

# District Five Final Estimates Meeting 2011





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# Problems Found on PARS



$$\int \frac{x+5}{x^2-2x-3} dx$$

Problems

$$\begin{aligned} \frac{5}{3} dx &= \int \frac{2}{x-3} dx - \int \frac{1}{x+1} dx \\ &= 2 \ln(x-3) - \ln(x+1) \\ &= \ln \frac{(x-3)^2}{x+1} + C \end{aligned}$$

# Problems Found on PARS



## 1. Contract Time:

- A.** Work was performed on a holiday. There was no request or approval to work in the time folder for that day.
- B.** The weather letter dated March 4, 2010 shows 2 weather days granted. The Contract Time Summary shows 4 days (-2 days).
- C.** Liquidated Damages: Incentive/Disincentive Memo (see D5 website) was not included in the Time Folder. This shows the amount of incentive or disincentive time and payment due to the contractor.

# Problems Found on PARS



## 2. Comp Book:

- A.** The total on the comp book pay item summary and certification sheet did not match the amount in SiteManager.
  
- B.** The comp book pay item summary and certification sheet did not have references to the page numbers, folders, plan sheets, or EDMS document number as to where the information is located. These sheets are not only for showing the final pay quantity, but also serves as the index to the comp book.
  
- C.** Pages were not added to the comp book for pay items added to the contract by Supplemental Agreements (per Prep & Doc Manual Chapter 5).

# Problems Found on PARS



## 3. As-Built Plans:

- A. Key sheet and plan sheet do not reflect the extension of the project limits by WO #8 (SMCO #46).
  
- B. All Projects
  - 1) The key sheets for other sections of the plans are not marked “Final As-Built Plans”.
  - 2) The as-built quantities were not shown in the matrices.
  - 3) As-Built Indexes were not complete, see Prep & Doc Manual Chapter 4.5.8(C) and the Computation Methods For Design, Construction & Final Estimates Handbook.
  - 4) Pavement As-Built Data sheets were not included with the as-built plans.

# Problems Found on PARS



## ***THIS SET OF FINAL "AS-BUILT" PLANS INCLUDES:***

- 1. ROADWAY PLANS***
- 2. SIGNING & PAVEMENT MARKINGS***
- 3. LIGHTING PLANS***
- 4. SHOP DRAWINGS FOR SCALE***

## ***FINAL "AS-BUILT" PLANS DOCUMENTS:***

***COMPUTATION BOOK # 1/2 AND 2/2***

***FIELDS BOOK # 16746 (FIELD MEASUREMENTS)***

***FIELD BOOK # 2001 (PILE DRIVING)***

***15 - FINAL MEASUREMENT BINDERS***

***8 - SITE SOURCE RECORDS***

# Problems Found on PARS



## **4. Field Books:**

- A. The field book for the bridge deck dry run was not labeled or given a book number per the Prep & Doc Manual Chapter 6.2.1.**
- B. The pile log book do not have a number nor is the spine of the book labeled per the Prep & Doc Manual Chapter 6.2.1.**

- 5. 400-143 Cleaning & Coating Concrete Structures and 524-2-2 Concrete Slope Pavement, Non-Reinforced 4” are plan quantity items. A plan quantity analysis was not submitted for these items.**

# Problems Found on PARS



- 6. 102-150-1 Portable Regulatory Signs**
- 102-150-2 Radar Speed Display Unit**
- 102-99 Changeable Variable Message Signs, Temp**
- 9999-4 ¾" Asphalt Conc MOT Overlay**

**These items were added by SA #1(SMCO 004). A comp book page was not added to the comp book for these items.**

- 7. 120-4 Subsoil Excavation:**

**TBM's on pages 8-10 of Field Book 00005 were set by the contractor. They were not checked into a known bench mark or checked for 3<sup>rd</sup> order accuracy.**

# Problems Found on PARS



## **8. 160-4 Stabilization Type B:**

The plan quantity analysis showed that the error met the criteria to adjust the plan quantity. Therefore the quantities for all of the items used to calculate the stabilization should be based on the actual quantity used for the project. The quantities for the traffic separator, Type E and Type F curbs appear to be in error (-78 SY) (-\$234.00).

**A.** There was a decrease in the fuel adjustment due to this change of -\$2.20.

# Problems Found on PARS



## **9. 285-704 Optional Base, Group 04**

- A.** The area for asphalt base was not deducted from the area to calculate the limerock core thickness adjustment.
- B.** A spread rate adjustment was not performed for the asphalt base used for this pay item.
- C.** There was no line item adjustment added for the CPF of the asphalt base. Section 234 of the Specifications, Basis of Payment; refers to Section 334 of the Specifications, which determines requirements of mixture, and CPF.

# Problems Found on PARS



## **10. Optional Base, Group 06**

**A note in the comp book states that the area was too small to take a core and no cores were taken. The area was a median crossover that consisted of one lot of lime-rock as defined in specification 120-8.1 in which three cores should have been taken and a thickness adjustment calculated.**

**11. Asphalt : This is a Lump Sum Project, the CPF is calculated per Prep and Doc Manual Chapter 11 page 11-14.**

# Problems Found on PARS



Item Description	Unit	Unit Prices
Superpave (Traffic Level B)	Ton	\$48.62
Superpave (Traffic level C)	Ton	\$52.99
Friction Course (FC 6)	Ton	\$56.79

## Example: #4

Lot = 4,000 tons  
Composite Pay Factor = 105% for lot #2

$4,000 \text{ tons} \times 1.05 = 4,200 \text{ tons}$

$4,200 - 4,000 = 200 \text{ tons}$

$200 \text{ Tons} \times \$48.62 = \$9,724.00$  will be the adjustment to the Lump Sum price.

All adjustments will be entered on the Final Estimates Certification and **Summary Sheet** as a line item adjustment.

# Problems Found on PARS



- 12. Overbuild:** You used a plan thickness of 1.51” and end up paying +282.7 Tons for over 1.00% of spread rate up to 1.05%.  
 $282.7 \text{ Tons} \times \$94.50 = \$26,715.15$ . I come up with a plan thickness of 1.63” and calculate +401.5 Tons for over 1.00% of spread rate up to 1.02% .  
 $401.5 \text{ Tons} \times \$91.80 = \$36,857.70$
- 13. 337-7-32 Asph. Conc. FC, TL C, FC 9.5, Rubber:** A deduction was made to the CPF of Lot 29 for the straightedge penalty. There is no provision in the specifications or Prep & Doc Manual to reduce the CPF of the last lot for a straightedge penalty.

# Problems Found on PARS



- 14. 530-1 Riprap, Sand-Cement:** This is not a plan quantity item. Could not find any documentation for the quantity paid Except for the plan matrix indicating the same quantity as the plan. Also there is no documentation showing the sand-cement met the specified 5:1 mixture per specification 530-4.1 and Prep & Doc Manual Chapter 6.3.3(2).

# Problems Found on PARS



*What Questions  
do you have?*





# Housekeeping

# 102-13.12 Temporary Crash Cushion



- **Do we pay manufacturer's/distributor's invoice price for the new materials/parts plus 20% markup for restoring damaged crash cushions???????**

# 102-13.12 Temporary Crash Cushion



## Spec Change January 2011

**102 MAINTENANCE OF TRAFFIC.  
(REV 8-10-10) (FA 8-16-10) (1-11)**

**102-13.12 Temporary Crash Cushion:**

**102-13.12.1 Redirective:** Price and payment will be full compensation for furnishing, installing, maintaining (including restoring or replacing damaged) and subsequently removing such crash cushions

# 102-13.12 Temporary Crash Cushion



## **MAINTENANCE OF TRAFFIC.**

**(REV 10-7-10) (1-11) (Mandatory Spec Change January 2011)**

**SUBARTICLE 102-13.12.1 (of the Supplemental Specifications) is deleted and the following substituted:**

**102-13.12.1 Redirective: Price and payment will be full compensation for furnishing, installing, maintaining and subsequently removing such crash cushions. Payment for restoring damaged crash cushions will be the manufacturer's/distributor's invoice price for the new materials/parts plus 20% markup. The 20% markup is compensation for all necessary work, including but not limited to labor, equipment, supplies and profit, as authorized by the Engineer. Additional MOT required for the repair of the crash cushion will be paid for under the appropriate MOT pay item.**

# 102-13.12 Temporary Crash Cushion



## **102 MAINTENANCE OF TRAFFIC.**

**(REV 10-7-10) (FA 10-19-10) (7-11) (July 2011 Workbook)**

### **102-13.12 Temporary Crash Cushion:**

**102-13.12.1 Redirective: Price and payment will be full compensation for furnishing, installing, maintaining and subsequently removing such crash cushions. Payment for restoring damaged crash cushions will be the manufacturer's/distributor's invoice price for the new materials/parts plus 20% markup. The 20% markup is compensation for all necessary work, including but not limited to labor, equipment, supplies and profit, as authorized by the Engineer. Additional MOT required for the repair of the crash cushion will be paid for under the appropriate MOT pay item.**

# 102-13.12 Temporary Crash Cushion



Read Your Contract!!

# Calculating CPF's For Lump Sum Project's



## 9-2.2.5 Quality:

Where an adjustment of payment for quality is called for in the Contract Documents, the Engineer will make such adjustments for the corresponding quantity of material based on the unit prices shown in Table 9-4.

# Calculating CPF's For Lump Sum Project's



**Where Can You Find The Procedure on How To Calculate A CPF Adjustment For A Lump Sum Project?**

**This Can Be Found In Chapter 11 Of The Prep and Doc Manual.**

<http://www.dot.state.fl.us/construction/Manuals/finalest/p&d/PDChapter11.pdf>

# Calculating CPF's For Lump Sum Project's



## Quality Adjustment

Table 9-4

Item Description	Unit	Unit Prices
Superpave (Traffic Level B)	Ton	\$48.62
Superpave (Traffic level C)	Ton	\$52.99
Friction Course (FC 6)	Ton	\$56.79

## Example: #4

Lot = 4,000 tons

Composite Pay Factor = 105% for lot #2

$4,000 \text{ tons} \times 1.05 = 4,200 \text{ tons}$

$4,200 - 4,000 = 200 \text{ tons}$

$200 \text{ Tons} \times \$48.62 = \$9,724.00$  will be the adjustment to the Lump Sum price.

All adjustments will be entered on the Final Estimates Certification and **Summary Sheet** as a line item adjustment.

# Calculating CPF's For Lump Sum Project's



**You Can Also Find an Example  
On The D5 Web Page, Under  
Final Estimates.**

[http://www.dot.state.fl.us/construction/DistrictOffices/  
d5web/files/DCO%20Reference%20Guide/Asphalt/CPF.  
pdf](http://www.dot.state.fl.us/construction/DistrictOffices/d5web/files/DCO%20Reference%20Guide/Asphalt/CPF.pdf)

# Lump Sum Project Adjustments



- **When adjustments are made on Lump Sum project they are to be entered into the estimate with a quantity of 1 LS with a the dollar amount for the unit price as shown in the Computation Methods For Design, Construction & Final Estimates Manual. Do not leave the quantity blank and just enter a dollar amount.**
  - **Do not enter a quantity other than 1 (one).**

**[http://www.dot.state.fl.us/construction/Manuals/final\\_est/newcompbook/NewSampleCompbook.shtm](http://www.dot.state.fl.us/construction/Manuals/final_est/newcompbook/NewSampleCompbook.shtm)**

# Lump Sum Project Adjustments



Date: 5/9/08

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
COMPUTATION BOOK PAY ITEM SUMMARY AND CERTIFICATION SHEET

Contract ID:                      Fin Proj. ID:                      Managing District:                      FAP No.:

Fin Proj regular Work Paid: \$ 9,744,449.14

Quantity	Unit Meas.	Item Code	S.A. Number	Pay Item Description	CDMS/ Page No.	Unit Price	Item Paid Amount	Line Item Adjustment Amount	Total Item Paid Amount
<i>Contract Adjustments for Pay Item Code: 0999 2</i>				<i>Change order Number:</i>					
		0002 BITM 1		Bituminous Adjustment	111584		\$ 142,510.23		\$ 142,510.23
		0002 BITM 1		Corrected Bit Adj. for removal & replacement of 48.00 Tons	112391		\$ (378.40)		\$ (378.40)
		0002 BITM 2		Asphalt Bituminous Adjustment	112392		\$ 269,232.82		\$ 269,232.82
		0002 BITM 3		Bituminous Adjustment	112977		\$ 36,537.12		\$ 36,537.12
		0002 BITM 2		Corrected Bit Adj. for removal & replacement of 825.73 Tons	112978		\$ (7,661.12)		\$ (7,661.12)
		0002 BITM 1		Bituminous Adjustment	113981		\$ 72,001.05		\$ 72,001.05
		0002 BITM 1		Bituminous Adjustment	114481		\$ 8,096.81		\$ 8,096.81
		0002 BITM 1		Bituminous Adjustment for estimate # 5	113448		\$ 22,613.95		\$ 22,613.95
		0002 BITM 1		Corrected Bit Adj. for removal & replacement of 58.15 Tons	112393		\$ (459.05)		\$ (459.05)
1	LS	0009 CPF 1		Lot No. 3 CPF of 0.94	15	\$ (9,360.00)	\$ (9,360.00)		\$ (9,360.00)
1	LS	0009 CPF 2		Lot No. 6 & 14 CPF of 0.96	15	\$ (18,538.57)	\$ (18,538.57)		\$ (18,538.57)
1	LS	0009 CPF 3		Lot No. 1, 2, 8, & 10 CPF of 0.98	15	\$ (14,724.15)	\$ (14,724.15)		\$ (14,724.15)
1	LS	0009 CPF 5		Lot No. 13, 16, & 17 CPF of 1.04	15	\$ 37,440.00	\$ 37,440.00		\$ 37,440.00
1	LS	0009 CPF 7		Lot No. 19 & 21 CPF of 0.92 (FC)	15	\$ (24,378.55)	\$ (24,378.55)		\$ (24,378.55)
1	LS	0009 CPF 9		Lot No. 22 & 26 CPF of 1.03 (FC)	15	\$ 10,800.00	\$ 10,800.00		\$ 10,800.00
1	LS	0009 CPF 10		Lot No. 25 CPF of 1.05 (FC)	15	\$ 9,000.00	\$ 9,000.00		\$ 9,000.00
1	LS	0009 CPF 11		Lot No. 23 & 24 CPF of 1.04 (FC)	15	\$ 14,400.00	\$ 14,400.00		\$ 14,400.00
1	LS	0009 CPF 8		Lot No. 20 CPF of 0.95 (FC)f	15	\$ (9,000.00)	\$ (9,000.00)		\$ (9,000.00)
1	LS	0009 CPF 6		Lot No. 4, 9 & 15 CPF of 1.05	15	\$ 31,200.00	\$ 31,200.00		\$ 31,200.00
1	LS	0009 CPF 4		Lot No. 5, 12 & 18 CPF of 1.03	15	\$ 19,397.92	\$ 19,397.92		\$ 19,397.92
		0001 FUEL 1		Diesel Fuel Adjustment	111026		\$ 359.18		\$ 359.18
		0004 FUEL 2		Diesel Fuel Adjustment	112976		\$ 2,532.36		\$ 2,532.36
		0004 FUEL 1		Corrected Diesel Fuel Adj. for removal & replacement of 826.73 tons	112974		\$ (7,849.06)		\$ (7,849.06)
		0006 FUEL 1		Diesel Fuel Adjustment	113988		\$ (2,373.37)		\$ (2,373.37)
		0005 FUEL 1		Corrected Diesel Fuel Adj. -64.42 tons asphalt used for base	113449		\$ (41.95)		\$ (41.95)
		0003 FUEL 1		Diesel Fuel Adjustment	112340		\$ 53,954.47		\$ 53,954.47
		0001 GASO 1		Gasoline Fuel Adjustment	111025		\$ 168.75		\$ 168.75
		0003 GASO 1		Corrected Gasoline Fuel Adj. for removal & replacement of 48 tons	112393		\$ (0.18)		\$ (0.18)
		0004 GASO 2		Corrected Gasoline Fuel Adj. for removal & replacement of 826.73 ton	112971		\$ (191.54)		\$ (191.54)

PAGE TOTAL	\$ 635,288.72
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# BM Requirement



**555-6.2 As-Built Plans:**

**556-6.2 As-Built Plans:**

**557-4.2 As-Built Plans:**

The plans must show appropriate elevations and be **referenced to a Department Bench Mark when associated with a Department project**, otherwise to a USGS grid system and datum, or a specific location on top of an existing Department head wall.



**Bench Mark requirements for As-built Plans;  
Specifications 555-6.2, 556-6.1(f) & 557-4.1(d)  
– (David Sadler/Stefanie Maxwell)**

**The group discussed a proposal to modify these specifications to no longer require the As-built plans reference Department Bench Marks. Polled districts continue to see benefit in requiring this information. No changes to current specifications will be made.**

# New Specs: January 2011 For Contractors Certified Survey and As-Built Plans



## 009 MEASUREMENT AND PAYMENT. (REV 9-16-10) (FA 7-29-10) (1-11)

### 9-8.1 Acceptance and Final Payment Documents:

(h) The Contractor has furnished and the Department has accepted the as-built drawings and certified survey in accordance with the requirements of Section 104, 555, 556, 557 and 611.

# CCEI Certification

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
CERTIFICATION AS TO ACCURACY OF FINAL PAYMENT

709-050-38  
OGC - CONSTRUCTION  
09/04



The undersigned \_\_\_\_\_, on behalf of and as a duly authorized representative of \_\_\_\_\_, (hereinafter referred to as the "Consultant") hereby certifies, to the best of Consultant's knowledge, information and belief, to the Florida Department of Transportation (hereinafter referred to as the "Department") as follows:

1. That the Final Estimate package for Contract Number \_\_\_\_\_, Financial Project Number(s) \_\_\_\_\_, (hereinafter referred to as the "Final Estimate") is in compliance with the Contract, Statewide Quality Control Plan or other acceptable plan as developed by the Consultant, and the Department's procedures; and
2. That the Final Estimate is true and correct as determined by the Consultant's reasonable and independent investigation and measurements; and
3. That the Consultant hereby recommends that the Department make payment based on the attached Final Estimate; and
4. That the Consultant hereby agrees to indemnify and hold the Florida Department of Transportation, its officers and employees harmless from all liabilities, damages, costs, and attorney fees incurred and paid as a result of the negligence, recklessness, or intentional wrongful misconduct of the Consultant and persons employed or utilized by the Consultant in the preparation and/or audit of the Final Estimate as outlined in the Scope of Services. The Department also reserves the right to recover from the Consultant any increased costs, delays or other damages to the Department due to errors and/or omissions under applicable Florida Statutes (334.044(2); 334.048.20.23(3)(a) and 337.015).

5. Monetary Amount Submitted \$4,321,135.97  
*PENDING SA#3 \$10,000.00*  
*\$4,331,135.97*

State of Florida \_\_\_\_\_  
County of \_\_\_\_\_  
Sworn to and subscribed before me this 11<sup>th</sup> day of  
July, 2001, by \_\_\_\_\_  
(Print name of person signing Certification)

A false statement or omission made in connection with this certification is sufficient cause for suspension, revocation or denial of qualification, and may subject the person and/or entity making false statement to any or all civil and criminal penalties available pursuant to applicable Federal and State Law.

Notary Public  
8/17/2012  
Commission Expires

\_\_\_\_\_  
By

Personally Known  OR Produced Identification   
Type of Identification Produced \_\_\_\_\_

Sr. Vice President  
Title

Distribution:  
Original - District Final Estimates Manager  
Copy - State Final Estimates Manager  
Copy - Attached to front of Computation Book



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

COMPUTATION BOOK PAYITEM SUMMARY AND CERTIFICATION SHEET

Fin. Proj. ID: [REDACTED]

Managing District: 05

FAP No.: N/A

Contract Adjustments

Adjustment Description	Amount	Adjustment Description	Amount
E AND DIESEL	\$ .00	LANE RENTAL	\$ .00
OUS MATERIAL	\$ .00	ARBITRATION ORDERS	\$ .00
JUSTMENTS	\$ .00	COURT ORDERS	\$ .00
ED SAVIGS	\$ .00	DAMAGE RECOVERY	\$ .00
ED DAMAGES	\$ .00	A+B INCENTIVE DISINCENTIVE	\$ .00
/ES/DISINCENTIVES	\$ .00	RETAINAGE	\$ .00
ISE BONUS	\$ .00	SETTLEMENT COST	\$ .00
		OTHER	\$ .00
		TOTAL AMOUNT OF CONTRACT ADJUSTMENTS:	\$ .00
		TOTAL AMOUNT OF CONTRACT (w/Cont.Adj.)	\$4,321,135.97

PENDING SA # 3  
#10,000.00  
#4,331,135.97

CERTIFICATION STATEMENT

This block shall be signed by the qualified person(s) responsible for the accuracy of the Final Estimates Package, as submitted, in accordance with Chapter 4 of the R & AM.

DFBO USE ONLY

VS \_\_\_\_\_  
Signature \_\_\_\_\_ Date \_\_\_\_\_

Per R & AM, Chapter 4, Section 4.2.4

I certify, based on my personal knowledge and well-founded belief, the quantities are accurate and conform to the contract plan dimensions and specification tolerances, manuals and that this final estimate submitted is true and correct.

Title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
And/Or  
Title: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Project Administrator

Signed \_\_\_\_\_  
Printed \_\_\_\_\_

Resident Engineer

Signed \_\_\_\_\_  
Printed \_\_\_\_\_

# Bridge Load Ratings



- **We Get Questions, On What Documentation Is Required To Be Turned In For The As-built Plans For The Load Ratings On Bridge Projects?**

# Bridge Load Ratings



- **If You Have A Bridge Project You Need To:**

**Review CPAM 10.11: General Structures Construction Issues. This Covers Load Ratings and What Is Required.**

# Plan Revisions



**A work order is to be written for plan revisions to incorporate them into the contract.**

# Specification 346-9.5



- **346-9.5 .....The resolution investigation will determine the strength test results for each of the four or less LOTs. When the QC strength test results are deemed to be the most accurate, the QC strength test results will represent the four or less consecutive LOTs and the Department will pay for the resolution testing and investigation. When the verification strength test results are deemed to be the most accurate, the Department will assess a 5 percent reduction of payment for the quantity represented by the Resolution Investigation.**

# Specification 346-9.5



**Is the cost of the resolution test found out on the State Materials website?**

**NO!!**

**The charge to the contractor is to be assessed according to Specification 346-9.5. Payment is made by taking 5% of the contract unit price and multiplying it to the quantity the resolution sample represents. The quantity is usually representing 4 or less Lots.**

# Housekeeping



*What Questions  
do you have?*





# Overbuild Asphalt Adjustments

- Streamline Lump Sum.
- Lump Sum.

# Streamline Lump Sum Overbuild



- **Streamline Lump Sum.**

# Streamline Lump Sum Overbuild



## 9-2.2 General Basis of Adjusted Pay:

**9-2.2.1 Asphalt Overbuild:** Adjustment in the lump sum payment will be made for actual quantities installed of asphalt overbuild, as additions or deletions, based on the quantity shown in the Contract Documents. The upward tonnage adjustment will not exceed 5 % of the asphalt overbuild quantity shown in the Contract Documents.

The Engineer will base all adjustments in payment on the unit prices as shown in Table 9-2.

Table 9-2

Item Description	Unit	Unit Price

# Streamline Lump Sum Overbuild



- **Where Do We Find Examples For Calculating Overbuild?**

# Streamline Lump Sum Overbuild



- Chapter 11 of the Prep and Doc

# Streamline Lump Sum Overbuild



## Example # 1

In this example; overbuild is less than what is in the Contract.

Item (Superpave SP 12.5) Traffic Level B

Original Quantity = 323.3 Tons

Final = 300.0 Tons

Final Pay Limited to 105%

$323.3 \times 1.05 = 339.5$  Tons (maximum Tonnage that can be paid)

However, 300.0 Tons were placed

$300 - 323.3 = -23.3$  Tons (This will be a negative, since the material is less than what's in the Contract).

$\$48.62 \times 23.3 = -\$1,132.85$  (The quantity of the material placed is less than the specified Tonnage in the Contract). A line item adjustment will need to be made showing 1 LS @ - \$ 1,132.85, which is a negative adjustment).

# Streamline Lump Sum Overbuild



## Example # 2

In this example; overbuild is more than what is in the Contract.

Item (Superpave SP 12.5) Traffic Level B

Original Quantity = 749.3 Tons

Final = 780.1 Tons

Final Pay Limited to 105%

$749.3 \text{ Tons} \times 1.05 = 786.8 \text{ Tons}$  (maximum Tonnage that can be paid)

However, 780.1 Tons were placed

$780.1 - 749.3 = + 30.8 \text{ Tons}$  (over the Contract Tonnage - we are still under the 5%)

$48.62 \times 30.8 = + \$ 1,497.50$  (The quantity of the material placed is greater than what's in the Contract). It's within the 5% limit. A line item adjustment will need to be made showing 1 LS @ + \$1,497.50, which is a positive adjustment.)

# Streamline Lump Sum Overbuild



## Example # 3

In this example; overbuild is more than 105%.

Item (Superpave SP 12.5) Traffic Level B

Original Quantity = 160.60 Tons

Final = 193.50

Final pay limited to 105%

$160.60 \text{ Tons} \times 1.05 = 168.6 \text{ Tons}$  (maximum Tons that we can be paid)

However, 193.5 Tons were placed

$168.6 - 160.60 = + 8 \text{ Tons}$  (over the Contract Tonnage – here we are at the 5% limit)

$\$ 48.62 \times 8 \text{ Tons} = \$ 388.96$  (The quantity of the material placed is greater than what's in the Contract). It also exceeds the 5% limit. The upward Tonnage adjustment, in this example, is limited to the maximum payable). A line item adjustment will need to be made showing 1 LS @ + \$ 388.96, which is a positive adjustment)

# Lump Sum Overbuild



- **Lump Sum Projects.**

# Lump Sum Overbuild



**9-2.2.3 Asphalt Overbuild:** Where overbuild is called for in the plans for the correction of cross-slope, the Engineer will make an adjustment in payment should the quantity of material placed be less than the specified spread rate. In addition, should the material placed exceed the specified spread rate with no negative effect to the correction of cross-slope, an upward adjustment will be made representing the additional material placed. The upward adjustment in payment is limited to 5% of the original material required for overbuild. Adjustments in pay will be determined for the entire project by applying a proportional adjustment in payment for the material in question, based on a ratio of the average spread rate to the design spread rate, which will then be applied using the unit prices as shown in Table 9-2.

Table 9-2

Item Description	Unit	Unit Prices

An average spread rate, per calculations as specified in 9-2.2, will be used to determine verification of the required amount of asphalt for the project.

# Lump Sum Overbuild



- **Where Do We Find Examples For Calculating Overbuild?**

# Lump Sum Overbuild



- Chapter 11 of the Prep and Doc

# Lump Sum Overbuild



## Asphalt Overbuild Adjustment

Table 9-2

Item Description	Unit	Unit Prices
Superpave (Traffic level B)	Ton	\$48.62
Superpave (Traffic level C)	Ton	\$52.99

# Lump Sum Overbuild



## Example # 1

In this example; overbuild is less than the target.

Item (Superpave SP 12.5) Traffic Level B

Original Quantity	= 323.3 Tons	Plan Thickness	= 0.33"
Final	= 300.0 Tons	Design Mix No.:	XXXXXX
Plan Area	= 19,690 SY	$G_{mm} = 2.521$	
Final Area	= 20,000 SY	$2.521 \times 43.3 \times 0.33 = 36.02$ Lbs/SY	
Plan Spread Rate	= 33 Lbs/SY	Target	= 36 Lbs/SY
Actual Spread Rate	= 30.00 Lbs/SY	Based on this Design Mix, the	
Final Pay Limited to 105%		Target Spread Rate is 36 Lbs/SY	
$36 \text{ Lbs/SY} \times 1.05$	= 37.80 Lbs/SY		

$323.3 - 300 = -23.3$  Tons (This will be a negative, since the material is less than the Target Spread Rate.

However, per **Specifications**, the adjustment will be based on a ratio of the average spread rate to the design spread rate. The outcome will be applied to the unit price shown in table 9-2.

$30 \div 36 = 0.8333 = 0.83$  (0.83 will be multiplied by the unit price listed in table 9-2)

$\$48.62 \times 0.83 = \$40.35$  (the adjusted unit price)

$23.3 \times \$40.35 = \$940.16$  (The quantity of the material placed is less than the specified spread rate (target). The material in question is 23.3 Tons. A line item adjustment will need to be made showing 1 LS @ - \$ 940.16, which is a negative adjustment).

# Lump Sum Overbuild



## Example # 2

In this example; overbuild is more than target.

Item (Superpave SP 12.5) Traffic Level B  
Original Quantity = 749.3 Tons  
Final = 805.5 Tons  
Plan Area = 8,482 SY  
Final Area = 8,300 SY  
Plan Spread Rate = 177 Lbs/SY  
Actual Spread Rate = 194.09 Lbs/SY

Plan Thickness = 1.77"  
Design Mix No.: XXXXXX  
 $G_{mm} = 2.521$   
 $2.521 \times 43.3 \times 1.77 = 193.21 \text{ Lbs/SY}$   
Target = 193 Lbs/SY  
Based on this Design Mix, the  
Target Spread Rate is 193 Lbs/SY

Final pay limited to 105%

$193 \text{ Lbs/SY} \times 1.05 = 202.65 \text{ Lbs/SY}$

$805.5 \text{ Tons} - 749.3 \text{ Tons} = + 56.2 \text{ Tons}$  (here, the average spread rate exceeded the design spread rate)

Per Specifications, the adjustment will be based on a ratio of the average spread rate to the design spread rate. The outcome will be applied to the unit price shown in table 9-2.

$194.09 \div 193 = 1.0056 = 1.01$  (1.01 will be multiplied by the unit price listed in table 9-2)

$\$ 48.62 \times 1.01 = \$ 49.11$  (the adjusted unit price)

$56.2 \times \$49.11 = \$ 2,759.98$  (The quantity of the material placed is greater than the

specified spread rate (target). The material in question is 56.2 Tons. A line item adjustment will need to be made showing 1 LS @ + \$2,759.98, which is a positive adjustment.)

# Lump Sum Overbuild



## Example # 3

In this example; overbuild is more than 105%.

Item (Superpave SP 12.5) Traffic Level B	Plan Thickness	= 0.44"
Original Quantity = 160.60 Tons	Design Mix No.:	XXXXXX
Final = 193.50	G <sub>mm</sub>	= 2.521
Plan Area = 7,300 SY	2.521 X 43.3 X 0.44	= 48.03
Final Area = 7,400 SY	Lbs/SY	
Plan Spread Rate = 44 Lbs/SY	Target	= 48 Lbs/SY
Actual Spread rate = 52.30 Lbs/SY	Based on this Design Mix, the	
	Target Spread Rate is	48 Lbs/SY

Final pay limited to 105%

48 Lbs/SY X 1.05 = 50.40 Lbs/SY

$\frac{(7,400 \text{ SY} \times 50.40 \text{ Lbs/SY})}{2000 \text{ Lbs/Ton}} = 186.48 = 186.5 \text{ Tons Maximum pay}$

186.5.0 – 160.60 = + 25.9 Tons

Per **Specifications**, the adjustment will be based on a ratio of the average spread rate to the design spread rate. The outcome will be applied to the unit price shown in table 9-2.

$52.30 \div 48 = 1.0896 = 1.09$  (Per Specifications, we can't go over 105%. 1.09 is greater than 1.05, so 1.05 will be multiplied by the unit price listed in table 9-2)

$\$ 48.62 \times 1.05 = \$ 51.05$  (the adjusted unit price)

$25.9 \times \$ 51.05 = \$ 1,322.20$  (The quantity of the material placed is greater than the specified spread rate (target). The material in question is 25.9 Tons. A line item adjustment will need to be made showing 1 LS @ + \$ 1,322.20, which is a positive adjustment)

# Lump Sum Overbuild



**Now Lets Look At A Real  
Project!**

# Real Overbuild Project



**9-2.2.3 Asphalt Overbuild:** Where overbuild is called for in the plans for the correction of cross-slope, the Engineer will make an adjustment in payment should the quantity of material placed be less than the specified spread rate. In addition, should the material placed exceed the specified spread rate with no negative effect to the correction of cross-slope, an upward adjustment will be made representing the additional material placed. The upward adjustment in payment is limited to 5% of the original material required for overbuild. Adjustments in pay will be determined for the entire project by applying a proportional adjustment in payment for the material in question, based on a ratio of the average spread rate to the design spread rate, which will then be applied using the unit prices as shown in Table 9-2.

Table 9-2

Item Description	Unit	Unit Prices
Superpave Asphaltic Concrete (Traffic C)	TN	\$90.00
Asph. Conc. Friction Course (Traffic C, FC-12.5, Rubber)	TN	\$115.00

An average spread rate, per calculations as specified in 9-2.2, will be used to determine verification of the required amount of asphalt for the project.

# Lump Sum Overbuild



## Overbuild Plans

# Lump Sum Overbuild



**Original Quantity = 2,008.7 TNS**

**Final = 2,410.2 TNS**

**Plan Area = 26,614 SY**

**Final Area = 26,614 SY**

**Plan Spread = 151 Lbs/SY**

**Actual Spread = 181 Lbs./SY**

**Final Pay is limited to 105% =  $177 \times 1.05 = 185.85$**

**$(185.85 \times 26,614) / 2000 = 2,473.1$  Max. Tons Allowed For Pay**

**$2,410.2 - 2,008.7 = +401.5$  Tons**

**Plan Thickness = 1.63''**

**Design Mix No. = SP08-5938A**

**Gmm = 2.510**

**Unit Price = \$90.00**

**$2.510 \times 43.3 \times 1.63'' = 177.15$  lbs./SY**

**Target Spread Rate = 177 Lbs/SY**

**Is this all?**

# Lump Sum Overbuild



**No!**

**Per specifications, the adjustment will be based on a ratio of the average spread rate to the design spread rate. The outcome will be applied to the unit price shown in table 9-2.**

# Lump Sum Overbuild



**Original Quantity = 2,008.7 TNS**

**Final = 2,410.2 TNS**

**Plan Area = 26,614 SY**

**Final Area = 26,614 SY**

**Plan Spread = 151 Lbs/SY**

**Actual Spread = 181 Lbs./SY**

**Final Pay is limited to 105% =  $177 \times 1.05 = 185.85$**

**$(185.85 \times 26,614)/2000 = 2,473.1$  Max. Tons Allowed For Pay**

**$2,410.2 - 2,008.7 = +401.5$  Tons**

**Plan Thickness = 1.63''**

**Design Mix No. = SP08-5938A**

**Gmm = 2.510**

**Unit Price = \$90.00**

**$2.510 \times 43.3 \times 1.63'' = 177.15$  lbs./SY**

**Target Spread Rate = 177 Lbs/SY**

**$181/177 = 1.02$**

**$\$90.00 \times 1.02 = \$91.80$**

**$401.5 \text{ Tns} \times \$91.80 = +\$36,857.70$  as a Line Item Adjustment**

# Lump Sum Overbuild



## Overbuild Spread Sheet and Calculator for Lump Sum

# Lump Sum Overbuild



## Overbuild Calculator for Lump Sum

# Lump Sum Overbuild



***ANY  
QUESTIONS?***



# New Specification 330-9.2.2



**Not really!!!!**

**The Spec has been in effect since July 2010.**

**330 HOT BITUMINOUS MIXTURES – GENERAL CONSTRUCTION REQUIREMENTS.  
(REV 1-26-10) (FA 2-2-10) (7-10)**

# 330-9.2.2 Thickness and Spread Rate of Layers



**330-9.2.2 Thickness and Spread Rate of Layers:** Construct each course of Type SP mixtures in layers of the thickness shown in Section 334.

When the deficiency of the average spread rate for the total course pavement thickness measured in accordance with 330-2.2 exceeds the following maximum spread rate tolerance, address the deficient area in accordance with 330-12.5.

1. Structural Course (non-friction)

- a. For pavement of a design thickness of 2-1/2 inches or more: plus or minus 50 lbs per sy.
- b. For pavement of a design thickness of less than 2-1/2 inches: plus or minus 25 lbs per sy.

2. Friction course

- a. For open grade friction course: plus or minus 15 lbs per sy.
- b. For dense grade friction course: plus or minus 25 lbs per sy.

As an exception, the Engineer may allow the Contractor to leave areas in place if it is determined by the Engineer that the deficiency is not a significant detriment to the pavement quality. A reduction to the pay item quantity will be made in accordance with 330-12.5.2.

# 330-9.2.2 Thickness and Spread Rate of Layers:



**Construct each course of Type SP mixtures in layers of the thickness shown in Section 334.**

**Lets Look at 334.**

# 330-9.2.2 Thickness and Spread Rate of Layers:



**334-1.4.1 Layer Thicknesses - Fine Mixes:** The allowable layer thicknesses for fine Type SP Asphalt Concrete mixtures are as follows:

Type SP-9.5.....	1 - 1 1/2 inches
Type SP-12.5.....	1 1/2 - 2 1/2 inches
Type SP-19.0.....	2 - 3 inches

In addition to the minimum and maximum thickness requirements, the following restrictions are placed on fine mixes when used as a structural course:

Type SP-9.5 - Limited to the top two structural layers, two layers maximum.

Type SP-9.5 – May not be used on Traffic Level D and E applications.

Type SP-19.0 - May not be used in the final (top) structural layer.

**334-1.4.2 Layer Thicknesses - Coarse Mixes:** The allowable layer thicknesses for coarse Type SP Asphalt Concrete mixtures are as follows:

Type SP-9.5.....	1 1/2 - 2 inches
Type SP-12.5.....	2 - 3 inches
Type SP-19.0.....	3 - 3 1/2 inches

In addition to the minimum and maximum thickness requirements, the following restrictions are placed on coarse mixes when used as a structural course:

Type SP-19.0 - May not be used in the final (top) structural layer.

# 330-9.2.2 Thickness and Spread Rate of Layers:



- **When the deficiency of the average spread rate for the total course pavement thickness measured in accordance with 330-2.2 exceeds the following maximum spread rate tolerance**

# 330-9.2.2 Thickness and Spread Rate of Layers:



- **330-2.2 Minimum Process Control Testing Requirements: Perform, as a minimum, the following activities at the testing frequencies provided below:**
- **Roadway**
- **5. Monitor the mix spread rate at the beginning of each day's production, and as needed to control the operations, at a minimum of once per 200 tons placed to ensure that the spread rate is within 5% of the target spread rate. When determining the spread rate, use, at a minimum, an average of five truckloads of mix. When the average spread rate is beyond plus or minus 5% of the target spread rate, monitor the thickness of the pavement layer closely and adjust the construction operations. If the Contractor fails to maintain an average spread rate within plus or minus 5% of the target spread rate for two consecutive days, the Engineer may elect to stop the construction operation at any time until the problem is resolved.**

# 330-9.2.2 Thickness and Spread Rate of Layers:



- **What this is saying, is that you are to look at each line of the road report for any line that is out of tolerance.**
- **Then you will look at the spread rate for the total course and if that is out by plus or minus the tolerance of the spec then you will have the shy or plus areas isolated.**
- **What is tolerance for the total course?**

# 330-9.2.2 Thickness and Spread Rate of Layers:



## 1. Structural Course (non-friction)

- a. For pavement of a design thickness of 2-1/2 inches or more: plus or minus 50 lbs per sy.
- b. For pavement of a design thickness of less than 2-1/2 inches: plus or minus 25 lbs per sy.

## 2. Friction course

- a. For open grade friction course: plus or minus 15 lbs per sy.
- b. For dense grade friction course: plus or minus 25 lbs per sy.

# 330-9.2.2 Thickness and Spread Rate of Layers:



We find a spread rate on the asphalt roadway report that is highlighted as a low or high spread, but that only tells us we are less than or more than 5% off target.

Now we look at the spread to see if it is within plus or minus of the spread tolerance. These tolerances are based on the Design Thickness, so if the typical calls for 3" of SP-12.5 you are going to place it in 2 lifts. If the bottom lift was more or less than 25 lbs you would have to stack it with the 2<sup>nd</sup> lift.

## 1. Structural Course (non-friction)

- a. For pavement of a design thickness of 2-1/2 inches or more: plus or minus 50 lbs per sy.
- b. For pavement of a design thickness of less than 2-1/2 inches: plus or minus 25 lbs per sy.

## 2. Friction course

- a. For open grade friction course: plus or minus 15 lbs per sy.
- b. For dense grade friction course: plus or minus 25 lbs per sy.



- **We have isolated the area's in question on the road reports.**
- **Now what?**
- **We calculate the overall spread for the area and tonnage for the total course of pavement thickness.**

# 330-9.2.2 Thickness and Spread Rate of Layers:



- **Okay so we find that the combined lifts of structural is more or less than 50 lbs/sy.**
- **What do we do?**
- **Address the deficient area's in accordance with 330-12.5. which we have isolated by the road reports.**

# 330-9.2.2 Thickness and Spread Rate of Layers:



- **330-12.5 Unacceptable Pavement:**
- **330-12.5.1 Corrections: Address all areas of unacceptable pavement at no cost to the Department. Retest all corrected areas and assure the requirements of these specifications are met.**
- **330-12.5.1.1 Structural Layers: Correct all deficiencies, as defined in these Specifications, in the Type SP structural layers by one of the methods described below:**
  - **a. Remove and replace the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective area for the full width of the paving lane.**
  - **b. Mill the pavement surface to a depth and width that is adequate to remove the deficiency. (This option only applies if the structural layer is not the final surface layer.)**
- **330-12.5.1.2 Friction Course: Correct deficiencies in the friction course or final surface layer by removing and replacing the full depth of the layer, extending a minimum of 50 feet on both sides (where possible) of the defective area for the full width of the paving lane. As an exception, the Engineer may allow the contractor to leave these areas in place if it is determined by the Engineer that the deficiency is not a significant detriment to the pavement quality. A reduction to the pay item quantity will be made in accordance with 330-12.5.2.**

# 330-9.2.2 Thickness and Spread Rate of Layers:



- **As an exception, the Engineer may allow the Contractor to leave areas in place if it is determined by the Engineer that the deficiency is not a significant detriment to the pavement quality. A reduction to the pay item quantity will be made in accordance with 330-12.5.2.**

# 330-9.2.2 Thickness and Spread Rate of Layers:



**330-12.5.2 Reduction in Pay Item Quantity:** When the Engineer elects to waive corrections, the Department will reduce the pay quantity for the pay item in question by the amount of material that the Contractor would have removed and replaced had the correction been made. When the pay quantity is in tons, the Department will base the reduction on the volume of material that the Contractor would have removed (the length by the lane width by layer thickness) multiplied by the maximum specific gravity of the mix as determined through the following equation:

$$\text{Quantity (tons)} = L \times W \times t \times G_{\text{mm}} \times 0.0024$$

Where: L = Lane length (ft.)

W = Lane width (ft.)

t = Layer thickness (in.)

$G_{\text{mm}}$  = Maximum specific gravity from verified mix design

For FC-5 open-graded friction course, the Department will base the reduction on the area that the Contractor would have removed (the length by lane width) multiplied by a spread rate of 80 lb/yd<sup>2</sup> as determined through the following equation:

$$\text{Quantity (tons)} = L \times W \times 0.0044$$

Where: L = Lane length (ft.)

W = Lane width (ft.)

# 330-9.2.2 Thickness and Spread Rate of Layers:



[Lot 1 Shy.pdf](#)

# 330-9.2.2 Thickness and Spread Rate of Layers:



[Lot 2 Shy.pdf](#)

Thickness	Lift	Actual Spread	Target	Target Plus 25 Lbs.	Target Minus 25 Lbs.	Start Paving at Station	End Paving at Station	50' Each Side	Length (Ft.)	Width (Ft.)	Tons Deducted
1.5"	1	132.79	165	190	140	1336+98.00	1340+80.00	100	482.00	11.0	48.54
1.5"	2	144.80	165	190	140	1335+50.00	1344+88.00	100	1,038.00	11.0	N/A
3.0"		277.59	330	380	280	1336+98.00	1340+80.00	100	482.00	11.0	48.54

Because the Design Thickness is 3" the Asphalt was placed in two 1.5" lifts. The first lift was placed shy by more than 25 lbs. for a 1.5" lift, between 1336+98 and 1340+80, but because the contractor has another lift to place you would not remove & replace or assess a penalty at this time. The second lift placed was shy in this area but not more than 25 lbs. for 1.5" lift.

You need to calculate the 3" overall spread rate for the total course and if that is out by plus or minus the 50 lb. tolerance of the spec from target, then you will have the shy or plus area isolated.

**LET'S SAY THAT THE OVERALL SPREAD FOR THE 3" COURSE CAME UP SHY! LESS THAN 280 LBS.**

You would now stack the two lifts  $132.79 + 144.80 = 277.59$  lbs/sy. and compare the spread to the Target for 3.0" lift (330 Lbs) the minimum would be  $330 - 50 = 280$  lbs., the maximum would be  $330 + 50 = 380$  lbs. The total lifts are shy, but we have isolated the shy area to the first 1.5" lift. We would remove & replace 482' x 11.0' at 1.5" or at the Engineers option we would leave in place with a deduct of 48.5 Tons at no pay.

# 330-9.2.2 Thickness and Spread Rate of Layers:



**Now Let's Look At Some Friction Course!**

#	FIN ID (Project #)	422004-152-01						LOT #	3															
2	TIN#	P62617381						Mix Design #	SP 09-7512C		SM-AsphaltForma@dot.state.fl.us													
3	Constant Width Areas						Gmm:		2.468															
#	Date Paved	Sub Lot	Truck Load #'s	Intended Use	Density ?	Lane	Desc.	Start Paving at Station	End Paving at Station	Length (FT)	Width (FT)	Area Paved (SY)	Quantity (TN)	Actual Spread Rate (LB/SY)	Target Spread Rate (LB/SY)	Target Plus 25 lbs.	Target Minus 25 lbs.	Start Paving at Station	End Paving at Station	50'each side	Length (FT)	Width (FT)	Tons Deducted	
5	6/22/2010	1	13-15	FC-6 (12.5) Rubbe Waste	Y	L2	Mainline	187+96.00	183+17.00	479	11.0	585.44	48.44	165.48	160									
7	6/23/2010	1	1-2	FC-6 (12.5) Rubbe	N		LTL	183+08.00	185+89.00	281	11.0	343.44	32.00	186.35	160	185.00	135.00	183+08.00	185+89.00	100	381.00	11.0	37.24	
8	6/23/2010	1	20-21	FC-6 (12.5) Rubbe Waste	Y	L1	Mainline	151+58.00	148+52.00	306	11.0	374.00	29.03	155.24	160									
11	6/24/2010	1	1-2	FC-6 (12.5) Rubbe	Y	L1	Mainline	148+52.00	145+12.00	340	10.5	396.67	35.03	176.62	160									
12	6/24/2010	2	2-4	FC-6 (12.5) Rubbe	Y	L1	Mainline	145+12.00	140+70.00	442	10.5	515.67	45.17	175.19	160									
13	6/24/2010	2	5-13	FC-6 (12.5) Rubbe	Y	L1	Mainline	140+70.00	123+25.00	1745	10.5	2035.83	164.75	161.85	160									
14	6/24/2010	2	14-16,1-4	FC-6 (12.5) Rubbe Waste	Y	R1	Mainline	123+25.00	140+89.00	1764	11.0	2156.00	171.09	158.71	160									
17	6/27/2010	2	1-4	FC-6 (12.5) Rubbe	Y	R1	Mainline	140+89.00	147+91.00	702	10.5	819.00	79.92	195.16	160	185.00	135.00	140+89.00	147+91.00	100	802.00	11.0	78.38	
18	6/27/2010	2	5-6	FC-6 (12.5) Rubbe	Y	R1	Mainline	147+91.00	151+41.00	350	11.4	441.78	39.07	176.88	160									
19	6/27/2010	3	6-7	FC-6 (12.5) Rubbe	Y	R1	Mainline	151+41.00	153+26.00	185	11.4	233.72	20.61	176.37	160									
20	6/27/2010	3	8-10	FC-6 (12.5) Rubbe	Y	R1	Mainline	153+26.00	158+76.00	550	11.8	718.06	59.49	165.70	160									
21	6/27/2010	3	11-15	FC-6 (12.5) Rubbe	Y	R1	Mainline	158+76.00	166+73.00	797	15.0	1328.33	103.01	155.10	160									
22	6/27/2010	3	16-23	FC-6 (12.5) Rubbe Waste	Y	R1	Mainline	166+73.00	181+76.00	1503	12.3	2045.75	155.93	152.44	160									
25	6/28/2010	3	1-3	FC-6 (12.5) Rubbe	Y	L2	hline/Parki	181+76.00	175+63.00	613	8.5	578.94	60.55	209.17	160	185.00	135.00	181+76.00	175+63.00	100	713.00	11.0	69.68	
26	6/28/2010	3	4-7	FC-6 (12.5) Rubbe	Y	L2	hline/Parki	175+63.00	168+27.00	736	8.0	654.22	78.80	240.90	160	185.00	135.00	175+63.00	168+27.00	100	836.00	11.0	81.70	
27	6/28/2010	3	8-9	FC-6 (12.5) Rubbe	Y	L2	hline/Parki	168+27.00	165+08.00	319	7.5	265.83	21.61	162.58	160									
28	6/28/2010	4	3	FC-6 (12.5) Rubbe	Y	L2	hline/Parki	165+08.00	162+50.00	258	7.5	215.00	17.48	162.60	160									
29	6/28/2010	4	10-15	FC-6 (12.5) Rubbe	Y	L2	Mainline	162+50.00	151+85.00	1065	11.6	1370.30	114.61	167.28	160									
30	6/28/2010	4	16-22,1	FC-6 (12.5) Rubbe	Y	L2	Mainline	151+85.00	136+04.00	1581	10.0	1756.87	142.64	162.40	160									
32	6/29/2010	4	2-4	FC-6 (12.5) Rubbe	Y	L2	Mainline	136+04.00	130+76.00	528	11.0	645.33	61.80	191.53	160	185.00	135.00	136+04.00	130+76.00	100	628.00	11.0	61.38	
33	6/29/2010	4	5-8	FC-6 (12.5) Rubbe	Y	L2	Mainline	130+76.00	123+25.00	751	11.0	917.89	77.25	168.32	160									
34	6/29/2010	4	9-11	FC-6 (12.5) Rubbe	N		Giore	123+35.00	132+59.00	924	7.3	744.33	62.31	167.42	160									
35	6/29/2010	4	12-13	FC-6 (12.5) Rubbe	Y	R2	Mainline	133+65.00	136+46.00	281	9.5	296.61	23.91	161.22	160									
39	Varied Width Areas																							
40	6/23/2010	1	2	FC-6 (12.5) Rubbe	N		LTL	185+89.00	186+79.00	90	11.0	110.00	10.00	181.82	160									
41	6/23/2010	1	2-3	FC-6 (12.5) Rubbe	N		LTL	186+79.00	188+57.00	178	5.5	108.77	10.00	183.87	160									
42	6/23/2010	1	3	FC-6 (12.5) Rubbe	N		Orlando sv	189+20.00	188+80.00	40	2.7	12.00	1.00	166.67	160									
43	6/23/2010	1	3	FC-6 (12.5) Rubbe	N		Smith st	185+87.00	185+52.00	35	3.1	12.00	1.00	166.67	160									
44	6/23/2010	1	3-6	FC-6 (12.5) Rubbe	Y	L1	Mainline	181+76.00	175+40.00	636	13.2	936.33	70.55	159.69	160									
45	6/23/2010	1	7-12	FC-6 (12.5) Rubbe	Y	L1	Mainline	175+40.00	164+37.00	1103	12.3	1507.43	120.49	159.86	160									
46	6/23/2010	1	13-19	FC-6 (12.5) Rubbe	Y	L1	Mainline	164+37.00	151+58.00	1279	11.5	1634.28	142.46	174.34	160									
48																						Total Ton:	328.38	



- **This is FC-6, SP12.5 at 1.5". The target is 160 lbs/sq. yd.**
- **All of the lines marked in yellow are over the maximum of plus 25 lbs.**
- **What is the overall spread rate?**





- In this case the overall spread came up to 168.7 lbs./sq. yd, the target was 160 lbs./sq.yd. for 1.5” FC 6.
- $160 \text{ lbs.} + 25 \text{ lbs.} = 185 \text{ lbs.}$  The overall spread of 168.7 is within the plus or minus 25 lbs.
- No action required!

# 330-9.2.2 Thickness and Spread Rate of Layers:



- Remember that this is tied to 330-2.2 monitoring the mix at a minimum of 200 tons, but it is also based on the overall thickness for the total course .
- If one line of the road report is more or less than 25 lbs off of the design thickness for less than 2 ½” or 50 lbs for a design thickness of 2 ½ “ or more and the overall spread reflected that it was out of the tolerance for the design thickness, the entire area that was isolated on the road reports plus 50’ each side would be removed and replaced or left in place at no pay.

# 330-9.2.2 Thickness and Spread Rate of Layers:



***ANY  
QUESTIONS?***



# New Specifications For January, July 2011 & January 2012



## ORIGINATION FORM

**Specification:** 105-8.6.2

**Subject:** Contractor Quality Control General Requirements/Personnel Qualifications/Asphalt Quality Control Personnel/Paving Technicians

**Origination date:** 03/23/2010

**Originator:** Alan Autry  
**Office/Phone:** 850-414-4195

**Problem statement:** Clarify the intent that inspection of miscellaneous asphalt pavement placement operations can be performed by a CTQP Asphalt Paving Level I technician working under the supervision of a CTQP Asphalt Paving Level II technician.

**Proposed solution:** Incorporate the language of DCE memo 17-04 in this specification.

**Information source:** DCE Memo 17-04

**Recommended Usage Note:** None

**Estimated fiscal impact, if implemented:** None

**Implementation of these changes, if and when approved, will begin with the January 2011 letting.**

**105 CONTRACTOR QUALITY CONTROL GENERAL REQUIREMENTS.**  
**(REV 5-24-10) (FA 8-16-10) (1-11)**

SUBARTICLE 105-8.6.2 (Page 144) is deleted and the following substituted:

**105-8.6.2 Paving Technicians:** For paving operations, keep a qualified CTQP Asphalt Paving Level II technician on the roadway at all times when placing asphalt mix for the Department, and perform all testing with a CTQP Asphalt Paving Level I technician. As an exception, measurements of cross-slope, temperature and yield (spread rate), as well as the inspection of the placement of miscellaneous asphalt, can be performed by someone under the supervision of a CTQP Paving Level II technician.

**008 PROSECUTION AND PROGRESS.**  
**(REV 7-22-10) (FA 9-20-10) (7-11)**



SUBARTICLE 8-6.4 (Page 86-87) is deleted and the following substituted:

**8-6.4 Suspension of Contractor's Operations-Holidays:** Unless the Contractor submits a written request to work on a holiday at least ten days in advance of the requested date and receives written approval from the Engineer, the Contractor shall not work on the following days: Martin Luther King, Jr. Day; Memorial Day; the Saturday and Sunday immediately preceding Memorial Day; **Independence Day; Independence Day (Observed);** Labor Day; the Friday, Saturday, and Sunday immediately preceding Labor Day; **Veterans Day; Veterans Day (Observed);** Thanksgiving Day; the Friday, Saturday and Sunday immediately following Thanksgiving Day; and December 24 through January 2, inclusive. Contract Time will be charged during these holiday periods regardless of whether or not the Contractor's operations have been suspended. Contract time will be adjusted in accordance with 8-7.3.2. The Contractor is not entitled to any additional compensation beyond any allowed contract time adjustment for suspension of operations during such holiday periods.

During such suspensions, remove all equipment and materials from the clear zone, except those required for the safety of the traveling public and retain sufficient personnel at the job site to properly meet the requirements of Sections 102 and 104. The Contractor is not entitled to any additional compensation for removal of equipment from clear zones or for compliance with Section 102 and Section 104 during such holiday periods.

# New Specs Stream Line Lump Sum



## MEASUREMENT AND PAYMENT.

(REV 6-22-11) (FA 6-26-11) (1-12)

SUBARTICLE 9-1.3 (Page 95) is deleted and the following substituted:

**9-1.3 Determination of Pay Reduction :** In measurement of areas of work, where pay reductions are to be assessed, the Engineer will use the lengths and widths in the calculations based upon station to station dimensions in the Contract Documents, the station to station dimensions actually constructed within the limits designated by the Engineer; or the final dimensions measured along the final surface of the completed work within the neat lines shown in the Contract Documents or designated by the Engineer. The Engineer will use the method or combination of methods of measurement which will reflect with reasonable accuracy, the actual surface area of the finished work as the Engineer determines.

Failure on the part of the Contractor to construct any item of work in compliance with the contract requirements; or to plan or authorized dimensions within the specification tolerances will result in: reconstruction to acceptable tolerances at no additional cost to the Department; or acceptance at no pay at the discretion of the Engineer.

When acceptance at no pay occurs for any material not listed in 9-2, the Engineer will apply a reduction in payment for the material in question based on the weighted average unit price in the Six Month Moving Statewide Averages report. The dates will be the six months prior to the letting date for this Contract.

# New Specs Stream Line Lump Sum



## MEASUREMENT AND PAYMENT.

(REV 6-22-11) (FA 6-26-11) (1-12)

**9-11.2 Schedule of Values:** Within 21 calendar days after contract award or at the preconstruction conference, whichever is earlier, prepare and submit a schedule of values to the Engineer for approval prior to invoicing. Assign the schedule of values to the scheduled work activities in the project schedule with the total being the lump sum contract amount.

The schedule of values will be the basis for determining monthly payments. Quantities will be compared with the project schedule to determine the percentage earned. The percentage shall be that portion of the work completed as compared to the total work contracted.

# New Specs For Lump Sum



## MEASUREMENT AND PAYMENT.

(REV 5-2-11) (FA 5-12-11) (1-12)

SUBARTICLE 9-1.3 (Page 95) is deleted and the following substituted:

**9-1.3 Determination of Pay Reduction:** In measurement of areas of work, where pay reductions are to be assessed, the Engineer will use the lengths and/or widths in the calculations based upon station to station dimensions in the Contract Documents, the station to station dimensions actually constructed within the limits designated by the Engineer; or the final dimensions measured along the final surface of the completed work within the neat lines shown in the Contract Documents or designated by the Engineer. The Engineer will use the method or combination of methods of measurement which will reflect with reasonable accuracy, the actual surface area of the finished work as the Engineer determines.

Failure on the part of the Contractor to construct any item of work to plan or authorized dimensions within the specification tolerances will result in: reconstruction to acceptable tolerances at no additional cost to the Department; acceptance at no pay; or, acceptance at reduced pay, all at the discretion of the Engineer.

When acceptance at no pay occurs for any material not listed in 9-2, the Engineer will apply a reduction in payment for the material in question based on the weighted average unit price in the Six Month Moving Statewide Averages report. The dates will be the six months prior to the letting date for this Contract.

# New Specs For Lump Sum



## **MEASUREMENT AND PAYMENT.**

**(REV 5-2-11) (FA 5-12-11) (1-12)**

**9-11.2 Schedule of Values:** Within 21 calendar days after contract award or at the preconstruction conference, whichever is earlier, prepare and submit a schedule of values to the Engineer for approval prior to invoicing. Assign the schedule of values to the scheduled work activities in the project schedule with the total being the lump sum contract amount.

The schedule of values will be the basis for determining monthly payments. Quantities will be compared with the project schedule to determine the percentage earned. The percentage shall be that portion of the work completed as compared to the total work contracted.

# Striping Certification Updated



**Striping Certification Form # 700-050-68 is now incorporated into the Worksheet Form # 700-050-67. The worksheet has been updated to incorporate the latest pay items for striping under the drop down section of the “Marking Type”. The Certification sheet allows the contractor to sum up the quantities monthly. Instructions for updated form is location next to the form on the forms website.**



*What Questions  
or Comments  
do you have?*

