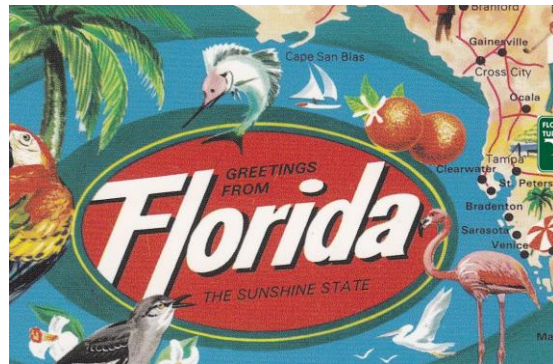


2017 FDOT-CO Winter FRP-RC Workshop

February 3, 2017

Orlando, FL

FDOT Current Status, Projects and Challenges



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FDOT Current Status Projects and Challenges

- Available Documentation
- Project Status
- Challenges (identified in Roadmap)

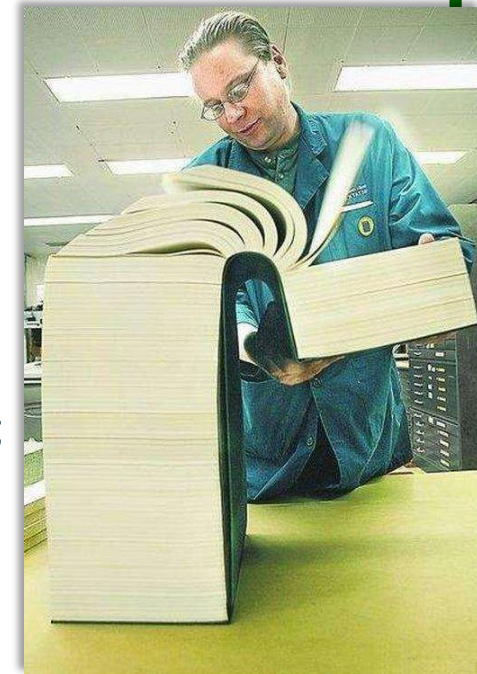


Available Documentation

Design Documentation

What's available from FDOT?

1. Design criteria –
 - a) *Fiber Reinforced Polymer Guidelines (FRPG)*
 - b) *Structures Design Guidelines (SDG)*;
2. Detailing criteria – *Structures Detailing Manual (SDM)*;
3. *Design Standards*;
4. *Specifications (Construction and Materials)*.



Available Documentation

Design Documentation

1. Design criteria –

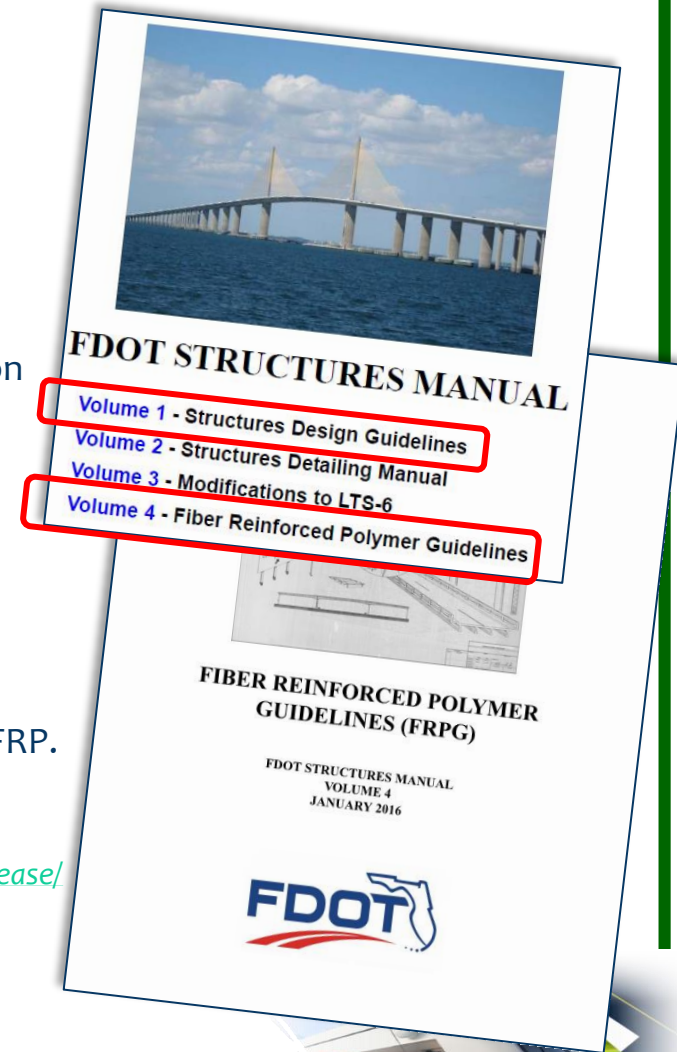
a) **Fiber Reinforced Polymer Guidelines (FRPG)**

- Overall commentary on FRP;
- Specific design criteria, plan content and Specification requirements;
- Design review requirements;
- Approval of use process;
- Permitted uses for each type of FRP.

b) **Structures Design Guidelines (SDG)**

- Overall design criteria;
- Revised and/or supplemented by **Fiber Reinforced Polymer Guidelines (FRPG)** for given applications of FRP.

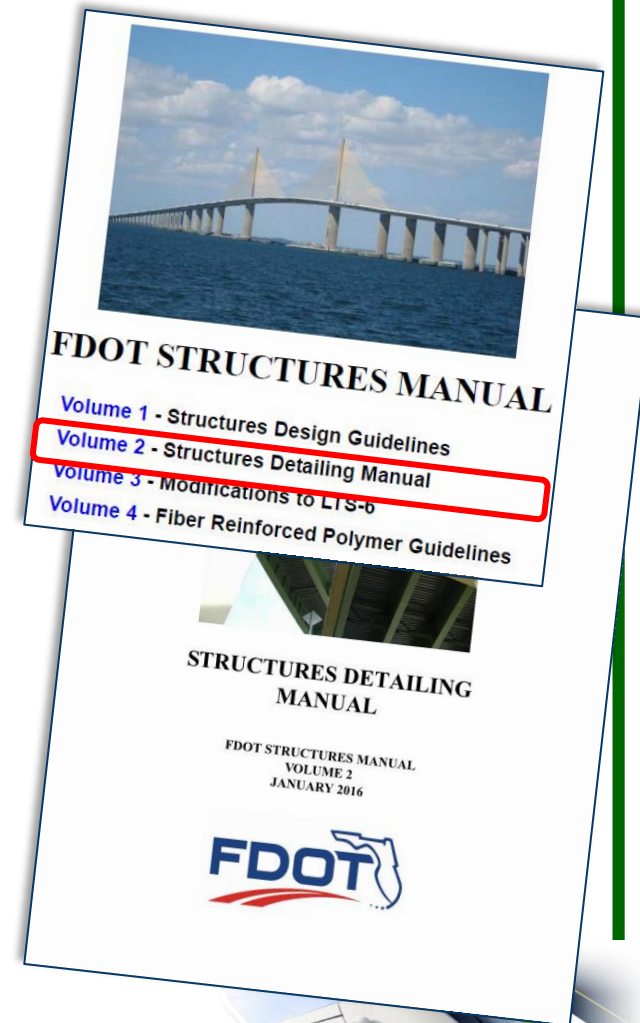
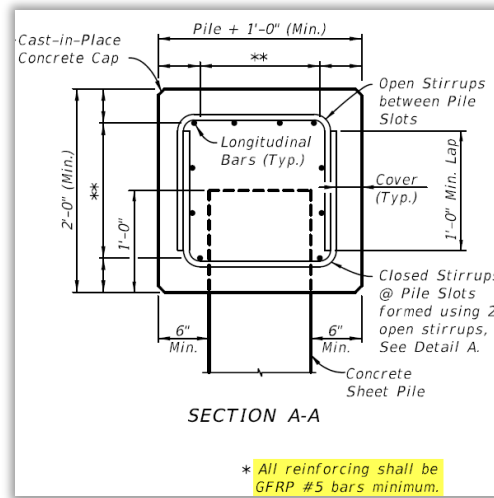
<http://www.dot.state.fl.us/structures/StructuresManual/CurrentRelease/StructuresManual.shtm>



Available Documentation

Design Documentation

2. Detailing criteria – **Structures Detailing Manual (SDM)**:
 - a) Overall detailing criteria;
 - b) Revised and/or supplemented by **Fiber Reinforced Polymer Guidelines (FRPG)** for given applications of FRP.



<http://www.dot.state.fl.us/structures/StructuresManual/CurrentRelease/Vol4FRPG.pdf>

2017 Winter FDOT FRP-RC Workshop



Available Documentation

Design Documentation

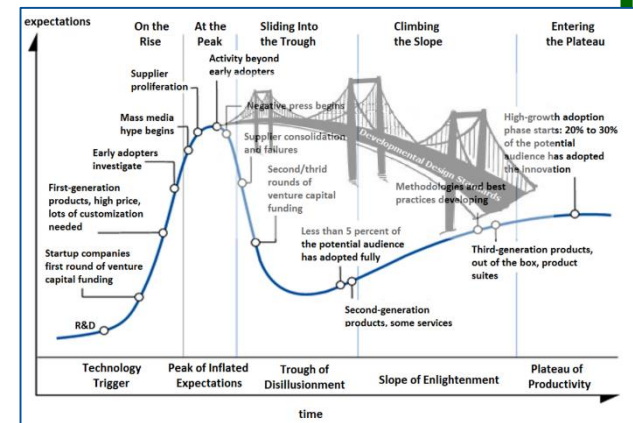
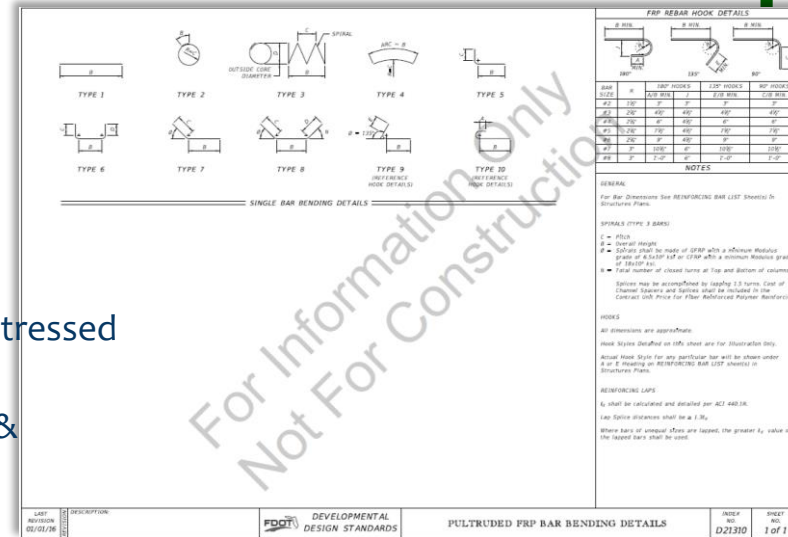
3. Design Standards:

a) FY2017-18 Design Standards:

- **Index 22600 series** – Square CFRP & SS Prestressed Concrete Piles;
- **Index 22440** – Precast Concrete CFRP/GFRP & HSSS/GFRP Sheet Pile Wall

b) Developmental Design Standards:

- **Index D6011c** – Gravity Wall – Option C (GFRP reinforced);
- **Index D21310** – Pultruded FRP Bar Bending Details;
- **Index D22420** – GFRP reinforced 32" F-Shape Traffic Railing;
- **Index D22900** – GFRP reinforced Approach Slab;



Available Documentation

Design Documentation

4. *Specifications:*

a) Standard Specifications (effective July 2016):

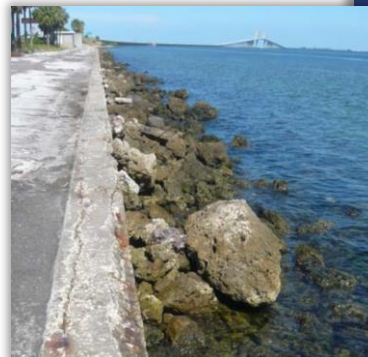
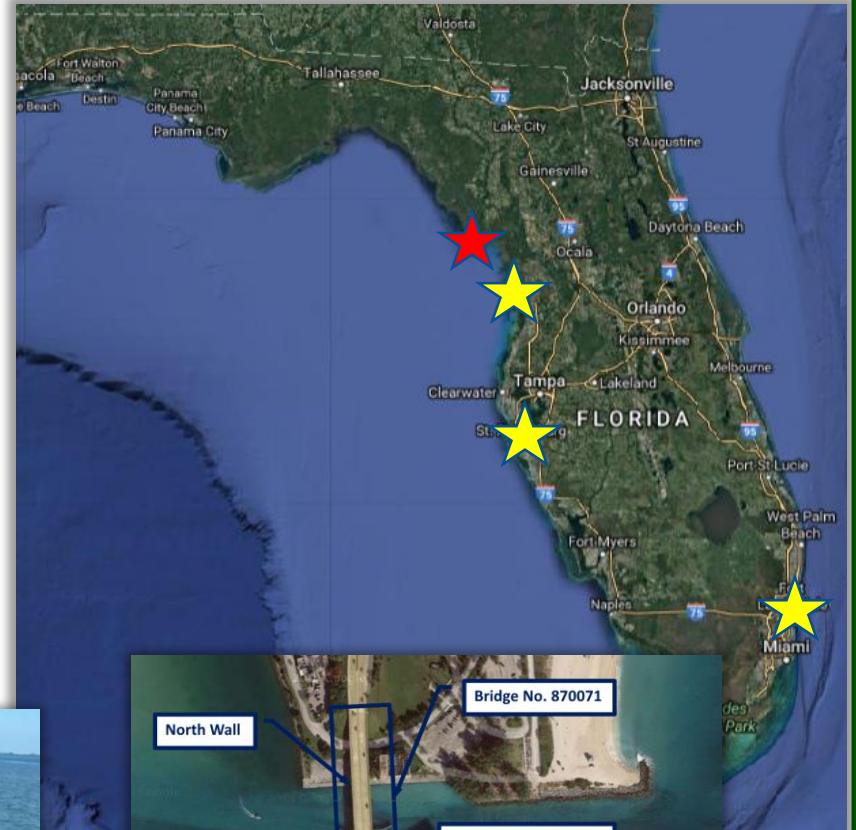
- Implemented previous FRP *Developmental Specifications*.
- **400** Concrete Structures – Fiber Reinforced Polymer Reinforcing;
- **410** Precast Concrete Box Culvert;
- **415** Reinforcing for Concrete;
- **450** Precast Prestressed Concrete Construction – Fiber Reinforced Polymer (FRP);
- **932** Nonmetallic Accessory Materials for Concrete Pavement and Concrete Structures;
- **933** Prestressing Strand;



(Photograph) Hughes Bros. Coated tie wire.

FDOT Projects Status

- 1. Cedar Key Bulkhead Cap Rehab.**
 - FPID 432194-1 construction completed June 2006; SMO monitoring.
- 2. Halls River Bridge Replacement**
 - Construction started 1/9/17;
 - Astaldi Construction Corp.
- 3. Bakers Haulover Cut Bridge Rehab.**
 - Contractor started mobilizing to site;
 - Kiewit Infrastructure South Co.
- 4. Skyway South Rest Area Seawall Rehab.**
 - Design Build Procurement;
 - Anticipated Award Date 02/8/2017;



FDOT Perceived Challenges

1. Refer to Proposed Roadmap

- Barriers to expanded FRP Implementation;
- Potential Focus Areas



Questions ??

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