

TRANSPORTATION PLANNING REPORT

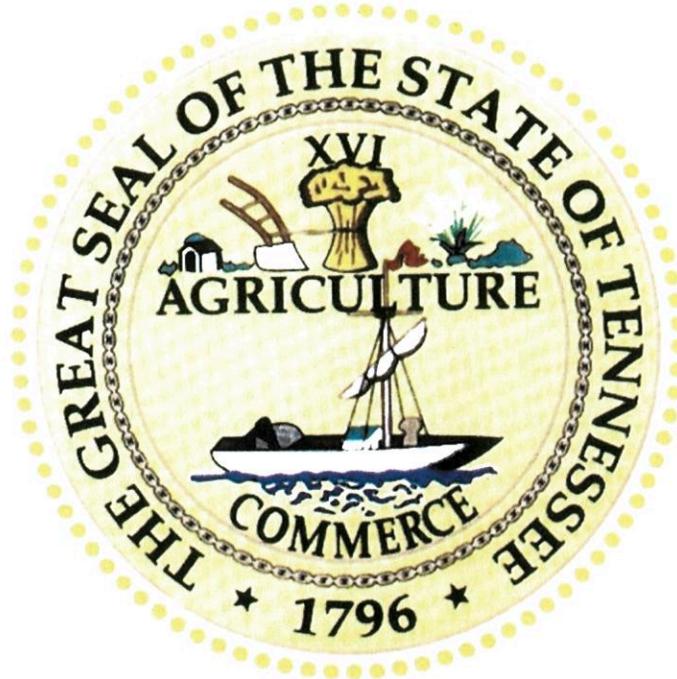
Special Bridge Replacement Program

LOCAL ROUTE 01443 (STANTON KOKO ROAD)

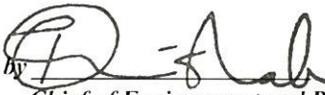
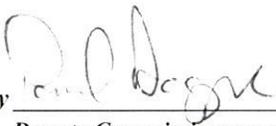
BRIDGE OVER PRAIRIE CREEK AT L.M. 2.54

HAYWOOD COUNTY

PIN: 118428.00

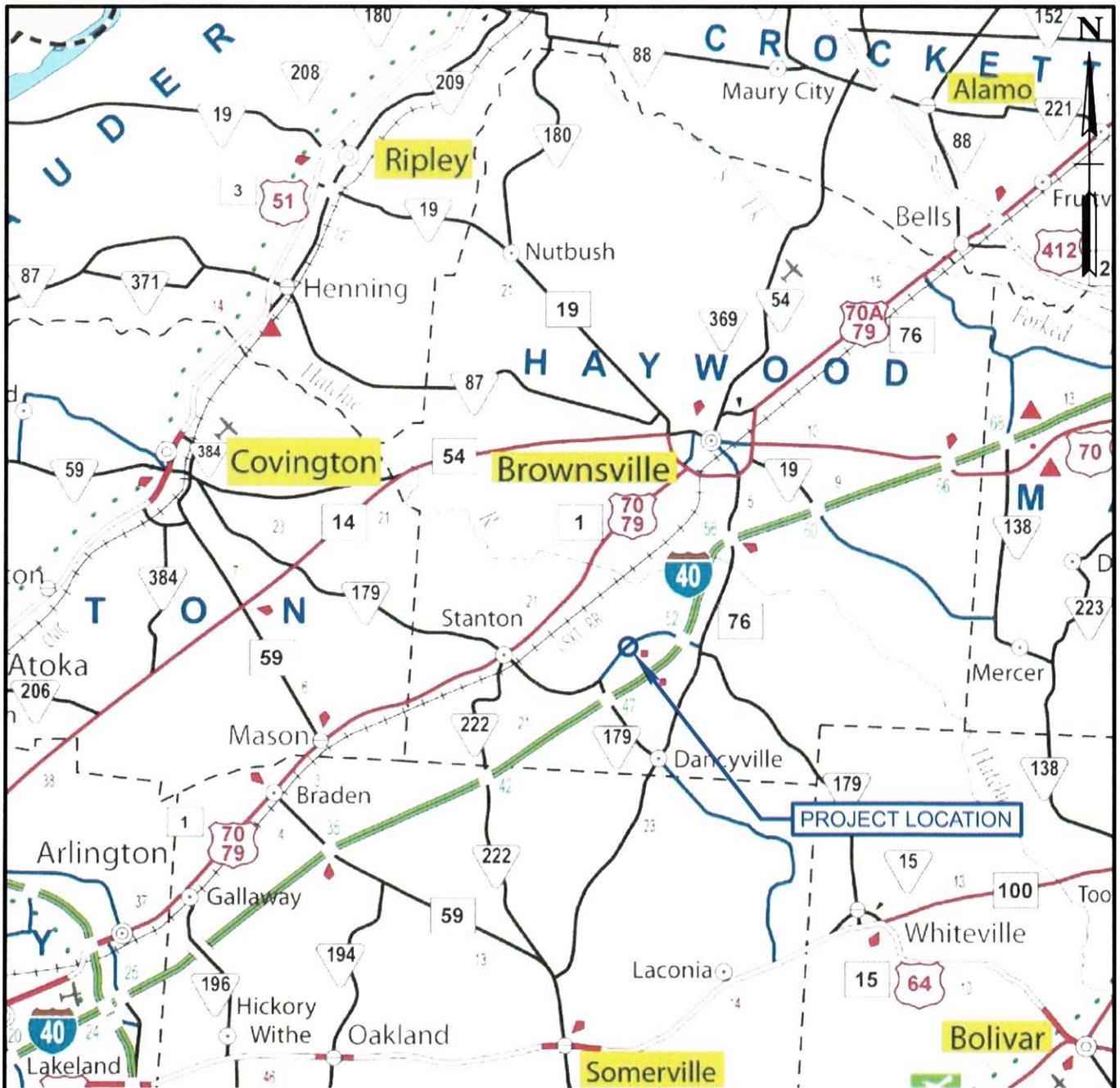


PREPARED BY
ALFRED BENESCH AND COMPANY
FOR THE
TENNESSEE DEPARTMENT OF TRANSPORTATION

Approved by  Date 1/9/14 Approved by  Date 2/12/14
Chief of Environment and Planning Deputy Commissioner and Chief Engineer

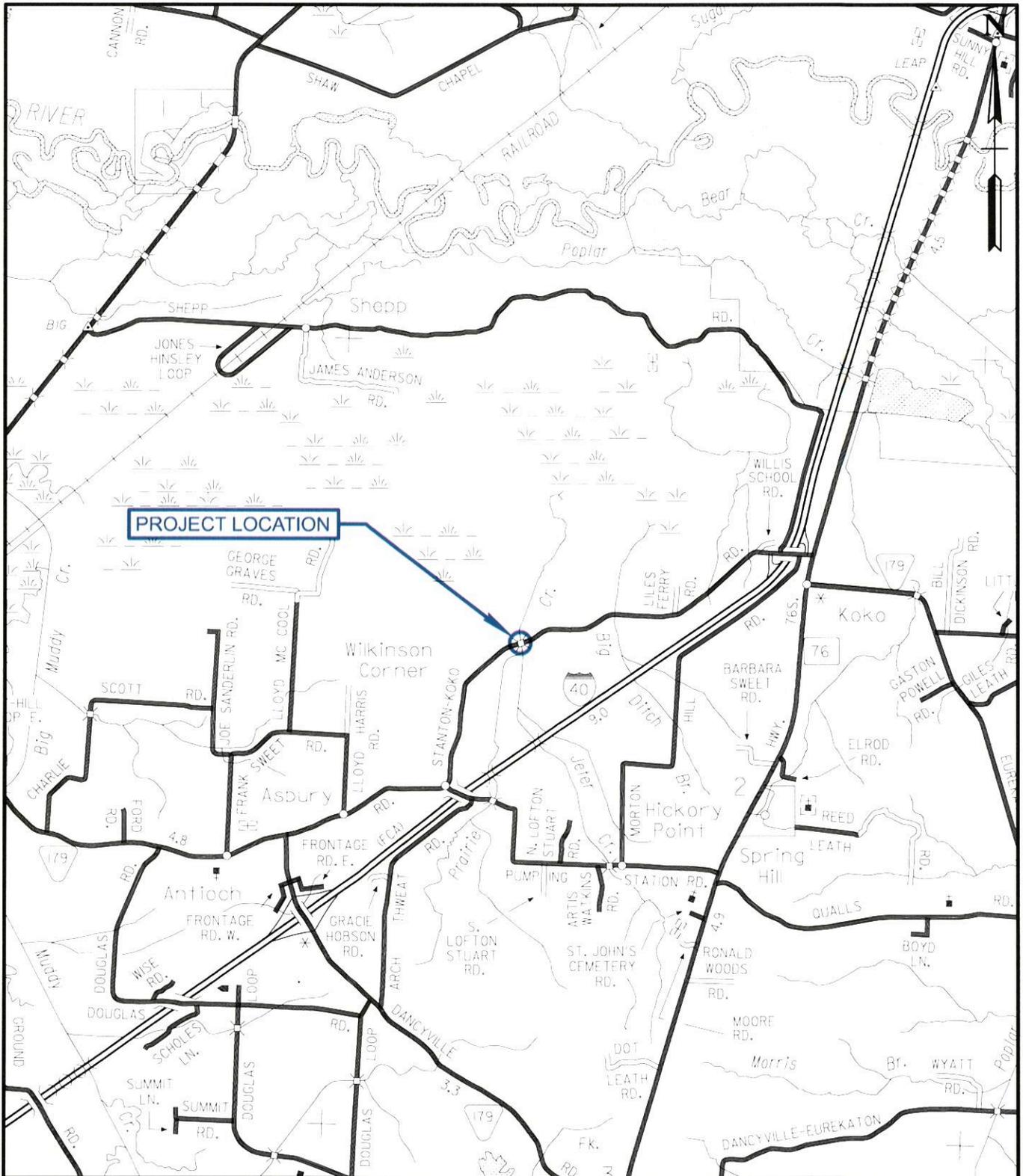
Approved by:	Signature:	Date:
Transportation Director Project Planning Division		8-2-13
Engineering Director Design Division		8-2-13
Engineering Director Structures Division		8-6-2013

This document is covered by 23 USC § 409 and its production pursuant to fulfilling public planning requirements does not waive the provisions of § 409.



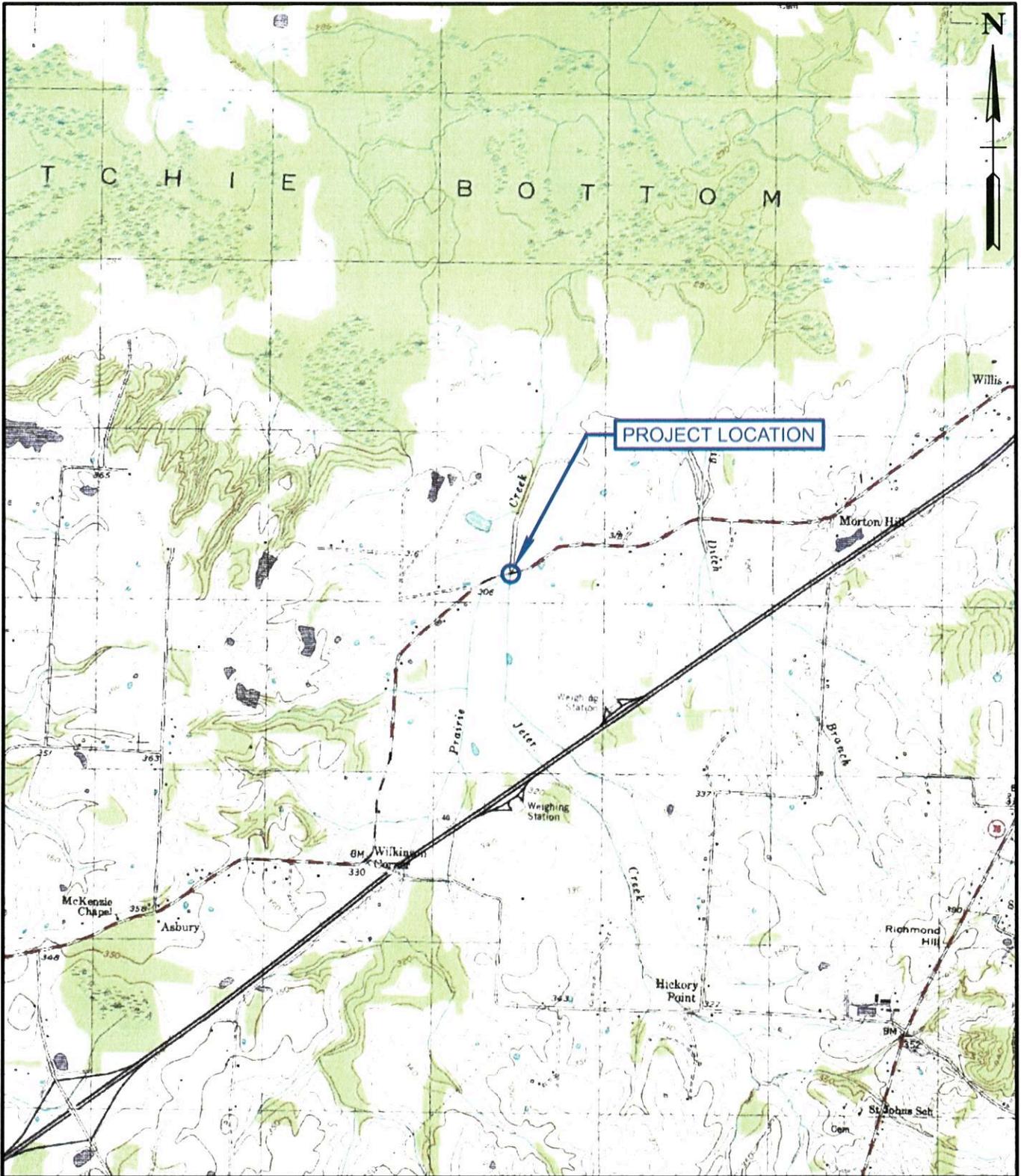
AREA MAP

COUNTY:	CITY:
HAYWOOD	STANTON
LR 1443 (STANTON KOKO RD)	
PIN 118428.00	
SCALE:	DATE:
1"= 10 MILES	3-28-13



LOCATION MAP

COUNTY:	HAYWOOD	CITY:	STANTON
LR 1443 (STANTON KOKO RD)			
PIN 118428.00			
SCALE:	1"= 1 MILE	DATE:	3-28-13



VICINITY MAP

COUNTY:	HAYWOOD	CITY:	STANTON
LR 1443 (STANTON KOKO RD)			
PIN 118428.00			
SCALE:	1" = 1/2 MILE	DATE:	3-28-13



AERIAL

COUNTY:	HAYWOOD	CITY:	STANTON
LR 1443 (STANTON KOKO RD.)			
PIN 118428.00			
SCALE:	1"= 500'	DATE:	3-28-13



EXISTING AND PROPOSED R.O.W. IS ESTIMATED AND INTENDED FOR PLANNING PURPOSES ONLY.



PROPOSED LAYOUT

COUNTY:	HAYWOOD	CITY:	STANTON
LR 1443 (STANTON KOKO RD)			
PIN 118428.00			
SCALE:	1" = 200'	DATE:	3-28-13

**TRANSPORTATION PLANNING WORKSHEET
BRIDGE REPLACEMENT ANALYSIS, NEEDS, AND COSTS**

County: Haywood Route: Local Route 01443 (Stanton Koko Road) Log Mile: 2.54
 Feature Crossed: Prairie Creek System: Local
 Functional Class: Rural / Local Bridge ID: 38S80520013

EXISTING CONDITIONS

2016 AADT: 300 App. Cross Section: 17' / 24' / 50' No. Lanes: 2
 Approach Alignment: curved west, curved east Year Built: 1960 Load Limit: 15 Tons
 Width (out to out): 25' Sidewalks: Right N/A Left N/A Length: 95'
 No. Spans: Approach: 2 Main: 3
 Substructure: Timber Vertical Clearance: N/A Sufficiency Rating: 51.3
 Other: Speed limit is not posted. Gas line attached to downstream side of bridge. Missing object marker. At&T UG cable is attached to upstream side of bridge. Newly installed waterline pipe (6") is visible protruding from the ground both east and west of the bridge. Blue flags are visible along upstream side of the bridge in line with protruding water lines.

PROPOSED IMPROVEMENTS

STANDARDS FROM RD01-TS-1A Type of Work: Replace
 Design Year: 2036 Design AADT: 360 Terrain Level ADL (F): -- (R): --
 Project Length: 400' Bridge Length: 100 ft Approach Length: 150' each approach
 Design Speed (MPH): 40 Posted Speed (MPH): _____
 Approach Width: 18' / 24' / As Req'd Bridge Width (O to O): 26.3 ft No. Lanes: 2
 Right-of-Way Required: 0.32 Acres Tract(s) 4 Structure Type: Concrete Span

MAINTENANCE OF TRAFFIC

Temporary Detour: Temporary Runaround: Stage Construct:
 Alternate Route: State Route 179 to State Route 76 to Stanton Koko Road

Remarks: Pumping Station Road to Morton Hill Road to Stanton Koko Road was determined not to be an acceptable detour route due to minimal roadway width and existing pavement condition. Local Partners request that construction and road closure be coordinated to minimize impact to agricultural activities.

ESTIMATED COST

Right-of-Way: \$21,000 Approaches: \$228,000 Structure: \$365,000
 Preliminary Engineering: \$78,500 Utilities: \$66,000 Misc./Cont.: \$71,400
 Mobilization: \$34,000 Total: \$863,900

Remarks: Existing alignment will be maintained and the grade will be raised 2' to maintain the low girder elevation.

Field Investigation by: Brian Gaffney, Greg Freeman (Benesch; Lisa Reaney (TDOT Planning)
 Erwin White, Burt Hutchins (TDOT Region 4 Design); Jason Moody (TDOT Region 4 Traffic); Tommy Cox (TDOT Utilities);
 Roger Lewis (TDOT ROW); Greg McCarley (Haywood Co.); Shane Hollin, Ronnie Owen (A2H); Kent Archer (SWTDD)

Route:	Local Route 01443 (Stanton Koko Road)
Description:	L.M. 2.54 Prairie Creek
County:	Haywood
Length:	400 feet
Date:	June 12, 2013

<u>DESCRIPTION</u>	<u>LOCAL</u>	<u>STATE</u>	<u>FEDERAL</u>	<u>TOTAL</u>
Right-of-Way	\$ 4,200	\$ -	\$ 16,800	\$ 21,000
Clearing and Grubbing	\$ 600	\$ -	\$ 2,400	\$ 3,000
Earthwork	\$ 2,200	\$ -	\$ 8,800	\$ 11,000
Railroad Crossing or Separation	\$ -	\$ -	\$ -	\$ -
Drainage	\$ 5,400	\$ -	\$ 21,600	\$ 27,000
Utilities	\$ 13,200	\$ -	\$ 52,800	\$ 66,000
Structures	\$ 73,000	\$ -	\$ 292,000	\$ 365,000
Pavement Removal	\$ -	\$ -	\$ -	\$ -
Paving	\$ 6,800	\$ -	\$ 27,200	\$ 34,000
Roadway and Pavement Appurtenances	\$ -	\$ -	\$ -	\$ -
Retaining Walls	\$ -	\$ -	\$ -	\$ -
Topsoil	\$ -	\$ -	\$ -	\$ -
Seeding	\$ -	\$ -	\$ -	\$ -
Sodding	\$ 1,400	\$ -	\$ 5,600	\$ 7,000
Rip-Rap or Slope Protection	\$ 2,600	\$ -	\$ 10,400	\$ 13,000
Fencing	\$ -	\$ -	\$ -	\$ -
Signing	\$ 600	\$ -	\$ 2,400	\$ 3,000
Pavement Markings	\$ 200	\$ -	\$ 800	\$ 1,000
Lighting	\$ -	\$ -	\$ -	\$ -
Signalization	\$ -	\$ -	\$ -	\$ -
Guardrail	\$ 3,200	\$ -	\$ 12,800	\$ 16,000
Pay Item Quantity Adjustment (15%) ¹	\$ 17,000	\$ -	\$ 68,000	\$ 85,000
Maintenance of Traffic	\$ 5,600	\$ -	\$ 22,400	\$ 28,000
Mobilization (5%)	\$ 6,800	\$ -	\$ 27,200	\$ 34,000
CONSTRUCTION COST (rounded)	\$ 142,800	\$ -	\$ 571,200	\$ 714,000
Engineering and Contingency (10%)	\$ 14,300	\$ -	\$ 57,100	\$ 71,400
TOTAL CONSTRUCTION COST (rounded)	\$ 157,100	\$ -	\$ 628,300	\$ 785,400
Preliminary Engineering (10%)	\$ 15,700	\$ -	\$ 62,800	\$ 78,500
PROJECT COST ²(rounded)	\$ 172,800	\$ -	\$ 691,100	\$ 863,900

¹ For estimating purposes, pay items are adjusted for fluctuation of cost based on quantity.

² For estimating future project costs, a compounded inflation rate of 10% should be applied from the date of this estimate.

TDOT PAY ITEM	TDOT DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
-	Right-of-Way	LS	1	\$ 20,900.00	\$ 20,900
RIGHT-OF-WAY TOTAL (ROUNDED)					\$ 21,000
201-01	Clearing and Grubbing	LS	1	\$ 2,440.00	\$ 2,440
CLEAR AND GRUBBING TOTAL (ROUNDED)					\$ 3,000
203-01	Road and Drainage Excavation	CY	1,067	\$ 10.00	\$ 10,667
EARTHWORK TOTAL (ROUNDED)					\$ 11,000
PAVEMENT REMOVAL TOTAL (ROUNDED)					\$ -
607-39.02	18" Sidedrain	LF	20	\$ 30.00	\$ 1,000
611-07.01	Endwall Concrete	CY	3	\$ 600.00	\$ 2,000
611-07.02	Endwall Steel	Lbs	274	\$ 3.00	\$ 1,000
611.07.03	Endwall Grates	Lbs	538	\$ 4.00	\$ 2,152
	Erosion Control	LS	1	\$ 20,000.00	\$ 20,000
DRAINAGE TOTAL (ROUNDED)					\$ 27,000
	Gas	LF	400	\$ 55.00	\$ 22,000
	Water	LF	400	\$ 55.00	\$ 22,000
	Poles	EA	3	\$ 2,000.00	\$ 6,000
	UG Telephone	LF	400	\$ 40.00	\$ 16,000
UTILITIES TOTAL (ROUNDED)					\$ 66,000
	New Bridge	SF	2,633	\$ 125.00	\$ 329,125
	Removal of Existing	SF	2,375	\$ 15.00	\$ 35,625
STRUCTURES TOTAL (ROUNDED)					\$ 365,000
RAILROAD CROSSING OR SEPARATION TOTAL (ROUNDED)					\$ -
411-01.10	Surface Course	TON	71	\$ 125.00	\$ 8,900
307-03.08	Binder Course	TON	121	\$ 85.00	\$ 10,245
303-01	Aggregate	TON	722	\$ 20.00	\$ 14,436
PAVING TOTAL (ROUNDED)					\$ 34,000
ROADWAY AND PAVEMENT APPURTENANCES TOTAL (ROUNDED)					\$ -
RETAINING WALLS TOTAL (ROUNDED)					\$ -
	Traffic Control	LS	1	\$ 28,000.00	\$ 28,000
MAINTENANCE OF TRAFFIC TOTAL (ROUNDED)					\$ 28,000
TOPSOIL TOTAL (ROUNDED)					\$ -
SEEDING TOTAL (ROUNDED)					\$ -
803-01	Sodding (New Sod)	SY	800	\$ 5.00	\$ 4,000
803-02	Trees	EA	12	\$ 250.00	\$ 3,000
SODDING TOTAL (ROUNDED)					\$ 7,000
713-11.01	"U" Section Steel Posts	144	Lbs	\$ 4.00	\$ 1,000
713-13.02	Flat Sheet Aluminum (0.080" Thick)	12	SF	\$ 15.00	\$ 1,000
713-15.36	Remove existing signs	4	EACH	\$ 50.00	\$ 200
SIGNING TOTAL (ROUNDED)					\$ 3,000

716-13.06	Spray Thermo Pvmnt Mrkng (40 mil)(4")	LM	0.53	\$	1,500.00	\$	795
PAVEMENT MARKINGS TOTAL (ROUNDED)							\$ 1,000
LIGHTING TOTAL (ROUNDED)							\$ -
SIGNALIZATION TOTAL (ROUNDED)							\$ -
FENCE TOTAL (ROUNDED)							\$ -
705-01.01	GR at Bridge Ends	LF	108	\$	65.00	\$	7,020
705-02.02	Single Guardrail (Type 2)	LF	50	\$	18.00	\$	900
705-04.02	Guardrail Terminal (Type-12)	EA	1	\$	1,000.00	\$	1,000
705-04.04	Guardrail Terminal (Type 21)	EA	3	\$	2,000.00	\$	6,000
705-04.05	Guardrail Terminal (Type-In-line)	EA	1	\$	700.00	\$	700
GUARDRAIL TOTAL (ROUNDED)							\$ 16,000
709-05.06	Class A-1	TON	233	\$	30.00	\$	7,000
709-05.08	Class B	TON	162	\$	35.00	\$	5,671
RIP-RAP OR SLOPE PROTECTION TOTAL (ROUNDED)							\$ 13,000



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

PROJECT PLANNING DIVISION
SUITE 1000, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-2208

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

MEMORANDUM

TO: Project Planning Division

FROM: Brian Gaffney, P.E.
Alfred Benesch & Company

DATE: June 12, 2013

SUBJECT: TPR Field Review (Special Bridge Replacement Program)
Local Route 1443-Stanton Koko Road Bridge Over
Prairie Creek (L.M. 2.54)
Haywood County, PIN 118428.00

A field review was held for the above-mentioned project on March 22, 2013.

The existing structure is 25.0 feet wide by 95.0 feet long and consists of an asphalt deck and concrete channel beams on timber pile abutments. The sufficiency rating for the project overflow bridge is 51.3. The 10-year and 100-year discharges and depths of flow Prairie Creek drainage basin were estimated using the appropriate regression equations. The 10-year and 100-year depth of flow estimates were 9.1 feet and 11.5 feet, respectively. The depth of flow estimates did not indicate roadway overtopping, which is consistent with information gathered in the field.

The roadway segment of Local Route 1443 (Stanton Koko Road) has a base year (2016) AADT of 300 vehicles/day and a design year (2036) AADT of 360 vehicles/day. The proposed structure over Prairie Creek will be designed to meet Road Design Standard RD01-TS-1A. Due to potential debris load, the proposed structure is a single span concrete bridge with a total out to out width of 26.33 feet. The structure is to contain two (2) nine foot (9') lanes and three foot (3') shoulders. The proposed bridge length is approximately 100 feet. The exact size and type of the structure will be determined by the TDOT Structures Division.

The proposed bridge is to maintain the existing horizontal alignment and raise the grade approximately two feet (2') to maintain low girder elevation. Local partners have agreed to close the road during construction. The proposed detour is State Route 179 to State Route 76 to Stanton Koko Road, a total distance of 14 miles (See Detour Map). Local Partners request that road closures are coordinated to minimize impacts to agricultural activities.

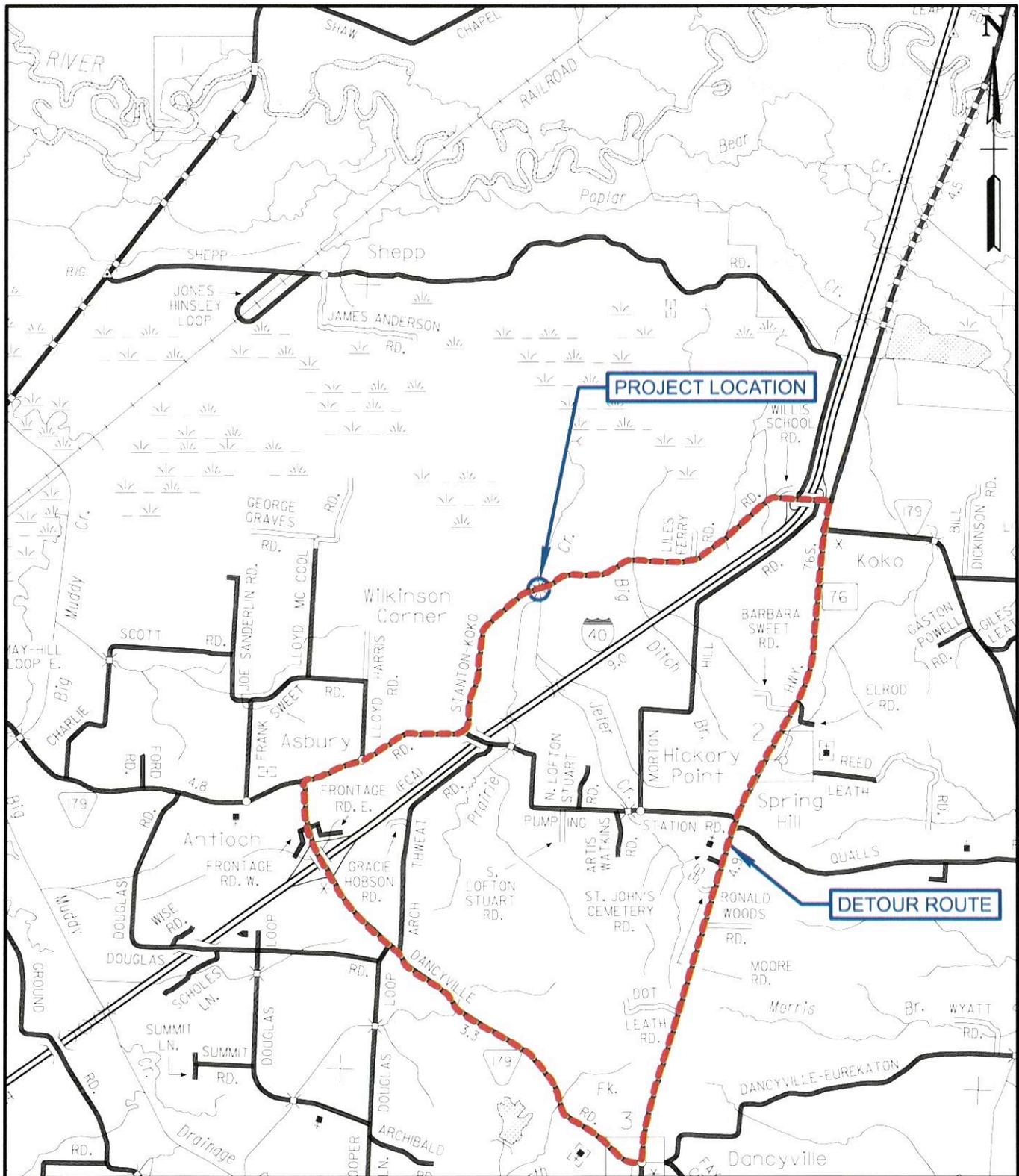
The required approach work, right-of-way, utility relocations, estimated replacement cost, and preliminary engineering are approximately \$863,900.

CC: File

CHECK LIST OF DETERMINANTS FOR LOCATION STUDY

If any of the following facilities or ESE categories are located within the project area or corridor, place an "x" in the blank opposite the item. Where more than one alternate is to be considered, place its letter designation in the blank.

1.	Agricultural land usage	X
2.	Airport (existing or proposed)	
3.	Commercial area, shopping center	
4.	Floodplains	X
5.	Forested land	
6.	Historical, cultural, or natural landmark	
7.	Industrial park, factory	
8.	Institutional usages	
a.	School or other educational institution	X
b.	Church or other religious institution (Cemetery)	X
c.	Hospital or other medical facility	
d.	Public building, e.g., fire station	
e.	Defense installation	
9.	Recreation usages	
a.	Park or recreational area	
b.	Game preserve or wildlife area	
10.	Residential establishment	
11.	Urban area, town, city, or community	
12.	Waterway, lake, pond, river, stream, spring	X
	Permit required:	
	Coast Guard	
	Section 404	X
	TVA Section 26a review	
	NPDES	X
	Aquatic Resource Alteration	X
13.	Other	
14.	Location coordinated with local officials	X
15.	Railroad crossings	
16.	Hazardous materials site	



DETOUR MAP

COUNTY:	HAYWOOD	CITY:	STANTON
LR 1443 (STANTON KOKO RD.)			
PIN 118428.00			
SCALE:	1" = 1 MILE	DATE:	3-28-13

**TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT PLANNING DIVISION**

PROJECT NO. 991091483-04 ROUTE 1447 STANTON ROAD
 COUNTY HAYWOOD CITY STANTON
 PROJECT PIN NUMBER _____
 PROJECT DESCRIPTION BRIDGE AND APPROACHES OVER FRAZIER CREEK @ I-75

DIVISION REQUESTING:

MAINTENANCE	<input type="checkbox"/>	PAVEMENT DESIGN	<input type="checkbox"/>
PLANNING	<input checked="" type="checkbox"/>	STRUCTURES	<input type="checkbox"/>
PROG DEVELOPMENT & ADM	<input type="checkbox"/>	SAFETY & DESIGN	<input type="checkbox"/>
PUBLIC TRANS & AIRO	<input type="checkbox"/>	TRAFFIC SIGNAL DESIGN	<input type="checkbox"/>
YEAR PROJECT PROGRAMME YEAR CONSTRUCTION		OTHER	<input type="checkbox"/>
PROJECT DUE DATING DATE			

TRAFFIC ASSIGNMENT:

BASE YEAR		DESIGN YEAR					DESIGN ROADWAY % TRUCKS		DESIGN AVERAGE DAILY TRAFFIC	
AADT	YEAR	AADT	DIV	%	YEAR	PERCENT	DDV	AADT	LEFT	RIGHT
300	2016	360	43	12	2036	65.35	3	5		

REQUESTED BY: NAME GENDA TYLES DATE 1/27/17
 DIVISION PROJECT PLANNING
 ADDRESS 1000 F. POLK BUILDING
NASHVILLE TN 37243

REVIEWED BY: TONY ARMSTRONG DATE 2/1/17
 TRANSPORTATION MANAGER 1
 SITE: 1000 FAMES & POLK BUILDING

APPROVED BY: BUDELY DANIEL DATE 1/27/17
 TRANSPORTATION MANAGER 2
 SITE: 1000 FAMES & POLK BUILDING

COMMENTS:

THIS TRAFFIC IS BASED ON 2012 CYCLE COUNT. THE FUTURE TRAFFIC IS BASED ON A 1% PER YEAR GROWTH RATE DUE TO THE ADAMS COMPLETE PROGRAM SHOWING A NEGATIVE GROWTH.

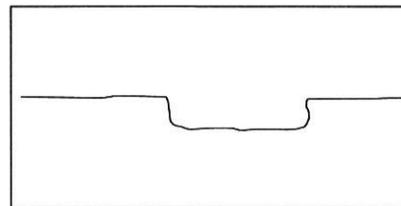
DIV'S ARE NOT REQUIRED FOR SIDE ROADS LESS THAN 1000 AADT
 NOTE: FOR BRIDGE REPLACEMENT PROJECTS, DIVS ARE NOT REQUIRED FOR AIMS OF 1000 OR LESS AND PERCENTAGE OF TRUCKS OF 7% OR LESS.
 SEE ALL ACTIVE SITES FOR TRAFFIC ASSIGNMENT AND APPROVAL REQUIREMENTS.

SITE INSPECTION

INSPECTION MADE BY: Greg Freeman, Michael Davis BRIDGE ID: 38S80520013 COUNTY: Haywood
 Date: 2/20/13 Route Name: LR 01443 (Stanton Koko Rd) Stream Name: Prairie Creek (LM 2.54)

CHANNEL

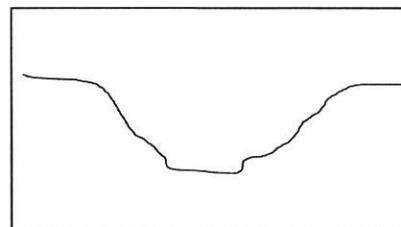
Approx depth and width of channel: Horizontal: 37' Vertical: 4' 3"
 Depth of normal flow: 3' In Reservoir: Yes No
 Depth of Ordinary High Water: 15'
 Type of material in stream bed: Silt
 Type of vegetation on banks: low growth, large timber
 "N" factor of the channel: 0.04
 Are channel banks stable: Yes No
 If the streambed is gravel: D₃₀ = -- D₈₅ = --
 Skew of the channel with the roadway: 75°



Channel Shape Sketch

FLOODPLAIN

Is the skew same as the channel? Yes No
 Is it symmetrical about the channel? Yes No
 Type of vegetation in the floodplain and "N" factors
 Left U.S.: Fields Right U.S.: Fields
 Left D.S.: Fields Right D.S.: Fields
 Are roadway approaches lower than the structure? Yes No
 Are there any buildings in the floodplain? Yes No
 Approx. floor elevations: N/A
 Flood information from local residents:
 (elevations & dates) N/A



Floodplain Sketch

EXISTING STRUCTURE

Length: 95' No. of spans: 5 Structure type: Conc. Channel No. of lanes: 2 Skew: 75°
 Width (out to out): 25' Width (curb to curb): 24' Approach: paved graveled
 Sidewalks on Structure: Yes No Bridgerail type: N/A Bridgerail height = N/A
 Superstructure depth: 5.17' Finished Grade to low girder = 20" Girder depth = 12"
 Are any substructures in the channel? Yes No Vertical Clearance = N/A ft
 Indications of overtopping: None
 High water marks: Drift brush was visible in the trees approximately 5 feet below low girder
 Local scour: Yes No
 Any signs of stream aggradation or degradation? Debris build-up evident in the channel
 Any drift or drift potential? Yes, Drift visible at structure No
 Any obstructions (pipes, stock fences, etc.)? None

PROPOSED STRUCTURE

Replacement Rehabilitate Widening New Location
 Bridge length: 100 ft Bridge type: Concrete Span Span arrangement: Single Span Skew: 75°
 Bridge width: 26.3 ft Sidewalks: None Design Speed (MPH): 40 ADT (2036) = 360
 Proposed grade: Raise 2' to maintain low girder elev. Proposed alignment: Maintain existing
 Method of maintaining traffic: Stage construction On site detour Close road Shift Centerline
 Cost of proposed Structure: \$125 per ft² X 26 / 100 length (ft) / width (ft) Cost = \$329,125
 Cost of bridge removal: \$15 per ft² X 25 / 95 length (ft) / width (ft) Cost = \$35,625
 Detour structure: Type and size = None Cost = \$0

Total Structure Cost = \$365,000

**Bridge TPR Flow Calculations
For Hydrologic Area 4
Area > 186 Acres**

County: <u>Haywood</u>	By: <u>GVF</u>
Bridge ID: <u>38S80520013</u>	Date: <u>6/12/13</u>
Route: <u>LR 01443 (Stanton Koko Rd)</u>	PIN: <u>118428.00</u>
Feature Crossed: <u>Prairie Creek</u>	
Log Mile: <u>2.54</u>	

DRAINAGE BASIN

Measurement from quad =	4,275 acres
Contributing Drainage Area, CDA = acres/640 =	6.68 sq. mi.

USGS REGRESSION EQUATIONS FOR FLOW

$Q_2 = 431(CDA)^{0.529} =$	1,177 cfs
$Q_5 = 615(CDA)^{0.545} =$	1,731 cfs
$Q_{10} = 735(CDA)^{0.554} =$	2,105 cfs
$Q_{25} = 883(CDA)^{0.563} =$	2,572 cfs
$Q_{50} = 991(CDA)^{0.568} =$	2,914 cfs
$Q_{100} = 1100(CDA)^{0.573} =$	3,266 cfs

DEPTH OF FLOW EQUATIONS

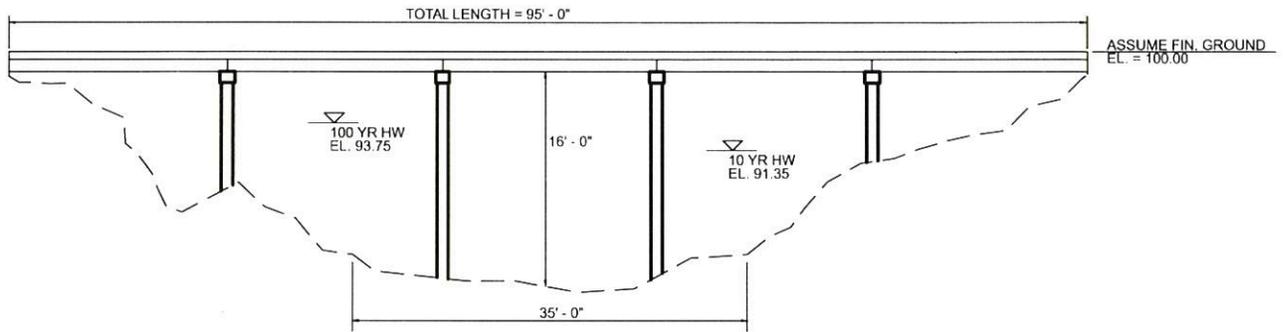
10-Year Flood Depth = $6.98(CDA)^{0.142} =$	9.1 ft
100-Year Flood Depth = $9.24(CDA)^{0.116} =$	11.5 ft

AREAS

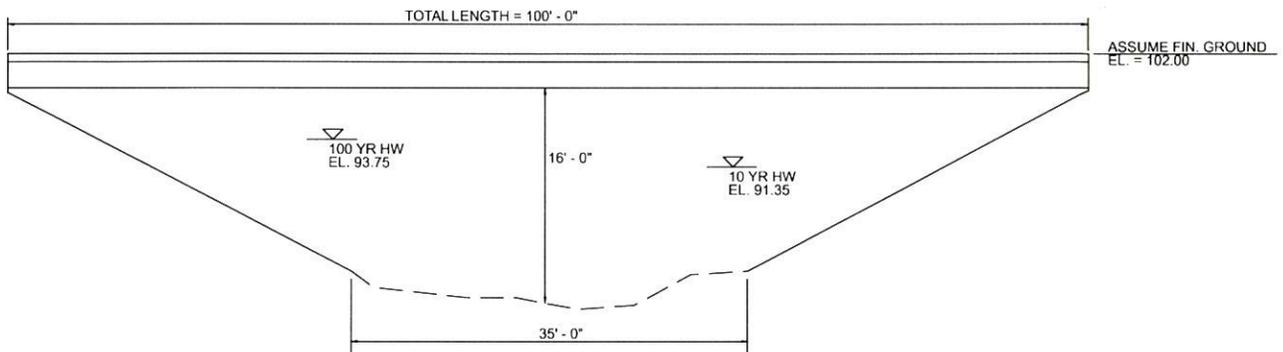
Existing Area Below Low Chord =	1,035 ft ²
Proposed Area Below Low Chord =	1,080 ft ²
Proposed 10-Year Flood Area, $A_{10} =$	671 ft ²
Proposed 100-Year Flood Area, $A_{100} =$	487 ft ²

VELOCITIES

Proposed 10-Year Flood Velocity, $V_{10} = Q_{10}/A_{10} =$	3.1 fps
Proposed 100-Year Flood Velocity, $V_{100} = Q_{100}/A_{100} =$	6.7 fps



EXISTING STRUCTURE



PROPOSED STRUCTURE



**BRIDGE
PROFILE**

COUNTY:	HAYWOOD	CITY:	STANTON
LR 1443 (STANTON KOKO RD)			
PIN 118428.00			
SCALE:	N.T.S.	DATE:	3-28-13

Project Photographs
Transportation Planning Report
Local Route 1443-Stanton Koko Road
Bridge Over Prairie Creek
Haywood County
Date Photos Taken: 02/20/2013



Photograph 1

Bridge Number
38-1443-2.54



Photograph 2

Westbound approach.

Project Photographs
Transportation Planning Report
Local Route 1443-Stanton Koko Road
Bridge Over Prairie Creek
Haywood County
Date Photos Taken: 02/20/2013



Photograph 3
View looking East from
bridge.



Photograph 4
Eastbound approach.

Project Photographs
Transportation Planning Report
Local Route 1443-Stanton Koko Road
Bridge Over Prairie Creek
Haywood County
Date Photos Taken: 02/20/2013



Photograph 5

View looking West from bridge.



Photograph 6

Upstream.

Project Photographs

Transportation Planning Report

Local Route 1443-Stanton Koko Road

Bridge Over Prairie Creek

Haywood County

Date Photos Taken: 02/20/2013



Photograph 7

Upstream left. Also visible is confluence of second stream.



Photograph 8

Upstream right. Also visible is confluence of second stream.

Project Photographs
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Local Route 1443-Stanton Koko Road
Bridge Over Prairie Creek
Haywood County
Date Photos Taken: 02/20/2013



Photograph 9
Downstream



Photograph 10
Downstream left.

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Photograph 11
Downstream right.



Photograph 12
Inlet.

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Bridge Over Prairie Creek
Haywood County
Date Photos Taken: 02/20/2013



Photograph 13
West side bank and abutment.



Photograph 14
Debris in substructure of the bridge.

Project Photographs
Transportation Planning Report
Local Route 1443-Stanton Koko Road
Bridge Over Prairie Creek
Haywood County
Date Photos Taken: 02/20/2013



Photograph 15

Newly installed waterline is visible on the east and west side of bridge. Blue flags indicate path of installation.



Photograph 16

View of westbound approach. Blue flags visible (waterline). Orange spray paint dashed line indicates AT&T underground cable (attached to bridge). Not visible is underground gas line (also attached to bridge) opposite side of road.