



# Florida Department of Transportation

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SECRETARY

MS-32

**DATE:** April 14, 2000

**TO:** Registered Holders of the Plans Preparation Manual (English and Metric)

**FROM:** Billy Hattaway, PE  
State Roadway Design Engineer

William Nickas, PE  
State Structures Design Engineer

**CC:** Freddie Simmons, Bill Albaugh, Jack Brown, Lex Chance, Duane Brautigam,  
Elwin Broome, Clark Scott, Bob Nichols, Jim Mills

**SUBJECT:** Mast Arm Assemblies for Traffic Signals  
New Design Procedures, Standards and Pay Items  
-Plans Preparation Manual July 2000 Update  
-Interim Standards 017740, 017742, 017744  
-Mast Arm Tabulation Sheet  
-Structures Standards S-1700, S-1710  
-2000 Basis of Estimates Handbook Special Update

New Design Procedures, Standards and Pay Items have been developed for the design of mast arm assemblies for traffic signals. Detailed instructions on the new design procedures and use of the new Standards are provided in the enclosed items as follows:

1. July 2000 Revisions to Plans Preparation Manual Volume 1 English, January, 2000.  
Chapter 7, Section 7.4.12, Mast Arm Supports  
Chapter 29, Section 29.3, Design of Mast Arm Assemblies and Foundations  
(Complete reprint of Chapters 7 and 29 enclosed.)
2. July 2000 Revisions to Plans Preparation Manual Volume II English, January, 2000.  
Chapter 24, Section 24.7, Mast Arm Sheets  
Chapter 24, Exhibit T-MA, Example Mast Arm Tabulation Sheet  
(Complete reprint of Chapter 24 enclosed.)
3. July 2000 Revisions to Plans Preparation Manual Volume 1 Metric, January, 1998.  
Chapter 7, Section 7.4.12, Mast Arm Supports  
Chapter 29, Section 29.3 Design of Mast Arm Assemblies and Foundations  
(Complete reprint of Chapters 7 and 29 enclosed.)

**April 14, 2000**  
**Memo to Registered Plans Preparation Manual Holders**  
**Mast Arm Assemblies for Traffic Signals**  
**Page 2**

4. July 2000 Revisions to Plans Preparation Manual Volume II Metric, January, 1999.  
Chapter 24, Section 24.7, Mast Arm Sheets  
Chapter 24, Exhibit T-MA, Example Mast Arm Tabulation Sheet  
(Complete reprint of Chapter 24 enclosed.)
5. Special Update to the 2000 Edition of the Basis of Estimates Handbook dated April 14, 2000 and addendum. This special update includes pay item changes for mast arms as well as other pay item changes being implemented.

Other items associated with the implementation of the new procedures and standards for mast arms, include: (not enclosed in this mailing)

6. Interim Indexes. These Interim Indexes are to be included in the plans when the Standard Mast Arm assemblies and/or components are included in the project.
  - 017740 (2 Sheets) Instructions and Examples for Designers and Fabricators of Standard Mast Arm Assemblies
  - 017742 (1 Sheet) Component Data for Standard Mast Arm Assemblies
  - 017744 (5 Sheets) Mast Arm Assemblies

These are available on the Roadway Design Office Web Site:

[http://www.dot.state.fl.us/rddesign/rd/rd\\_cadd.htm](http://www.dot.state.fl.us/rddesign/rd/rd_cadd.htm)

7. Mast Arm Tabulation Sheet. This sheet is completed by the traffic design engineer of record, provided to the structures designer, and included in the contract plans. This sheet will be added to the CADD Cell Library in the Roadway CADD software when cumulative service pack release 2000.00.02 is issued later this year. Until this service release is issued, this sheet is available on the Roadway Design Office Web Site on the same page as the Interim Standards:  
[http://www.dot.state.fl.us/rddesign/rd/rd\\_cadd.htm](http://www.dot.state.fl.us/rddesign/rd/rd_cadd.htm)

8. Structures Standard Drawing S-1700. This Structures Semi-Standard includes the Standard Mast Arm Assemblies Design Table to be completed by the structures design engineer of record and included in the contract plans. This Standard is available on the Structures Design Office Web Site: <http://www.dot.state.fl.us/structures/>

9. Structures Standard Drawing S-1710. This Structures Semi-Standard includes information for site specific mast arm assemblies for which either the arm or pole, or both, do not conform to the standard components. For these conditions, this Semi-Standard is to be completed by the structures design engineer of record and included in the contract plans. This Semi-Standard is available on the Structures Design Office Web Site:  
<http://www.dot.state.fl.us/structures/>

10. Specifications. A new specification, Section 649 Mast Arm Assemblies, will be included

**April 14, 2000**  
**Memo to Registered Plans Preparation Manual Holders**  
**Mast Arm Assemblies for Traffic Signals**  
**Page 3**

in the January, 2001 Specification Work Book. The January 2001 Specification Workbook will be available August, 2000 on the Specifications Office Web Site:  
<http://www.dot.state.fl.us/specificationoffice/>

**IMPLEMENTATION:**

The new design procedures and standards for mast arm assemblies may be used on projects beginning with the January, 2001 letting. At the District's option, projects with mast arm design underway may be completed with the current practice; however the new pay item must be used beginning with the January, 2001 letting, and coded as a special design. Use of the new Standards is mandatory beginning with the July, 2001 letting except for unique special designs where none of the components covered by the new Standards can be used. Districts are encouraged to use the new Standards as soon as possible since this will eliminate the need for shop drawings.

**TRAINING:**

Design Conference 2000 scheduled for August 7-11, 2000 in Orlando will include a session in the Structures Design Sessions for structures designers on the use of the new design procedures and standards on mast arms. Likewise, there will be a session for traffic designers during the Traffic Plans Sessions of Design Conference 2000. In addition, the new mast arm procedures and standards will be included in the Design Update Training which will be held throughout the State in October and November, 2000.

For questions related to Traffic Design of Mast Arms, please contact Clark Scott, Roadway Design Office, at 850-414-4338, Suncom 994-4338. For questions related to Structures Design of Mast Arms, please contact Bob Nichols, Structures Design Office at 850-414-4283, Suncom 994-4283.