

**TENNESSEE DEPARTMENT OF TRANSPORTATION
PLANNING DIVISION**

PROJECT NO.: 49S087-S1-007 ROUTE: S.R. 87
COUNTY: LAUDERDALE CITY: _____
PROJECT PIN NUMBER: 136185.12
PROJECT DESCRIPTION: BRIDGE OVER BRANCH @ L.M. 19.11

DIVISION REQUESTING:

MAINTENANCE	<input type="checkbox"/>	PAVEMENT DESIGN	<input type="checkbox"/>
S.T.I.D.	<input checked="" type="checkbox"/>	STRUCTURES	<input type="checkbox"/>
PROG. DEVELOPMENT & ADM.	<input type="checkbox"/>	SURVEY & ROADWAY DESIGN	<input type="checkbox"/>
PUBLIC TRANS. & AERO.	<input type="checkbox"/>	TRAFFIC SIGNAL DESIGN	<input type="checkbox"/>
		OTHER	<input type="checkbox"/>

YEAR PROJECT PROGRAMMED FOR CONSTRUCTION: 2029
PROJECTED 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
1,910	2029	2,100	231	11	2049	65-35	1	2	20	29

REQUESTED BY: NAME BEN COLES DATE 8/4/25
DIVISION GRESHAM-SMITH
ADDRESS 222 2nd 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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FAP Urban

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)		1,411	0.001	1	0.001	1
Pick-up, Panel, Van (3)		553	0.004	2	0.004	2
Sing. Unit	Buses (4)	2	0.300	1	0.300	1
	2-axle, 6-tire (5)	6	0.260	2	0.260	2
	3-axle or more (6-7)	11	1.000	11	1.500	17
	4-axle (8)	6	0.640	4	0.800	5
Comb.	5-axle or more (9-13)	16	1.200	19	1.900	30
Totals (2039 AADT)		2,005		40		57

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	39.8	=	20
RIGID:	0.5	X	1.00	X	57.5	=	29

ADL Calculations By: TONY ARMSTRONG Date: 8/4/2025
 Reviewed By: Ashlie Bevan Date: 8/4/2025
 [REV. 6/12/24]