

**TENNESSEE DEPARTMENT OF TRANSPORTATION  
PLANNING DIVISION**

PROJECT NO.: 49S371-S1-003 ROUTE: S.R. 371  
COUNTY: LAUDERDALE CITY: \_\_\_\_\_  
PROJECT PIN NUMBER: 136185.13  
PROJECT DESCRIPTION: BRIDGE OVER BRANCH @ L.M. 1.39  
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\_\_\_\_\_  
\_\_\_\_\_

**DIVISION REQUESTING:**MAINTENANCE ☐S.T.I.D. ☐PROG. DEVELOPMENT & ADM. ☐PUBLIC TRANS. & AERO. ☐PAVEMENT DESIGN ☐STRUCTURES ☐SURVEY & ROADWAY DESIGN ☐TRAFFIC SIGNAL DESIGN ☐OTHER GRESHAM-SMITH ☒YEAR PROJECT PROGRAMMED FOR CONSTRUCTION: 2029PROJECTED LETTING DATE: 2029**TRAFFIC ASSIGNMENT:**

BASE YEAR		DESIGN YEAR					DESIGN ROADWAY % TRUCKS		DESIGN AVERAGE DAILY LOADS	
AADT	YEAR	AADT	DHV	%	YEAR	DIR.DIST.	DHV	AADT	FLEX	RIGID
940	2029	1,200	156	13	2049	65-35	2	3	20	27

REQUESTED BY: NAME BEN COLES DATE 8/4/25  
DIVISION GRESHAM-SMITH  
ADDRESS 222 2<sup>nd</sup> AVE. SOUTH SUITE 1400  
NASHVILLE TN 37201-2308

REVIEWED BY: ASHLIE BEVAN Ashlie Bevan DATE 8/4/2025  
TRANSPORTATION PROG. SUPERVISOR  
SUITE 1000, JAMES K. POLK BUILDING

APPROVED BY: TONY ARMSTRONG Tony Armstrong DATE 8/4/2025  
TRANSPORTATION MANAGER 2  
SUITE 1000, JAMES K. POLK BUILDING

**COMMENTS:**

FURNISH THE 2029-2049 ADL's FOR PAVEMENT DESIGN.

THIS TRAFFIC IS BASED ON A 2023 CYCLE COUNT. THE DESIGN YEAR TRAFFIC IS  
BASED ON GROWTH RATE FROM THE TN-TIMES LINEAR REGRESSION TOOL.  
ADL's ARE INCLUDED.

**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. 4/1/25)

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ROUTE NO.: S.R. 371

COUNTY: LAUDERDALE

CITY:

PROJECT DESCRIPTION: BRIDGE OVER BRANCH @ L.M. 1.39

### 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)		763	0.001	1	0.001	1
Pick-up, Panel, Van (3)		275	0.005	1	0.004	1
Sing. Unit	Buses (4)	2	0.300	1	0.300	1
	2-axle, 6-tire (5)	7	0.240	2	0.310	2
	3-axle or more (6-7)	16	1.700	27	2.300	37
	4-axle (8)	3	1.110	3	1.500	5
Comb.	5-axle or more (9-13)	4	1.320	5	2.200	9
Totals (2039 AADT)		1,070		40		55

#### 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	40.2	=	20
RIGID:	0.5	X	1.00	X	54.7	=	27

ADL Calculations By: Ashlie Bevan

Date: 8/4/2025

Reviewed By:

*Tony Armstrong*

Date: 8/4/2025

[REV. 6/12/24]