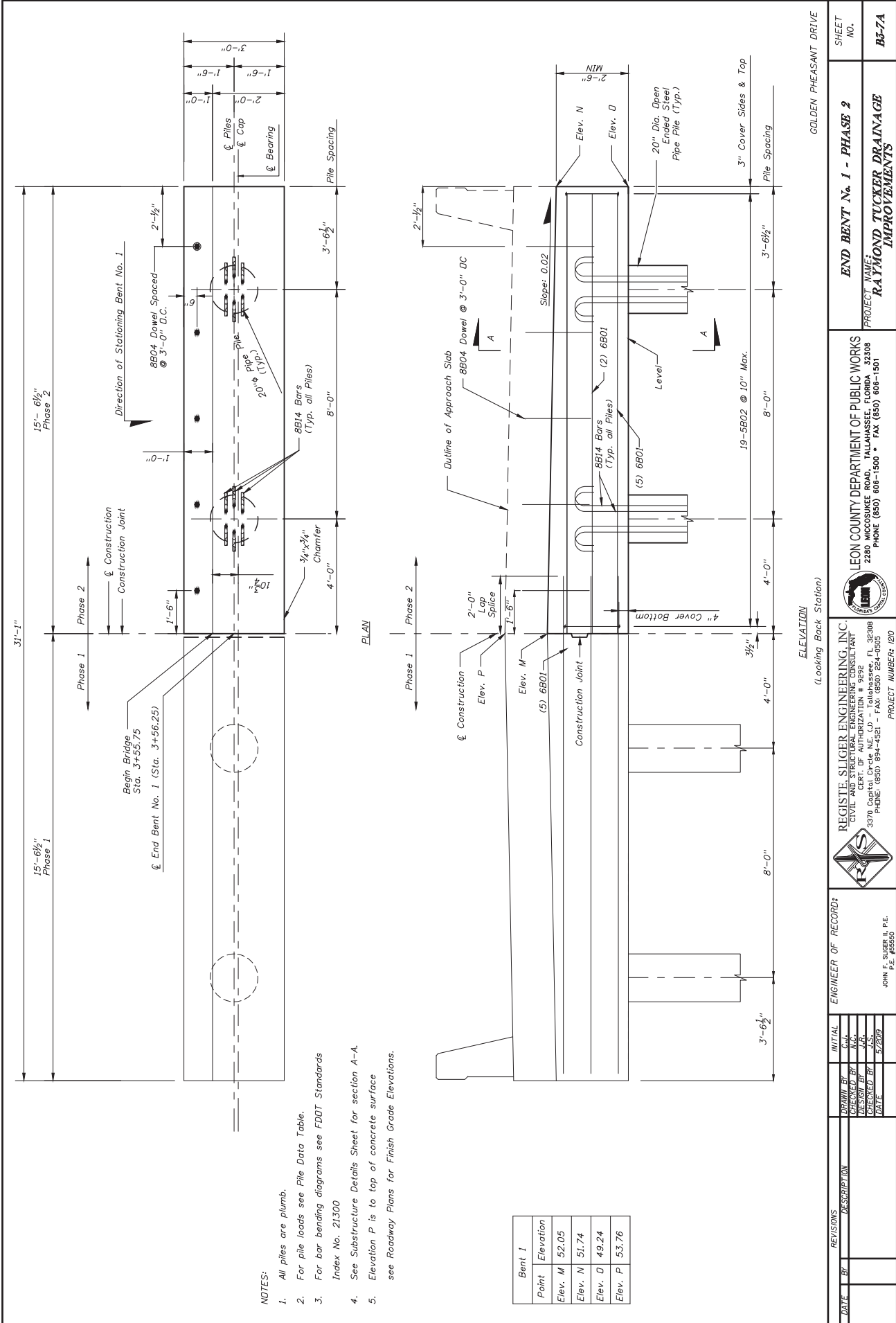
SUPERSTRUCTURE PLAN (PHASE 2)	SHEET NO.
RAYMOND TUCKER DRAINAGE IMPROVEMENTS	BB-131



- NOTES:**
- All piles are plumb.
 - For pile loads see Pile Data Table.
 - For bar bending diagrams see FDDT Standard Index No. 21300
 - See Substructure Details Sheet for section A-A.
 - Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

ELEVATION
(Looking Back Station)

<p>LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 • FAX (850) 608-1801</p>		<p>END BENT No. 1 - PHASE 1</p>	<p>SHEET NO. B3-6A</p>
<p>REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9692 FL 38308 3370 CORP. AVENUE, SUITE 200, TALLAHASSEE, FLORIDA 32308 PHONE (850) 894-4321 - FAX (850) 894-4321</p>		<p>PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS</p>	
<p>ENGINEER OF RECORD: JOHN F. SLIGER, II, P.E. P.E. #25558</p>		<p>PROJECT NUMBER: 120</p>	
<p>DATE</p>	<p>BY</p>	<p>INITIAL</p>	<p>DESCRIPTION</p>



- NOTES:
1. All piles are plumb.
 2. For pile loads see Pile Data Table.
 3. For bar bending diagrams see FDOT Standards Index No. 21300
 4. See Substructure Details Sheet for section A-A.
 5. Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

Bent 1	
Point	Elevation
Elev. M	52.05
Elev. N	51.74
Elev. O	49.24
Elev. P	53.76

DATE	BY	DESCRIPTION

INITIAL	DATE

ENGINEER OF RECORD:
 JOHN F. SLIGER, II, P.E.
 P.E. #20550

REGISTE: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 3692 FL 36308
 3370 CORP. CENTER BLVD. SUITE 200
 PALM BEACH GARDENS, FL 33418
 PHONE: (561) 894-4521 - FAX: (561) 894-4525

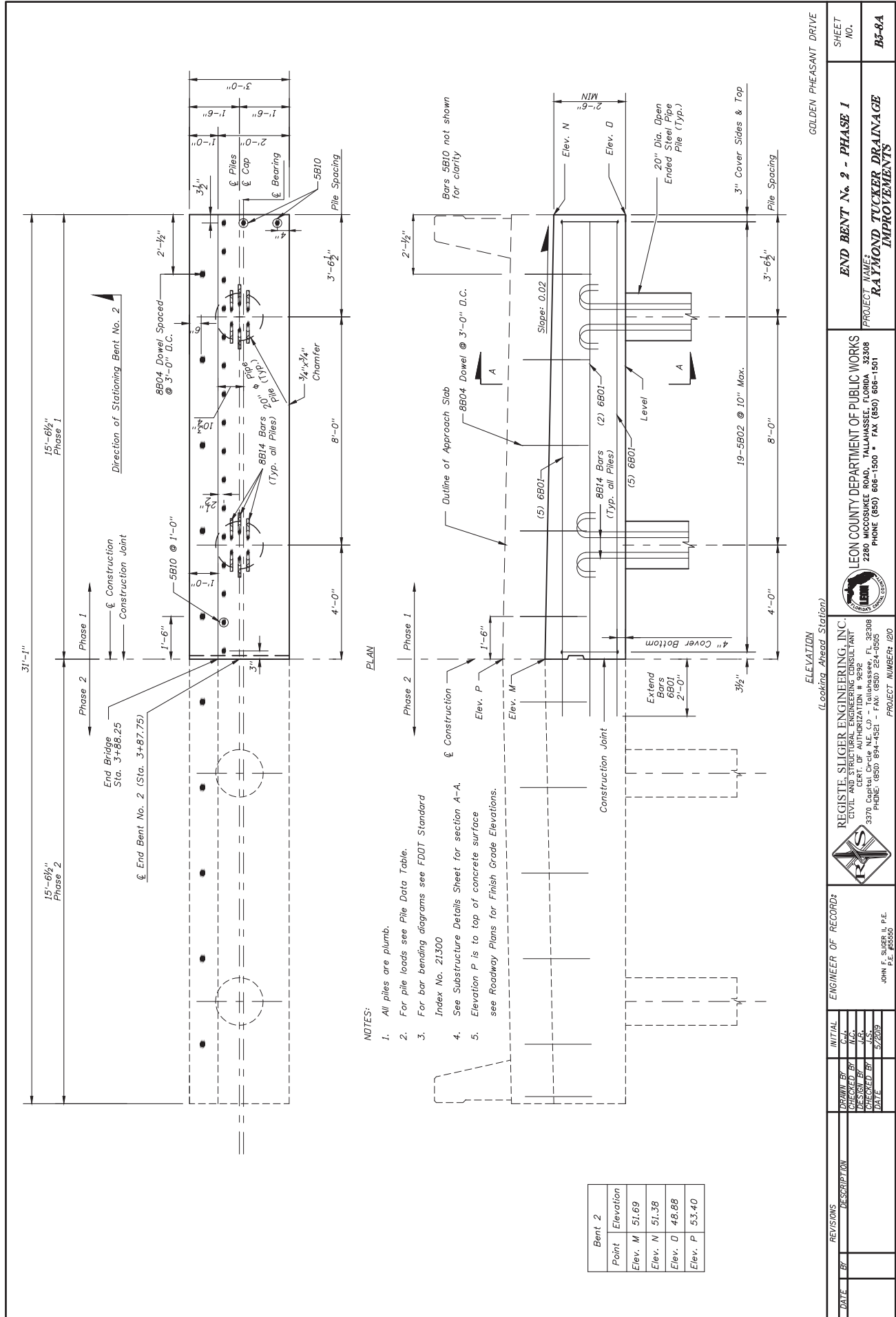


LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 608-1500 * FAX (850) 608-1801

PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

END BENT No. 1 - PHASE 2
 SHEET NO.
B3-7A

GOLDEN PHEASANT DRIVE
 (Looking Back Station)



Bent 2	
Point	Elevation
Elev. M	51.69
Elev. N	51.38
Elev. D	48.88
Elev. P	53.40

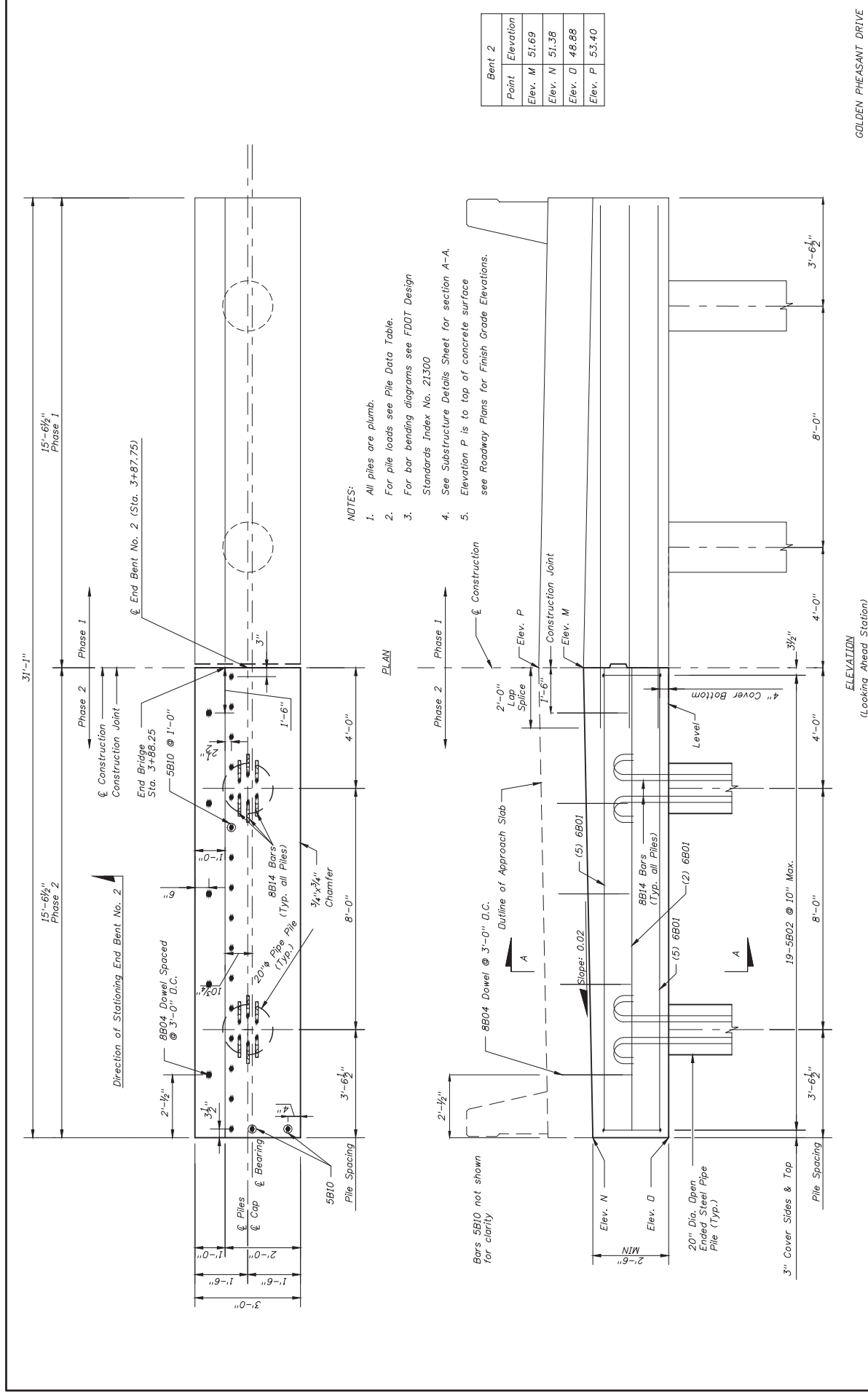
NOTES:

- All piles are plumb.
- For pile loads see Pile Data Table.
- For bar bending diagrams see FDDT Standard Index No. 21300
- See Substructure Details Sheet for section A-A.
- Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

REVISIONS DATE BY DESCRIPTION		INITIAL DRAWN BY C.A. CHECKED BY J.C. DESIGN BY J.R. DATE 5/20/09		ENGINEER OF RECORD: JOHN F. SLIGER, II, P.E. P.E. #20558		REGISTE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9692 FL 36308 3370 CORP. BLVD. SUITE 204 PALM BEACH, FLORIDA 33480 PHONE: (561) 844-4321 - FAX: (561) 844-0505 PROJECT NUMBER: 120		LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE: (850) 608-1500 * FAX: (850) 608-1801		PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS		END BENT No. 2 - PHASE 1 SHEET NO. B3-8A	
----------------------------------	--	---	--	--	--	---	--	---	--	--	--	---	--

ELEVATION
(Looking Ahead Station)

GOLDEN PHEASANT DRIVE

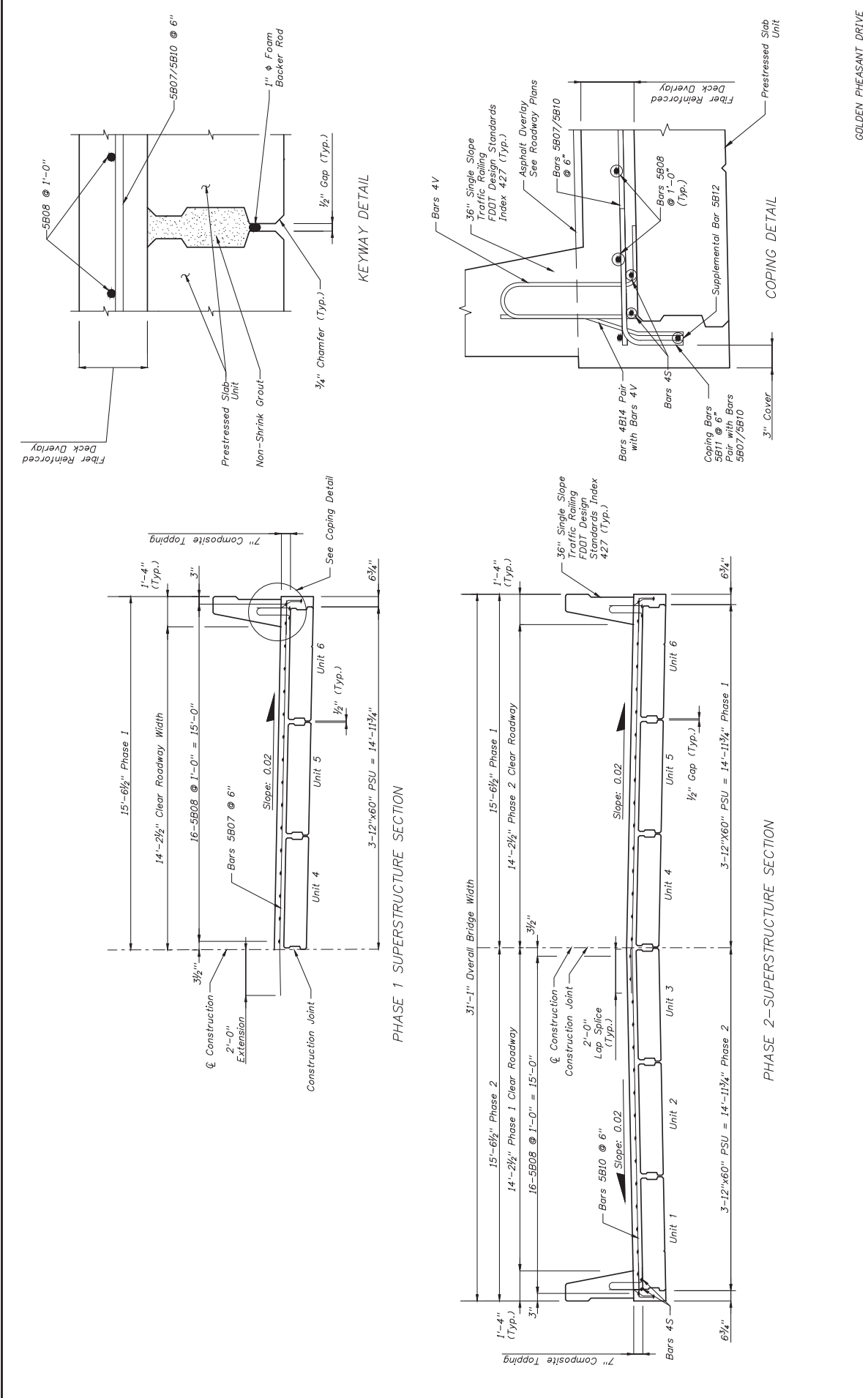


- NOTES:
1. All piles are plumb.
 2. For pile loads see Pile Data Table.
 3. For bar bending diagrams see FDOT Design Standards Index No. 21300
 4. See Substructure Details Sheet for section A-A.
 5. Elevation P is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

Bent 2	
Point	Elevation
Elev. M	51.69
Elev. N	51.38
Elev. D	48.88
Elev. P	53.40

ELEVATION
(Looking Ahead Station)

	REGISTERED ENGINEERING CONSULTANT CIVIL AND STRUCTURAL ENGINEERING CONSULTANT JOHN F. SLIGER II, P.E. 3378 CORP. AUTORIZATION # 3692 FL 36308 PHONE (850) 894-4321 - FAX (850) 824-0505 PROJECT NUMBER: 120	LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 808-1500 * FAX (850) 808-1801	GOLDEN PHEASANT DRIVE END BENT No. 2 - PHASE 2 PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS
			SHEET NO. B3-9A

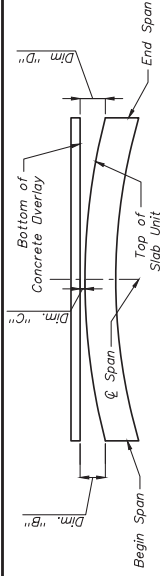


REVISIONS		DATE	BY	DESCRIPTION

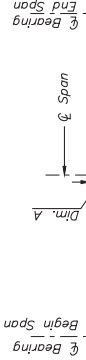
ENGINEER OF RECORD:		INITIAL	
JOHN F. SLIGER II, P.E.		C.S.A.	
P.E. #25528		M.C.	
		J.R.	
		M.P.	
		DATE	
		5/22/19	

REGISTE, SLIGER ENGINEERING, INC.		LEON COUNTY DEPARTMENT OF PUBLIC WORKS	
CIVIL AND STRUCTURAL ENGINEERING CONSULTANT		2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308	
CERT. OF AUTHORIZATION # 3692		PHONE (850) 808-1500 * FAX (850) 808-1801	
3370 CANTON ROAD, TALLAHASSEE, FLORIDA 32308		PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	
PHONE (850) 894-4321 - FAX (850) 224-0505		PROJECT NUMBER: 120	
PROJECT NUMBER: 120		SHEET NO.	
		B-141	

GOLDEN PHEASANT DRIVE



BUILD-UP DIAGRAM FOR TANGENT SPANS (ALONG & SLAB UNIT) (CASE 1)



DEAD LOAD DEFLECTION DIAGRAM

PRESTRESSED SLAB UNIT CAMBER AND BUILD-UP NOTES:

The build-up values given in the table are based on theoretical unit cambers. The contractor shall monitor unit cambers for the purpose of predicting camber values at the time of the deck pour. If the predicted cambers based on field measurements differ more than $\pm 1/8"$ from the theoretical "Net Unit Camber @ 120 Days" shown in the table, propose modified build-up dimensions as required and submit to Leon County for approval a minimum of 21 days prior to casting overlay concrete.

POURED EXPANSION JOINT DATA TABLE			Table Date 1-01-09	
LOCATION	DIM. "A" TOTAL DESIGN @ 70° F MOVEMENT	#DIM.	"A" ADJUSTMENT PER 10° F	
Bent 1	3/4"	0.31"	+/- 0.028"	

*For temperature above 70° F reduce the opening.
 *For temperature below 70° F increase the opening.

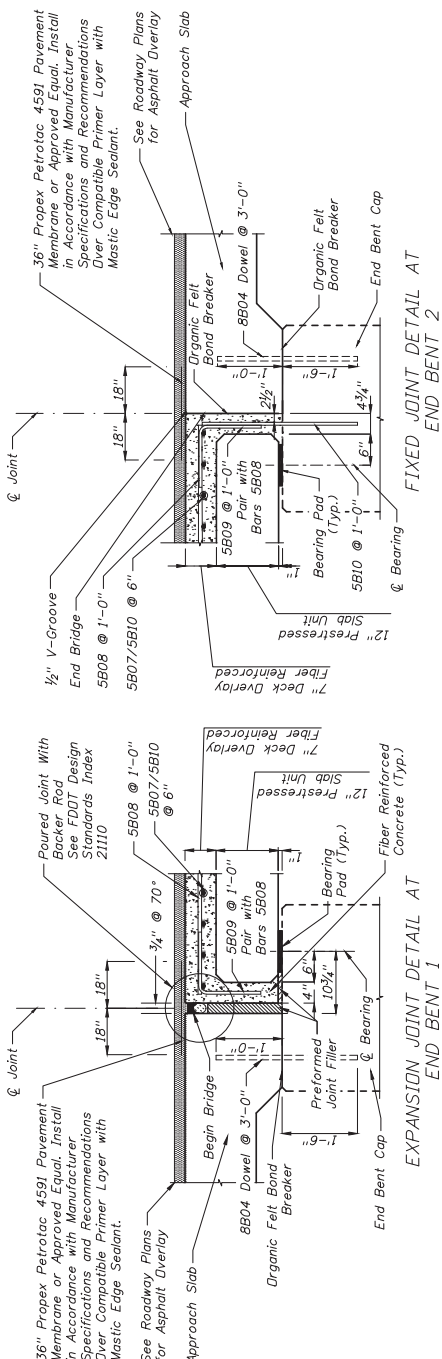
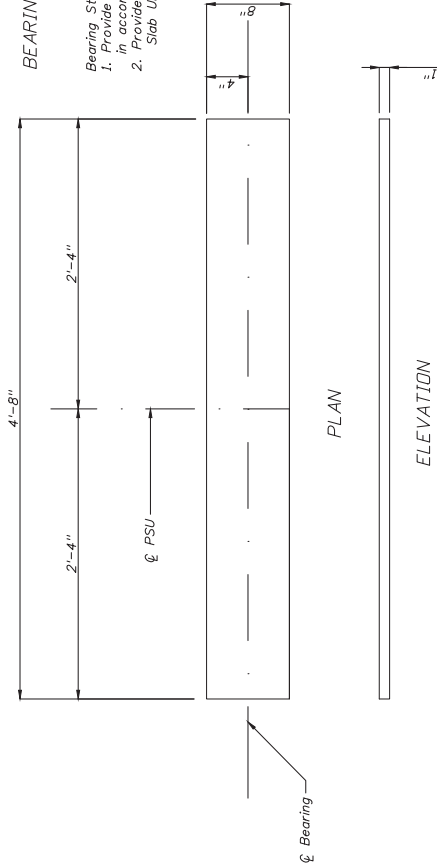
NOTE: Dim. "A" adjustment per 10° F shown, is measured perpendicular to & Expansion Joint. Work this table with FDOT Design Standards Index No. 21110.

BUILD-UP & DEFLECTION DATA TABLE FOR PRESTRESSED SLAB UNITS									
LOCATION	SPAN BEAM NO.	REQUIRED THEORETICAL BUILD-UP OVER & BEAM *		NET BEAM DEFLECTIONS (CAMBERS) (DEAD LOAD DECK POUR OF BEAM) @ 120 DAYS		DEAD LOAD DEFLECTION @ 120 DAYS	BUILD-UP CASE NO.	Table Date 11-19-09	
		AT BEGIN SPAN DIM "B" DIM "C"	AT END SPAN DIM "D" DIM "E"	AT BEGIN SPAN DIM "F" DIM "G"	AT END SPAN DIM "H" DIM "I"				
1	1	0.51	0	0.51	0.79	0.28	1		
1	2	0.51	0	0.51	0.79	0.28	1		
1	3	0.51	0	0.51	0.79	0.28	1		
1	4	0.51	0	0.51	0.79	0.28	1		
1	5	0.51	0	0.51	0.79	0.28	1		
1	6	0.51	0	0.51	0.79	0.28	1		

NOTES: Work this table with FDOT Developmental Design Standard Index No. 020399.

BEARING PAD DETAILS

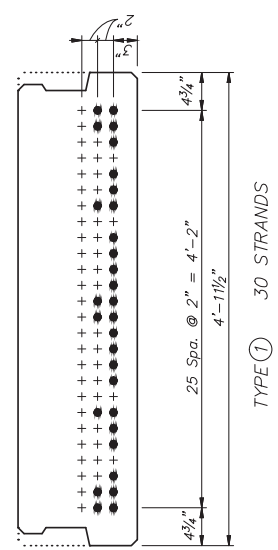
- Bearing Strip Notes:
 1. Provide Bearing Strips (Shear Modulus G= 110 Pst) in accordance with FDOT Standard Specification Section 932
 2. Provide matching Bearing Strips at each end of Prestressed Slab Units



* Add Preformed Joint Filler Between Bearing Pads

DATE		DESCRIPTION		INITIAL	ENGINEER OF RECORD:	<p>REGISTE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9692 FL 36308 3370 CORP. CENTER BLVD. SE PHOENIX, AZ 85044-4521 FAX (602) 224-0505</p>	<p>LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 608-1500 * FAX (850) 608-1801</p>	SUPERSTRUCTURE DETAILS & OF 2 PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS	SHEET NO.	
						JOHN F. SLIGER, II, P.E. P.E. #20588			GOLDEN PHEASANT DRIVE STANDARD INDEX NO. 020399.	BE-161A

SPAN NO.	SLAB UNIT	CLASS	STRENGTHS (psi)	28 Day Release	PRN	CASE		ANGLE Φ		DIM J	DIM K1	DIM K2	DIMENSIONS *			402	403	5Y1	5Y2	4K	NO. OF BAR SPACES			BAR SPACING *			RAILING REIN. ***								
						END 1	END 2	END 1	END 2				DIM L	DIM R	DIM C						DIM C	ND.	DIM C	DIM B	DIM B	S1	S2	S3	V1	V2	V3	INDEX NO.	CASE	DIM X1	DIM X2
1	1/12"x60"	V1	8,500	6,000	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	31'-8 1/2"	1/4"	3'-3"	3'-3"	4'-4 1/2"	4'-4 1/2"	132	132	1	15	12"	5 1/4"	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
1	2/12"x60"	V1	8,500	6,000	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	31'-8 1/2"	1/4"	3'-3"	3'-3"	4'-4 1/2"	4'-4 1/2"	132	132	1	15	12"	5 1/4"	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
1	3/12"x60"	V1	8,500	6,000	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	31'-8 1/2"	1/4"	3'-3"	3'-3"	4'-4 1/2"	4'-4 1/2"	132	132	1	15	12"	5 1/4"	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
1	4/12"x60"	V1	8,500	6,000	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	31'-8 1/2"	1/4"	3'-3"	3'-3"	4'-4 1/2"	4'-4 1/2"	132	132	1	15	12"	5 1/4"	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1	5/12"x60"	V1	8,500	6,000	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	31'-8 1/2"	1/4"	3'-3"	3'-3"	4'-4 1/2"	4'-4 1/2"	132	132	1	15	12"	5 1/4"	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1	6/12"x60"	V1	8,500	6,000	I	I	90°	90°	6"	10 3/4"	10 3/4"	10 3/4"	31'-8 1/2"	1/4"	3'-3"	3'-3"	4'-4 1/2"	4'-4 1/2"	132	132	1	15	12"	5 1/4"	12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



TYPE ① 30 STRANDS

STRAND DESCRIPTION: Use 1/2" Diameter, Grade 270, Low Relaxation Strands stressed at 30,975 kips each. Area per strand equals .153 sq. in.

NOTE: Work this sheet with Developmental Design Standards Index Nos. D20350 and D20355.

STRAND DEBONDING LEGEND

- - fully bonded strands.
- ⊙ - strands debonded "----" from end of beam.
- ⊠ - strands debonded "----" from end of beam.
- ⊡ - strands debonded "----" from end of beam.
- ⊢ - strands debonded "----" from end of beam.

NOTE: On slab units with skewed ends the debonded length shall be measured along the debonded strand.

DIMENSION NOTES

- * All longitudinal slab unit dimensions shown on this sheet with a single asterisk (*) are measured along the top of unit at the centerline of slab unit.
- ** End of slab unit bearing dimensions "J" and "K" are measured along the bottom of the slab unit.
- *** See Index No. 20350 for modified reinforcement. See "Prestressed Slab Units - Traffic Railing Reinforcing Layout Table" for railing placement on horizontal curves.

GOLDEN PHEASANT DRIVE

REGISTER: SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9692 EL 36308
 3370 CORP. CENTER BLVD. # 4521 - FAK (850) 224-0505
 PHONE (850) 894-4521 - FAX (850) 224-0505
 PROJECT NUMBER: 120

ENGINEER OF RECORD:
 JOHN F. SLIGER, II, P.E.
 P.E. #20588

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (850) 808-1500 * FAX (850) 808-1801

PRESTRESSED STANDARD SLAB UNIT TABLE
 PROJECT NAME:
RAYMOND TUCKER DRAINAGE IMPROVEMENTS

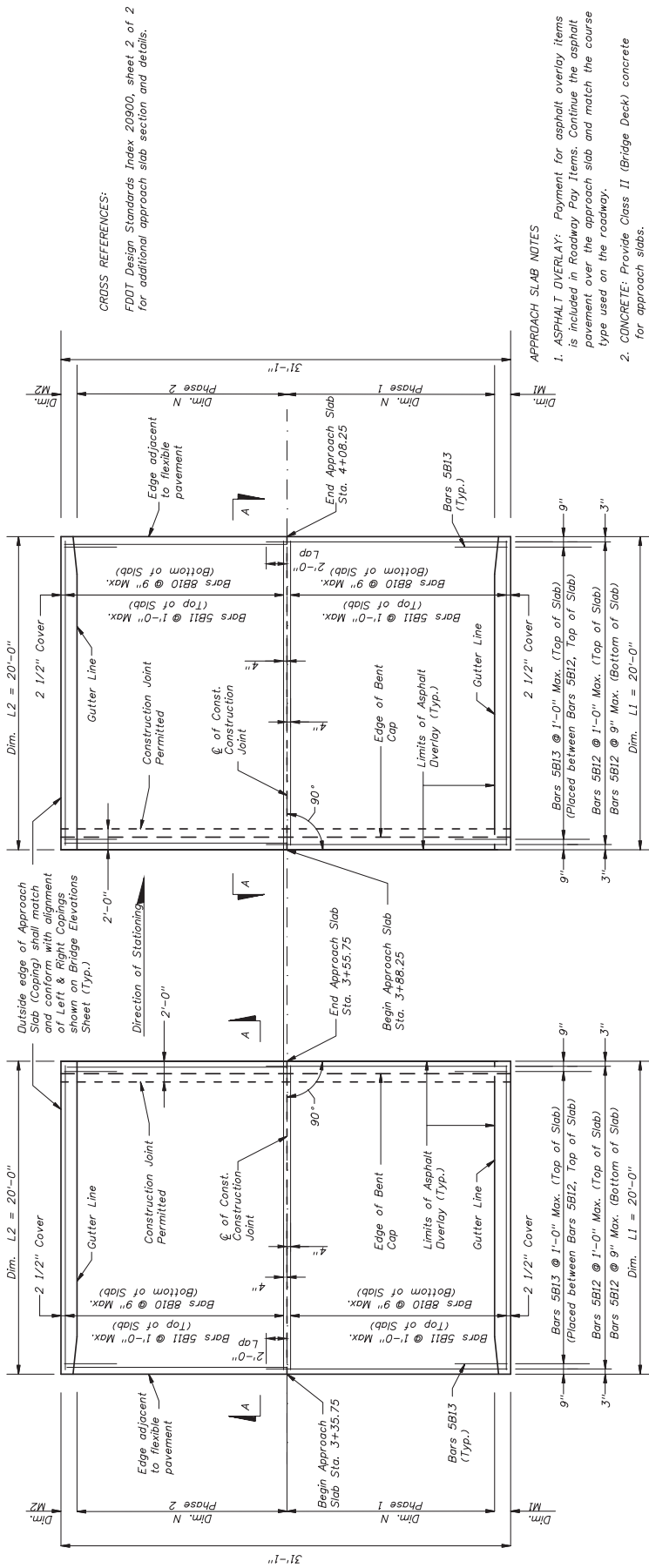
REVISIONS

DATE	BY	DESCRIPTION

INITIALS

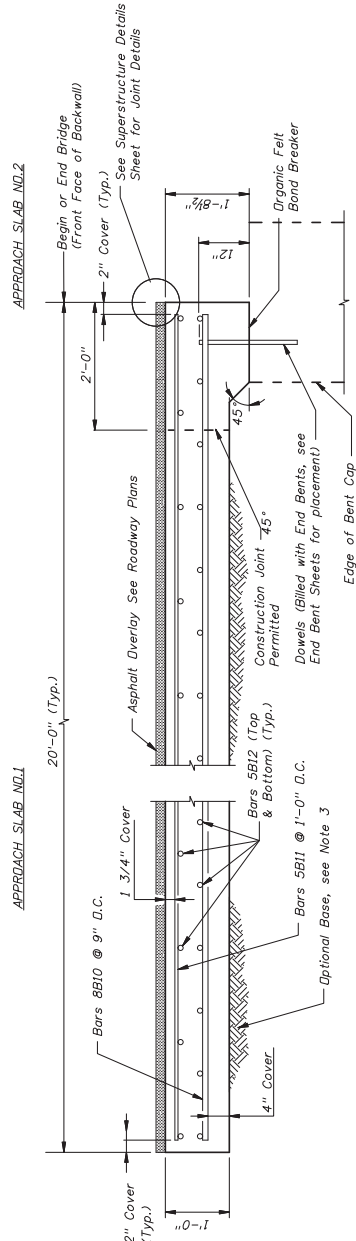
DRAWN BY	CWA
CHECKED BY	JCS
DESIGN BY	JCS
DATE	5/20/19

SHEET NO. **B3-16.A**



APPROACH SLAB INDEX 20900 TABLE OF DIMENSIONS

LOCATION	DIMENSIONS				ANGLE
	L1	L2	M1	M2	
Slab No.1 - Phase 1	20'-0"	N/A	1'-4"	N/A	14'-2 1/2"
Slab No.2 - Phase 1	20'-0"	N/A	1'-4"	N/A	14'-2 1/2"
Slab No.1 - Phase 2	N/A	20'-0"	N/A	1'-4"	14'-2 1/2"
Slab No.2 - Phase 2	N/A	20'-0"	N/A	1'-4"	14'-2 1/2"



SECTION A-A

DATE	BY	REVISIONS	DESCRIPTION	INITIAL	ENGINEER OF RECORDS

REGISTE, SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9692
 3812 BUCKINGHAM ROAD, TALLAHASSEE, FL 32308
 PHONE (850) 884-4561 - FAX (850) 884-4605
 PROJECT NUMBER: 120

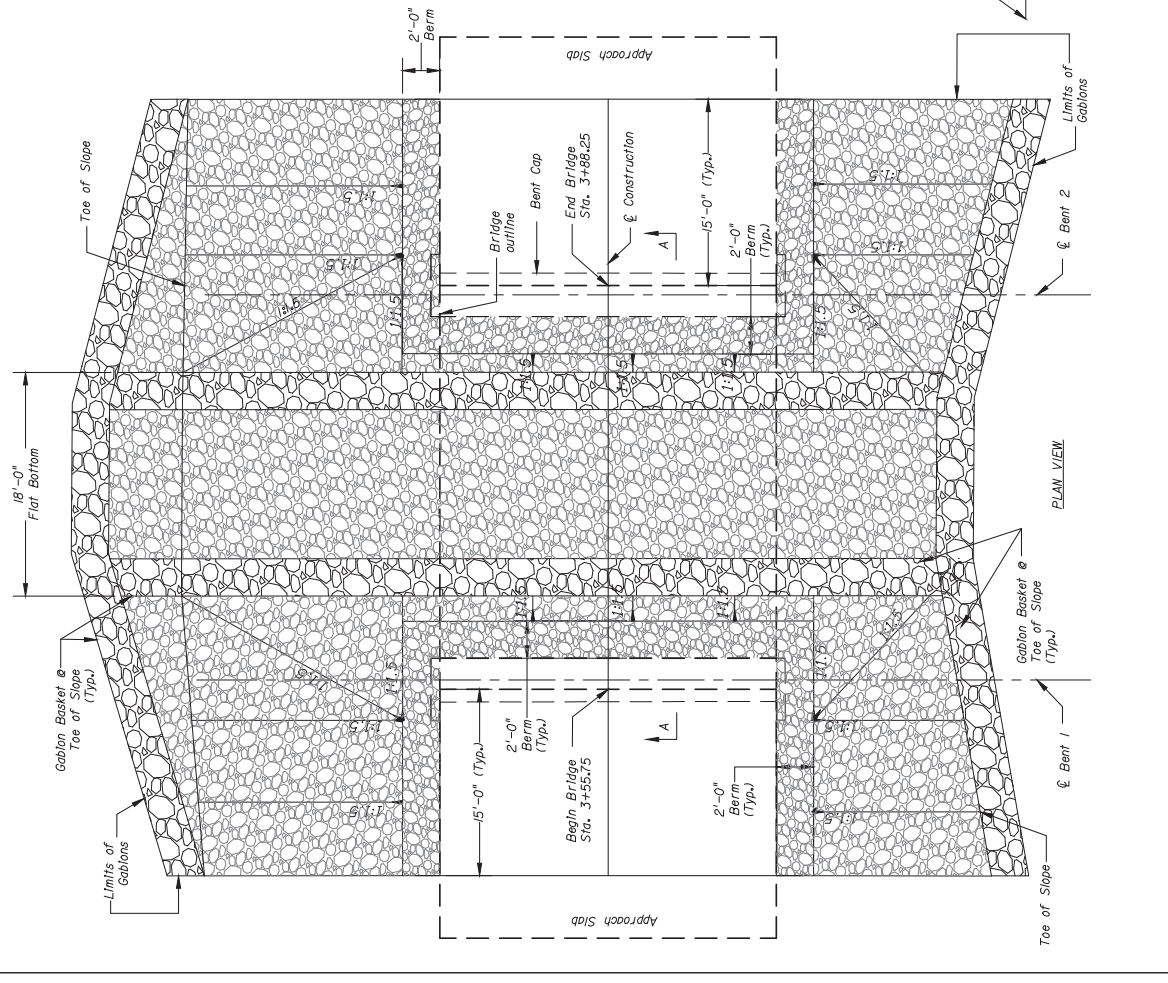
JOHN F. SLIGER, II, P.E.
 P.E. #93530

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2288 MACONUCKE ROAD, TALLAHASSEE, FL 32308
 PHONE (850) 606-1500 - FAX (850) 606-1501

APPROACH SLABS
 PROJECT NAME: **RAYMOND TUCKER DRAINAGE IMPROVEMENTS**
 SHEET NO.: **BS-17A**

GOLDEN PHEASANT DRIVE

- Notes:**
1. All Gabions shall be Maccaferrri or approved equal.
 2. Maccaferrri can be contacted at www.maccaferrri-usa.com or by phone at 301-223-6910
 3. Compact the soil below gabions to a minimum density of 90% of the soils Modified Proctor maximum dry density (ASTM D-1557) for a depth of at least 24 inches.
 4. Gabions components shall be in accordance with FDOT Standard Specification Section 530-2.3. Install Gabions in accordance to FDOT Standard Specification Section 530-3.5 and the manufacturer's specifications and recommendations.



DATE	BY	DESCRIPTION

INITIAL	DESIGN BY	
	CHECKED BY	
	DESIGN BY	
	CHECKED BY	
	DATE	5/2/2019

ENGINEER OF RECORD:
 REGISTE SLIGER ENGINEERING, INC.
 CIVIL AND STRUCTURAL ENGINEERING CONSULTANT
 CERT. OF AUTHORIZATION # 9292
 3370 Capital Circle NE, (J) - Tallahassee, FL 32308
 PHONE: (905) 894-4521 - FAX: (905) 224-0505
 JOHN F. SLIGER II, P.E.
 P.E. #5550

REVISIONS

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
 2280 MICCOSUEE ROAD, TALLAHASSEE, FLORIDA 32308
 PHONE (905) 608-1500 - FAX (905) 608-1501

GABION BANK PROTECTION DETAILS

PROJECT NAME: **RAYMOND TUCKER DRAINAGE IMPROVEMENTS**

SHEET NO. **B5-18A**

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

CHANNEL PROFILE STA. 3+71.54
 LOOKING UP STATION
 GOLDEN PHEASANT DRIVE

MARK	SIZE	DES	LENGTH	NO	TYPI	STY	B	C	D	E	F	H	J	K	N	?	
			FT	IN	BAR	BAR	LG	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO
			LOCATION														
6	B01		17-4	12	1	17-3 1/2											
5	B02		9-10	19	4	4	1-11	2-6									
8	B04		2-6	5	1	2-6											
			LOCATION														
6	B01		17-4	12	1	17-3 1/2											
5	B02		9-10	19	4	4	1-11	2-6									
8	B04		2-6	5	1	2-6											
5	B10		2-8	16	1	2-8											
			LOCATION														
6	B01		15-4	12	1	15-3 1/2											
5	B02		9-10	19	4	4	1-11	2-6									
8	B04		2-6	5	1	2-6											
5	B10		2-8	16	1	2-8											
			LOCATION														
5	B07		17-4	65	1	17-3 1/2											
5	B08		32-0	16	1	32-0											
5	B09		2-0	16	10	1-0											
5	B11		3-2	65	10	2-6	0-8										
5	B12		32-0	1	1	32-0											
4	B14		2-1	65	28	0-11	0-6	0-7	0-2 1/4								
			LOCATION														
5	B08		32-0	16	1	32-0											
5	B09		2-0	16	10	1-0											
5	B10		15-4	16	1	15-3 1/2											
5	B11		3-2	65	10	2-6	0-8										
5	B12		32-0	1	1	32-0											
4	B14		2-1	65	28	0-11	0-6	0-7	0-2 1/4								
			LOCATION														
8	B10		19-6	21	1	19-6											
5	B11		19-6	16	1	19-6											
5	B12		17-4	48	1	17-4											
5	B13		5-0	20	1	5-0											
			LOCATION														
8	B10		19-6	21	1	19-6											
5	B11		19-6	16	1	19-6											
5	B12		17-4	48	1	17-4											
5	B13		5-0	20	1	5-0											
			LOCATION														
8	B14		37-0	6	17	6	37-0										

END OF LIST

MARK	SIZE	DES	LENGTH	NO	TYPI	STY	B	C	D	E	F	H	J	K	N		
			FT	IN	BAR	BAR	LG	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO
4	B15		4-5	31	24	1-0	0-6 1/2										
			LOCATION														
8	B14		37-0	6	17	6	37-0										
4	B15		4-5	31	24	1-0	0-6 1/2										

PIPE PILE PHASE 2

NO. REQUIRED = 4

PIPE PILE PHASE 2

NO. REQUIRED = 4

NO. REQUIRED = 4

REVISIONS DATE BY DESCRIPTION		INITIAL DRAWN BY CHECKED BY DESIGNED BY DATE		ENGINEER OF RECORD: JOHN F. SLIGER II, P.E. REG. # 52209				REGISTE: SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF REGISTRATION # 9592 3370 CORTLAND BLVD., SUITE 100 PALM BEACH, FLORIDA 33408 PHONE (850) 894-4521 - FAX (850) 824-0505 PROJECT NUMBER: 120		LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 806-1500 * FAX (850) 806-1501		REINFORCING BAR LIST PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS		SHEET NO. B2-191	
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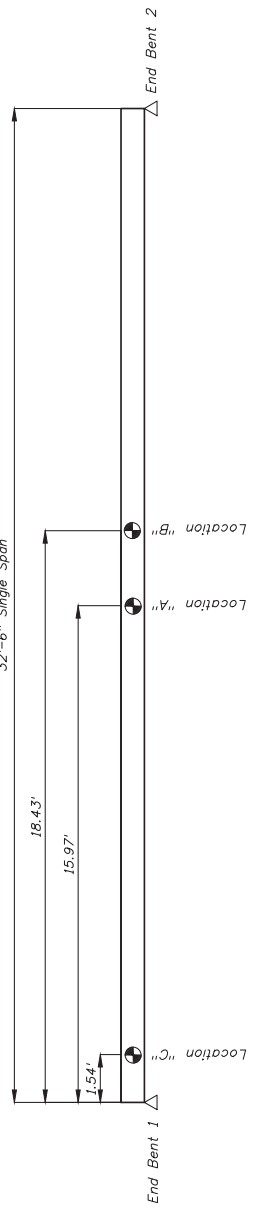
- NOTES:
1. Work this sheet with FDOT Design Standards Index 21300.
 2. Reinforcement for pipe piles is to be included in the payment for pipe piles. See Steel Pipe Pile sheet for details.

GOLDEN PHEASANT DRIVE

Table 2 - LRFER

Level	Limit State	Vehicle	Weight (tons)	Load Factors			Moment (Strength)			Shear (Strength)			Comments:				
				LL	DC	DW	Distribution Factor (DF)	Rating Factor	Tons	Location	Dimension	Distribution Factor (DF)		Rating Factor	Tons	Location	Dimension
Design Load Rating	Strength I (Inv)	HL-93	N/A	1.75	1.25	1.50	0.47	2.26	N/A	A	15.97'	0.72	4.16	N/A	C	1.54	Interior/exterior beam DF method if other than LFRD. Other appropriate comments
	Strength I (Op)	HL-93	N/A	1.35	1.25	1.50	0.47	2.94	N/A	A	15.97'	0.72	5.40	N/A	C	1.54	Exterior Beam
	Service III (Inv)	HL-93	N/A	1.35	1.25	1.50	0.47	2.39	N/A	A	15.97'	N/A	N/A	N/A	N/A	N/A	Exterior Beam
Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	0.47	2.39	143.14	B	18.43'	0.72	3.69	221.58	C	1.54	Exterior Beam

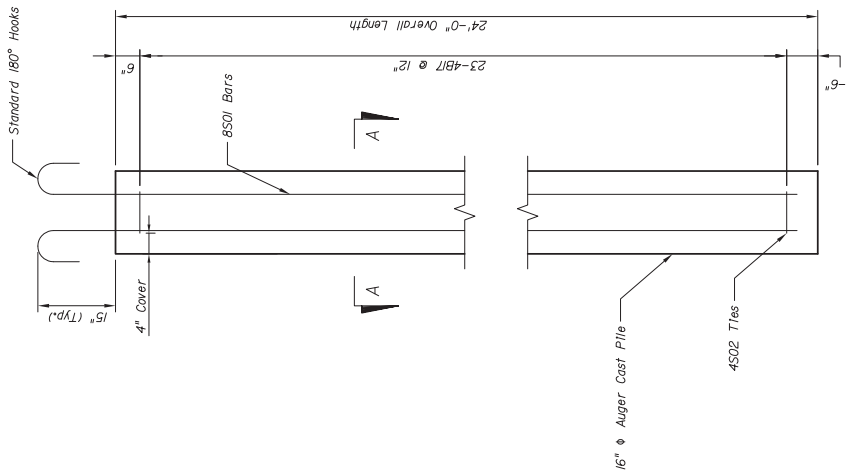
Abbreviations:
 Inv - Inventory
 Op - Operating



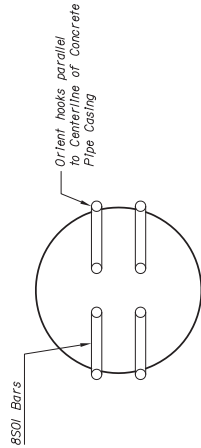
RATING LOCATIONS

- General Notes:
- This table is based on the requirements established in the January 2017 "Structures Manual".
 - Permit capacity is determined by using the permit vehicle in all lanes.
 - Service III Design Inventory tensile stress limit = $6\sigma_{\text{trf}(c)}$
 - Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? Yes No
 - Load Rating Performed utilizing FDOT LRFD Prestressed Beam Program V5.2.

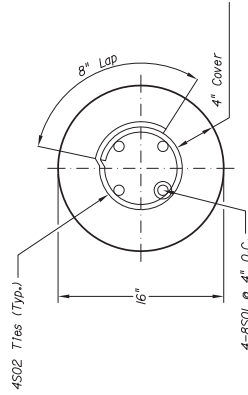
DATE	REVISIONS	INITIAL	ENGINEER OF RECORD:	LEON COUNTY DEPARTMENT OF PUBLIC WORKS	GOLDEN PHEASANT DRIVE	SHEET NO.
			REGISTE SLIGER ENGINEERING, INC.	2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308		
			CIVIL AND STRUCTURAL ENGINEERING CONSULTANT	PHONE (904) 894-1500 * FAX (904) 894-1501		
			CERT. OF AUTHORIZATION # 9292	PROJECT NAME:		
			3370 Capital Circle NE, C.J. - Tallahassee, FL 32308	RAYMOND TUCKER DRAINAGE IMPROVEMENTS		
			PHONE: (904) 894-4521 - FAX (904) 224-0905			
			PROJECT NUMBER: 120			
			JOHN F. SLIGER II, P.E.			
			P.E. #5550			



16" ϕ AUGER CAST PILE ELEVATION



PLAN VIEW OF AUGER CAST PILE
(Showing Bars 85I6)



SECTION A-A

Pile Installations:
Install Piles in accordance with FDOT Standard Specifications Section 455-44. Prior to Installation, the Contractor shall submit an Auger cast Pile Installation Plan in accordance with FDOT Standard Specifications Section 455-47 to Leon County Department of Public Works for the approval of the Engineer of Record.

GROUT:
Grout mixture materials shall be in accordance with Section 455-40 of the FDOT Standard Specifications. Proportion Grout mixture to produce a minimum 28 day compressive strength $f'_c = 4,000$ psi in accordance with FDOT Standard Specifications Sections 455-41 & 455-42. Allow for a minimum curing time of 12 hours prior to installation of 20% Open Ended Steel Pipe Piles within 4 pile diameters.

Reinforcing Steels:
All reinforcing steel shall conform to ASTM A615, Grade 60.

Payment:
All costs associated with furnishing and installing of Auger Cast piles are to be included in the contract unit price for AUGER GROUTED PILES.

AUGER CAST PILE DATA TABLE			
Pile No.	Size	Top Elevation	Tip Elevation
1	16"	46.3	22.3
2	16"	46.4	22.4

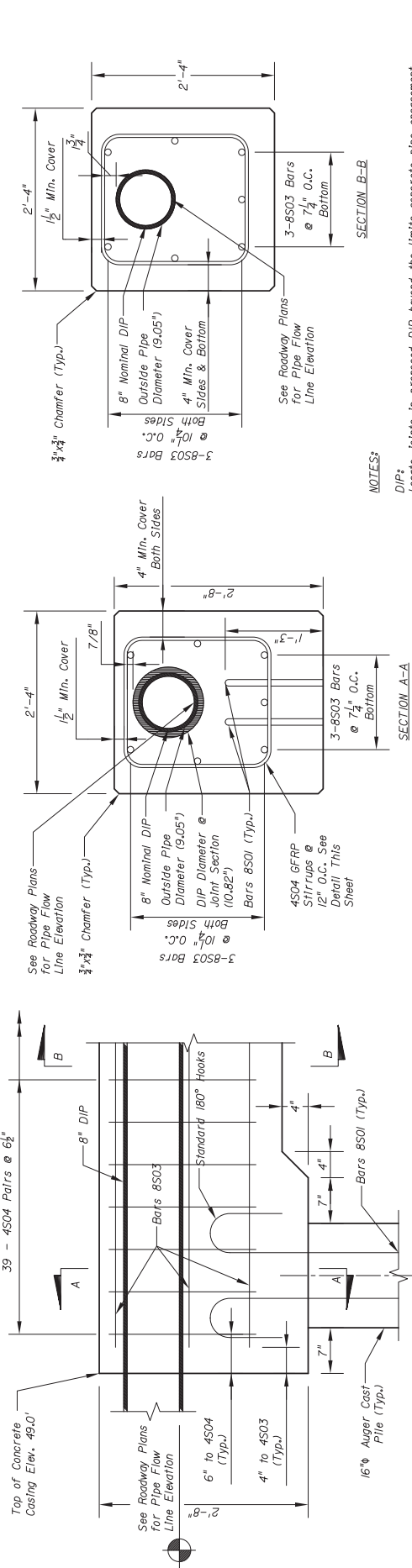
NOTES:
For Pile Casing Details see Sheet BSI-2
For Auger Cast Pile Location, see sheet B3-3.

GOLDEN PHEASANT DRIVE

DATE	REVISIONS	DESCRIPTION	BY	INITIAL	ENGINEER OF RECORD:	PROJECT NUMBER:	SHEET NO.
					REGISTE, SLIGER ENGINEERING, INC. CIVIL AND STRUCTURAL ENGINEERING CONSULTANT CERT. OF AUTHORIZATION # 9692 F. 062008 3370 S.W. 11TH AVENUE, SUITE 100, BOCA RATON, FL 33433 PHONE: (850) 994-4821 FAX: (850) 264-0505 PROJECT NUMBER: 210	BSI-1A	
					LEON COUNTY DEPARTMENT OF PUBLIC WORKS 2200 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308 PHONE (850) 606-1500 * FAX (850) 606-1501	BSI-1A	
						AUGER CAST PILE DETAIL	BSI-1A
						RATMOND TUCKER DRAINAGE IMPROVEMENTS	BSI-1A

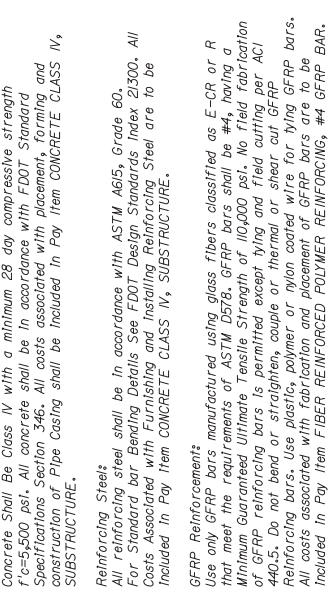


ENGINEER OF RECORD:
JOHN F. SLIGER II, P.E.
P.E. #3533



PARTIAL PLAN VIEW PIPE CASING

For Auger Cast Pile Details, See Sheet BS1-1.



NOTES:

DIPs: Locate Joints in proposed DIP beyond the limits concrete pipe encasement whenever possible. When joints are required within the concrete pipe casing, center Joints over Auger cast Pile Supports. Payment for DIP is Included with the Roadway Pay Items.

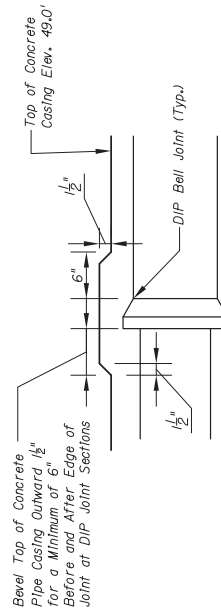
Concrete: Concrete Shall Be Class IV with a minimum 28 day compressive strength $F_c=5,500$ psi. All concrete shall be in accordance with FDOT Standard Specifications Section 346. All casts associated with placement, forming and construction of Pipe Casing shall be Included in Pay Item CONCRETE CLASS IV, SUBSTRUCTURE.

Reinforcing Steel: All reinforcing steel shall be in accordance with ASTM A615, Grade 60.

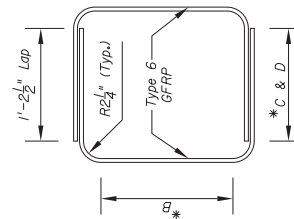
For Standard Bar Bending Details See FDOT Design Standards Index 23300. All Casts Associated with Furnishing and Installing Reinforcing Steel are to be Included in Pay Item CONCRETE CLASS IV, SUBSTRUCTURE.

GFRP Reinforcements: Use only GFRP bars manufactured using glass fibers classified as E-CR or R

bar, meet the requirements of ASTM 1577B. GFRP bars shall be #4, having fabrication with Guaranteed Ultimate Tensile Strength of 10,000 Psi. No field fabrication of GFRP reinforcing bars is permitted, except tying and field cutting GFRP 440.5. On reinforcing bars, the ends shall be protected with a GFRP cap. Reinforcing bars use plastic polymer pipe coated wires or filar GFRP bars. All casts associated with fabrication and placement of GFRP bars are to be Included in Pay Item FIBER REINFORCED POLYMER REINFORCING, #4 GFRP BAR.



DIP JOINT SECTION DETAIL



GFRP STIRRUP DETAILS

GFRP = Glass Fiber Reinforced Polymer

*See Reinforcing Bar List for Dimensions and Quantities

Work GFRP STIRRUP DETAIL with FDOT Developmental Design Standard Index D2130

MARK	SIZE	DES	LENGTH	NO	TYP	STY	B	C	D	E	F	H	J	K	N	Ø	
	FT	IN	FT	IN	BAR	IN	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	AVG
LOCATION AUGER CAST PILES																	
Ø	S01		25-10	4	17	1	24-10										
4	S02		2-9	23	24		0-8	0-4									
LOCATION PIPE CASING																	
Ø	S03		20-11	7	1		20-11										
4	S04		4-10	78	6		1-5	1-4									
NO. REQUIRED = 2																	
NO. REQUIRED = 1																	

END OF LIST

GOLDEN PHEASANT DRIVE

DATE	BY	REVISIONS	DESCRIPTION	INITIAL	DATE
ENGINEER OF RECORD:			REGISTE, SLIGER ENGINEERING, INC.		
			CIVIL AND STRUCTURAL ENGINEERING CONSULTANT		
			3370 Coastal Circle NE, D-1 Tallahassee, FL 32308		
			PHONE: (850) 894-4521 FAX: (850) 224-0505		
			PROJECT NUMBER: 120		
			PROJECT NAME: RAYMOND TUCKER DRAINAGE IMPROVEMENTS		
			LEON COUNTY DEPARTMENT OF PUBLIC WORKS		
			2280 MICCOSUKEE ROAD, TALLAHASSEE, FLORIDA 32308		
			PHONE (850) 606-1500 * FAX (850) 606-1501		
			SHEET NO. BS1-2A		