

**DATE:** April 1, 2002

**TO:** Basis of Estimate Handbook Holders

**FROM:** David Duncan, CES Coordinator

**COPY:** Ken Morefield, Freddie Simmons, Bill Albaugh, Greg Xanders, Phillip “Greg” Davis, William Nickas, Duane Brautigam, Brian Blanchard, Sharon Holmes, Bruce Dietrich, Rick Renna, Jeff Caster, Kenneth Weldon, District Design Engineers, District Project Management Engineers, District Structures Design Engineers, District Construction Engineers, District Traffic Operations Engineers, District Drainage Engineers and District Specifications Engineers

**SUBJECT:** 2002 –Mid Year Update - Basis of Estimate Handbook Electronic Edition of Summary of Major Changes



***This will be the last mailout of the BOE Cover Letter to PPM Holders. The October and April letters in the future will be on the Internet.***

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:

<b>Group</b>	<b>Issue Description</b>	<b>Effective Letting</b>	<b>Page No.</b>
TRNS*PORT (PES/CES)	TRANS*PORT (PES/CES) and Design Interface	October 2002	3 - 5
Roadway	Traffic Control Officer & Speed and Law Enforcement Officer	January 2003	6 - 7
Roadway	Barrier Wall and Glare Screen	January 2003	8 - 9
Roadway	Changeable (Variable Message Sign) Advance Warning Panel	January 2003	10 - 11
Roadway	Motorist Awareness Devices	January 2003	12 - 13
Roadway	Trainee Manhours	July 2002	14
Pavement Design	Asphalt Concrete Friction Course	July 2002	15 - 16
Drainage	Pipe Filling and Plugging	January 2003	17 - 18
Structures	Noise Barrier Wall	July 2002	19 - 20
Utilities	Directional Boring, Jack and Bore, and Vibratory Plowing	January 2003	21 - 23
Landscape	Category 0600 for all Landscape Items	January 2003	24
Structures	Mast Arm Assemblies	July 2003	25 - 28
Structures	Piles - Estimating Quantities	January 2003	29 - 30

**Additional Information for the Handbook Holders:**

BOE handbook is published on line only 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.

## *Effective with the October 2002 letting*

### ***TRNS\*PORT PES/CES and Designer Interface***

As announced in the October 2001 Basis of Estimates Update, the Department is transitioning to TRNS\*PORT for all projects to be let October 2002 and later. During this transition, there are a few issues which would benefit from clarification. Although summarized below, please refer to Section 3 for additional details. (Note: for projects to be let now through September 2002, continue to process projects according to established procedures; these instructions will not apply.)

#### ***Leading Zero***

When entering English items 50- through 999 into the TRNS\*PORT system, a leading zero must be added before the first group of digits, i.e. 102- 1 becomes 0102- 1. (A leading zero replaces the leading space only in the first group of digits.) Metric items and English Utility items are unaffected, as they already have four numbers in the first group of digits.

The plans, specifications, standards, and other documents, including the BOE, will continue to refer to the item numbers without the leading zero.

#### ***Alternates***

Alternates use a 3 character code to describe the Design group, alternate, and item(s) within the group. A sample pair of alternates might be shown as AA1 and AA2. Details on alternates are included in Section 3.

#### ***Control Groups***

Control Groups are used by TRNS\*PORT to assign projects and/or proposals to selected users. The typical designer (user) control group is CD??U525, where CD indicates that the project is for Construction (as opposed to Maintenance), originating in the District. The question marks (??) are wildcard indicators for the district number. Finally, the last 4 digits indicate the designer's company. Projects are assigned to a company's control group by the District Estimates Engineer. Note: by using the ?? for district number, a designer is permitted to see all projects, in all districts, which have been assigned to their company. Additional details are included in Section 3.

#### ***Participating/ Non-Participating***

The column labeled "Non-Part" within the designer interface screens and reports is an indicator or "flag" for those items not participating in the major funding group, as defined in PES. Since most designers are not provided with funding categories information for PES, the instructions given for Designer Interface input are as follows: "*Leave the field blank, unless specifically instructed otherwise by your Project Manager.*" Additional details on funding are included in Section 3.

#### ***Programming Revisions- Adobe Acrobat .pdf files***

When requesting a report from the TRNS\*PORT web pages, an additional login is required. This second login for reports uses the UserID of **trnsuser** and password **trnsport**. (Note: This ID and password is valid only for reports, after you have properly entered the system with your own valid ID and password.)

Some reports are limited to 500 records of output. This limit applies to the Master Pay Item list. Therefore, searches on this report should be requested only for a limited range. To obtain a complete Master Pay Item List, users will need to use the Estimates web page at [www11.MyFlorida.com/estimates](http://www11.MyFlorida.com/estimates). This report will be updated once a month.

The reports are returned in Adobe Acrobat format. From the adobe options, users may save, print, or search the output, as well as utilize other Adobe Acrobat Reader functions. (For those experiencing problems with Acrobat Reader 4.0 vs 5.0 errors, a patch has been applied.)

### ***Summary of Pay Items Report***

Please read carefully, as this varies slightly from “the way we have always done it.” The following definitions are important in TRNS\*PORT.

**Project:** A single project, with appropriate Financial Project number, header information, funding, pay items, etc.

**Proposal:** One or more projects combined for the purpose of creating a contract for letting. Projects are “strung” only when combined to form a proposal. Proposals will normally be created at approximately 90% plans, or when strung jobs have been identified. Proposal numbers will become Contract Numbers when transferred to LAS (the Letting and Award System in TRNS\*PORT). Districts should avoid prematurely assigning proposal/contract numbers due to PES/LAS issues.

**Project Summary of Pay Items Report:** This report is currently available from the Interface reports menu. It will print in .pdf format for a specified project. This report will be used for early phase reviews.

**Proposal Summary of Pay Items Report for Microstation®:** After a proposal has been created by the District, the Designer will be able to select a Proposal Summary of Pay Items from the Interface reports menu. (This is an option that will be added to the reports menu as soon as possible.) After entering the proposal number, a report will be sent to the CADD ftp site. The designer can download and import the file according to established CADD procedures. Since the proposal is not created until the later phases, this report will only be used for later reviews and final submittals.

**Recommended Use of Reports:** The following information for use of reports and phase submittals should be used for October letting projects and later. Any changes will be announced in the October 2002 Basis of Estimates Update. The update of the PPM and other affected documents will be coordinated with their regular update schedule.

*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.

### ***Registration for BOE and Designer Interface Users***

If you attended the Designer Interface Training in February or March 2002, your registration information will be merged with the Basis of Estimates users registration for future updates. If you would like to be removed from this list, please reply to any update with the request “please remove from distribution list”. If you would like to be added to the update list, please register for the BOE updates using the Estimates Office’s web pages at [www11.MyFlorida.com/estimates](http://www11.MyFlorida.com/estimates).

***Future Training***

At this time, initial training has been completed; additional training will be scheduled as needed, or provided by the districts. Training information is available on the Estimates web pages.

Training will be provided at the Design Conference in August 2002. The session is expected to include much of the early training information, as well as any program enhancements that may occur. Details will be announced at a later date.

**Central Office Design:**

Update 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

*Effective with the January 2003 letting*

**Issue:           *Traffic Control Officer & Speed and Law Enforcement Officer***

**History:**       The Maintenance of Traffic Committee (MOTC) has updated the Maintenance of Traffic specifications (Section 102) and made the following recommendations for the use of different types of officers:

**Traffic Control Officer:** Provide uniformed traffic control officers, including marked law enforcement vehicles, to assist in controlling and directing traffic in the work zone ONLY when the following types of work is necessary on projects:

Traffic control in a signalized intersection when signals are not in use.

When standard index no. 627 is used on Interstate at nighttime and require by the plans.

When pacing/rolling blockade is used.

The Department will include a pay item (102-14) for officers directing traffic as defined above.

**Speed and Law Enforcement Officer:** Provide uniformed traffic control officers, including marked law enforcement vehicles, to assist in controlling speed and enforcing traffic laws in the work zone

The MOTC wants officers who are actively involved in reducing speeding and traffic violations in our work zones.

The Department will include a “do not bid” pay item (999-102) for Speed and Law Enforcement Officers for officers controlling speed and/or enforcing traffic laws in the work zone. The Districts are encouraged to enter into a contractual agreement with local law enforcement agencies to accomplish this goal. The designer should get with Construction to determine which agency to use.

**Central Office Design:**

Establish the following new pay items April 2002:

102- 14	Traffic Control Officer	HR
2102- 14	<i>Traffic Control Officer</i>	<i>HR</i>
999-102-xxa	Speed and Law Enforcement Officer (Do Not Bid)	HR
2999-102-xxa	<i>Speed and Law Enforcement Officer (Do Not Bid)</i>	<i>HR</i>
	1 = Central Office Statewide Contract	
	2 = District Contract	

Permanently block the following pay items December 31, 2002:

102-10	Off-Duty Law Enforcement Officer	MH
2102-10	<i>Off-Duty Law Enforcement Officer</i>	<i>MH</i>

999-1 FHP (Contract) (Do Not Bid) HR  
2999-1 FHP (Contract) (Do Not Bid) HR

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

**Specifications:** Specifications will be available for the January 2003 letting.

**Central Office Contact Person -** Cheryl Adams 850-414-4327 SC 994-4327

***Approved:*** Brian Blanchard \_\_\_\_\_ Date \_\_\_\_\_  
State Roadway Design Engineer

***Approved:*** Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

***Approved:*** Sharon Holmes \_\_\_\_\_ Date \_\_\_\_\_  
State Maintenance 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:** Phillip “Greg” Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

**Approved:** Duane F. Brautigam \_\_\_\_\_ Date \_\_\_\_\_  
State Specifications Engineer



*Approved:* Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

*Approved:* Sharon Holmes \_\_\_\_\_ Date \_\_\_\_\_  
State Maintenance Engineer

*Approved:* Phillip "Greg" Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

*Approved:* Duane F. Brautigam \_\_\_\_\_ Date \_\_\_\_\_  
State Specifications Engineer

*Effective with the January 2003 letting*

**Issue:** *Motorist Awareness Devices*

**History:** The Maintenance of Traffic Committee (MOTC) has updated the Maintenance of Traffic specification (Section 102) and recommends that several trial/developmental items should be allowed for statewide use in accordance with Plans Preparation Manual, Chapter 10 and Design Standard Index 670.

**Central Office Design:**

Establish the following new pay items April 2002:

Item No. 900-102-1 Portable Regulatory Signs - per each per day.  
*Item No. 2900-102-1 Portable Regulatory Signs - per each per day.*

Item No. 102-150-2 Radar Speed Display Unit – per each per day.  
*Item No. 2102-150-2 Radar Speed Display Unit – per each per day.*

Item No. 102-150-3 Safety Warning Transmitter - per each per day.  
*Item No. 2102-150-3 Safety Warning Transmitter - per each per day*

Item No. 102-150-4 Highway Advisory Radio - per each per day.  
*Item No. 2102-150-4 Highway Advisory Radio - per each per day*

Permanently block the following pay items December 31, 2002:

Item No. 900-102-1 Portable Regulatory Signs - per each per day.  
*Item No. 2900-102-1 Portable Regulatory Signs - per each per day.*

Item No. 900-102-2 Radar Speed Display Unit – per each per day.  
*Item No. 2900-102-2 Radar Speed Display Unit – per each per day.*

Item No. 900-102-3 Safety Warning Transmitter - per each per day.  
*Item No. 900-102-3 Safety Warning Transmitter - per each per day*

Item No. 900-102-4 Highway Advisory Radio - per each per day.  
*Item No. 2900-102-4 Highway Advisory Radio - per each per day*

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

**Specifications:** Specifications will be available for the January 2003 letting.

**Central Office Contact Person** - Cheryl Adams 850-414-4327 SC 994-4327

*Approved:* Brian Blanchard \_\_\_\_\_ Date \_\_\_\_\_  
State Roadway Design Engineer

*Approved:* Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

*Approved:* Sharon Holmes \_\_\_\_\_ Date \_\_\_\_\_  
State Maintenance Engineer

*Approved:* Phillip “Greg” Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

*Approved:* Duane F. Brautigam \_\_\_\_\_ Date \_\_\_\_\_  
State Specifications Engineer

*Effective with the July 2002 Letting*

**Issue:** *Trainee Manhours*

**History:** The office of Equal Opportunity has recommended that we delete the item for Trainee Hours to simplify the training process, make it more contractor friendly, and give ownership to the District Compliance staff who is responsible for monitoring and implementing the training requirements.

***Implementation Plan:***

**Central Office Design**

Permanently block the following pay items June 30, 2002:

105-70	Trainee Manhours	MH
2105-70	<i>Trainee Manhours</i>	<i>MH</i>

**District Design:** Update plans and CES/TRNS\*PORT files on applicable projects beginning with the July 2002 letting.

**Specifications:** Modifications have been made to the July 2002 workbook.

**Approved:** Brian Blanchard \_\_\_\_\_ Date \_\_\_\_\_  
State Roadway Design Engineer

**Approved:** Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

**Approved:** Phillip "Greg" Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

**Approved:** Duane F. Brautigam \_\_\_\_\_ Date \_\_\_\_\_  
State Specifications Engineer

*Effective with the July 2002 Letting*

**Issue:** *Asphaltic Concrete Friction Course*

**History:** A new specification for an FC-9.5 fine graded mix has been developed to allow a one-inch lift of friction course. This specification also changed the nomenclature **ONLY** for FC-6 to FC-12. Dual nomenclature is used, so FC-6 can still be shown on plans. Guidance for selecting Friction Course should be in accordance with Flex Pavement Design Manual.

***Implementation Plan:***

**Central Office Design**

Change in nomenclature only:

337-7-xxa	Asphaltic Concrete Friction Course (Inc Bit) ( <del>Rubber</del> )	TN
2337-7-xxa	<i>Asphaltic Concrete Friction Course (Inc Bit)</i> ( <del>Rubber</del> )	MT

a=     5 = (FC-5)(**Rubber**)  
          6 = (**FC-12.5**)(FC-6)(**Rubber**)

Expand the following Items July 1, 2002

337-7-xxa	Asphaltic Concrete Friction Course (Inc Bit)	TN
2337-7-xxa	<i>Asphaltic Concrete Friction Course (Inc Bit)</i>	MT

a=     7 = (FC-9.5)(Rubber)  
          20 = (FC-12.5)(FC-6)(PG 76-22)  
          21 = (FC-9.5)(PG 76-22)

Permanently block the following pay items December 31, 2002:

337-7-xxa	Asphaltic Concrete Friction Course (Inc Bit) (Rubber)	TN
2337-7-xxa	<i>Asphaltic Concrete Friction Course (Inc Bit)</i> (Rubber)	MT

          2 = (FC-2)  
          3 = (FC-3)

**District Design:** Update plans and TRNS\*PORT files on applicable projects beginning with the January 2003 letting. Designers should verify that the Friction Course described in the Typical Section is the Friction Course identified in the Summary of Pay Items.

**Specifications:** Specifications will be available for the July 2002 letting.

**Pavement Design Contact Person:** Emmanuel Uwaibi 850-414-4372 SC 994-4372

*Approved:* Brian Blanchard \_\_\_\_\_ Date \_\_\_\_\_  
State Roadway Design Engineer

*Approved:* Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

*Approved* Sharon Holmes \_\_\_\_\_ Date \_\_\_\_\_  
State Maintenance Engineer

*Approved:* Phillip “Greg” Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

*Approved:* Duane F. Brautigam \_\_\_\_\_ Date \_\_\_\_\_  
State Specifications Engineer

*Approved:* Bruce Dietrich \_\_\_\_\_ Date \_\_\_\_\_  
State Pavement Design Engineer



*Effective with the January 2003 Letting*

**Issue:** *Pipe Filling And Plugging*

**History:** Pipe filling and plugging is to be used for existing drainage culverts only, where called for in the plans.

The cost of filling and plugging pipe shown in the plans as existing (to be placed out of service) will be paid for at the contract unit price for filling and plugging pipe, per cubic yard [cubic meter]. Price and payment will be full compensation for flowable fill, masonry, concrete, mortar, and all labor and materials necessary to complete the work.

**Note:** The specifications have been updated to include the cost of plugging proposed new pipe in the Contract unit price for pipe culvert.

***Implementation Plan:***

**Central Office Design**

Establish the following Items April 2002

430-830	Pipe Filling And Plugging	CY
2430-830	<i>Pipe Filling And Plugging</i>	<i>CM</i>

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

**Specifications:** Specifications will be available for the January 2003 letting.

**Structures Contact Person:** Chris Hack 850-414-4352 SC 994-4352

**Approved:** Brian Blanchard \_\_\_\_\_ Date \_\_\_\_\_  
State Roadway Design Engineer

**Approved:** Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

**Approved** Sharon Holmes \_\_\_\_\_ Date \_\_\_\_\_  
State Maintenance Engineer

**Approved:** Phillip "Greg" Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

*Approved:* Duane F. Brautigam \_\_\_\_\_ Date \_\_\_\_\_  
State Specifications Engineer

*Approved:* Rick Renna \_\_\_\_\_ Date \_\_\_\_\_  
State Drainage Engineer

*Effective with the July 2002 Letting*

**Issue:** *Noise Barrier Wall Temporary and Permanent*

**History:** The FDOT has a court-ordered injunction prohibiting the use of certain current details using auger cast piles in the construction of the FDOT Standard Noise Wall (Structures Standard and Semi- Standard Index Nos. 1530 – 1537). Noise Barrier Wall details have been developed for use until the July 02 Letting. New Noise Barrier Wall Standards (Structures Standard and Semi- Standard Index Nos. 1500 – 1507) are being developed for the July 02 Letting and beyond. No special notes are required in the plans. Quantities will continue to be calculated as they are currently calculated.

***Implementation Plan:***

**Central Office Design**

Establish the following new pay items March 2002:

534-72-11	Noise Barrier Wall (Temporary)	SF
2534-72-11	<i>Noise Barrier Wall (Temporary)</i>	<i>SM</i>
534-72-12	Noise Barrier Wall (Permanent)	SF
2534-72-12	<i>Noise Barrier Wall (Permanent)</i>	<i>SM</i>

Permanently Block the following pay items June 30, 2002:

400-1-19	Class I Concrete (Sound Barrier Wall)	CY
2400-1-19	<i>Class I Concrete (Sound Barrier Wall)</i>	<i>M3</i>
400-2-19	Class II Concrete (Sound Barrier Wall)	CY
2400-2-19	<i>Class II Concrete (Sound Barrier Wall)</i>	<i>M3</i>
400-3-19	Class III Concrete (Sound Barrier Wall)	CY
2400-3-19	<i>Class III Concrete (Sound Barrier Wall)</i>	<i>M3</i>
400-4-19	Class IV Concrete (Sound Barrier Wall)	CY
2400-4-19	<i>Class IV Concrete (Sound Barrier Wall)</i>	<i>M3</i>
400-8-19	Class V Concrete (Sound Barrier Wall)	CY
2400-8-19	<i>Class V Concrete (Sound Barrier Wall)</i>	<i>M3</i>
534-72-1	Noise Barrier Wall (Temporary)	SF
2534-72-1	<i>Noise Barrier Wall (Temporary)</i>	<i>SM</i>

534-72-2 Noise Barrier Wall (Permanent) SF  
2534-72-2 Noise Barrier Wall (Permanent) SM

**District Design:** Prior to the July 2002 Letting, update only the plans. For the July 2002 Letting and later, update the plans and the CES/TRNS\*PORT to indicate the new pay items on all projects.

**Specifications:** Prior to the July 2002 Letting, contact the State Specifications Office. Specifications will be available for the July 2002 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:** Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

**Approved:** Sharon Holmes \_\_\_\_\_ Date \_\_\_\_\_  
State Maintenance Engineer

**Approved:** Phillip "Greg" Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

**Approved:** Duane F. Brautigam \_\_\_\_\_ Date \_\_\_\_\_  
State Specifications Engineer

## *Effective with the January 2003 Letting*

### **Issue:                    *Directional Boring, Jack and Bore, and Vibratory Plowing***

**History:**           The FDOT was experiencing an extensive amount of roadway damage as a result of contractor activities associated with Directional Boring and Jack and Boring. In trying to find a solution to the problem, it was found that no specifications addressed bores greater than 6 inches. The only guidelines for these processes were outlined in the 1993 edition of the Utility Accommodation Manual. As a result, all bores greater than 6” were sent to the State Utilities Engineer for approval. It was decided to transfer the authority for approval of bores greater than 6” to the Districts with certain guidelines and specifications.

In accordance with Rule 14-46.001, the FDOT partnered with Industry to develop a rough first draft specification for each above process. The specs were pulled together using older FDOT specs, specs from other states and Industry materials. They were submitted to the 1999 Statewide Value Engineering Boring Task Team to use in developing a second draft. During this meeting, it was suggested that a specification also be established for Vibratory Plowing. Dual units (English and Metric) were not a part of the study but have since been added.

These specs include some new issues and eliminate others. For example:

1. They do not contain a lot of material found in the old 1993 Utility Accommodation Manual such as permitting documentation requirements, and internal processes even though that was part of the old official spec. Internal processes still must be followed but they are not specifications and will be addressed in separate design documentation.
2. Only construction and supplied material requirements are in the new specs.
3. Some new issues include better defined construction documentation, flagging of utilities, as-builts, making utilities traceable by electronic means, defining alignment tolerances, and responsibilities previously left to question.

Previously, the only means to get compensated for Jack and Bore was to use pay item 730, Steel Casing. It had a feature associated with the pay item to be installed with a Jack and Bore process. No account was made for plastic or concrete. Because this pay item was the only means to pay for boring processes, it was abused and did not fully describe the work actually performed. Steel Casing will still be available as a furnished item only. The new specifications address both product and process of installation.

Payment for directional drilling and Jack & Bore will include the cost of the pipe/casing installed as part of the operation, as well as the tracking conductor to locate the pipe. The contents of the pipe/casing (fiber optics cable, or other material) will be paid for separately. Refer to the specifications for details.

## ***Implementation Plan:***

### **Central Office Design**

Expanding the following new pay items April 2002

555-1-xxa	Directional Boring	LF
2555-1-xxa	<i>Directional Boring</i>	<i>MI</i>
	a= 5(24" to <36")	(600mm to <900mm)
	6(36" to <48")	(900mm to <1200mm)
	7(48" to <60")	(1200mm to <1500mm)
556-1-xaa	Jack and Bore	LF
2556-1-xaa	<i>Jack and Bore</i>	<i>MI</i>
	aa= 01(<6")	(<150mm)
	02(6" to <18")	(150mm to <300mm)
	03(12" to <18")	(300mm to <450mm)
	04(18" to <24")	(450mm to <600mm)
	05(24" to <36")	(600mm to <900mm)
	06(36" to <48")	(900mm to <1200mm)
	07(48" to <60")	(1200mm to <1500mm)
	08(60" to <72")	(1500mm to <1800mm)
	09(72" to <84")	(1800mm to <2100mm)
	10(84" to <96")	(2100mm to <2400mm)
	11(96" to <108")	(2400mm to <2700mm)
	Additional ranges at 12" increments	
557-1-xxa	Vibratory Plowing	LF
2557-1-xxa	<i>Vibratory Plowing</i>	<i>MI</i>
	a= 1(<6")	(<150mm)
	2(6" to <12")	(150mm to <300mm)
	3(12" to <18")	(300mm to <450mm)

**Permanently block the following pay items December 31, 2002:**

730-76-abb	Steel Casing	LF
2730-76-abb	<i>Steel Casing</i>	<i>MI</i>
	a= 02(Jack and Bored)	
	03(Jack and Bored – Install Only)	

**Note:** a = 1, 4 and 5 will remain valid for open cut trench applications only.

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

**Specifications:** Specifications will be available for the January 2003 letting.

**Utilities Contact Person:** Kenneth Weldon 850-414-4364 SC 994-4364

*Approved:* Brian Blanchard \_\_\_\_\_ Date \_\_\_\_\_  
State Roadway Design Engineer

*Approved:* William N. Nickas \_\_\_\_\_ Date \_\_\_\_\_  
State Structures Design Engineer

*Approved:* Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

*Approved:* Sharon Holmes \_\_\_\_\_ Date \_\_\_\_\_  
State Maintenance Engineer

*Approved:* Phillip "Greg" Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

*Approved:* Duane F. Brautigam \_\_\_\_\_ Date \_\_\_\_\_  
State Specifications Engineer

*Approved:* Kenneth Weldon \_\_\_\_\_ Date \_\_\_\_\_  
State Utility Engineer





*Effective with the July 2003 letting  
(or sooner)*

**Issue: Mast Arm Assemblies**

**History:** The Department has revised the standard designs and details for Mast Arm structures that carry signals and signs. If a Mast Arm assembly is required that differs from the standards, then a special design is performed and the details placed in the plans. The standards are only available in English units. Instructions for using these new standards will be available in the upcoming revision to the PPM. The standards will be available on the Roadway website on 07/01/2002.

There are two new Mast Arm assemblies “B” and “C” in addition to the existing Mast Arm “A” assemblies. Mast Arms “C” are designed for 90 mph wind speed with signal backplates or 110 mph wind speed without signal backplates. Mast Arms “B” are designed for 110 mph wind speed with signal backplates like existing Mast Arms “A”. Mast Arms “B” are to replace Mast Arms “A”, which will be eliminated in the future. Note that a differing arm connection plate size results in a unique Arm Type designation. Hence there are two Arm Type designations for a 36 ft. arm and 46 ft. arm. A 78 ft. arm has also been added. Several Pole Types have been consolidated and a Pole Type has been added for the 78 ft. arm. In general, pole component sizes have been streamlined and consolidated.

***Implementation Plan:***

**Central Office Design:**

Expanding the following pay items April, 2002

649-abc-dee	Mast Arm Assemblies	EA
2649-abc-dee	<i>Mast Arm Assemblies</i>	<i>EA</i>

- a= operation/loading
  - 4 (furnish and install/high loading)
  - 5 (furnish/high loading)
  - 6 (install/high loading)
  
- b= structure type
  - 1 (single arm without luminaire)
  - 2 (double arm without luminaire)
  - 3 (single arm with luminaire)
  - 4 (special design)
  - (When b= 4 Then c=0 & dee = Blank)

- c= first arm type
  - 1 (B1)
  - 2 (B2)
  - 3 (B3)
  - 4 (B4)
  - 5 (B5)
  - 6 (B6)
  - 7 (B7)
  
- d= second arm type
  - 0 (no second arm)
  - 1 (B1)
  - 2 (B2)
  - 3 (B3)
  - 4 (B4)
  - 5 (B5)
  - 6 (B6)
  
- ee= upright pole type
  - 01 (Q1)
  - 02 (Q2)
  - 03 (Q3)
  - 04 (Q4)
  - 05 (Q5)
  - 06 (Q6)
  - 07 (Q21 Lum)
  - 08 (Q22 Lum)
  - 09 (Q23 Lum)
  - 10 (Q24 Lum)

649-abc-dee Mast Arm Assemblies - EA

2649-abc-dee Mast Arm Assemblies EA

- a= operation/loading
  - 7 (furnish and install/reduced loading)
  - 8 (furnish/reduced loading)
  - 9 (install/reduced loading)
  
- b= structure type
  - 1 (single arm without luminaire)
  - 2 (double arm without luminaire)
  - 3 (single arm with luminaire)
  - 4 (special design)
 (When b= 4 Then c=0 & dee = Blank)

- c= first arm type
  - 1 (C1)
  - 2 (C2)
  - 3 (C3)
  - 4 (C4)
  - 5 (C5)
  - 6 (C6)
  - 7 (C7)
  
- d= second arm type
  - 0 (no second arm)
  - 1 (C1)
  - 2 (C2)
  - 3 (C3)
  - 4 (C4)
  - 5 (C5)
  - 6 (C6)
  
- ee= upright pole type
  - 01 (R1)
  - 02 (R2)
  - 03 (R3)
  - 04 (R4)
  - 05 (R5)
  - 06 (R6)
  - 07 (R21 Lum)
  - 08 (R22 Lum)
  - 09 (R23 Lum)
  - 10 (R24 Lum)

Permanently Block the following pay items June 30, 2003:

- 649-1bc-dee
- 649-2bc-dee
- 649-3bc-dee

**District Design:** These new designs may be used on projects beginning with the January 2003 letting. These new designs are mandated for use on projects beginning with the July 2003 letting. Update plans accordingly.

**Specifications:** No specification revisions are required for this change.

**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:* Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

*Approved:* Phillip "Greg" Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer

***Effective with the January 2003 letting  
(or sooner)***

***Issue: Piles Estimating Quantities***

In an effort to reduce the appearance of construction cost overruns on piling, the Department has decided to change the formula for estimating the quantity for Prestressed Concrete Piling, Steel Piling and Test Piles.

**Central Office Design:**

Establish the following new method of measurement:

Item No. 455-34-xaa	Prestressed Concrete Piling (Furnish & Driven)	LF
<i>Item No. 2455- 34-xaa</i>	<i>Prestressed Concrete Piling (Furnish &amp; Driven)</i>	<i>MI</i>
Item No. 455-36-xaa	Concrete Cylinder Piles (Furnish & Driven)	LF
<i>Item No. 2455- 36-xaa</i>	<i>Concrete Cylinder Piles (Furnish &amp; Driven)</i>	<i>MI</i>

Quantity for Prestressed Concrete Piling and Concrete Cylinder Piles is computed as follows:  
(Sum of estimated pile lengths) + (5 feet per pile for cut-off of all piles) + [(0.3) x Sum of preformed pile hole depths for production piles]  
Do not add allowances for splices.

Include quantity for preformed holes only if performing is known to be required and shown in the plans. Do not use as contingency.

Item No. 455- 35-xaa	Steel Piling (Furnish & Driven)	LF
<i>Item No. 2455- 35-xaa</i>	<i>Steel Piling (Furnish &amp; Driven)</i>	<i>MI</i>

Quantity for Steel Piling is computed as follows:  
(Sum of estimated pile lengths) + [(0.3) x Sum of preformed pile hole depths for production piles]  
Do not add allowances for splices.

Include quantity for preformed holes only if performing is known to be required and shown in the plans. Do not use as contingency.

Item No. 455-143-xaa	Test Piles (Prestressed Concrete)	LF
<i>Item No. 2455-143-xaa</i>	<i>Test Piles (Prestressed Concrete)</i>	<i>MI</i>
Item No. 455-144-xaa	Test Piles (Steel)	LF
<i>Item No. 2455-144-xaa</i>	<i>Test Piles (Steel)</i>	<i>MI</i>
Item No. 455-145-xxa	Test Piles (Concrete Cylinder)	LF
<i>Item No. 2455-145-xxa</i>	<i>Test Piles (Concrete Cylinder)</i>	<i>MI</i>

Quantity for Test Piles is computed as follows:

(Sum of test pile lengths) + [(0.3) x Sum of preformed pile hole depths for test piles]

Do not add allowances for splices.

Include quantity for preformed holes only if performing is known to be required and shown in the plans. Do not use as contingency.

**Structures Contact Person:**

Robert Robertson 850-414-4267 SC 994-4267

*Approved:* William N. Nickas \_\_\_\_\_ Date \_\_\_\_\_  
State Structures Design Engineer

*Approved:* Greg Xanders \_\_\_\_\_ Date \_\_\_\_\_  
State Construction Engineer

*Approved:* Phillip "Greg" Davis \_\_\_\_\_ Date \_\_\_\_\_  
State Estimates Engineer