

SHEET 1 LTPP TRAFFIC DATA SUMMARY TRANSMITTAL FORM	*STATE ASSIGNED ID <u>[0031]</u>
	*STATE CODE <u>[21]</u>
	*SHRP SECTION ID <u>[3016]</u>

STATE OR PROVINCE KENTUCKY COUNTY BULLITT
 HIGHWAY ROUTE NO. I-65 MILEPOST# 106.500
 NEAREST CITY/TOWN LEBANON JUNCTION NEAREST INTERSECTION KY 61
 FUNCTIONAL CLASS 01 NO. LANES EACH DIRECTION 3 TOTAL NO. LANES 6
 DIRECTION OF TRAVEL GPS LANE NORTH DATE OPENED TO TRAF. 11-15-85
 FIPS COUNTY CODE 029 FHWA STATION IDENTIFICATION NO. _____
 HPMS SAMPLE NO. 009065/03308 HPMS SUBDIVISION NO. _____
 TYPE OF PAVEMENT: AC _____ PCC ☒ OTHER _____
 CONTROL OF ACCESS: YES _____ NO _____ MEDIAN: YES ☒ NO _____
 CURRENT SURROUNDING DEVELOPMENT:
 URBAN _____ SUBURBAN _____ RURAL ☒
 HAS INTENSITY OF ROADSIDE DEVELOPMENT INCREASED OVER PAST 10 YEARS?
 YES _____ NO ☒
 IF YES, DESCRIBE CHANGES _____

Note
 Recast
 from 4
 6 lane
 to 11 lbs.
 11/85

NOTE: ATTACH ALL RELATED FORMS AND COUNT DATA AND SUBMIT TO THE
 SHRP REGIONAL OFFICE. ATTACH MAP INDICATING THE LOCATION OF
 EACH TRAFFIC COUNT, VEHICLE CLASSIFICATION COUNT, OR WEIGHT
 STATION RELATIVE TO THIS GPS TEST SECTION.

NAME OF PREPARER <u>A. Rucker</u>	PHONE # <u>564-7183</u>
DATE PREPARED <u>1-15-91</u>	

SHEET 2
LTPP TRAFFIC DATA
TRAFFIC VOLUMES
AND LOAD ESTIMATES

*STATE ASSIGNED ID (0051)
 *STATE CODE (21)
 *SHRP SECTION ID (3016)

YEAR	1. ESTIMATED TOTAL VEHICLES AADT (TWO-WAY)	2. ESTIMATED TOTAL TRUCK AADT (TWO-WAY) 33.7	3. ESTIMATED TOTAL VEHICLES AADT GPS LANE 18.6	4. ESTIMATED TOTAL TRUCKS AADT GPS LANE 47.2	5. ESTIMATED ESAL'S/YR GPS LANE (1000's)
1989	- 33500	11290	6230	2940	910.3
1988	- 33000	11120	6140	2900	877.8
1987	- 30800	10380	5730	2705	801.1
1986	- 29800	10045	5545	2615	757.7
1985					
1984					
1983					
1982					
1981					
1980					
1979					
1978					
1977					
1976					
1975					
1974					
1973					
1972					
1971					
1970					
1969					
1968					
1967					
1966					
1965					

NAME OF PREPARER _____ PHONE # _____
 DATE PREPARED _____

LTPP TRAFFIC DATA PROCEDURES FOR ESTIMATING ANNUAL AVERAGE VOLUMES AND TOTAL ANNUAL ESALS

*STATE ASSIGNED ID [0021]

*STATE CODE [21]

*SHRP SECTION ID [3016]

1. Year Applicable 1986, 87, 88, 89

2. METHOD FOR ESTIMATING AADT

- ☐ Factored a single count taken this year at the GPS site.
- ☐ Averaged multiple counts taken this year at the GPS site.
- ☐ Averaged and factored multiple counts taken this year at the GPS site.
- ☒ Growth factored last year's estimate.
- ☐ Estimated based on volume counts at nearby locations.
- ☐ Used flow maps.
- ☐ Used computerized network analyses.
- ☐ Other: _____

3. METHOD FOR ESTIMATING TRUCK VOLUMES OR PERCENTAGES

- ☐ Used a single count taken this year at the GPS site.
- ☐ Factored a single count taken this year at the GPS site.
- ☐ Averaged multiple counts taken this year at the GPS site.
- ☐ Used system averages from counts taken this year.
- ☐ Used count data from nearby sites.
- ☐ Used count data taken in earlier years at the GPS site.
- ☐ Used system averages taken in earlier years at the GPS site.
- ☐ Used computerized network analyses.
- ☒ Other: USED 1990 CLASS CT.

4. METHOD FOR ESTIMATING AADT BY GPS LANE

- ☒ Based on actual lane count data. 1990 CLASS CT.
- ☐ System distribution factors.
- ☐ Other: _____

5. METHOD FOR ESTIMATING TRUCK AADT IN GPS LANES

- ☒ Based on actual lane count data. 1990 CLASS CT.
- ☐ System distribution factors.
- ☐ Other: _____

6. METHOD FOR ESTIMATING ESAL/VEHICLE

- ☐ ESAL/Truck.
- ☐ ESAL/Vehicle class. (no. of classes) _____
- ☒ Other: USED NY'S ESAL ESTIMATION METHOD

7. ESAL ESTIMATES

(A) Source of Data

- ☐ Weight data collected at GPS site this year.
- ☐ Weight data collected at GPS site prior years.
- ☐ Weight data from system averages this year.
- ☐ Weight data from system averages prior years.
- ☐ Weight data from historic W-4 Tables used.
- ☒ Other: USED NY'S ESAL ESTIMATION METHOD

(B) Weight Scale Type

- ☒ WIM scale. 1990
- ☐ Static scale used for enforcement.
- ☐ Static scale not used for enforcement.
- ☐ Other: _____

NAME OF PREPARER A. RUCKER
DATE PREPARED 1-15-91

PHONE # 502 564-7183

SHEET 8

LTPP TRAFFIC DATA

VEHICLE CLASSIFICATION DATA
FHWA 13-CLASS SYSTEM

*STATE ASSIGNED ID [0051]

*STATE CODE [21]

*SHRP SECTION ID [3016]

HIGHWAY RT. NO. (THIS COUNT) 2-65 MILEPOST# (THIS COUNT) 106-500LOCATION (THIS COUNT) MP 106-500 FUNCTIONAL CLASS 01BEGINNING DATE 9-10-90 ENDING DATE 9-13-90BEGINNING TIME 8:00 PM ENDING TIME 8:15 PM DURATION (HRS) 24TYPE OF COUNT: MANUAL ☒ AUTOMATED ☐ NO. OF LANES COUNTED TYPE OF EQUIP.: AVC PERM. ☐ AVC PORT. ☐ WIM PERM. ☐ WIM PORT. ☐EQUIPMENT NAME / MODEL # TOTAL NO. OF VEHICLES CLASSIFIED 27957 # TRUCKS 9412 % TRUCKS 33.7NO. OF TRUCKS IN GPS LANE 2455 % OF TRUCKS IN GPS LANE 47.2VEHICLE CLASSIFICATION METHOD: FHWA ☒ OTHER ☐ # BINS

NOTE: IF THIS COUNT DOES NOT USE THE FHWA 13-BIN CLASSIFICATION SYSTEM USE SHEET 6. PLEASE DESCRIBE ON AN ATTACHED PAGE THE VEHICLE CLASSIFICATION SYSTEM USED BY THE AGENCY AND COMPLETE SHEET 7 DESCRIBING HOW THE SHA WOULD EXPAND OR COLLAPSE THE USER CLASSIFICATION SYSTEM TO CORRESPOND WITH THE FHWA 13 CLASSES.

VEHICLE CLASSES	TOTAL NUMBER OF VEHICLES TWO-WAY	TOTAL NUMBER OF VEHICLES GPS DIRECTION	TOTAL NUMBER OF VEHICLES GPS LANE
1. FHWA CLASSES 1-3 (Cars, Motorcycles, Vans)	<u>18545</u>	<u>8603</u>	<u>2741</u>
2. FHWA CLASS 4 (Buses)	<u>56</u>	<u>30</u>	<u>7</u>
3. FHWA CLASS 5 (Two Axle, 6-Tire, SU Truck)	<u>1027</u>	<u>485</u>	<u>289</u>
4. FHWA CLASS 6 (3 AXLE SU TRUCK)	<u>100</u>	<u>55</u>	<u>42</u>
5. FHWA CLASS 7 (4 or more Axle SU Truck)	<u>41</u>	<u>18</u>	<u>14</u>
6. FHWA CLASS 8 (4 or less axle 1-Trlr.Truck)	<u>152</u>	<u>99</u>	<u>65</u>
7. FHWA CLASS 9 (5 Axle, 1-Trlr.Truck)	<u>7558</u>	<u>3546</u>	<u>1883</u>
8. FHWA CLASS 10 (6 or more Axle, 1-Trlr.Truck)	<u>40</u>	<u>24</u>	<u>17</u>
9. FHWA CLASS 11 (5 or less Axle, Multi-Trlr.Truck)	<u>377</u>	<u>202</u>	<u>138</u>
10. FHWA CLASS 12 (6 Axle, Multi-Trlr.Truck)	<u>11</u>	<u>0</u>	<u>0</u>
11. FHWA CLASS 13 (7 or more Axle, Multi-Trlr.Truck)	<u>0</u>	<u>0</u>	<u>0</u>
12. OTHER VEHICLES	<u>0</u>	<u>0</u>	<u>0</u>
GRAND TOTAL	<u>27957</u>	<u>13062</u>	<u>5196</u>

NAME OF PREPARER A. RUCKER PHONE # 502 564-7183

DATE PREPARED 1-15-91

BY [Signature]

LOCATION I-65 in BULLITT CO. TYPE EQUIP. PAT BENDING PLATE
MP # 106.5 MODEL # DAW 200

[illegible]

ESTIMATION OF EQUIVALENT AXLELOAD ACCUMULATIONS

COUNTY BULLITTDATE 1-15-91NAME A. Ruckel

ROUTE ID:

Road Name _____

Route No. I-65Classified ☒Project No. SHED 213016

Unclassified _____

Project Limits MP 106.500Reference Stations BULLITT CO. STA 507(90) 1989 EAL TABLES

Functional Class	
Rural	Urban
<input checked="" type="checkbox"/> 01 Interstate	11 Interstate
02 Principal Arterial	12 Other Freeways & Expressways
06 Minor Arterial	14 Other Principal Arterial
07 Major Collector	16 Minor Arterial
08 Minor Collector	17 Collector
09 Local	19 Local

Percent Trucks Hauling Coal
☒ Less Than 3.0
☐ 3.0 or Greater

DATES: Base Year _____ Design Period (Years) _____ Project Midyear 1989

TRAFFIC PARAMETERS:

	Base Year Estimate	Annual Change (Fractions)	No. Years to Midyear	Increment	Base Year Estimate	Project Midyear Estimate
Volume (AADT)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>6230</u>
Percent Trucks (%T)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>47.2</u>
% Trucks Hauling Coal (%CT)	_____ x	_____ x	_____ =	_____ +	_____ =	_____
Non-Coal Trucks						
Axles/Truck (A/NCT)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>4,579</u>
EAL's/Axle (EAL/NCA)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>0.184</u>
Coal Trucks						
Axles/Truck (A/CT)	_____ x	_____ x	_____ =	_____ +	_____ =	_____
EAL's/Axle (EAL/CA)	_____ x	_____ x	_____ =	_____ +	_____ =	_____

DAILY EAL'S AT MIDYEAR:

$$\begin{aligned}
 & \text{4-Tired Vehicles: } \frac{6230}{\text{AADT}} \times \frac{0.528}{1-(\%T/100)} \times 0.005 = \underline{16.45} \\
 & \text{Non-Coal Trucks: } \frac{6230}{\text{AADT}} \times \frac{0.472}{(\%T/100)(1-\%CT/100)} \times \frac{4,579}{\text{A/NCT}} \times \frac{0.184}{\text{EAL/NCA}} = \underline{2477.53} \\
 & \text{Coal Trucks: } \frac{\text{AADT}}{\text{AADT}} \times \frac{\text{A/CT}}{(\%T/100)(\%CT/100)} \times \frac{\text{EAL/CA}}{\text{EAL/CA}} = \underline{\quad\quad\quad} \\
 & \text{Total Midyear Daily EAL's} = \underline{2493.98}
 \end{aligned}$$

DESIGN EAL'S:

$$\begin{aligned}
 & \frac{2493.98}{\text{Midyear Daily EAL's}} \times 365 \times \frac{1}{\text{Design Period}} \times \frac{\text{Lane Adjustment}}{\text{(1 or 2 Way)}} = \underline{910,303}
 \end{aligned}$$

Lane Distribution Adjustments

L = 0.497 - (1.84 + 1.42 FT)(AADT)(10⁻⁶) for 4-lane roadways (Minimum value = 0.375)L = 0.427 - (2.308 + 1.75 FT)(AADT)(10⁻⁶) for 6-lane roadways (Minimum value = 0.25)

L = 0.50 for 2-lane roadways

ESTIMATION OF EQUIVALENT AXLELOAD ACCUMULATIONS

COUNTY BULLITTDATE 1-15-91NAME A. Rucker

ROUTE ID:

Road Name _____

Route No. 5-65Classified ☒Project No. SHRD 213016

Unclassified _____

Project Limits MP 106.500Reference Stations BULLITT CO. STA 507 (90) 1989 EAL TABLES

Functional Class		
Rural	Urban	
<input checked="" type="checkbox"/> 01 Interstate	11 Interstate	
02 Principal Arterial	12 Other Freeways & Expressways	
06 Minor Arterial	14 Other Principal Arterial	
07 Major Collector	16 Minor Arterial	
08 Minor Collector	17 Collector	
09 Local	19 Local	

Percent Trucks Hauling Coal
☒ Less Than 3.0
3.0 or GreaterDATES: Base Year _____ Design Period (Years) _____ Project Midyear 1988

TRAFFIC PARAMETERS:

	Base Year Estimate	Annual Change (Fractions)	No. Years to Midyear	Increment	Base Year Estimate	Project Midyear Estimate
Volume (AADT)	_____ x _____	_____ x _____	_____ = _____	_____ + _____	_____ = _____	<u>6140</u>
Percent Trucks (%T)	_____ x _____	_____ x _____	_____ = _____	_____ + _____	_____ = _____	<u>47.2</u>
% Trucks Hauling Coal (%CT)	_____ x _____	_____ x _____	_____ = _____	_____ + _____	_____ = _____	_____
Non-Coal Trucks						
Axles/Truck (A/NCT)	_____ x _____	_____ x _____	_____ = _____	_____ + _____	_____ = _____	<u>4.579</u>
EAL's/Axle (EAL/NCA)	_____ x _____	_____ x _____	_____ = _____	_____ + _____	_____ = _____	<u>0.180</u>
Coal Trucks						
Axles/Truck (A/CT)	_____ x _____	_____ x _____	_____ = _____	_____ + _____	_____ = _____	_____
EAL's/Axle (EAL/CA)	_____ x _____	_____ x _____	_____ = _____	_____ + _____	_____ = _____	_____

DAILY EAL'S AT MIDYEAR:

$$\begin{aligned}
 & \text{4-Tired Vehicles: } \frac{6140}{\text{AADT}} \times \frac{0.528}{1-(\%T/100)} \times 0.005 = \underline{16.21} \\
 & \text{Non-Coal Trucks: } \frac{6140}{\text{AADT}} \times \frac{0.472}{(\%T/100)(1-\%CT/100)} \times \frac{4.579}{\text{A/NCT}} \times \frac{0.180}{\text{EAL/NCA}} = \underline{2388.66} \\
 & \text{Coal Trucks: } \frac{\text{AADT}}{\text{AADT}} \times \frac{\text{A/CT}}{(\%T/100)(\%CT/100)} \times \frac{\text{EAL/CA}}{\text{EAL/CA}} = \underline{\quad\quad\quad} \\
 & \text{Total Midyear Daily EAL's} = \underline{2404.87}
 \end{aligned}$$

DESIGN EAL'S:

$$\begin{aligned}
 & \frac{2404.87}{\text{Midyear Daily EAL's}} \times 365 \times \frac{1}{\text{Design Period}} \times \frac{\text{Lane Adjustment}}{\text{Lane Adjustment}} \\
 & \text{(No. of Lanes } \underline{1} \text{) (1 or 2 Way } \underline{1} \text{)} = \underline{877,778}
 \end{aligned}$$

Lane Distribution Adjustments

L = 0.497 - (1.84 + 1.42 FT)(AADT)(10⁻⁴) for 4-lane roadways (Minimum value = 0.375)L = 0.427 - (2.308 + 1.75 FT)(AADT)(10⁻⁴) for 6-lane roadways (Minimum value = 0.25)

L = 0.50 for 2-lane roadways

ESTIMATION OF EQUIVALENT AXLELOAD ACCUMULATIONS

COUNTY BULLITTDATE 1-15-91NAME A. ROCKGR

ROUTE ID:

Road Name _____

Route No. I-65Classified ☒Project No. SHRP 213016

Unclassified _____

Project Limits MP 106.500Reference Stations BULLITT CO. STA. 507(90) 1989 GAL TABLES

Functional Class		
Rural	Urban	
<input checked="" type="checkbox"/> 01 Interstate	<input type="checkbox"/> 11 Interstate	
<input type="checkbox"/> 02 Principal Arterial	<input type="checkbox"/> 12 Other Freeways & Expressways	
<input type="checkbox"/> 06 Minor Arterial	<input type="checkbox"/> 14 Other Principal Arterial	
<input type="checkbox"/> 07 Major Collector	<input type="checkbox"/> 16 Minor Arterial	
<input type="checkbox"/> 08 Minor Collector	<input type="checkbox"/> 17 Collector	
<input type="checkbox"/> 09 Local	<input type="checkbox"/> 19 Local	

Percent Trucks Hauling Coal
☒ Less Than 3.0
☐ 3.0 or Greater

DATES: Base Year _____ Design Period (Years) _____ Project Midyear 1987

TRAFFIC PARAMETERS:

	Base Year Estimate	Annual Change (Fractions)	No. Years to Midyear	Increment	Base Year Estimate	Project Midyear Estimate
Volume (AADT)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>5730</u>
Percent Trucks (%T)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>47.2</u>
% Trucks Hauling Coal (%CT)	_____ x	_____ x	_____ =	_____ +	_____ =	_____
Non-Coal Trucks						
Axles/Truck (A/NCT)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>4,579</u>
EAL's/Axle (EAL/NCA)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>0.176</u>
Coal Trucks						
Axles/Truck (A/CT)	_____ x	_____ x	_____ =	_____ +	_____ =	_____
EAL's/Axle (EAL/CA)	_____ x	_____ x	_____ =	_____ +	_____ =	_____

DAILY EAL'S AT MIDYEAR:

$$\begin{aligned}
 & \text{4-Tired Vehicles: } \frac{5730}{\text{AADT}} \times \frac{0.528}{1-(\%T/100)} \times 0.005 = \underline{15.13} \\
 & \text{Non-Coal Trucks: } \frac{5730}{\text{AADT}} \times \frac{0.472}{(\%T/100)(1-\%CT/100)} \times \frac{4,579}{\text{A/NCT}} \times \frac{0.176}{\text{EAL/NCA}} = \underline{2179.62} \\
 & \text{Coal Trucks: } \frac{\text{AADT}}{\text{AADT}} \times \frac{\text{A/CT}}{(\%T/100)(\%CT/100)} \times \frac{\text{EAL/CA}}{\text{EAL/CA}} = \underline{\quad\quad\quad} \\
 & \text{Total Midyear Daily EAL's} = \underline{2194.75}
 \end{aligned}$$

DESIGN EAL'S:

$$\begin{aligned}
 & \frac{2194.75}{\text{Midyear Daily EAL's}} \times 365 \times \frac{1}{\text{Design Period}} \times \frac{\text{Lane Adjustment}}{\text{Lane Adjustment (1 or 2 Way)}} = \underline{801,084} \\
 & \text{(No. of Lanes } \underline{1} \text{)}
 \end{aligned}$$

Lane Distribution Adjustments

L = 0.497 - (1.84 + 1.42 FT)(AADT)(10⁻⁴) for 4-lane roadways (Minimum value = 0.375)

L = 0.427 - (2.308 + 1.75 FT)(AADT)(10⁻⁴) for 6-lane roadways (Minimum value = 0.25)

L = 0.50 for 2-lane roadways

ESTIMATION OF EQUIVALENT AXLELOAD ACCUMULATIONS

COUNTY BULLITTDATE 1-15-91NAME A. RUCKER

ROUTE ID:

Road Name _____

Route No. E-65Classified ✓Project No. SHRP 213016

Unclassified _____

Project Limits MP 106.500Reference Stations BULLITT CO. STA. 507 (90) 1989 EAL TABLES

Functional Class	
Rural	Urban
<u>✓</u> 01 Interstate	11 Interstate
02 Principal Arterial	12 Other Freeways & Expressways
06 Minor Arterial	14 Other Principal Arterial
07 Major Collector	16 Minor Arterial
08 Minor Collector	17 Collector
09 Local	19 Local

Percent Trucks Hauling Coal
☒ Less Than 3.0
☐ 3.0 or GreaterDATES: Base Year _____ Design Period (Years) _____ Project Midyear 1986

TRAFFIC PARAMETERS:

	Base Year Estimate	Annual Change (Fractions)	No. Years to Midyear	Increment	Base Year Estimate	Project Midyear Estimate
Volume (AADT)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>5545</u>
Percent Trucks (%T)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>47.2</u>
% Trucks Hauling Coal (%CT)	_____ x	_____ x	_____ =	_____ +	_____ =	_____
Non-Coal Trucks						
Axles/Truck (A/NCT)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>4.579</u>
EAL's/Axle (EAL/NCA)	_____ x	_____ x	_____ =	_____ +	_____ =	<u>0.172</u>
Coal Trucks						
Axles/Truck (A/CT)	_____ x	_____ x	_____ =	_____ +	_____ =	_____
EAL's/Axle (EAL/CA)	_____ x	_____ x	_____ =	_____ +	_____ =	_____

DAILY EAL'S AT MIDYEAR:

$$\begin{aligned}
 & \text{4-Tired Vehicles: } \frac{5545}{\text{AADT}} \times \frac{0.528}{1-(\%T/100)} \times 0.005 = \underline{14.64} \\
 & \text{Non-Coal Trucks: } \frac{5545}{\text{AADT}} \times \frac{0.472}{(\%T/100)(1-\%CT/100)} \times \frac{4.579}{\text{A/NCT}} \times \frac{0.172}{\text{EAL/NCA}} = \underline{2061.31} \\
 & \text{Coal Trucks: } \frac{\text{AADT}}{\text{AADT}} \times \frac{\text{EAL/CA}}{(\%T/100)(\%CT/100)} \times \frac{\text{A/CT}}{\text{A/CT}} \times \frac{\text{EAL/CA}}{\text{EAL/CA}} = \underline{\quad\quad\quad} \\
 & \text{Total Midyear Daily EAL's} = \underline{2075.95}
 \end{aligned}$$

DESIGN EAL'S:

$$\begin{aligned}
 & \frac{2075.95}{\text{Midyear Daily EAL's (No. of Lanes)}} \times 365 \times \frac{1}{\text{Design Period}} \times \frac{\text{Lane Adjustment (1 or 2 Way)}}{\text{Lane Adjustment (1 or 2 Way)}} = \underline{757,122}
 \end{aligned}$$

Lane Distribution Adjustments

L = 0.497 - (1.84 + 1.42 FT)(AADT)(10⁻⁴) for 4-lane roadways (Minimum value = 0.375)L = 0.427 - (2.308 + 1.75 FT)(AADT)(10⁻⁴) for 6-lane roadways (Minimum value = 0.25)

L = 0.50 for 2-lane roadways