STRUCTURES
STANDARDS

JANUARY 1984
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NOTE: Numbers in parentheses indicate with index number. Blank spaces indicate revision number.
## GENERAL NOTES

**CONSTRUCTION SPECIFICATIONS**: State of Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Current Edition with approved Supplements thereon.


**DESIGN LOADING**: Designed in accordance with AASHTO LRFD.

**FUTURE WEARING SURFACES**: An allowance of 1% per 10 ft. is included for future wearing surfaces.

**REINFORCING STEEL**: All reinforcing steel shall conform to ASTM A 615 Grade 40 or Grade 60 when otherwise noted.

**PLACING**: Paving shall be in 7-1/2" Prestrained Control Piles. For Quantities see Summary of Bridge Tip Pile. Maximum pile loads shall be as follows:

<table>
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<tr>
<th>BRIDGE WIDTH</th>
<th>29.0</th>
<th>30.0</th>
<th>31.0</th>
<th>32.0</th>
<th>33.0</th>
<th>34.0</th>
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<tbody>
<tr>
<td>40 FT ROADWAY</td>
<td>25</td>
<td>8.25</td>
<td>Interim. 3.0</td>
<td>90</td>
<td>35</td>
<td>90</td>
</tr>
<tr>
<td>44 FT ROADWAY</td>
<td>25</td>
<td>5.0</td>
<td>Interim. 3.0</td>
<td>90</td>
<td>35</td>
<td>90</td>
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**CONCRETE**: Class III Concrete (5% 3000 psi) shall be used throughout the Substructure. Class IV Concrete (6000 psi) shall be used for field components in the Superstructure. Class V Concrete (9000 psi) shall be used for precast members. Class V Concrete (9000 psi) shall be used for precast members.

**CONCRETE FINISH**: Concrete shall be provided with all surfaces of Slab units shall receive a Class 1 Anti-slip Coating.

**ENVIRONMENTAL LIMITATIONS**: The choice of materials shall be in accordance with DOT Environmental Impact Statements.

**LIMITATIONS FOR USE**: These drawings shall not be used for Structures located in Suburban/Suburban Transition or in Structures as defined where the Impact/Conder is located on the bearing is greater than 0.04 and not 0.06.

**BITUMINOUS MATERIAL**: For Type of Bituminous Materials, Estimated Quantities, and Tar see roadway Piles.

**ALTERNATE SECTIONS**: At the option of the Contractor, alternate units may be furnished provided the amount of prestressing per foot of width is maintained.

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**PRESSTRESSED MEMBERS**

**FINISH**: The top of prestressed units shall be finished smooth by floating or broomming. All other surfaces of all members, shall be finished in Class 1 surface finish. The edges of the top surface of the units shall be finished by use of a small roller tool.

**CONCRETE STRENGTH**: At rest of the prestressing load, the cylinder strength of the concrete shall be 4000 psi.

**HANDLING STORAGE**: During handling and storage, the prestressed units must be maintained in a vertical position at all times. The units must be fixed up on the ends of the units until the load is completely lifted.

**FORMS & PALLETS**: All prestressed units shall be set on concrete based pallets and on metal forms.

**STRANDS**: All the option of the Contractor, stabilized strands may be used in lieu of stress relieved strands. Calculations are to be submitted showing the requirements of the substrate meets the following requirements:

1. The strands used to prestress ASTMC 416 Grade 70
2. The net compressive stress in the concrete after all loads is at least as long as that provided by the stress relieved strands.
3. The ultimate strength of the structure must be equal to the Ultimate load of the substrate.

4. At the option of the Contractor, stabilized strands may be substituted in lieu of the E55 strands where standard that condition required. Calculations are to be submitted showing the requirements of the substrate meets the following requirements:

5. The ultimate strength of the structure must be equal to the Ultimate load of the substrate.

**STRAIN EXTENSION**: At strains shall extend 5% beyond the ends of the prestressed units.

**TIE BARS**: Tie bars shall be 1/2" B5 and for post-tensioning and shall comply with the requirements of Section 933 of the Specifications. The tie bars shall be stressed and anchored at (12,000 psi per psi prestressed psi) (12,000 psi per psi prestressed psi).

**SHOP DRAWINGS**: The contractor shall submit 7 sets of shop drawings, showing complete details of the prestressed members. The drawings shall include reinforcing steel, prestressing steel, and anchorage systems, and all connections required to control the work.

**SEATING PADS**: Seating pads shall be 1/2" x 6" in accordance with specifications for 932-2 of the Specifications.

**PAYMENT**: The contract unit price for the precast prestressed units shall include the units, prestressed strands, reinforcing steel, shapes, and the cost of the tie bars and for the concrete for the tie bar anchorage in the construction documents for approval by the Shop Drawings.

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**CONSTRUCTION NOTES**

**EQUIPMENT ON UNITS**: Before being construction equipment is positioned on the structure during construction, check the following:

1. The equipment is being used by an authorized and trained professional.

**FILLING KEYS**: During placement of the units, prior to filling the joints between the units and applying to tie to the units, the section of the openings shall be blocked to prevent damage of the placement of the concrete. The section of the tie bars are blocked for the winter the units are to be preheated, the joints and tie bars shall be filled with epoxy mortar (See epoxy mortar note below). Concrete continuity shall be given to the joint when the tie bar is inserted and for the concrete to be placed in the concrete.

**TIE BARS**: The tie bars shall be at least 1" in diameter and shall be at least 12,000 psi.

**GROUTING BARS**: The tie bars shall be inserted in accordance with section 0-300 of the Specifications. The greater the bars shall not be disturbed, and for stress-reducing tendons to be placed on the same for a period of 72 hours following grouting.

**FILLING ANCHORAGE BLOCKOUTS**: The necessary and blockthe fatigue bars for post-tensioned bars shall be filled with anti-corrosive grout.

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**PLACING BARRIER WALLS SURFACING**: After all the bars have been grouted, the surfaces shall be prepared for the surfacing. The barrier walls and warning signs shall be placed.

**SAID JOINT**: In the case of the joints shall be provided with the surfacing of all supports joint, the joints of the warning surface, from gutter to gutter. The joint shall be provided for the construction of the concrete joint shall be used upon completion of the surfacing.

**EPOXY MORTAR**: The tie bars shall be a mixture of epoxy and sand as follows:

(a) BINDER
- The binder shall be a two-component, fast-setting, water-resistant material meeting the following requirements:
  1. Hardened concrete shall be 5000 psi at 24 hours.
  2. The final setting shall have met the requirements of the substrate.

(b) The material shall be a mixture of:
- Sand:
  1. A sand filter shall be a fine, siliceous sand meeting the gradation requirements:
    - Standard Sand
    - ALTERNATE Sand

(c) MORTAR:
- The epoxy mortar shall be mixed in strict accordance with the manufacturer's directions.
- The mixture shall be mixed at least 1" in diameter and shall be at least 12,000 psi.

**STRENGTH**: The strength of the anchor shall be considered adequate provided that 0.50 cubic ft of the mortar between a composite and concrete at the same time shall be determined at 28 days.

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**STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS**

**GENERAL & CONSTRUCTION NOTES**

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**NOTES**

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**DATE**: 10/15/2021

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**SIGNATURE**

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**DESIGN:**

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**ENGINEER:**

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**CONTRACTOR:**

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**SUPERVISOR:**

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**PROJECT:**

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**DATE:** 12/14/21
VIEW A-B
WIND DETAILS 0° SKEW

VIEW C-C
ELEVATION
WIND C DETAILS 12° SKEW

VIEW D-D
ELEVATION
WIND D DETAILS 12° SKEW

VIEW E-E
ELEVATION
WIND E DETAILS 12° SKEW

VIEW F-F
ELEVATION
WIND F DETAILS 12° SKREW

VIEW G-G
SECTION E-E 0° SKREW

VIEW H-H
WIND G SECTION E-E 15° SKREW

VIEW I-I
WIND H SECTION E-E 25° SKREW

VIEW J-J
WIND I SECTION E-E 25° SKREW

VIEW K-K
ELEVATION
WIND J DETAILS 15° SKREW

VIEW L-L
ELEVATION
WIND K DETAILS 25° SKREW

VIEW M-M
ELEVATION
WIND L DETAILS 25° SKREW

VIEW N-N
ELEVATION
WIND M DETAILS 25° SKREW

VIEW O-O
ELEVATION
WIND N DETAILS 25° SKREW

VIEW P-P
ELEVATION
WIND O DETAILS 25° SKREW

VIEW Q-Q
ELEVATION
WIND P DETAILS 25° SKREW

VIEW R-R
ELEVATION
WIND Q DETAILS 25° SKREW

VIEW S-S
ELEVATION
WIND R DETAILS 25° SKREW

VIEW T-T
ELEVATION
WIND S DETAILS 25° SKREW

VIEW U-U
ELEVATION
WIND T DETAILS 25° SKREW

VIEW V-V
ELEVATION
WIND U DETAILS 25° SKREW

VIEW W-W
ELEVATION
WIND V DETAILS 25° SKREW

VIEW X-X
ELEVATION
WIND W DETAILS 25° SKREW

VIEW Y-Y
ELEVATION
WIND X DETAILS 25° SKREW

VIEW Z-Z
ELEVATION
WIND Y DETAILS 25° SKREW

VIEW AA
ELEVATION
WIND Z DETAILS 25° SKREW

NOTE:
1. Reference plane is the normal plane to the plane at the 0° Grade.
   This dimension shall be adjusted to the point to match.
   Always check each detail before structures are pumped or
   subjected to stress.

2. This dimension shall be adjusted to the point to match
   referenced 5th scale.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

END BENT WING DETAILS