DATE: October 1, 2002 Revised 11/12/02

TO: Basis of Estimate Handbook Users

FROM: David Duncan, CES Coordinator

E-COPY: Ken Morefield, Freddie Simmons, Bill Albaugh, Robert Greer, Phillip "Greg" Davis, William Nickas, Duane Brautigam, Brian Blanchard, Sharon Holmes, Ananth Prasad, Bruce Dietrich, District Design Engineers, District Project Management Engineers, District Structures Design Engineers, District Construction Engineers, District Pavement Design Engineers, and District Specifications Engineers

SUBJECT: **2003 Basis of Estimate Handbook Electronic Edition Summary of Major Changes**

The Coordination Team has made recommendations to the implementation of changes to pay items and specifications that have been developed within the last six months. The implementation plan for each issue has been approved by the appropriate office and concurred in by the Directors for the Offices of Design and Highway Operations. A detailed description of each of these changes and their implementation dates is attached. The following is a summary of issues addressed in this update:

Group	Issue Description	Effective Letting	Page No.
TRNS*PORT (PES/CES)	TRNS*PORT (PES/CES) and Designer Web Pages	October 2002	3 - 4
MOT	Maintenance of Traffic	January 2003	5
Roadway	Retro-Reflectivity of Paint Revised 11/12/02	Clarification	6 - 7
MOT	Orange Vest/ Garments and Work Zone Signs Revised 11/12/02	July 2003	8 8a
Pavement Design	Bituminous Material (Tack and Prime)	July 2003	9 - 10
Structures	Post-Tensioning	July 2003	11 - 12
Structures	Multirotational Bearing Assembly	July 2003	13 - 14
Structures	Traffic Railing Barriers and Concrete Parapets on Retaining Wall Systems	July 2003/ January 2004	15 - 17

Additional Information for the Handbook Holders:

BOE handbook is published on line at http://www11.MyFlorida.com/estimates

Please register on-line to be notified via e-mail when the Basis of Estimate Handbook is updated. These announcements will be distributed every 6 months, or as necessary. Users will have the option to add/delete their address for future updates.

Training:
Design update training will be offered this fall at various locations around the state. Visit Roadway's web page at http://www11.myflorida.com/rddesign/training/training.htm for additional information and registration.

Effective with the October 2002 letting
(Clarification of April 2002 update.)

Issue: *TRNS*PORT PES/CES and Designer Web Pages*

Summary of Pay Items Reports

There are differences in producing the Project Summary of Pay Items and the Proposal Summary of Pay Items. Please use the appropriate report, based on your project's phase:

For early phase reviews (up to 90%, or until the proposal has been created), the Project Summary of Pay Items Report must be used. (No proposal, no proposal report.) If multiple projects are anticipated to be let together, the Designer should be sure to print each project's Summary of Pay Items for review. These reports may be printed on standard 8.5" by 11" paper. It is not necessary to put in CADD sheet format for phase review submittals.

For later phase reviews (90%, or after the proposal has been created), the Proposal Summary of Pay Items Report should be used. After the Designer submits the report from the interface menu, the output will be sent to the CADD ftp site in 5-10 minutes.

Refer to the April 2002 update letter for complete details.

Central Office Design:

Update Plans Preparation Manual (PPM) and other affected documents with above information on regular update schedules.

Central Office Estimates:

Update Estimates Office web pages to include TRNS*PORT notices.

Contact Persons:

For Project Specific Issues: Project Manager
For TRNS*PORT Access and Issues listed above: District Estimates Engineer

Approved: Brian Blanchard _____Date _____
State Roadway Design Engineer

Approved: Phillip "Greg" Davis _____Date _____
State Estimates Engineer

Approved: William N. Nickas _____Date _____
State Structures Design Engineer

Approved: Sharon Holmes _____Date _____
State Maintenance Engineer

Effective with the January 2003 Letting

Issue: ***Maintenance of Traffic***

History: A complete re-write of the Maintenance of Traffic specification (Section 102) will go into effect with the January Letting. This specification incorporates many of the past Special Provisions and Supplemental Specifications into one Section. A copy of the specification is available from the Specifications web page at:
http://www11.myflorida.com/specificationsoffice

Please visit the web page, select Implemented Modifications to the Standard Specifications for 2003 JANUARY - JUNE (the January "workbook"), then scroll down to D1020000 of the Supplemental Specifications.

Of particular note to construction personnel, the method of measurement & basis of payment for many items will be based on a certified invoice from the Contractor. The specification states:

102-12 Submittals.

102-12.1 Submittal Instructions: Prepare a certified invoice, using the Department's current approved form, for certified Maintenance of Traffic payment items, excluding work zone pavement markings for each project in the Contract. Submit the certified invoice to the Engineer. The Department will not pay for any disputed items until the Engineer approves the certified invoice.

102-12.2 Contractor's Certified Invoice: Request payment by submitting a certified invoice no later than Twelve O'clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the invoice consists of the following: (a) Contract Number, FPID Number, Invoice Number, Invoice Date and the period that the invoice represents; (b) The basis for arriving at the amount of the progress invoice, less payments previously made and less an amount previously retained or withheld. The basis will include a detail breakdown provided on the invoice of items of payment in accordance with 102-13. After the initial setup of the maintenance of traffic items and counts, the interval for recording the counts will be made weekly on the certification sheet unless there is a change. This change will be documented on the day of occurrence. Some items may necessitate a daily interval of recording the counts.

Please review the April 2002 Basis of Estimates cover letter on this web page for details on changes to specific pay items.

Issue: ***Retro-Reflectivity of Paint***

~~***History:*** For the number of applications of final pavement marking to be applied, check with the appropriate District.~~

~~The following specification is from the January workbook and is included in all projects.~~

~~"Retest all final traffic stripes for reflectivity within 14 days before final acceptance of the project. Reapply traffic stripes where reflectivity falls below the final values shown in FM 5-541 when approved by the Engineer. Compensation for final re-striping within 14 days before final acceptance will be at the Contract unit price for the appropriate material when the material used appears on the QPL and is properly installed."~~

~~Unless otherwise directed by the District, plans should be updated as follows:~~

~~" 710- All traffic stripes shall be paint unless otherwise noted in the plans. Pavement marking quantities shown on the Signing and Pavement Marking Tabulation Sheet are for one application. Two applications of traffic stripes will be required on final surface. The quantities for these two applications are included in the total quantities for traffic stripes shown in the Roadway Summary of Pay Items. "~~

~~Note that the above note is different than that which appeared in the December 17, 2001 memo from Brian Blanchard.~~

Summary of PPM Corrected Pages:

See Roadway Design Web page for the complete PPM corrected page at: http://www11.myflorida.com/rddesign/PPM%20Manual/2003/PPM.htm

PPM Volume 1 Chapter 7 Page 6:

13. The following pay item note should be shown in the Roadway Plans:
710- The totals shown on the Summary of Roadway Pay Items include the quantities for pavement markings used for Traffic Control Pavement Markings plus two applications of final pavement markings.

PPM Volume 1 Chapter 22 Page 5:

For projects that include new asphalt surfaces, a note should be placed in the Signing and Pavement Marking Plans that states, "All pavement markings shall be paint unless otherwise noted in the plans."

PPM Volume 11 Chapter 19 Page 2:

MOT quantities should be tabulated by phase in the traffic control plans or shown in the computation book.

PPM Volume 11 Chapter 23 Page 3:

Projects using paint for final pavement markings are to include quantities for two applications of final pavement markings in the Roadway Summary of Pay Items. However, the Signing and Pavement Marking Plans tabulation of quantities for final pavement markings shall show quantities for one application. A pay item note is included in the Roadway Plans as shown in ***Exhibit 7-1*** in ***Chapter 7*** of this Volume.

PPM Volume 11 Chapter 23 Page 11:

There are currently no standard notes for Signing and Pavement Marking Plans.

Current and Correct Specification:

PAINTING TRAFFIC STRIPES.
(REV 7-25-01) (1-02)

SUBARTICLE 710-4.1 (Page 780) is expanded by the following:
Reapply all final traffic stripes and markings a minimum of 14 days after first application but prior to final acceptance of the project.

ARTICLE 710-8 (Page 782) is expanded by the following:
(7) Re-application as specified in (1) through (6).

Central Office Contact Person - David Duncan 850-414-4323 SC 994-4323

Approved: Brian Blanchard _____Date _____
State Roadway Design Engineer

Approved: Ananth Prasad _____Date _____
State Construction Engineer

Approved: Phillip "Greg" Davis _____Date _____
State Estimates Engineer

Approved: Duane F. Brautigam _____Date _____
State Specifications Engineer

Approved: Sharon Holmes _____Date _____
State Maintenance Engineer

Effective Dates Shown Below

Revised 11/12/02

Issue: ***Orange Vest/Garments and Work Zone Signs***

(The original memo for this issue can be found on the Internet at: http://www11.myflorida.com/rddesign/updates/files/updates.htm)

Subject: **Specifications Changes:**

1) **Orange Vest/Garments:** American National Standards Institute (ANSI) and International Safety Equipment Association (ISEA) High-Visibility Apparel
2) **Work Zone Signs:** Fluorescent Orange Sheeting (FOS)

Due to the wide use of the above Maintenance of Traffic items, the Department is making a special effort to notify organizations in advance of the changes to these two specifications. With this advance notification, it is the Department's intent to minimize the impacts to your business and allow you time to plan for these changes when purchasing equipment for use on State Highways. The changes and implementation plans are as follows:

1) **Orange Vest/Garments:** The Department has adopted the use of orange vest/garments that conform to ANSI/ISEA 107-1999 Standard Class 3 to be worn whenever workers are within 15 feet of the edge of the travelway. Class 3 vest/garments will apply to "ALL SPEEDS" on FDOT facilities. Vest/garments that meet this standard provide users with a high level of conspicuity through the use of combined fluorescent and retroreflective materials. This will be effective for all personnel working on Department projects let after January 1, 2003. For all other work on the State Highway system, consultants, surveyors, utility company personnel, local maintaining agency personnel, or any other person working within 15 feet of the edge of the travelway shall conform to this requirement by July 2004.

See Revision Letter Next Page

2) **Work Zone Signs:** The Department has adopted the use of FOS for all work zone signs where the color orange is required. FOS signs are significantly more conspicuous than standard orange signs, giving drivers more awareness of upcoming work zone operations. The implementation plan for this is as follows:

All Orange Work Zone Roll-Up Signs	July 2004
All Orange Work Zone Signs on Interstates	July 2004
All Orange Work Zone Signs on other systems and uses	July 2005

The Department would encourage the use of ANSI/ISEA 107-1999 Standard Class 3 vest/garments and FOS prior to the above implementation dates to expedite the replacement of obsolete stock. Please advise the appropriate affected staff within your area of these changes. For additional information, please contact Cheryl Adams at (850) 414-4327.

Effective with the July 2003 Letting

Issue: Bituminous Material (Prime and Tack)

History: The Flexible Pavement Committee has recommended the specifications for asphalt and base be re-written to eliminate separate payment for bituminous materials listed below. Payment for these items will be incidental to the work being performed.

Permanently block the following items effective June 30, 2003:

300-1-xaa	Bituminous Material	GA
2300- 1-xaa	*Bituminous Material*	*L1*

aa= 1 (Prime)
3 (Tack)

Note: The remaining aa items remain valid.

District Design: Update plans and TRNS*PORT files on applicable projects beginning with the July 2003 letting.

Specifications: Specifications will be available for the July 2003 letting.

Central Office Contact Person - David Chason 850-414-4171 SC 994-4171

Approved: Brian Blanchard _____Date _____
State Roadway Design Engineer

Approved: Bruce Dietrich _____Date _____
State Pavement Design Engineer

Approved: Phillip "Greg" Davis _____Date _____
State Estimates Engineer

Approved: Ananth Prasad _____Date _____
State Construction Engineer

Approved: Sharon Holmes _____Date _____
State Maintenance Engineer

Approved: Duane F. Brautigam _____Date _____
State Specifications Engineer

Effective with the July 2003 letting

Issue: *Post-Tensioning*

History: To eliminate the alpha-numeric character in the specification number for post-tensioning, the specification has been renumbered from Section B460 to Section 462. The associated pay item numbers are changing accordingly. No changes are being made to the computation of the quantities. This change is required to be compatible with the new computer tracking programs used by the Department.

There has been a substantial rewrite of these specifications and standards have been created which incorporate the Departments new policies and criteria for the design and construction of post-tensioned structures. These new criteria are to be used in developing all future designs utilizing post-tensioning elements.

Implementation Plan:

Central Office Design:

Establish the following new pay items October, 2002:

462-xx2-xaa	Post-Tensioning Tendons	LB
2462-xx2-xaa	*Post-Tensioning Tendons*	*KG*

aa= 11 Superstructure Strand
12 Superstructure Bar
13 Substructure Strand
14 Substructure Bar

462-xx3-	Additional Post-Tensioning in Segmental Box Span	EA
2462-xx3-	*Additional Post-Tensioning in Segmental Box Span*	*EA*

Permanently block the following pay items June 30, 2003:

460-111-xaa	Post-Tensioning Tendons	LB
2460-111-xaa	*Post-Tensioning Tendons*	*KG*

460-116-	Additional Post-Tensioning in Segmental Box Span	EA
2460-116-	*Additional Post-Tensioning in Segmental Box Span*	*EA*

District Design: Update plans and TRNS*PORT files on applicable projects beginning with the July 2003 letting.

Specifications: Specifications will be available for the July 2003 letting.

<u>Structures Contact Person</u> - Robert Robertson 850-414-4267 SC 994-4267

Approved: Brian Blanchard _____Date _____
State Roadway Design Engineer

Approved: William N. Nickas _____Date _____
State Structures Design Engineer

Approved: Ananth Prasad _____Date _____
State Construction Engineer

Approved: Phillip "Greg" Davis _____Date _____
State Estimates Engineer

Approved: Sharon Holmes _____Date _____
State Maintenance Engineer

Approved: Duane F. Brautigam _____Date _____
State Specifications Engineer

Effective with the July 2003 letting

Issue: *Multirotational Bearing Assembly*

History: To eliminate the alpha-numeric character in the specification number for multirotaional bearing assemblies, the specification has been renumbered from Section A460 to Section 461. The associated pay item numbers are changing accordingly. No changes are being made to the computation of the quantities. This change is required to be compatible with the new computer tracking programs used by the Department.

Implementation Plan:

Central Office Design:

Establish the following new pay items October, 2002:

461-113-xab	Multirotational Bearing Assembly - Fixed	EA
2461-113-xab	*Multirotational Bearing Assembly - Fixed*	*EA*

a= Operation
1 (furnish and install)
2 (replace)

b=	1 (1- 250 kips)	*(1–1100 kn)*
	2 (251- 500 kips)	*(1101-2200 kn)*
	3 (501- 750 kips)	(*2201-3350 kn*)
	4 (751-1000 kips)	*(3351-4450 kn)*
	5 (1001-1250 kips)	*(4451-5550 kn)*
	6 (1251-1500 kips)	*(5551-6650 kn)*
	7 (1501-1750 kips)	*(6651-7800 kn)*
	8 (1751-2000 kips)	*(7801-8900 kn)*
	9 (greater than 2000 kips)	*(greater than 8900 kn)*

461-114-xab	Multirotational Bearing Assembly - Expansion	EA
2461-114-xab	*Multirotational Bearing Assembly - Expansion*	*EA*

xab the same as above for 461-113-xab and 2461-113-xab

Permanently block the following pay items June 30, 2003:

460-113-xaa	Multirotational Bearing Assembly - Fixed	EA
2460-113-xaa	*Multirotational Bearing Assembly - Fixed*	*EA*

460-114-xab	Multirotational Bearing Assembly - Expansion	EA
2460-114-xab	*Multirotational Bearing Assembly - Expansion*	*EA*

District Design: Update plans and TRNS*PORT files on applicable projects beginning with the July 2003 letting.

Specifications: Specifications will be available for the July 2003 letting.

Structures Contact Person - Robert Robertson 850-414-4267 SC 994-4267

Approved: Brian Blanchard _____Date _____
State Roadway Design Engineer

Approved: William N. Nickas _____Date _____
State Structures Design Engineer

Approved: Phillip "Greg" Davis _____Date _____
State Estimates Engineer

Approved: Ananth Prasad _____Date _____
State Construction Engineer

Approved: Sharon Holmes _____Date _____
State Maintenance Engineer

Approved: Duane F. Brautigam _____Date _____
State Specifications Engineer

Effective with the July 2003/January 04 Letting

Issue: Traffic Railing Barriers and Concrete Parapets on Retaining Wall Systems

History: Currently, traffic railing barriers and concrete parapets on Retaining Wall Systems are included in the cost of the wall. The Contractor has had the choice of providing either cast-in-place or precast standard barriers. The wall supplier usually provided precast barriers as part of the wall system, thus the payment for the wall system included the barriers. With the introduction of numerous barrier shapes and sound walls used in conjunction with wall systems, the need to separate these items from the wall is required. This will allow for shapes which can not be precast to be utilized. Cast-in-place barriers are not supplied by the wall supplier but constructed by the contractor or specialty sub. To be consistent with the payment for all barrier types, the barriers and parapets will no longer be considered part of the wall system for payment. Barriers and parapets will include the cost of associated junction slabs or sidewalks and be paid for as linear feet (meters). The quantity for the wall system will now be calculated to the top of the coping instead of the top of the barrier or parapet. Standard retaining wall details are being developed which will standardize the common details used by all Retaining Wall Systems. The current standards for Retaining Wall Systems will be revised to include only those items which are particular to the individual system. All current traffic railing barriers and pedestrian parapet standards will be modified. Standards for junction slabs to be used in conjunction with these barriers and parapets on Retaining Wall Systems are under development. Standards will only be developed using English units, metric projects would be designed using English standards. Plans will continue to be developed as currently required without any revisions necessary to incorporate the new standards.

Implementation Plan:

<u>Central Office Design:</u>

English standards for traffic railing barrier with an 8 feet tall noise wall placed on Retaining Wall Systems will be available Jan 1, 2003.
English standards for junction slabs, parapets, traffic railing barriers, standard wall details and Retaining Wall Systems will be available on July 1, 2003.

Establish the following new pay items October, 2002:

460-71-xxa	Metal Traffic Railing Barrier	LF
2460-71-xxa	*Metal Traffic Railing Barrier*	*M1*

a= 3 (Steel Post and Rail - Retaining Wall System Mounted)

521-6-xxa	Concrete Parapet	LF
2521-6-xxa	*Concrete Parapet*	*M1*

a= 3 (Retaining Wall System Mounted with sidewalk)
4 (Retaining Wall System Mounted with sidewalk and 8' Sound Wall)

521-8-xaa Concrete Traffic Railing Barrier (Retaining Wall System Mounted with junction slab) LF
2521-8-xaa Concrete Traffic Railing Barrier (Retaining Wall System Mounted with junction slab) M1

aa= 1 (32" F-Shape)
2 (42" F-Shape)
3 (32" Vertical Face)
4 (42" Vertical Face)
5 (Corral Rail with Curb)
20 (Special)

548-xaa Retaining Wall Systems (excluding barrier) SF
2548-xaa Retaining Wall Systems (excluding barrier) M2

aa= 12 (Permanent)
13 (Temporary)

Permanently block the following pay items June 30, 2003:

548-xaa Retaining Wall Systems (including barrier) SF
2548-xaa Retaining Wall Systems (including barrier) M2

aa= 10 (Permanent)
11 (Temporary)

District Design: Update plans and TRNS*PORT files on applicable projects beginning with the July 2003 letting. Update plans to incorporate interim standards beginning with the January 2004 letting.

Specifications: Specifications will be available for the July 2003 letting.

Structures Contact Person - Robert Robertson 850-414-4267 SC 994-4267

Approved: Brian Blanchard _____Date _____
State Roadway Design Engineer

Approved: Ananth Prasad _____Date _____
State Construction Engineer

Approved: Phillip "Greg" Davis _____Date _____
State Estimates Engineer

Approved: Duane F. Brautigam _____Date _____
State Specifications Engineer

Approved: Sharon Holmes _____Date _____
State Maintenance Engineer

Approved: William N. Nickas _____Date _____
State Structures Design Engineer