



U.S. Department  
of Transportation

Federal Highway  
Administration

Eastern Federal Lands  
Highway Division

# Final Construction Report

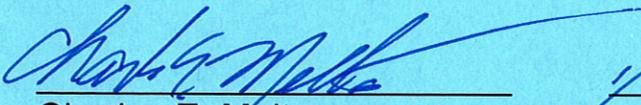
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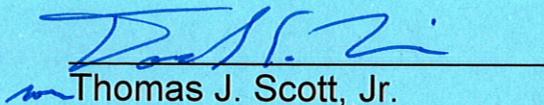
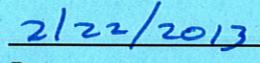
**Project No.:** PRA-FOOT 8E13

**Location:** Great Smoky Mountains National Park Foothills Parkway

**Description:** The project consisted of construction of the Foothills parkway from station 25+477 to 25+600, including one AASHTO girder bridge, grading, drainage, sub-base, paving, asphalt surface treatment, and retaining walls. The project also finished grade work, sub-base, paving, and bridge deck overlays from station 25+600 to 26+120.

Submitted by                      Martin L. Hatcher  
Project Engineer

Recommended by:   
Charles E. Melton                        
Construction Operations Engineer                      Date

Approved by:   
Thomas J. Scott, Jr.                        
Construction Engineer                      Date

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**FINAL CONSTRUCTION REPORT  
PROJECT PRA-FOOT 8E13**

**Great Smoky Mountains National Park Foothills Parkway**

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# FINAL CONSTRUCTION REPORT

## **Project PRA-FOOT 8E13 Great Smoky Mountains National Park Foothills Parkway**

### **I. PROJECT DESCRIPTION**

- A. Project Number** - Project PRA-FOOT 8E13 was located in Great Smoky Mountains National Park, Blount County, Tennessee.
- B. Description of Work** - This project consisted of construction of the Foothills Parkway from station 25+477 to 25+600, and included one AASHTO girder bridge, grading, drainage, sub-base, paving, asphalt surface treatment, retaining walls, and other miscellaneous work. Also required was construction to finish grade of an existing parkway section from station 25+600 to 26+120, including grading, sub-base, paving, bridge deck overlays, and other miscellaneous work.
- C. Environmental Considerations** – The environmental assessment was completed by the National Park Service (NPS) and signed on January 7, 1998, with a finding of No Significant Impact (FONSI).

### **II) PROJECT DATA**

- A. Specifications** - Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-96 (Metric). The Standard Specifications were supplemented by the Special Contract Requirements for Project PRA-FOOT 8E13.
- B. Termini** - The project is located between stations 25+477 and 26+120 on the Foothills Parkway.
- C. Length** – 643 meters (402.4 meters of the 643 meters was bridge decks)

#### **D. Width –**

##### **Bridges:**

The bridge width is 10.4 meters from face of curb to face of curb.

##### **Roadway:**

The typical roadway width on the Foothills Parkway is 6.7 meters. The width varies up to 7.62 meters at widening curves.

**E. Pavement Structure** – A 300 mm depth of aggregate base, Tennessee Department of Transportation Grading C, was placed on the subgrade. A 100 mm base course of Superpave Asphalt Concrete Pavement with a 25 mm nominal size aggregate was then applied. Finally, a 50 mm temporary top course of Superpave Asphalt Concrete Pavement with a 25 mm nominal size aggregate was placed to protect the bridge approaches during future construction activities.

**F. Structures –**

Bridge No. 10 (deck overlay) is a 3 span cast-in-place, post-tensioned segmental box girder bridge. Both piers were precast, post-tensioned segments, erected on spread footings. The pier 2 footing is supported by micro piles. The abutments are both vaulted. They are founded on spread footings and supported by micropiles.

Bridge Structure Number: 5460-209P

Length: 157.673 meters from abutment stubwall to abutment stubwall.

Width: 10.4 meters from face of curb to face of curb. There are two 3.35 meter travel lanes, one in each direction.

Bridge No. 9 (deck overlay) is a 3 span cast-in-place, post tensioned segmental box girder bridge. One pier was precast, post-tensioned segments while the other was cast-in-place, post tensioned segments. The pier foundations were spread footings on rock. Abutment 1 is vaulted and rests on micro pile supported spread footings while abutment 2 is a breast wall on a spread footing.

Bridge Structure Number: 5460-210P

Length: 150.681 meters from abutment stubwall to front face of abutment backwall.

Width: 10.4 meters from face of curb to face of curb. There are two 3.35 meter travel lanes, one in each direction.

Bridge No. 8 (new bridge) is a 3 span concrete AASHTO girder bridge. Both piers were monolithically cast-in-place. The pier stems were socketed directly into rock. Both abutments are vaulted and rest on spread footings.

Bridge Structure Number: 5460-213P

Length: 94.000 meters from abutment stubwall to abutment stubwall.

Width: 10.4 meters from face of curb to face of curb. There are two 3.35 meter travel lanes, one in each direction.

**G. Contract Number and Date -** DTFH71-05-C-00005 - May 26, 2005

**H. Contracting Officers –**

Melisa L. Ridenour	Division Engineer
Donald W. Miller	Director, Project Delivery
Wanda A. Peffer	Contracting Officer
Thomas J. Scott, Jr.	Construction Engineer
Charles E. Melton	Construction Operation Engineer

**I. Contract Bid Amount -** \$4,673,957.40

**J. Engineer's Estimate -** \$4,600,000.00

**K. Final Contract Amount -** \$4,016,377.80

**L. Contract Time -**

Award Date:	May 26, 2005
Notice To Proceed:	July 11, 2005
Contract Time Began:	July 11, 2005
Contract Time Bid:	433 Calendar Days
Original Completion Date:	September 16, 2006
Total Extensions Granted:	125 Calendar Days (CM No. 003)
New Contract Completion Date:	January 19, 2007
Date Substantially Complete:	January 15, 2008
Date All Work Complete:	January 22, 2008
Liquidated Damages Assessed:	353 Days @ \$2,200/Day <u>11 Days @ \$440/Day</u>
	Total: \$402,992.69 (CM No. 007)

**M. Contractor –**

Charles Blalock & Sons, Inc.  
P.O. Box 4750  
Sevierville, TN 37864-4750

**N. Subcontractors –**

Shular, Brackins & Sons, Inc. P.O. Box 1811 Seymour, TN 37865	Small Business Concern (SBC)
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<i>Turf Establishment</i>	\$8,082.75
Vaughn & Melton 1909 Ailor Avenue Knoxville, TN 37921 <i>Construction Staking</i>	\$40,600.00
Protection Services, Inc. 4125 Topeka Street Knoxville, TN 37917 <i>Construction Signs</i>	\$1,947.60
Troitino Construction, Inc. 1039 Riceville Road Ashville, NC 28805 <i>Stone Masonry</i>	SBC Disadvantaged Business Enterprise (DBE) \$371,000.00
APAC-Tennessee, Inc. P.O. Box 359 Alcoa, TN 37701 <i>Asphalt Paving</i>	\$45,500.00
Caldwell Fence Erection Company P.O. Box 5239 Maryville, TN 37802-5239 <i>Erect Fence in Office Compound</i>	SBC Women Business Enterprise (WBE) \$24,450.00
Wolf Tree Experts P.O. Box 5416 Knoxville, TN 37928-0416 <i>Roadside Cleanup</i>	\$16,800.00
Planet, Inc. 920 North Front Avenue Rockwood, TN 37802-5239 <i>Shot Blasting Bridge Deck</i>	SBC, WBE \$37,622.90
Delong Concrete, LLC 940 Delong Road Lexington, KY 40515 <i>Latex Modified Concrete Overlay</i>	SBC, WBE \$214,373.70
Framers of Tennessee, LLC 7045 Industrial Park Nunnely, TN 37137 <i>Metal Decking</i>	SBC \$4,778.00

**O. Construction Engineering Costs -**

EFLHD PE Costs:	\$1,157,429.77
EFLHD CE Costs:	\$1,142,057.72
Total Costs:	\$2,299,487.49

Percent of the Final Contract Amount – 57.22

**P. Maintaining Agency -** National Park Service,  
Great Smoky Mountains National Park

**III Construction**

**A. Materials -  
Item 20401, Roadway Excavation (Embankment)**

Material: Tannish Brown Silty Clay with Rock  
Manufactured: On site material

Physical Properties  
Maximum Dry Density: 126.6 – 135.5 pcf  
Optimum Moisture: 10.9% - 6.3%  
Liquid Limit: 38 – 31  
Plastic Index: 20 – 11  
pH: 7.28 – 7.51

**Item 20701DD, Earthwork Geotextile IV-D**

Material: GEOTEX 104F  
Manufactured: SI Corporations  
Supplied: East Tennessee Geosynthetics, LLC  
Knoxville, TN

Physical Properties:  
Thickness: 0.30 mm  
Grab Tensile Strength: 1645.0 x 1.100 N  
Grab Elongation: 24 x 24 %  
Puncture Strength: 535 N  
Trapezoidal Tear: 445 x 310 N  
UV Resistance: 90%  
Permittivity: 0.28 sec<sup>-1</sup>  
Apparent Opening Size: 0.212 mm  
Water Flow Rate: 730.0 l/min/m<sup>2</sup>

**Item 25101C, Placed Riprap, Class 3**

This material was produced by Vulcan Materials Company. There was approximately 6.26 tons of material placed for this project. The rock ranged in size from 49.161192 mm to 163.87064 mm. The material was accepted by visual inspection.

**Item 30101Z, Aggregate Base, Grading C or D**

Material: TDOT Class A, Grading C  
Manufactured: Vulcan Materials Company  
Supplied: Charles Blalock & Son

Physical Properties:

Rock Type: Crushed Limestone  
Maximum Dry Density: 145.6 pcf  
Optimum Moisture: 5.6%  
Bulk Specific Gravity: 2.77 SSD  
LA Abrasion: 17.2  
Liquid Limit: ND  
Plastic Limit: NP

Gradation:	<u>Sieve</u>	<u>% Passing</u>
	1.5"	100
	1.0"	90-100
	3/8"	45-74
	No. 4	30-55
	No. 100	04-15

**Item 30502J, Aggregate-Topsoil Course, 90 mm Depth**

Material: Crushed Limestone, #57 Stone  
Manufactured: Vulcan Materials Company  
Supplied: Charles Blalock & Son

Material: Topsoil (Subsurface soil as specified)  
Manufactured: Conserved, on site soil

There was approximately 9.5 tons of material placed for this project. The material was accepted by visual inspection.

**Item 40907AB, AT-38 Asphalt Surface Treatment**

Material: Emulsified Asphalt RS-2  
Manufactured: Marathon Petroleum Company, LLC  
Supplied: Charles Blalock & Sons

Aggregates: Crushed Limestone, TDOT No. 7  
Manufactured: Vulcan Materials Company  
Sevierville, TN  
Supplied: Charles Blalock & Sons

Aggregates: Crushed Limestone, TDOT No. 8  
Manufactured: Vulcan Materials Company  
Kodak, TN  
Supplied: Charles Blalock & Sons

Physical Properties:

Fractured Faces: 100%

**Item 41801DB, Superpave Asphalt Concrete Pavement, 25mm Nominal Maximum Size Aggregate, 0.3-<3 ESAL**

Material: Asphalt Concrete Pavement  
Grade: PG 64-22  
Manufactured: Marathon Ashland Petroleum LLC  
Supplied: Southern States of Knoxville, TN

Binder Grade Results:

Specific Gravity: 1.033  
Flash Point: 635 F  
Viscosity: 0.425  
Dynamic Shear: 1.3872

Aggregates:

Aggregates Type: Coarse Aggregates  
Manufactured and Supplied: Vulcan Materials Company  
Maryville, TN

Physical properties:

Specific Gravity 2.828  
Passing 1 ½ inch sieve 100%

Aggregate Type: Fine aggregate  
Manufactured and Supplied: Newport Sand and Gravel Quarry

Proportion:

RAP	14.8%
#56 coarse aggregate	30.0%
#7's	14.2%
Screenings	10.0%
Natural sand	10.0%
Manufactured sand	20.0%
Bag house fines	1.00%

Mix Parameters:

	<u>Target</u>	<u>Range</u>
VMA	13.4	12 Min
VFA	66.3	65-78
Target asphalt content	4.00%	±0.5
Dust-Asphalt Ratio	1.3	<1.6
Density	90	min

<u>Mix Gradation:</u>	<u>Sieve</u>	<u>% Passing</u>
	1.5"	100
	1.0"	97 +3,-7
	3/4"	86 ± 4
	No. 8	44 ± 6
	No. 200	4.7 ± 2

Production Test Results

Average Asphalt Content -	4.07%
Average VMA -	13.3%
Average Field Density -	91.6%
Average Core Density -	92.6%

Quantity was less than 600 tons. QL-Pay was not applicable for this item.

**Item 55201A, Structural Concrete, Class A(AE), for Abutments**

**Item 55201A, Structural Concrete, Class A(AE), for Piers and Caps**

**Item 55201A, Structural Concrete, Class A(AE), for Cantilever Retaining Walls**

Class of Concrete: A(AE) with and without color

Supplier (A(AE) without color): Blalock Lumber  
Sevierville, TN

Mix Requirements:

Min Strength	4,000 psi
Min Concrete Content	611 lbs./cuyds
Max W/C Ratio	0.40 Max

Slump	1”- 4” (8” max. with HRWR)	
Min Air Content	4%	
Cement:	Type 1 Cemex Knoxville, TN	485 pcy
Fly Ash:	Class F Fly Ash SEFA Belews Creek, NC	182 pcy
Fine Aggregate:	Mfg. Washed Sand Vulcan Material Sevierville, TN	1237 pcy
Coarse Aggregate:	#57 Stone Vulcan Material Bristol, TN	1748 pcy
Water:	Well	266 pcy
Air Entrainment:	MicroAir Degussa Cleveland, OH	1.0 oz./cwt
Water Reducer:	Polyheed N Degussa Cleveland, OH	4.0 oz./cwt
High Range Water Reducer:	Glenium 3030 NS Degussa Cleveland, OH	6.0 oz./cwt
Hydration Stabilizer:	Delvo Degussa Cleveland, OH	5.0 oz./cwt
Average Test Results:	Slump = 6” Air Content = 4.5% Temperature = 77 Degrees 28 Day Compressive Strength = 6590 psi	

<u>Class of Concrete:</u>	A(AE) with color	
Supplier:	Blalock Lumber Sevierville, TN	
<u>Mix Requirements:</u>		
Min Strength	4,000 psi	
Min Concrete Content	611 lbs./cuyd	
Max W/C Ratio	0.40 Max	
Slump	1"- 4" (8" max. with HRWR)	
Min Air Content	4%	
Cement:	Type 1 Cemex Knoxville, TN	485 pcy
Fly Ash:	Class F Fly Ash SEFA Belews Creek, NC	182 pcy
Fine Aggregate:	Mfg. Washed Sand Vulcan Material Sevierville, TN	1214 pcy
Coarse Aggregate:	#57 Stone Vulcan Material Bristol, TN	1748 pcy
Water:	Well	266 pcy
Air Entrainment:	MicroAir Degussa Cleveland, OH	1.0 oz./cwt
Water Reducer:	Polyheed N Degussa Cleveland, OH	4.0 oz./cwt
Water Reducer High Range:	Glenium 3030 NS Degussa Cleveland, OH	6.0 oz/cwt
Hydration Stabilizer:	Delvo Degussa Cleveland, OH	5.0 oz./cwt

Concrete Color: Iron Oxide Black 860 47 lbs/cy  
Davis Color

Average Test Results: Slump = 6"  
Air Content = 4.5%  
Temperature = 77 Degrees  
28 Day Compressive Strength = 6590 psi

**Item 55202NE, Structural Concrete, Class HPC, Bridge Deck**  
**Item 55202NE, Structural Concrete, Class HPC, Bridge Deck (Abutment Deck)**  
**Item 55207NN, Structural Concrete, Class HPC, Approach Slabs, Type I**

Class of Concrete: HPC

Supplier: Blalock Lumber  
Sevierville, TN

Mix Requirements:

Min Strength 4,000 psi  
Min Concrete Content 611 lbs./cuyd  
Max W/C Ratio 0.35  
Slump 1"- 4" (8" max. with HRWR)  
Min Air Content 5.5%

Cement: Type 1/II 485 pcy  
Cemex  
Knoxville, TN

Fly Ash: Class F Fly Ash 182 pcy  
SEFA  
Belews Creek, NC

Fine Aggregate: Mfg. Washed Sand 1227 pcy  
Vulcan Material  
Sevierville, TN

Coarse Aggregate: #57 Stone 1750 pcy  
Vulcan Material  
Enka, NC

Water: Sevierville, TN 233 pcy

Air Entrainment: MicroAir 1 oz./cwt  
Master Builders  
Cleveland, OH

Water Reducer:	Polyheed N Master Builders Cleveland, OH	5 oz./cwt
Water Reducer High Range:	Glenium 3000 Master Builders Cleveland, OH	12 oz./cwt
Hydration Stabilizer:	Delvo Master Builders Cleveland, OH	5.0 oz./cwt
Concrete Color:	Iron Oxide Black 860 Davis Color	47 lbs./cy
Shrinkage Reducer:	Tetraguard AS20 Master Builders Cleveland, OH	1.5 gal./cy
Average Test Results:	Slump = 5.0" Air Content = 6.5% Temperature = 65 degrees 28 Day Compressive Strength = 4,970 psi Chloride Permeability 28 day = 3,500 C	

**Item 55207 NV, Structural Concrete, Class HPC, Bridge Deck Overlay (Latex)**

<u>Class of Concrete:</u>	LMC	
Supplier:	Delong Concrete Knoxville, TN	
<u>Mix Requirements:</u>		
Minimum Strength	4000 psi	
Maximum Water/Cement Ration	0.38	
Slump	3"- 5"	
Minimum Air Content:	5% - 9%	
Cement:	Type III Buzzi Unicem USA Greencastle, IN	658 pcy
Fine Aggregate:	Natural Sand Newport Paving & Ready Mix Newport, TN	1,734 pcy

Coarse Aggregate:	Crushed stone granite Vulcan Materials Enka, NC	1,151 pcy
Water:	Potable	17.7 gcy
Latex:	Modifier A/AN Dow Reichhold Midland, MA	24.5 gcy
Color:	Davis Hydrotint Black	
Average Test Results:	Slump = 4.98” Air Content = 4.02 % Temperature = 77 Degrees 28 Day Compressive Strength = 6622 psi	

**Item 55302AC, Precast Prestressed Concrete Structural Members, I-Beams, AASHTO Type 3 (Class HPC Concrete)**

<u>Class of Concrete:</u>	HPC	
Supplier:	Ross Prestressed Concrete Bristol, TN	
<u>Mix Requirements:</u>		
Minimum Strength	8000 psi	
Maximum Water/Cement Ration	0.34	
Slump	0” – 4” (8” max. with HRWR)	
Minimum Air Content:	6.4%	
Cement:	Type I/II LA Cemex Knoxville, TN	750 pcy
Silica Fume:	Tri-State Gray, TN	53 pcy
Fine Aggregate:	Manufactured Sand Vulcan Material Bristol, TN	1305 pcy
Coarse Aggregate:	Crushed Stone Vulcan Material Bristol, TN	1509 pcy

Water:	Potable	275 pcy
Air Entrainment:	MBAE-90 Degussa Admixtures, Inc. Cleveland, OH	1.5 oz./cwt
Water Reducer:	Rheobuild 1000 Degussa Admixtures, Inc. Cleveland, OH	6.0 oz./cwt
Retarder:	Pozzolith 300R Degussa Admixtures, Inc. Cleveland, OH	16.8 oz./cwt
Average Test Results:	Slump = 8" Air Content = 6.4% Temperature = 82° 28 Day Compressive Strength = 9,815 psi	

**Item 55401, Reinforcing Steel**

Reinforcing Steel:	Grade 60, black Gerdau Ameristeel Knoxville, TN
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**Item 55402, Epoxy Coated Reinforcing Steel**

Reinforcing Steel:	Grade 60, epoxy coated Gerdau Ameristeel Knoxville, TN
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**Item 55502, Bridge Expansion Joint**

Elastomeric Bridge Bearing Material:	60 Durometer Natural Rubber TOBI Engineering Glenview, IL
	Galvanizing Plates AAA Galvanizing of Joliet Joliet, IL

**Item 55601CB, Aluminum Bridge Rail, Two Rail**

Supplier:	Valentine & Company Middletown, OH
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**Item 60501, Underdrain System (6-Inch Diameter)**

Materials: 6" ID Perforated and non-perforated  
Superior Drainage Products  
Knoxville, TN

#57 Stone  
Vulcan Material  
Sevierville, TN

Propex 1199 Geotextile Fabric  
Superior Drainage Products  
Knoxville, TN

**Item 60508, Granular Backfill**

Material: #57 Stone  
Vulcan Material  
Sevierville, TN

**Item 60801E, Paved Waterway, Type 5**

Asphalt mix: TDOT 411-E Mix  
PG 84-22

Manufactured by: Blalock & Sons  
Sevierville, TN

Supply by: Blalock & Sons  
Sevierville, TN

Aggregates:

Manufactured: #89 Coarse Aggregates – 38.08%  
Vulcan Material Company,  
Sevierville, TN

Manufactured: #10 Hard Screenings – 57.12%  
Vulcan Material Company  
Sevierville, TN

**Item 62001BE, Class B Masonry, Rock Face Finish**

Material: Elberton Georgia Granite  
Elberton, GA

MFG Sand  
Vulcan Material  
Maryville, TN

Cement Type S  
Blalock Ready Mix  
Sevierville, TN

**Item 62002A, Stone Masonry Guardwall, Type 1**

**Item 62002B, Stone Masonry Guardwall, Type 2**

Class of Concrete: A(AE) without color

Supplier: Blalock Lumber  
Sevierville, TN

Mix Requirements:

Min Strength 4,000 psi  
Min Concrete Content 611 lbs./cuyd  
Max W/C Ration 0.40  
Slump 1"- 4"  
Min Air Content 6%

Cement: Type I/II 485 pcy  
Cemex  
Knoxville, TN

Fly Ash: Class F Fly Ash 182 pcy  
SEFA  
Belews Creek, NC

Fine Aggregate: Mfg. Washed Sand 1237 pcy  
Vulcan Material  
Sevierville, TN

Coarse Aggregate: #57 Stone 1748 pcy  
Vulcan Material  
Bristol, TN

Water: Well 266 pcy

Air Entrainment:	MicroAir Degussa Cleveland, OH	1.0 oz./cwt
Water Reducer:	Polyheed N Degussa Cleveland, OH	4.0 oz./cwt
Water Reducer High Range:	Glenium 3030 NS Degussa Cleveland, OH	6.0 oz./cwt.
Retarder:	Delvo Degussa Cleveland, OH	3.8 oz./cwt.
Average Test Results:	Slump = 7" Air Content = 6.4% Temperature = 59° 28 Day Compressive Strength = 5,500 psi	

#### **Item 62509, Turf Establishment**

Approximately 26 pound of native seed was supplied by the National Park Services.

Seed mixture:	Creeping Red Fescue Annual Ryegrass Chewing Fescue Hard Fescue
Supplier:	Green Seed Company Knoxville, TN
Fertilizer: Manufactured:	7-2-3 Natural – All Purpose Fertilizer Rocky Mountain Bio-Products
Lime: Manufactured:	NeutraLime Dry Calcitic Lime Profile Products LLC
Mat Fiber Mulch: Manufactured:	Soil Guard Mat, Incorporated
Neutralizers: Manufactured:	Garden Lime Oldcastle Retail, Incorporated
Limestone: Manufactured:	Calcium Limestone Franklin Industrial Minerals

## **B. Experimental or New Features -**

None

## **C. Changes –**

Contract Modification (CM) No. 0001 – A unilateral CM was prepared to replace page H-1 of the Special Contract Requirements. Percent performance of work by the contractor was not specified in the solicitation as required by the FAR and TAR clauses. This CM modified subsection 52.236-1 to specify the contractor shall perform on the site, and with its own organization, work equivalent to at least 50 % of the total amount of work to be performed under the contract. This CM had no effect on contract cost or contract time.

CM No. 0002 – A bilateral CM was prepared to allow the use of Structural Concrete, Class Latex Modified Concrete (LMC), as an alternate material for the deck overlays on Bridges 9 and 10. The LMC was paid under the existing Pay Item: 55207NV, Structural Concrete, Class High Performance Concrete (HPC), for Bridge Deck Overlays. By letter dated September 6, 2005, the contractor requested the use of LMC in lieu of HPC. By letter dated September 15, 2005, FHWA indicated that the use of LMC in lieu of HPC was acceptable. This CM had no effect on contract cost or contract time. However, the contractor reserved the right to request a time extension at a later date.

CM No. 0003 – A bilateral CM was prepared to extend the contract completion date from September 16, 2006, to January 19, 2007, or 125-calendar days. The contractor agreed to the time extension specified and released the Government from all liability under this contract for further equitable adjustment attributable to this modification. This modification completed full settlement of all issues relating to or arising from the bridge deck overlays.

CM No. 0004 – A bilateral CM was prepared to reduce the contract price/increase the quantity for pay item: 40907AB AT-38 Asphalt Surface Treatment and reduce the quantity for pay item: 63523 Maintenance of Traffic, Pavement Patch. These changes were due to the asphalt surface treatment in lieu of the maintenance of traffic, pavement patch in the area between Carr Creek Road and Bridge 10 on the Foothills Parkway. This CM resulted in no change to the contract amount or contract time.

CM No. 0005 – A bilateral CM was prepared to create one new lump sum pay item: 66601, Manhole Openings – Access for Inspection. This change was due to a request by FHWA Bridge Design to add manhole openings for future inspection. This CM resulted in a net increase to the contract of \$11,754.00 for two manhole openings. This CM had no effect on contract time.

CM No. 0006 – A bilateral CM was prepared to create two new contract pay items: 66605, Aluminum Bridge Railing, Two Rail, and Anchorages and 66601, Investigation – Surveying/Engineering – Curb and Anchorages for Bridges 9 and 10. The modification

also deleted existing contract pay item: 55601CB, Aluminum Bridge Railing, Two Rail. The net decrease to the contract was \$132,511.67 and had no effect on contract time. The contractor reserved the right to request additional time for the change at a later date.

CM No. 0007 – A bilateral CM was prepared to adjust the contract quantities to those actually measured in the field. This modification also adjusted the final contract amount to compensate for the actual work performed and to assess liquidated damages. This CM resulted in a net decrease to the contract of \$536,821.93 and had no effect on contract time.

#### **D. Problems –**

1. LMC concrete developed shrinkage cracking shortly after placement on Bridges 9 and 10. The cracking was on 4” to 6” centers and was most noticeable following a rain. The bond testing was good and the overlay showed no signs of delamination. The intent of the overlay was to protect the superstructure post tensioning from water infiltration. The superstructure was leaking water through the deck at various locations and especially at the closure segment joints prior to the overlay. The deck did not visually appear to leak following the overlay. There was no practical method to determine if infiltration was occurring through the overlay down to the deck.

2. Attempts to color the LMC appeared to be futile. A special liquid coloring agent rather than the typical dry powder agent had to be added due to the mobile mix unit used for LMC. With excessive difficulty the concrete was sufficiently darkened during mixing and placement. However, shortly after curing, the overlay turned back to its typical white appearance in contrast to the remainder of the structure. It appears the latex bleeds through and dominates the color of the overlay regardless of admixtures added.

3. The existing curb on Bridges 9 and 10 was not cast to a line and grade acceptable for the aluminum bridge rail placement. Anchor bolts were too short to adjust the grade of the rail and the rail had no adjustment as designed. The grade of the curb undulated as much as 2.5 inches from the proposed profile line. The rail could not be placed to a smooth line and grade as required by the FP-96 given the condition of the curb. As a result, the rail was deleted from the contract and Bridges 9 and 10 remain incomplete.

4. The scuppers on Bridge 8 were not properly detailed and conflicted with the AASHTO girders. The scuppers were moved to function properly but may result in future problems due to water dripping on the girders and running to the bearings. The curved deck over the straight beams resulted in the drainage difficulty.

#### **E. Recommendations –**

1. LMC does not appear to be an acceptable overlay material for the segmental bridges on the Foothills Parkway. Future projects requiring overlays should specify HPC with fiber reinforcement as originally planned for this project. It is believed that the fiber reinforced HPC could provide better protection and service life for these structures.

2. LMC does not appear to be an acceptable overlay material for structures requiring a colored concrete appearance. Future projects requiring colored overlays should specify HPC. It has been shown on Bridge 8 that HPC can be colored to provide the desired appearance.

3. The curbs on Bridges 9 and 10 must be corrected for line and grade before the aluminum bridge rail can be placed. Anchorages will have to be modified or corrected in the curb. This work should be added to the next bridge project on the west end of the “Missing Link” (Bridge 7).

Future bridge contracts should require that the bridge rail be placed by the contractor constructing the bridge curb. Curbs should never be placed in short 8 foot corded sections as was done on Bridges 9 and 10. Curb grades should be independent and relative to the as-cast structure in order to obtain a smooth alignment for the aluminum rails. A special contract requirement should be developed to help ensure the desired quality of the finished product.

4. The scuppers on Bridge 8 need a 45 degree fitting placed on the bottom to divert water away from the AASHTO girders. This was especially true on span 1 where the water was running along the bottom and across the bearing of the left exterior girder. More attention should be given to scupper placement on future contracts.

**F. Claims –**

There were no claims on this project.

**IV. Construction Engineering**

**A. Project Personnel –**

Martin L. Hatcher, Project Engineer

James Talley, Highway Engineer (Rotational Assignment)

Aide Romero, Highway Engineer (Professional Development Program Assignment)

**B. Other Contacts –**

Michael T. Tomkosky, Project Manager, Denver Service Center, FLHP Field Liaison, Great Smoky Mountains National Park, Sevierville, Tennessee

W. Treff Alexander, Field Landscape Architect, Denver Service Center, Great Smoky Mountains National Park, Sevierville, Tennessee

**C. Partnering –**

There was no formal partnering on this project. The Contractor, the Federal Highway Administration, and the National Park Service agreed to informal partnering during the Pre-Construction Conference. Informal partnering worked sufficiently for this project.



NPS NO.	REG	STATE	PROJECT	SHEET NO.
133	SE	TN	PRA-FOOT 8E13	A2
43,919				

Final Paving of Sections E & F will be included under the Final Project of PRA-FOOT 8E (FUTURE)

PRA-FOOT 8E13 (PROPOSED)  
 STA. 26+120 TO STA. 25+482 RT.  
 AND STA. 25+477 LT.

SECTION 8H1

SECTION 8G

SECTION 8F

SECTION 8E

SECTION 8D

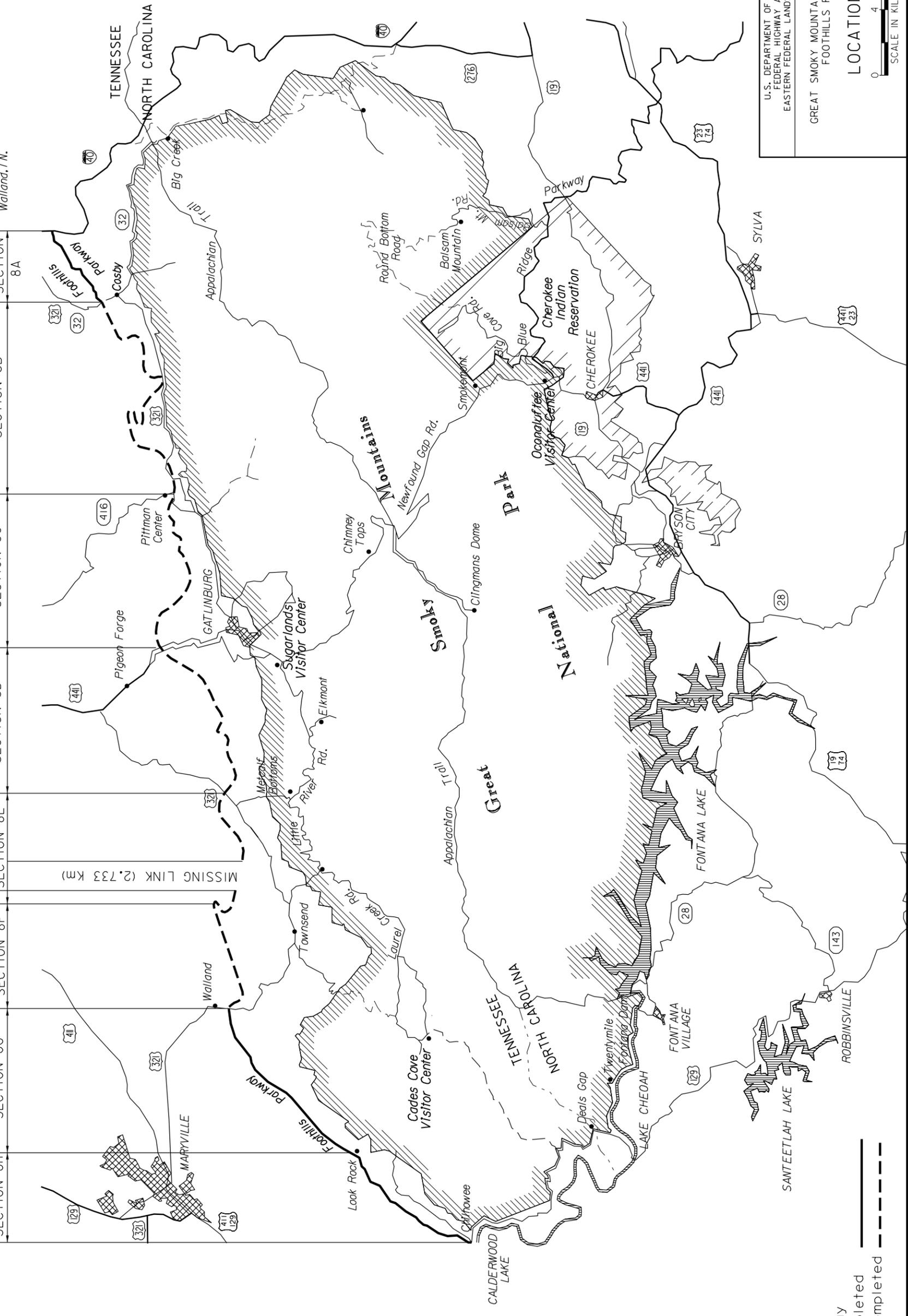
SECTION 8C

SECTION 8B

SECTION 8A

MISSING LINK (2.733 Km)

General Notes:  
 1. Hauling of material and construction equipment are prohibited on Carr Creek Road except construction personnel vehicles. Construction traffic will only be allowed to access the Foothills Parkway at the junction of US 321 and Foothills Parkway at Walland, TN.



Legend:  
 Parkway  
 Completed  
 Uncompleted

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 EASTERN FEDERAL LANDS HIGHWAY DIVISION

GREAT SMOKY MOUNTAINS NATIONAL PARK  
 FOOTHILLS PARKWAY

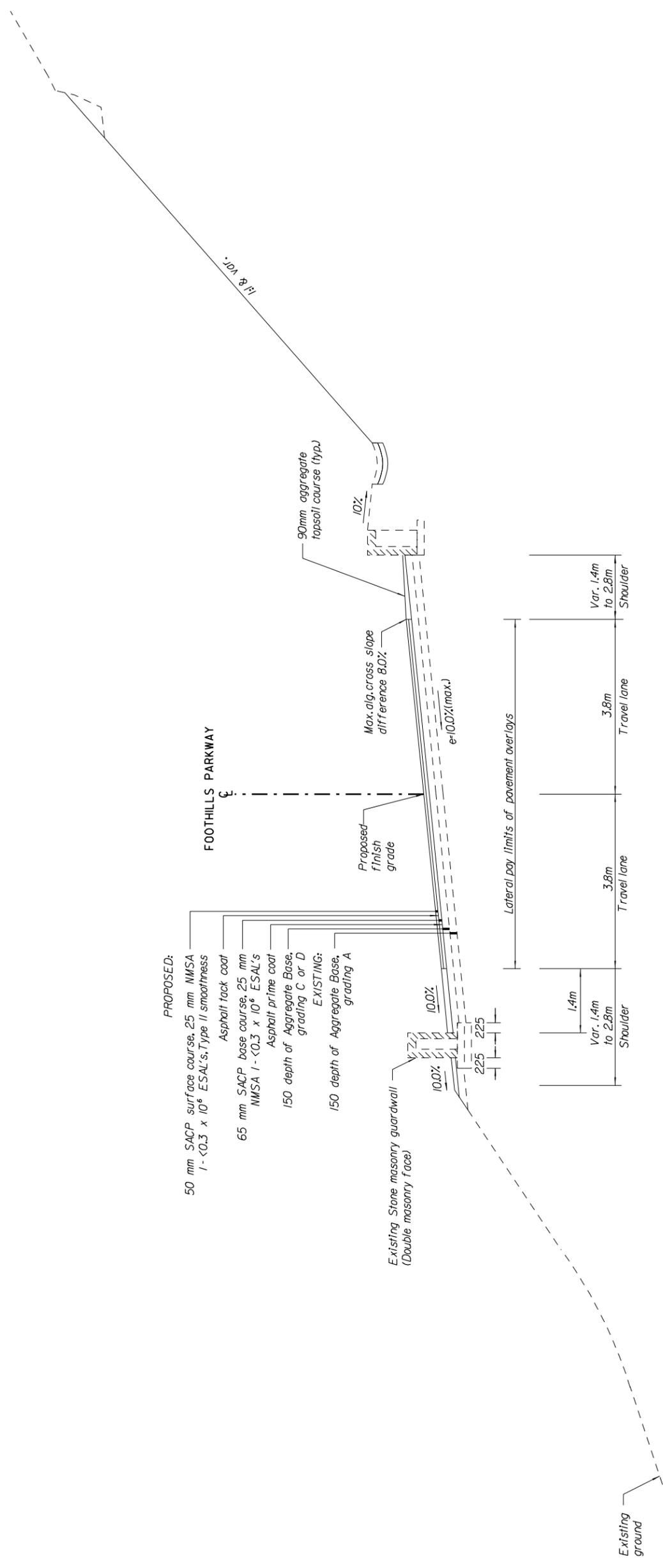
LOCATION MAP

0 4 8  
 SCALE IN KILOMETERS





NPS NO.	REG	STATE	PROJECT	SHEET NO.
133	SE	TN	PRA-FOOT 8E13	B3
43,919				



- PROPOSED:**
- 50 mm SACP surface course, 25 mm MMSA 1 - <math>0.3 \times 10^6</math> ESAL's, Type II smoothness
  - Asphalt tack coat
  - 65 mm SACP base course, 25 mm MMSA 1 - <math>0.3 \times 10^6</math> ESAL's
  - Asphalt prime coat
  - 150 depth of Aggregate Base, grading C or D
  - 150 depth of Aggregate Base, grading A
- EXISTING:**
- Existing Stone masonry guardwall (Double masonry face)

STA. 25+600 TO 26+120

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 EASTERN FEDERAL LANDS HIGHWAY DIVISION  
 STERLING, VIRGINIA

GREAT SMOKY MOUNTAINS NATIONAL PARK  
 FOOTHILLS PARKWAY

# TYPICAL SECTION

8E12 ROADWAY OVERLAY SECTION

SHEET 3 OF 3

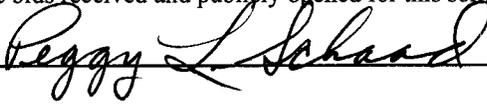
TABULATION OF BIDS

Schedule: A  
 Project No.: PRA-FOOT 8E13  
 Project Name: FOOTHILLS PARKWAY

State: TN  
 County: BLOUNT  
 GREAT SMOKY MOUNTAINS NATIONAL

Opened at: Sterling, VA  
 By: P. Schaad/M. Harris  
 Date: 05/05/05

I certify that this Bid Tabulation accurately reflects the bids received and publicly opened for this solicitation.

Signed: Peggy L. Schaad 

Title: Contracting Specialist Date: 5/05/05

Contract Awarded to: Charles Blalock and Sons Date: 5/26/05

Contractor	Bid Amount	Responsive
Charles Blalock & Sons, Inc. P.O. Box 4750 Sevierville, TN 87864-4750	4,673,957.40	
Mountain States Contractors, LLC 3874 S. Alston Ave, Suite 103 Durham, NC 27713	5,990,181.40	
Engineer's Estimate	4,400,000.00	

## TABULATION OF BIDS

Date: 05/05/05

Schedule: A

Project No.: PRA-FOOT 8E13

Project Name: FOOTHILLS PARKWAY

Item No.	Item Unit	Item Description	Quantity	Unit Price	Amount
15101	LPSM	Mobilization			
		Charles Blalock & Sons, Inc.	ALL	675,000.00	675,000.00
		Mountain States Contractors, LLC		598,472.00	598,472.00
		ENGINEER'S ESTIMATE		364,086.00	364,086.00
15201	LPSM	Construction survey and staking			
		Charles Blalock & Sons, Inc.	ALL	75,000.00	75,000.00
		Mountain States Contractors, LLC		40,000.00	40,000.00
		ENGINEER'S ESTIMATE		175,000.00	175,000.00
15401	LPSM	Contractor testing			
		Charles Blalock & Sons, Inc.	ALL	250,000.00	250,000.00
		Mountain States Contractors, LLC		130,000.00	130,000.00
		ENGINEER'S ESTIMATE		175,000.00	175,000.00
15703	m	Silt fence			
		Charles Blalock & Sons, Inc.	185	20.00	3,700.00
		Mountain States Contractors, LLC		50.00	9,250.00
		ENGINEER'S ESTIMATE		50.00	9,250.00
15705	m	Slope drains			
		Charles Blalock & Sons, Inc.	60	100.00	6,000.00
		Mountain States Contractors, LLC		80.00	4,800.00
		ENGINEER'S ESTIMATE		100.00	6,000.00
20101	ha	Clearing and grubbing			
		Charles Blalock & Sons, Inc.	0.25	400,000.00	100,000.00
		Mountain States Contractors, LLC		80,000.00	20,000.00
		ENGINEER'S ESTIMATE		75,000.00	18,750.00
20201	ha	Selective clearing			
		Charles Blalock & Sons, Inc.	0.11	100,000.00	11,000.00
		Mountain States Contractors, LLC		120,000.00	13,200.00
		ENGINEER'S ESTIMATE		20,000.00	2,200.00
20213	LPSM	Roadside cleanup			
		Charles Blalock & Sons, Inc.	ALL	30,000.00	30,000.00
		Mountain States Contractors, LLC		95,000.00	95,000.00
		ENGINEER'S ESTIMATE		10,000.00	10,000.00

## TABULATION OF BIDS

Date: 05/05/05

Schedule: A

Project No.: PRA-FOOT 8E13

Project Name: FOOTHILLS PARKWAY

Item No.	Item Unit	Item Description	Quantity	Unit Price	Amount
20302V	m	Removal of fence (existing silt fence)			
		Charles Blalock & Sons, Inc.	650	75.00	48,750.00
		Mountain States Contractors, LLC		30.00	19,500.00
		ENGINEER'S ESTIMATE		5.00	3,250.00
20302VC	m	Removal of chain link fence			
		Charles Blalock & Sons, Inc.	618	10.00	6,180.00
		Mountain States Contractors, LLC		9.00	5,562.00
		ENGINEER'S ESTIMATE		30.00	18,540.00
20401	m3	Roadway excavation			
		Charles Blalock & Sons, Inc.	3,500	60.00	210,000.00
		Mountain States Contractors, LLC		125.00	437,500.00
		ENGINEER'S ESTIMATE		30.00	105,000.00
20701BB	m2	Earthwork geotextile, type II-B			
		Charles Blalock & Sons, Inc.	140	10.00	1,400.00
		Mountain States Contractors, LLC		12.00	1,680.00
		ENGINEER'S ESTIMATE		10.00	1,400.00
20701DD	m2	Earthwork geotextile, type IV-D			
		Charles Blalock & Sons, Inc.	165	10.00	1,650.00
		Mountain States Contractors, LLC		12.00	1,980.00
		ENGINEER'S ESTIMATE		8.00	1,320.00
20701G	m2	Earthwork geotextile, type VII			
		Charles Blalock & Sons, Inc.	130	20.00	2,600.00
		Mountain States Contractors, LLC		24.00	3,120.00
		ENGINEER'S ESTIMATE		10.00	1,300.00
20801	m3	Structure excavation (Bridge Piers)			
		Charles Blalock & Sons, Inc.	151	600.00	90,600.00
		Mountain States Contractors, LLC		700.00	105,700.00
		ENGINEER'S ESTIMATE		300.00	45,300.00
25101C	m3	Placed riprap, class 3			
		Charles Blalock & Sons, Inc.	160	68.00	10,880.00
		Mountain States Contractors, LLC		175.00	28,000.00
		ENGINEER'S ESTIMATE		175.00	28,000.00

## TABULATION OF BIDS

Date: 05/05/05

Schedule: A

Project No.: PRA-FOOT 8E13

Project Name: FOOTHILLS PARKWAY

Item No.	Item Unit	Item Description	Quantity	Unit Price	Amount
30103Z	m3	Aggregate base, grading C or D			
		Charles Blalock & Sons, Inc.	300	60.00	18,000.00
		Mountain States Contractors, LLC		120.00	36,000.00
		ENGINEER'S ESTIMATE		75.00	22,500.00
30502J	m2	Aggregate-topsoil course, 90 mm depth			
		Charles Blalock & Sons, Inc.	605	8.00	4,840.00
		Mountain States Contractors, LLC		15.00	9,075.00
		ENGINEER'S ESTIMATE		10.00	6,050.00
40907AB	m2	AT-38 asphalt surface treatment			
		Charles Blalock & Sons, Inc.	22	40.00	880.00
		Mountain States Contractors, LLC		75.00	1,650.00
		ENGINEER'S ESTIMATE		25.00	550.00
41801DB	t	Superpave asphalt concrete pavement, 25mm nominal maximum size aggregate, 0.3 - <3 ESAL			
		Charles Blalock & Sons, Inc.	400	120.00	48,000.00
		Mountain States Contractors, LLC		95.00	38,000.00
		ENGINEER'S ESTIMATE		60.00	24,000.00
55201A	m3	Structural concrete, class A (AE) , for abutments			
		Charles Blalock & Sons, Inc.	629	800.00	503,200.00
		Mountain States Contractors, LLC		1,450.00	912,050.00
		ENGINEER'S ESTIMATE		1,050.00	660,450.00
55201A	m3	Structural concrete, class A (AE) , for piers & caps			
		Charles Blalock & Sons, Inc.	183	950.00	173,850.00
		Mountain States Contractors, LLC		1,650.00	301,950.00
		ENGINEER'S ESTIMATE		1,050.00	192,150.00
55201A	m3	Structural concrete, class A (AE) , for cantilever retaining walls			
		Charles Blalock & Sons, Inc.	102	900.00	91,800.00
		Mountain States Contractors, LLC		1,850.00	188,700.00
		ENGINEER'S ESTIMATE		1,050.00	107,100.00
55202NE	m3	Structural concrete, class HPC, for bridge deck			
		Charles Blalock & Sons, Inc.	198	1,200.00	237,600.00
		Mountain States Contractors, LLC		1,100.00	217,800.00
		ENGINEER'S ESTIMATE		1,200.00	237,600.00

## TABULATION OF BIDS

Date: 05/05/05

Schedule: A

Project No.: PRA-FOOT 8E13

Project Name: FOOTHILLS PARKWAY

Item No.	Item Unit	Item Description	Quantity	Unit Price	Amount
55202NE	m3	Structural concrete, class HPC, for bridge deck (Abutment deck)			
		Charles Blalock & Sons, Inc.	216	990.00	213,840.00
		Mountain States Contractors, LLC		1,000.00	216,000.00
		ENGINEER'S ESTIMATE		1,200.00	259,200.00
55207NN	m2	Structural concrete, class HPC, for approach slabs, type 1			
		Charles Blalock & Sons, Inc.	83	300.00	24,900.00
		Mountain States Contractors, LLC		600.00	49,800.00
		ENGINEER'S ESTIMATE		250.00	20,750.00
55207NV	m2	Structural concrete, class HPC, for bridge deck overlay			
		Charles Blalock & Sons, Inc.	3,415	73.00	249,295.00
		Mountain States Contractors, LLC		225.00	768,375.00
		ENGINEER'S ESTIMATE		125.00	426,875.00
55302AC	m	Precast prestressed concrete structural members, I-beams, AASHTO type 3 (Class HPC concrete)			
		Charles Blalock & Sons, Inc.	254	850.00	215,900.00
		Mountain States Contractors, LLC		1,000.00	254,000.00
		ENGINEER'S ESTIMATE		500.00	127,000.00
55401	kg	Reinforcing steel			
		Charles Blalock & Sons, Inc.	94,192	1.70	160,126.40
		Mountain States Contractors, LLC		1.65	155,416.80
		ENGINEER'S ESTIMATE		2.00	188,384.00
55402	kg	Epoxy coated reinforcing steel			
		Charles Blalock & Sons, Inc.	50,308	2.00	100,616.00
		Mountain States Contractors, LLC		1.95	98,100.60
		ENGINEER'S ESTIMATE		2.50	125,770.00
55502	m	Bridge expansion joints			
		Charles Blalock & Sons, Inc.	23	1,500.00	34,500.00
		Mountain States Contractors, LLC		800.00	18,400.00
		ENGINEER'S ESTIMATE		300.00	6,900.00
55601CB	m	Aluminum bridge railing, two rail			
		Charles Blalock & Sons, Inc.	746	320.00	238,720.00
		Mountain States Contractors, LLC		370.00	276,020.00
		ENGINEER'S ESTIMATE		450.00	335,700.00

## TABULATION OF BIDS

Date: 05/05/05

Schedule: A

Project No.: PRA-FOOT 8E13

Project Name: FOOTHILLS PARKWAY

Item No.	Item Unit	Item Description	Quantity	Unit Price	Amount
60406	Each	Inlet adjustment			
		Charles Blalock & Sons, Inc.	1	2,000.00	2,000.00
		Mountain States Contractors, LLC		5,000.00	5,000.00
		ENGINEER'S ESTIMATE		1,100.00	1,100.00
60501	m	Underdrain system (6-inch diameter)			
		Charles Blalock & Sons, Inc.	92	100.00	9,200.00
		Mountain States Contractors, LLC		100.00	9,200.00
		ENGINEER'S ESTIMATE		50.00	4,600.00
60508	m3	Granular backfill			
		Charles Blalock & Sons, Inc.	45	75.00	3,375.00
		Mountain States Contractors, LLC		200.00	9,000.00
		ENGINEER'S ESTIMATE		75.00	3,375.00
60801E	m2	Paved waterway, type 5			
		Charles Blalock & Sons, Inc.	55	100.00	5,500.00
		Mountain States Contractors, LLC		350.00	19,250.00
		ENGINEER'S ESTIMATE		100.00	5,500.00
62001BE	m3	Class B masonry, rock face finish			
		Charles Blalock & Sons, Inc.	80	4,500.00	360,000.00
		Mountain States Contractors, LLC		4,500.00	360,000.00
		ENGINEER'S ESTIMATE		5,000.00	400,000.00
62002A	m	Stone masonry guardwall, type 1			
		Charles Blalock & Sons, Inc.	25	3,750.00	93,750.00
		Mountain States Contractors, LLC		5,000.00	125,000.00
		ENGINEER'S ESTIMATE		2,500.00	62,500.00
62002B	m	Stone masonry guardwall, type 2			
		Charles Blalock & Sons, Inc.	8	3,000.00	24,000.00
		Mountain States Contractors, LLC		4,000.00	32,000.00
		ENGINEER'S ESTIMATE		2,500.00	20,000.00
62402K	ha	Furnishing and placing topsoil, 100 mm depth			
		Charles Blalock & Sons, Inc.	0.30	50,000.00	15,000.00
		Mountain States Contractors, LLC		75,000.00	22,500.00
		ENGINEER'S ESTIMATE		10,500.00	3,150.00

## TABULATION OF BIDS

Date: 05/05/05

Schedule: A

Project No.: PRA-FOOT 8E13

Project Name: FOOTHILLS PARKWAY

Item No.	Item Unit	Item Description	Quantity	Unit Price	Amount
62509	ha	Turf establishment			
		Charles Blalock & Sons, Inc.	0.30	6,000.00	1,800.00
		Mountain States Contractors, LLC		18,000.00	5,400.00
		ENGINEER'S ESTIMATE		10,500.00	3,150.00
62901B	m2	Erosion control mat type 2			
		Charles Blalock & Sons, Inc.	605	6.00	3,630.00
		Mountain States Contractors, LLC		6.00	3,630.00
		ENGINEER'S ESTIMATE		10.00	6,050.00
63505C	Each	Barricade, type 3			
		Charles Blalock & Sons, Inc.	2	1,000.00	2,000.00
		Mountain States Contractors, LLC		800.00	1,600.00
		ENGINEER'S ESTIMATE		500.00	1,000.00
63507	m2	Construction sign			
		Charles Blalock & Sons, Inc.	15	225.00	3,375.00
		Mountain States Contractors, LLC		500.00	7,500.00
		ENGINEER'S ESTIMATE		250.00	3,750.00
63523	t	Maintenance of traffic, pavement patch			
		Charles Blalock & Sons, Inc.	2,000	125.00	250,000.00
		Mountain States Contractors, LLC		105.00	210,000.00
		ENGINEER'S ESTIMATE		60.00	120,000.00
63701	Each	Field office			
		Charles Blalock & Sons, Inc.	1	60,000.00	60,000.00
		Mountain States Contractors, LLC		95,000.00	95,000.00
		ENGINEER'S ESTIMATE		60,000.00	60,000.00
64801	t	Agricultural Limestone			
		Charles Blalock & Sons, Inc.	3.0	500.00	1,500.00
		Mountain States Contractors, LLC		10,000.00	30,000.00
		ENGINEER'S ESTIMATE		150.00	450.00

TABULATION OF BIDS

Date: 05/05/05

Schedule: A

Project No.: PRA-FOOT 8E13

Project Name: FOOTHILLS PARKWAY

BID ITEM CHECK PASS

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Bidder	Item No.	Bidder's Extension	Computed Extension
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No extension errors in this Schedule.

TABULATION OF BIDS

Date: 05/05/05

Schedule: A  
 Project No.: PRA-FOOT 8E13  
 Project Name: FOOTHILLS PARKWAY

BID TOTAL CHECK PASS

Bidder	Bidder's Bid Amount	Computed Bid Amount	Error
Charles Blalock & Sons, Inc.	4,673,957.40	4,673,957.40	
Mountain States Contractors, LLC	5,990,181.00	5,990,181.40	***

The apparent low bidder is 6 % above the engineer's estimate.

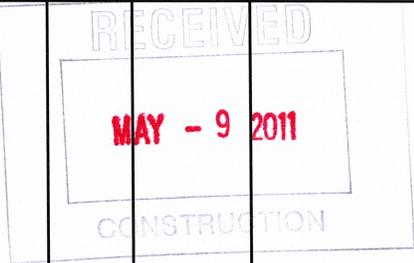
Standard Form 1034 Revised October 1967 Department of the Treasury 1 TFM 4-2000 1034-121	<b>PUBLIC VOUCHER FOR PURCHASES AND SERVICES OTHER THAN PERSONAL</b>	VOUCHER NO.
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U.S. DEPARTMENT, BUREAU, OR ESTABLISHMENT AND LOCATION U. S. Department of Transportation Federal Highway Administration Eastern Federal Lands Highway Division 21400 Ridgetop Circle Sterling, Virginia 20166-6511	DATE VOUCHER PREPARED March 30, 2011	SCHEDULE NO.
	CONTRACT NUMBER AND DATE DTFH71-05-C-00005 05/26/2005	PAID BY
	REQUISITION NUMBER AND DATE	

PAYEE'S NAME AND ADDRESS  Charles Blalock & Sons, Inc. P. O. Box 4750 Sevierville, TN 37864-4750	DATE INVOICE RECEIVED
	DISCOUNT TERMS
	PAYEE'S ACCOUNT NUMBER
	GOVERNMENT B/L NUMBER

SHIPPED FROM	TO	WEIGHT	GOVERNMENT B/L NUMBER
--------------	----	--------	-----------------------

NUMBER AND DATE OF ORDER	DATE OF DELIVERY OR SERVICE	ARTICLES OR SERVICES <i>(Enter description, item number of contract or Federal supply schedule, and other information deemed necessary)</i>	QUAN-TITY	UNIT PRICE		AMOUNT  ( 1 )
				COST	PER	
		Completed Estimate No. 28 - Final Payment of Contract. This is final settlement for the construction of Project PRA-FOOT 8E13, Great Smoky Mountains National Park, and final closeout is specifically conditioned upon the execution of the Contractor's Release attached hereto and incorporated herein.  By: <u>James D. Blalock</u> Title: <u>PRESIDENT</u> Date: <u>4/30/11</u>				



(Use continuation sheet(s) if necessary) **(Payee must NOT use the space below)** **TOTAL** \$0.00

PAYMENT:	APPROVED FOR	EXCHANGE RATE	DIFFERENCES
<input type="checkbox"/> PROVISIONAL	= \$ 0.00	= \$1.00	
<input type="checkbox"/> COMPLETE	BY <sup>2</sup>		
<input type="checkbox"/> PARTIAL	<u>For Laurin R. Lineman</u>		Amount verified, correct for payment
<input checked="" type="checkbox"/> FINAL	TITLE		(Signature or initials)
<input type="checkbox"/> PROGRESS	Director, Project Delivery		<u>[Signature]</u>
<input type="checkbox"/> ADVANCE			

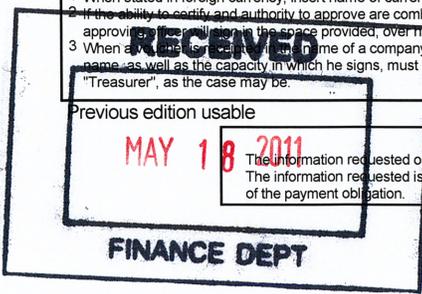
Pursuant to authority vested in me, I certify that this voucher is correct and proper for payment.  
5/18/11 (Date) [Signature] (Authorized Certifying Officer) For (Title) Financial Manager

ACCOUNTING CLASSIFICATION  
 Proj 1515471220002 Task 540.00.R9L0.47 Org 1547001130

P A I D  B Y \$	CHECK NUMBER	ON TREASURER OF THE UNITED STATES	CHECK NUMBER	ON (Name of bank)
	CASH	DATE	PAYEE <sup>3</sup>	

<sup>1</sup> When stated in foreign currency, insert name of currency.  
<sup>2</sup> If the ability to certify and authority to approve are combined in one person, one signature only is necessary; otherwise the approving signature and title in the space provided, over his official title.  
<sup>3</sup> When a representative of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary", or "Treasurer", as the case may be.

Previous edition usable NSN 7540-00-900-2234  
**PRIVACY ACT STATEMENT**  
 The information requested on this form is required under the provisions of 31 U.S.C. 82b and 82c, for the purpose of disbursing Federal money. The information requested is to identify the particular creditor and the amounts to be paid. Failure to furnish this information will hinder discharge of the payment obligation.



CT-11-157

DEPARTMENT OF TRANSPORTATION  
**CONTRACTOR'S RELEASE**

**CONTRACT NO.**  
DTFH71-05-C-00005

CONTRACTOR (Name and address)

Charles Blalock & Sons, Inc.  
P. O. Box 4750  
Sevierville, TN 37864-4750

SUM OF

Zero dollars and zero cents

DOLLARS (\$) 0.00

In consideration of the sum stated above, which has been paid or is to be paid to the Contractor, or his assignees, the Contractor, upon payment of the said sum by the UNITED STATES OF AMERICA (hereinafter called the Government), does remise, release, and discharge the Government, its officers, agents, and employees, of and from all liabilities, obligations, claims, and demands whatsoever under or arising from the said contract, except:

1. Specified claims in stated amounts or in estimated amounts where the amounts are not susceptible of exact statement by the Contractor, as follows:
2. Claims, together with reasonable expenses incidental thereto, based upon the liabilities of the Contractor to third parties arising out of the performance of this contract, which are not known to the Contractor on the date of the execution of this release and of which the Contractor gives notice in writing to the Contracting Officer within the period specified in the said contract: and
3. Claims for reimbursement of costs (other than expenses of the Contractor by reason of his indemnification of the Government against patent liability), including reasonable expenses incidental thereto, incurred by the Contractor under any provisions of the said contract relating to patents.

The Contractor agrees, in connection with patent matters and with claims which are not released as set forth above, that he will comply with all provisions of the said contract, including without limitation those provisions relating to notifications to the Contracting Officer and relating to the defense or prosecution of litigation.

IN WITNESS WHEREOF, this release has been executed this 30<sup>th</sup> day of APRIL, 2011

WITNESSES

Charles Blalock & Sons, Inc.

(Contractor)

Yasmeen Frank  
Engineering Secretary

BY James D. Blalock

TITLE PRESIDENT

NOTE: In the case of a corporation, witnesses are not required, but the certification below must be completed.

**CERTIFICATE**

I, Doon Blalock, certify that I am the \_\_\_\_\_ secretary of the corporation named as Contractor in the foregoing release; that JAMES D. BLALOCK who signed said release on behalf of the Contractor was then PRESIDENT of said corporation; that said release was duly signed for and in behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

(CORPORATE SEAL)

[Signature]



# United States Department of the Interior

NATIONAL PARK SERVICE  
Great Smoky Mountains National Park  
107 Park Headquarters Road  
Gatlinburg, Tennessee 37738



IN REPLY REFER TO:

D30  
PMIS 079801  
PRA-FOOT 8E13

April 23, 2008

Ms. Melissa Ridenour  
Division Engineer  
Eastern Federal Lands Highway Division  
Federal Highway Administration  
21400 Ridgetop Circle  
Sterling, VA 20166-6511

Dear Ms. Ridenour:

Reference: Great Smoky Mountains National Park, PMIS # 079801, Project PRA-FOOT 8E13  
Construct Bridge 8, Foothills Parkway, Blount County, Tennessee, Project Construction,  
Contract # DTFH71-05-C-00005

Subject: Final Acceptance

On January 22, 2008, a final inspection of the above referenced project was performed and as a result of that inspection, punch list items were identified which required completion prior to final acceptance of the project by the National Park Service.

On March 5, 2008, the Federal Highway Administration informed the National Park Service that all of the identified punch list work items had been completed. A follow up review conducted by Denver Service Center staff on March 28, 2008, has resulted in the verification that all punch list items have been completed to the satisfaction of the National Park Service and the project is hereby accepted as complete, effective March 5, 2008.

We would like to take this opportunity to thank all who were involved in the planning, design and construction of this project. The continued construction of the Foothills Parkway is important to the Park and each project we complete moves us closer to the eventual opening of this section of the Parkway.

Sincerely,

  
Dale A. Ditmanson  
Superintendent, GRSM NP

  
Michael T. Tomkosky  
Project Manager, NPS/DSC

cc:  
SERO Regional Director, Attn. Kent Cochran  
GRSM-FMD, Attn: A. Sumeriski  
FHWA-EFLHD, **COE E. Melton**  
DSC-T, Attn: G. Stahlecker, T. Alexander

TAKE PRIDE<sup>®</sup>  
IN AMERICA 



U.S. Department  
of Transportation  
Federal Highway  
Administration

Eastern Federal Lands  
Highway Division

21400 Ridgetop Circle  
Sterling, VA 20166-6511

APR 26 2011

In Reply Refer To: HFCO-15

**FEDERAL EXPRESS**

Mr. Allen Blalock  
Vice President  
Charles Blalock & Sons, Inc.  
409 Robert Henderson Road  
Sevierville, TN 37862

Subject: Project PRA-FOOT 8E13, Great Smoky Mountains National Park  
AASHTO Girder Bridge and Construct to Finish Grade Existing Parkway Section  
Project Closeout  
Contract No. DTFH71-05-C-00005

Dear Mr. Blalock:

We are pleased to advise you that all work performed on the above referenced project has been satisfactorily completed in substantial conformity with the plans and specifications. Final Acceptance was effective on March 5, 2008, and as of that date you were relieved of further maintenance obligations. Enclosed please find the following documents for the subject project:

- The final estimate (Estimate No. 28)
- Two copies of Form 4220.4, Contractor's Release
- Two copies of Form 1034, Public Voucher for Purchases and Services Other Than Personal

You are requested to sign and return both copies of Forms 4220.4 and 1034, which are based on the final estimate. If you have any questions, please contact Mr. Charles E. Melton, Construction Operations Engineer, at 865-286-6101.

Sincerely yours,

/s/ Thomas J. Scott, Jr.

Thomas J. Scott, Jr., P.E.  
Construction Engineer and  
Administrative Contracting Officer

Enclosures





## CONSTRUCTION PROJECT MATERIAL CERTIFICATION

State Tennessee Project No. PRA-FOOT 8E13

Project name Foothills Parkway Bridge # 8 Contract No. DTFH71-05-C-00005

### Part I - Field Control

It is certified (1) that all material accepted pursuant to this contract complies with the terms of the contract as documented by the project records in according to Federal Lands standards; or (2) that material not complying with the terms of the contract was accepted according to FAR Clause 52.246-12 based on a technical evaluation of the material documented in the project records.

It is further certified (1) that the results of verification tests taken during construction confirm the validity of acceptance tests according to Federal Lands standards; or (2) that inconsistencies between verification and acceptance tests were responded to according to Federal Lands standards and so documented in the project records.

It is further certified (1) for material accepted by manufacturer's certification of compliance, such certifications and accompanying test result (when required) indicate compliance with the terms of the contract; and (2) that if verification tests of such material were taken, the tests confirmed the validity of the certifications, or the discrepancies were responded to according to Federal Lands standards and so documented in the project records.

Project Engineer Martin L. Hatcher Digitally signed by Martin L. Hatcher  
 DN: cn=Martin L. Hatcher, ou=FHWA, ou=FLHD, email=martin.hatcher@fhwa.dot.gov, c=US  
 Date: 2009.10.13.09:12:00-0400 Date 10-13-09

Construction Operations Engineer C. Emmett Melton Digitally signed by C. Emmett Melton  
 DN: cn=C. Emmett Melton, ou=FHWA, ou=FLHD, email=emmettmelton@fhwa.dot.gov, c=US  
 Date: 2009.10.13.09:13:00-0400 Date 10-13-2009

### Part II - Final Review

It is certified (1) that the results of verification tests taken during construction confirm the validity of the job site acceptance testing and/or manufacturer's certificates; or (2) that inconsistencies are appropriately documented together with the technical basis of acceptance of the material.

Materials Engineer Michael P. Dallaire Digitally signed by Michael P. Dallaire  
 DN: cn=Michael P. Dallaire, ou=FHWA, ou=FLHD, email=michael.dallaire@fhwa.dot.gov, c=US  
 Date: 2009.10.13.09:09:45-0400 Date 10/13/2009

It is certified that the records for this project have been reviewed and confirmed that the acceptance and documentation of all materials complied with Federal Lands standards.

Construction Engineer Thomas J. Scott Jr. Digitally signed by Thomas J. Scott Jr.  
 DN: cn=Thomas J. Scott Jr., ou=FLHD, ou=HFDCC-15, email=Thomas.Scott@fhwa.dot.gov, c=US  
 Date: 2009.10.19.11:24:12-0400 Date \_\_\_\_\_

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
EASTERN FEDERAL LANDS HIGHWAY DIVISION  
21400 RIDGETOP CIRCLE  
STERLING, VIRGINIA 20166

batch #  
cntrl #

### PRA-FOOT 8E13 - GREAT SMOKY MOUNTAINS NATIONAL PARK

Construction of Foothills Parkway from Sta. 25+477 to 25+600 including, one ASHTO girder bridge, drainage, grading, subbase, asphalt surface treatment, retaining walls and other work. Construct to finish grade existing parkway section from Sta. 25+600 to 26+120 including, grading, subbase, paving, bridge deck overlays and other work.

TO: CHARLES BLALOCK & SONS, INC.  
P. O. BOX 4750  
SEVIERVILLE, TN 37864-4750

### CONSTRUCTION SUMMARY

For work performed up to and including March 5, 2008

TOTAL AMOUNT EARNED TO DATE	\$4,016,377.80
*ADJUSTMENTS	\$0.00
TOTAL PAYMENTS APPROVED TO DATE	\$4,016,377.80
TOTAL PAYMENTS PREVIOUSLY PAID	\$4,016,377.80
AMOUNT TO BE PAID THIS ESTIMATE	\$0.00

FINAL ESTIMATE # 28

PERIOD THROUGH 03/05/08

CONTRACT NUMBER: DTFH71-05-C-00005

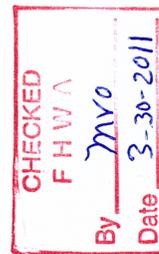
AWARD DATE: May 26, 2005

STATE Tennessee  
COUNTIES Blount  
FOREST OR PARK Great Smoky Mountains NP  
LENGTH 0.643 km

This estimate submitted by Project Engineer  
Martin L. Hatcher

\*ADJUSTMENTS:  
\$402,992.69 Liquidated Damages - See body of estimate.

\*DTFH71-05-C-00005  
FINAL ESTIMATE # 28



*Charles E. Melton* date: 4/10/11  
Charles E. Melton, Construction Operations Engineer  
Concur in estimate  
*Thomas J. Sobti* date: 5/10/11  
Thomas J. Sobti, Construction Engineer  
Approve for payment  
*Teresa Daniel* date: 5/10/11  
Teresa Daniel, Financial Manager

EXPEND \$0.00  
LIQUIDATE

ACCOUNT NUMBER  
Proj 1515471220002; Org 1547001130; Task 540.00.R9L0.47

KDL - Certify funds available

**PRA-FOOT 8E13 - GREAT SMOKY MOUNTAINS NATIONAL PARK FINAL ESTIMATE # 28**

ITEM NO.	DESCR.	CONTRACTED				FINAL QUANTITIES			TOTAL CHANGE	PERCENT VARIATION	OVERRUN QUANTITY		
		QUANTITY	CM	AMENDED UNIT	UNIT PRICE	AMOUNT	CURRENT	PREVIOUS TO DATE				AMOUNT	
15101	Mobilization	100,000		100,000 LPSM	\$675,000.00	\$675,000.00	0.000	100,000	100,000	\$675,000.00	0.00	0.00	0
15201	Construction survey and staking	100,000		100,000 LPSM	\$75,000.00	\$75,000.00	0.000	100,000	100,000	\$75,000.00	0.00	0.00	0
15401	Contractor testing	100,000		100,000 LPSM	\$250,000.00	\$250,000.00	0.000	100,000	100,000	\$250,000.00	0.00	0.00	0
15703	Silt fence (CM #0007, 07/31/08, increase quantity 89.9 m)	185,000	89,900	274,900 m	\$20.00	\$5,498.00	0.000	274,900	274,900	\$5,498.00	89.90	48.59	0
15705	Slope drains	60,000		60,000 m	\$100.00	\$6,000.00	0.000	60,000	60,000	\$6,000.00	0.00	0.00	0
20101	Clearing and grubbing (CM #0007, 07/31/08, decrease quantity 0.082 ha)	0.250	-0.082	0.168 ha	\$400,000.00	\$67,200.00	0.000	0.168	0.168	\$67,200.00	-0.08	-32.80	0
20201	Selective clearing (CM #0007, 07/31/08, decrease quantity 0.039 ha)	0.110	-0.039	0.071 ha	\$100,000.00	\$7,100.00	0.000	0.071	0.071	\$7,100.00	-0.04	-35.45	0
20213	Roadside cleanup	100,000		100,000 LPSM	\$30,000.00	\$30,000.00	0.000	100,000	100,000	\$30,000.00	0.00	0.00	0
20302V	Removal of fence (existing silt fence) (CM #0007, 07/31/08, decrease quantity 31.5 m)	650,000	-31,500	618,500 m	\$75.00	\$46,387.50	0.000	618,500	618,500	\$46,387.50	-31.50	-4.85	0
20302VC	Removal of chain link fence (CM #0007, 07/31/08, decrease quantity 618 m)	618,000	-618,000	0.000 m	\$10.00	\$0.00	0.000	0.000	0.000	\$0.00	-618.00	-100.00	0
20401	Roadway excavation (CM #0007, 07/31/08, decrease quantity 901.63 m3)	3500,000	-901,630	2598,370 m3	\$60.00	\$155,902.20	0.000	2598,370	2598,370	\$155,902.20	-901.63	-25.76	0
20701BB	Earthwork geotextile, type II-B (CM #0007, 07/31/08, decrease quantity 140 m2)	140,000	-140,000	0.000 m2	\$10.00	\$0.00	0.000	0.000	0.000	\$0.00	-140.00	-100.00	0
20701DD	Earthwork geotextile, type IV-D (CM #0007, 07/31/08, decrease quantity 165 m2)	165,000	-165,000	0.000 m2	\$10.00	\$0.00	0.000	0.000	0.000	\$0.00	-165.00	-100.00	0
20701G	Earthwork geotextile, type VII (CM #0007, 07/31/08, decrease quantity 130 m2)	130,000	-130,000	0.000 m2	\$20.00	\$0.00	0.000	0.000	0.000	\$0.00	-130.00	-100.00	0
20801	Structure excavation (Bridge Piers) (CM #0007, 07/31/08, increase quantity 17.26 m3)	151,000	17,260	168,260 m3	\$600.00	\$100,956.00	0.000	168,260	168,260	\$100,956.00	17.26	11.43	0
25101C	Placed riprap, class 3 (CM #0007, 07/31/08, decrease quantity 153.74 m3)	160,000	-153,740	6,260 m3	\$68.00	\$425.68	0.000	6,260	6,260	\$425.68	-153.74	-96.09	0
30103Z	Aggregate base, grading C or D (CM #0007, 07/31/08, decrease quantity 135.99 m3)	300,000	-135,990	164,010 m3	\$60.00	\$9,840.60	0.000	164,010	164,010	\$9,840.60	-135.99	-45.33	0
30502J	Aggregate-topsoil course, 90 mm depth (CM #0007, 07/31/08, decrease quantity 59.67 m2)	605,000	-59,670	545,330 m2	\$8.00	\$4,362.64	0.000	545,330	545,330	\$4,362.64	-59.67	-9.86	0
40907AB	AT-38 asphalt surface treatment (CM #0004, 10/17/06, decrease quantity 22 m2)	22,000	-22,000	0.000 m2	\$40.00	\$0.00	0.000	0.000	0.000	\$0.00	-22.00	-100.00	0

**PRA-FOOT 8E13 - GREAT SMOKY MOUNTAINS NATIONAL PARK FINAL ESTIMATE # 28**

ITEM NO.	DESCR.	CONTRACTED			FINAL QUANTITIES		TOTAL CHANGE	PERCENT VARIATION	OVERRUN QUANTITY			
		QUANTITY	CM	AMENDED UNIT PRICE	AMOUNT	CURRENT PREVIOUS TO DATE				AMOUNT		
40907AB	CM #0004, 10/17/06, AT-38 asphalt surface treatment (new unit price) (CM #0007, 07/31/08, increase quantity 304 m2)	30304.000	30304.000	m2	\$7.77	\$235,462.08	0.000	30304.000	\$235,462.08	304.00	1.01	0
41801DB	Superpave asphalt concrete pavement, 25mm nominal maximum size aggregate, 0.3 - <3 ESAL (CM #0007, 07/31/08, increase quantity 158.35 t)	400.000	158.350	t	\$120.00	\$67,002.00	0.000	558.350	\$67,002.00	158.35	39.59	0
55201A	Structural concrete, class A (AE), for abutments (CM #0007, 07/31/08, increase quantity 116.21 m3)	629.000	116.210	m3	\$800.00	\$596,168.00	0.000	745.210	\$596,168.00	116.21	18.48	0
55201A	Structural concrete, class A (AE), for piers & caps (CM #0007, 07/31/08, increase quantity 8.6 m3)	183.000	8.600	m3	\$950.00	\$182,020.00	0.000	191.600	\$182,020.00	8.60	4.70	0
55201A	Structural concrete, class A (AE), for cantilever retaining walls (CM #0007, 07/31/08, decrease quantity 6.96 m3)	102.000	-6.960	m3	\$900.00	\$85,536.00	0.000	95.040	\$85,536.00	-6.96	-6.82	0
55202NE	Structural concrete, class HPC, for bridge deck (CM #0007, 07/31/08, increase quantity 1.63 m3)	198.000	1.630	m3	\$1,200.00	\$239,556.00	0.000	199.630	\$239,556.00	1.63	0.82	0
55202NE	Structural concrete, class HPC, for bridge deck (abutment deck) (CM #0007, 07/31/08, decrease quantity 127.13 m3)	216.000	-127.130	m3	\$990.00	\$87,981.30	0.000	88.870	\$87,981.30	-127.13	-58.86	0
55207NN	Structural concrete, class HPC, for approach slabs, type 1 (CM #0007, 07/31/08, decrease quantity 0.26 m2)	83.000	-0.260	m2	\$300.00	\$24,822.00	0.000	82.740	\$24,822.00	-0.26	-0.31	0
55207NV	Structural concrete, class HPC, for bridge deck overlay (CM #0007, 07/31/08, increase quantity 15.645 m2)	3415.000	15.645	m2	\$73.00	\$250,437.09	0.000	3430.645	\$250,437.09	15.65	0.46	0
55302AC	Precast prestressed concrete structural members, I-beams, AASHTO type 3 (Class HPC concrete)	254.000	254.000	m	\$850.00	\$215,900.00	0.000	254.000	\$215,900.00	0.00	0.00	0
55401	Reinforcing steel (CM #0007, 07/31/08, increase quantity 6500.411 kg)	94192.000	6500.411	kg	\$1.70	\$171,177.10	0.000	100692.411	\$171,177.10	6500.41	6.90	0
55402	Epoxy coated reinforcing steel (CM #0007, 07/31/08, increase quantity 2410.167 kg)	50308.000	2410.167	kg	\$2.00	\$105,436.33	0.000	52718.167	\$105,436.33	2410.17	4.79	0
55502	Bridge expansion joints (CM #0007, 07/31/08, increase quantity 0.53 m)	23.000	0.530	m	\$1,500.00	\$35,295.00	0.000	23.530	\$35,295.00	0.53	2.30	0

**PRA-FOOT 8E13 - GREAT SMOKY MOUNTAINS NATIONAL PARK FINAL ESTIMATE # 28**

ITEM NO.	DESCR.	CONTRACTED				FINAL QUANTITIES		TOTAL CHANGE	PERCENT VARIATION	OVERRUN QUANTITY	
		QUANTITY	CM	AMENDED UNIT	UNIT PRICE	AMOUNT	AMOUNT				
55601CB	Aluminum bridge railing, two rail (CM #0006, 05/22/07, decrease quantity 746 m)	746.000	-746.000	0.000	m	\$320.00	\$0.00	\$0.00	-746.00	-100.00	0
60406	Inlet adjustment	1.000		1.000	Each	\$2,000.00	\$2,000.00	\$2,000.00	0.00	0.00	0
60501	Underdrain system (6-inch diameter) (CM #0007, 07/31/08, increase quantity 102.42 m)	92.000	102.420	194.420	m	\$100.00	\$19,442.00	\$19,442.00	102.42	111.33	0
60508	Granular backfill (CM #0007, 07/31/08, decrease quantity 35.1 m <sup>3</sup> )	45.000	-35.100	9.900	m <sup>3</sup>	\$75.00	\$742.50	\$742.50	-35.10	-78.00	0
60801E	Paved waterway, type 5 (CM #0007, 07/31/08, decrease quantity 41.5 m <sup>2</sup> )	55.000	-41.500	13.500	m <sup>2</sup>	\$100.00	\$1,350.00	\$1,350.00	-41.50	-75.45	0
62001BE	Class B masonry, rock face finish (CM #0007, 07/31/08, increase quantity 2.33 m <sup>3</sup> )	80.000	2.330	82.330	m <sup>3</sup>	\$4,500.00	\$370,485.00	\$370,485.00	2.33	2.91	0
62002A	Stone masonry guardwall, type 1 (CM #0007, 07/31/08, increase quantity 0.163 m)	25.000	0.163	25.163	m	\$3,750.00	\$94,361.25	\$94,361.25	0.16	0.65	0
62002B	Stone masonry guardwall, type 2 (CM #0007, 07/31/08, decrease quantity 1.8 m)	8.000	-1.800	6.200	m	\$3,000.00	\$18,600.00	\$18,600.00	-1.80	-22.50	0
62402K	Furnishing and placing topsoil, 100 mm depth (CM #0007, 07/31/08, decrease quantity 0.3 ha)	0.300	-0.300	0.000	ha	\$50,000.00	\$0.00	\$0.00	-0.30	-100.00	0
62509	Turf establishment (CM #0007, 07/31/08, increase quantity 0.035 ha)	0.300	0.035	0.335	ha	\$6,000.00	\$2,010.00	\$2,010.00	0.04	11.67	0
62901B	Erosion control mat type 2 (CM #0007, 07/31/08, decrease quantity 605 m <sup>2</sup> )	605.000	-605.000	0.000	m <sup>2</sup>	\$6.00	\$0.00	\$0.00	-605.00	-100.00	0
63505C	Barricade, type 3	2.000		2.000	Each	\$1,000.00	\$2,000.00	\$2,000.00	0.00	0.00	0
63507	Construction sign (CM #0007, 07/31/08, decrease quantity 0.99 m <sup>2</sup> )	15.000	-0.990	14.010	m <sup>2</sup>	\$225.00	\$3,152.25	\$3,152.25	-0.99	-6.60	0
63523	Maintenance of traffic, pavement patch (CM #0004, 10/17/06, decrease quantity 1857.76 t; CM #0007, 07/31/08, increase quantity 29.09 t)	2000.000	-1828.670	171.330	t	\$125.00	\$21,416.25	\$21,416.25	-1828.67	-91.43	0
63701	Field office	1.000		1.000	Each	\$60,000.00	\$60,000.00	\$60,000.00	0.00	0.00	0
64801	Agricultural limestone (CM #0007, 07/31/08, increase quantity 1.554 t)	3.000	1.554	4.554	t	\$500.00	\$2,277.00	\$2,277.00	1.55	51.80	0
66601	CM #0005, 04/12/07, Contract Modification Work (manhole openings - access for inspection)	100.000		100.000	LPSM	\$11,754.00	\$11,754.00	\$11,754.00	0.00	0.00	0

U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 EASTERN FEDERAL LANDS HIGHWAY DIVISION

**PRA-FOOT 8E13 - GREAT SMOKY MOUNTAINS NATIONAL PARK FINAL ESTIMATE # 28**

ITEM NO.	DESCR.	CONTRACTED			FINAL QUANTITIES			TOTAL PERCENT OVERRUN		
		QUANTITY	CM	AMENDED UNIT PRICE	AMOUNT	CURRENT PREVIOUS TO DATE	AMOUNT		CHANGE VARIATION QUANTITY	
66601	CM #0006, 05/22/07, Contract Modification Work (investigation - survey/engineering - curb & anchorages for bridges 9 and 10)	100.000		100.000 LPSM	\$18,912.33	\$18,912.33	0.00	0.00	0.00	0
66601	CM #0007, 07/31/08, Contract Modification Work (Liquidated Damages)	100.000		100.000 LPSM	-\$402,992.69	-\$402,992.69	0.00	0.00	0.00	0
66601	CM #0007, 07/31/08, Contract Modification Work (Low beam strength)	100.000		100.000 LPSM	-\$27,000.00	-\$27,000.00	0.00	0.00	0.00	0
66605	CM #0006, 05/22/07, Contract Modification Work (aluminum bridge railing, two rail, and anchorages)(CM #0007, 07/31/08, increase quantity 0.156 m)	128.156		128.156 m	\$682.00	\$87,402.39	0.00	128.156	0.16	0.12

**PRA-FOOT 8E13 - GREAT SMOKY MOUNTAINS NATIONAL PARK FINAL ESTIMATE # 28**

DATE TIME BEGAN: 07/11/05  
 DATE CONTRACT COMPLETE: 09/16/06  
 REVISED COMPLETION DATE: 01/19/07 by CM #0003

DAYS ALLOWED: 433  
 EXTENSIONS GRANTED BY CM: 125 by CM #0003

TOTAL DAYS ALLOWED: 558  
 DAYS USED: 913

TIME USED: 163.62%  
 to date/allowed: 03/05/08  
 WORK COMPLETE: 100.00%  
 to date/probable: 03/05/08

CONSTR FUNDS USED: 100.00%  
 to date/allotted: 100.00%  
 CE FUNDS USED: #DIV/0!  
 to date/allotted: 86.90%  
 CE BUDGET USED: 86.90%

TOTAL INCREASE DUE TO CMS: \$527,914.17  
 TOTAL DECREASE DUE TO CMS: -\$1,165,493.77

TOTAL INCREASE DUE TO OVERRUNS: \$0.00  
 TOTAL DECREASE DUE TO UNDERRUNS: \$0.00

CM #0001, 07/27/05, admn, replace page H-1 of contract  
 CM #0002, 12/08/05, substitute Class LMC for  
 Class HPC for bridge deck overlay  
 CM #0003, 01/25/06, 125 CD  
 CM #0004, 10/17/06, reduced Item 63523 & increased  
 Item 40907AB  
 CM #0005, 04/12/07, provide manhole access openings  
 CM #0006, 05/22/07, bridges 8, 9, & 10 railing & anchorages  
 CM #0007, 07/31/08, final quantities

CONSTRUCTION BID TO DATE

CONTRACT	\$4,673,957.40	\$4,016,377.80
DBE INCENTIVE	\$0.00	\$0.00
QUALITY INCENTIVE	\$0.00	\$0.00
SMOOTHNESS INCENTIVE	\$0.00	\$0.00
TOTAL	\$4,673,957.40	\$4,016,377.80

FUNDS AUTHORIZED  
 Proj 1515471220002; Org 1547001130; Task 540.00.R9L0.47  
 \$4,673,957.40 \$4,016,377.80

BALANCE OR DEFICIT \$0.00

\$691.07 int. pd est. 12, 14, 16, 17, & 18.

CONSTRUCTION ENGINEERING AUTHORIZED TO DATE PROBABLE TO DATE CN

TOTAL-ALL WORK CODES	\$0.00	\$955,884.56	\$1,100,000.00	27.39%
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C E BREAKDOWN FUNCTION C FUNCTION I FUNCTION M FUNCTION B FUNCTION S TOTAL

*TO DATE AUTHORIZED					\$0.00
EXPENDED	\$763,517.02	\$148,553.23	\$43,814.31		\$955,884.56
PROBABLE	\$860,000.00	\$170,000.00	\$60,000.00	\$5,000.00	\$1,100,000.00

EXPENDED PER DELPHI REPORTS AS OF 10/17/07, FY 08 & PP 20  
 \$1,157,429.77 PE EXPENDED PER DELPHI 10/17/07, FY 08 & PP 20

\*CE AUTH. PER DELPHI  
 DELPHI CE ACCOUNT NUMBERS Proj 1515471220002; Org 1547001130; Task 520.C0.R9L0.47

ACCOUNT NUMBER FOR PYRL: FOOT 8E13 CE-C-R9L

Contract Award \$4,673,957.40  
 Net CMs -\$657,579.60  
 TOTAL CONTRACT AMOUNT \$4,016,377.80

**FISCAL DATA RECORD**

**FOOT 8E13**

**CONTRACT DTFH71-05-C-00005**  
**with CHARLES BLALOCK & SONS, INC.**  
**TIN # 62-0692776**

disbursements to:

SUN TRUST BANK  
 SEVIERVILLE, TN 37862  
 0610 0010 4  
 (0001249282) CHARLES BLALOCK & SONS, INC.

CURRENT PROBABLES \$4,388,146.49  
 % TIME COMPLETE 165.23%  
 %WORK COMPLETE 99.98%

Proj 1515471220002; Org 1547001130; Task 540.00.R9L0.47

Date	Explanation	Disbursed	Allotment	Obligated	Liquidated	Unliq. Bal.	Unoblig. Bal.
			\$4,400,000.00			\$0.00	\$4,400,000.00
			\$273,957.40			\$0.00	\$4,673,957.40
						\$0.00	\$4,673,957.40
05/26/05	contract award amount CM #0001 being done in aq.			\$4,673,957.40		\$4,673,957.40	\$0.00
10/06/05	Est 01	\$147,674.21			\$147,674.21	\$4,673,957.40	\$0.00
12/08/05	CM #0002, change specs on item @ no change to cost to contractor 11/22/05					\$4,526,283.19	\$0.00
01/25/06	CM #0003, adl. 125 days			\$0.00	\$0.00	\$4,526,283.19	\$0.00
02/17/06	Est 02	\$515,987.99			\$515,987.99	\$4,010,295.20	\$0.00
03/23/06	Est 03	\$54,362.70			\$54,362.70	\$3,955,932.50	\$0.00
04/19/06	Est 04	\$265,153.11			\$265,153.11	\$3,690,779.39	\$0.00
05/23/06	Est 05	\$53,897.37			\$53,897.37	\$3,636,882.02	\$0.00
06/27/06	Est 06	\$110,792.35			\$110,792.35	\$3,526,089.67	\$0.00
07/21/06	Est 07	\$109,239.36			\$109,239.36	\$3,416,850.31	\$0.00
09/28/06	Est 08	\$99,297.67			\$99,297.67	\$3,317,552.64	\$0.00
09/21/06	Est 09	\$142,903.56			\$142,903.56	\$3,174,649.08	\$0.00
10/19/06	Est 10	\$31,809.19			\$31,809.19	\$3,142,839.89	\$0.00
10/17/06	CM #0004				\$0.00	\$3,142,839.89	\$0.00
11/16/06	Est 11	\$315,007.44			\$315,007.44	\$2,827,832.45	\$0.00
11/21/06	PR CN-07-032 \$11,754.00 provide manhole access openings Br. #8					\$2,827,832.45	\$0.00
12/21/06	Est 12 to finance 12/28/06	\$117,695.84			\$117,695.84	\$2,710,136.61	\$0.00
01/22/07	Est 13	\$91,201.99			\$91,201.99	\$2,618,934.62	\$0.00
02/16/07	Est 14	\$155,385.35			\$155,385.35	\$2,463,549.27	\$0.00
03/16/07	funding CN-07-032 appro R9L0		\$11,754.00			\$2,463,549.27	\$11,754.00
03/26/07	Est 15	\$119,613.29			\$119,613.29	\$2,343,935.98	\$11,754.00
04/12/07	CM #0005			\$11,754.00		\$2,355,689.98	\$0.00
04/17/07	Est 16	\$119,053.47			\$119,053.47	\$2,236,636.51	\$0.00
05/17/07	Est 17	\$66,323.89			\$66,323.89	\$2,170,312.62	\$0.00
05/22/07	CM #0006					\$132,511.67	\$132,511.67
06/20/07	Est 18	\$108,134.20			\$108,134.20	\$1,929,666.75	\$132,511.67
07/24/07	Est 19	\$63,884.66			\$63,884.66	\$1,865,782.09	\$132,511.67
08/21/07	Est 20	\$25,665.92			\$25,665.92	\$1,840,116.17	\$132,511.67
09/19/07	Est 21	\$121,617.87			\$121,617.87	\$1,718,498.30	\$132,511.67
10/22/07	Est 22	\$98,265.75			\$98,265.75	\$1,620,232.55	\$132,511.67
12/ /07	Est 23	\$204,246.98			\$204,246.98	\$1,415,985.57	\$132,511.67
12/19/07	Est 24	\$57,834.37			\$57,834.37	\$1,358,151.20	\$132,511.67
	Est 25	\$131,635.67			\$131,635.67	\$1,226,515.53	\$132,511.67
	<b>TOTALS</b>	\$3,326,684.20	\$4,685,711.40	\$4,685,711.40	\$3,459,195.87	\$1,226,515.53	\$132,511.67



FOOTHILLS PARKWAY STATION 25+477 TO 25+600 PRIOR TO CONSTRUCTION



FOOTHILLS PARKWAY STATION 25+477 TO 25+600 PRIOR TO CONSTRUCTION



FOOTHILLS PARKWAY STATION 25+477 TO 25+600 PRIOR TO CONSTRUCTION



FOOTHILLS PARKWAY DURING CONSTRUCTION



FOOTHILLS PARKWAY DURING CONSTRUCTION



CONSTRUCTION OF ABUTMENT AND PIER



ABUTMENT DURING CONSTRUCTION



PIER 2 DURING CONSTRUCTION



PIER DURING CONSTRUCTION



FOOTHILLS PARKWAY BRIDGE 8 DURING CONSTRUCTION



BRIDGE 8 DECK PLACEMENT



BRIDGE 8 DECK PAVING



BRIDGE 8 DECK PAVING



BRIDGE 8 RAIL PLACEMENT



BRIDGE 8 RAIL FINISHED



ROAD AND BRIDGE COMPLETE



BRIDGE 8 COMPLETE



BRIDGE 8 COMPLETE