

**TENNESSEE DEPARTMENT OF TRANSPORTATION  
STRATEGIC TRANSPORTATION INVESTMENTS DIVISION**

PROJECT NO.: 24029-1207-94 ROUTE: S.R. 193  
 COUNTY: FAYETTE CITY: \_\_\_\_\_  
 PROJECT PIN NUMBER: 124285.00  
 PROJECT DESCRIPTION: BRIDGE OVER BRANCH (L.M. 11.48)  
BRIDGE ID: 24015420001

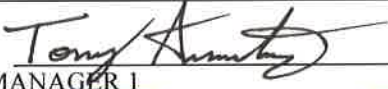
**DIVISION REQUESTING:**

MAINTENANCE  PAVEMENT DESIGN   
 S.T.I.D.  STRUCTURES   
 PROG. DEVELOPMENT & ADM.  SURVEY & ROADWAY DESIGN   
 PUBLIC TRANS. & AERO.  TRAFFIC SIGNAL DESIGN   
 OTHER   
 YEAR PROJECT PROGRAMMED FOR CONSTRUCTION: \_\_\_\_\_  
 PROJECTED LETTING DATE: \_\_\_\_\_

**TRAFFIC ASSIGNMENT:**

BASE YEAR		DESIGN YEAR					DESIGN ROADWAY % TRUCKS		DESIGN AVERAGE DAILY LOADS	
AADT	YEAR	AADT	DHV	%	YEAR	DIR.DIST.	DHV	AADT	FLEX	RIGID
1,540	2022	1,730	190	11	2042	65-35	3	4	42	58

REQUESTED BY: NAME MICHAEL GILBERT DATE 2/28/18  
 DIVISION S.T.I.D.  
 ADDRESS J.K. POLK BLDG.  
NASHVILLE, TN. 37243

REVIEWED BY: TONY ARMSTRONG  DATE 2.28.18  
 TRANSPORTATION MANAGER I  
 SUITE 1000, JAMES K. POLK BUILDING

APPROVED BY: JIM WATERS  DATE 3/1/18  
 ASSISTANT DIRECTOR  
 SUITE 1000, JAMES K. POLK BUILDING

**COMMENTS:**

THIS TRAFFIC BASED ON 2017 CYCLE COUNTS. THE DESIGN YEAR TRAFFIC BASED ON GROWTH RATE FROM THE MEMPHIS MPO COMPUTER ASSIGNMENT MODEL.

**DHV'S ARE NOT REQUIRED FOR SIDE ROADS LESS THAN 1000 AADT.**

NOTE: FOR BRIDGE REPLACEMENT PROJECTS, ADLs ARE NOT REQUIRED FOR ADTs OF 1000 OR LESS AND PERCENTAGE OF TRUCKS OF 7% OR LESS.

SEE ATTACHMENTS FOR TURNING MOVEMENTS AND/OR OTHER DETAILS.

(REV. 2/22/17)

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 BRIDGE ID: 240154200001

**FAP Rural**

Pavement Structural Design

Calculation of Equivalent Daily 18 Kip Single Axle Loads

Type Vehicle	ADT (No. Counted)	Flexible		Rigid	
		18-kip Factor	ADL	18-kip Factor	ADL
Pass. cars and motorcycles (1-2)	973	0.001	1	0.001	1
Pick-up, Panel, Van (3)	597	0.005	3	0.004	2
Sing. Unit Buses (4)	0	0.300	0	0.300	0
2-axle, 6-tire (5)	13	0.240	3	0.310	4
3-axle or more (6-7)	26	1.700	44	2.300	60
Comb. 4-axle (8)	11	1.110	12	1.500	17
5-axle or more (9-13)	15	1.320	20	2.200	33
<b>Totals (2032 AADT)</b>	1,635		83		117

Suggested Percentages of Trucks in Design Lane

5,000 or less ADT            95%  
 5,000 - 10,000 ADT        90%  
 10,000 - 15,000 ADT      85%  
 15,000 - 20,000 ADT      80%  
 20,000 - 30,000 ADT      75%  
 30,000 - 40,000 ADT      70%  
 40,000 Plus                 60%

No. of Lanes: 2

% Trucks in Design Lane: 100%

ADL in Design Lane:

FLEX:	0.5	X	1.00	X	83.3	=	42
RIGID:	0.5	X	1.00	X	116.7	=	58

ADL Calculations By: RANDY BOGUSKIE  
 Reviewed By: Tony Amato  
 [REV. 7/1/14]

Date: 2/28/2018  
 Date: 2.28.18



FAYETTE COUNTY  
S.R. 193 @ L.M. 11.48