

SHEET 1
LTPP TRAFFIC DATA
SUMMARY TRANSMITTAL FORM

*STATE ASSIGNED ID [5907]
*STATE CODE [46]
*SHRP SECTION ID [5025]

STATE OR PROVINCE South Dakota COUNTY Jackson
HIGHWAY ROUTE NO. I-90 MILEPOST# 128.94
NEAREST CITY/TOWN E of Wall NEAREST INTERSECTION 2.3 MI W of SR. 240
FUNCTIONAL CLASS 1 NO. LANES EACH DIRECTION 1 TOTAL NO. LANES 2
DIRECTION OF TRAVEL GPS LANE EB DATE OPENED TO TRAF. - - - 74
FIPS COUNTY CODE 071 FHWA STATION IDENTIFICATION NO. _____
HPMS SAMPLE NO. 0000 90124590 HPMS SUBDIVISION NO. 0
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: 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 _____	PHONE # _____
DATE PREPARED _____	

LTPP TRAFFIC DATA

TRAFFIC VOLUMES
AND LOAD ESTIMATES

*STATE ASSIGNED ID [5907]

*STATE CODE [46]

*SHRP SECTION ID [5025]

YEAR	1. ESTIMATED TOTAL VEHICLES AADT (TWO-WAY)	2. ESTIMATED TOTAL TRUCK AADT (TWO-WAY)	3. ESTIMATED TOTAL VEHICLES AADT GPS LANE	4. ESTIMATED TOTAL TRUCKS AADT GPS LANE	5. ESTIMATED ESAL'S / YR GPS LANE (1000's)
1989	4180	1058	2090	529	64.2 25.3
1988	4320	220	2195	410 19	45.9
1987	4170	910	2085	455	47.35 *
1986	3950	1000	1975	500 25	48.8
1985	3810	878	1905	439	43.6 *
1984	3670	755	1835	378 21	38.4
1983	3575	735	1788	368	35.15 *
1982	3480	715	1740	358 21	31.9
1981	3350	688	1675	344	30.1 *
1980	3260	660	1610	330 20	28.3
1979	3458	685	1729	343	27.9 *
1978	3675	710	1848	355 19	27.5
1977	3328	603	1664	302	24.75 *
1976	2960	475	1480	248 17	23.0
1975	2680	505	1340	253 19	20.0
1974	2520	415	1260	208 16	18.8
1973					
1972					
1971		* line has been averaged			
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 [5907]

*STATE CODE [46]

*SHRP SECTION ID [2025]

1. Year Applicable 74-89

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: Flow maps

4. METHOD FOR ESTIMATING AADT BY GPS LANE

- ☐ Based on actual lane count data.
- ☐ System distribution factors.
- ☒ Other: EST 90/10

5. METHOD FOR ESTIMATING TRUCK AADT IN GPS LANES

- ☐ Based on actual lane count data.
- ☐ System distribution factors.
- ☒ Other: Flow maps

6. METHOD FOR ESTIMATING ESAL/VEHICLE

- ☐ ESAL/Truck.
- ☐ ESAL/Vehicle class. (no. of classes) _____
- ☒ Other: Summation

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: _____

(B) Weight Scale Type

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

NAME OF PREPARER _____ PHONE # _____

DATE PREPARED _____

SHEET 3

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

*STATE ASSIGNED ID [5907]

*STATE CODE [46]

*SHRP SECTION ID [5025]

1. Year Applicable _____

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: Flow map

4. METHOD FOR ESTIMATING AADT BY GPS LANE

- ☐ Based on actual lane count data.
☐ System distribution factors.
☒ Other: EST 90/10

5. METHOD FOR ESTIMATING TRUCK AADT IN GPS LANES

- ☐ Based on actual lane count data.
☐ System distribution factors.
☒ Other: Flow map

6. METHOD FOR ESTIMATING ESAL/VEHICLE

- ☐ ESAL/Truck.
☐ ESAL/Vehicle class. (no. of classes) _____
☒ Other: Summation

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: _____

(B) Weight Scale Type

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

NAME OF PREPARER _____

PHONE # _____

DATE PREPARED _____

SHEET 4 LTPP TRAFFIC DATA TRAFFIC VOLUME COUNTS	*STATE ASSIGNED ID [5907] *STATE CODE [46] *SHRP SECTION ID [5025]
---	--

HIGHWAY ROUTE NO. (THIS COUNT) _____

MILEPOST# OR LOCATION (THIS COUNT) _____

BEGINNING DATE _____ ENDING DATE _____

BEGINNING TIME _____ ENDING TIME _____

COUNT DURATION _____ [] HOURS [] DAYS [] MONTHS

TYPE OF COUNTER _____ NAME/MODEL # _____

TYPE OF COUNT: TWO-WAY _____ ONE DIRECTION ONLY _____ GPS TEST LANE ONLY _____

ITEM	ACTUAL COUNTS	UNITS
1. TOTAL NO. OF VEHICLES (RAW COUNT)	-----	Sheets 4-7
2. ADJUSTMENT FACTORS (FILL IN AS APPLICABLE):		N/A
A. ADJUSTMENT TO 24-HOUR COUNT	-----	
B. AXLE CORRECTION FACTOR	-----	Used Flow
C. DAY OF WEEK FACTOR	-----	maps
D. MONTH FACTOR	-----	
E. OTHER FACTOR (_____)	-----	
3. ANNUAL AVERAGE DAILY TRAFFIC (AADT) (TWO-WAY)	-----	
4. DIRECTIONAL DISTRIBUTION FACTOR	-----	
5. GPS LANE DISTRIBUTION FACTOR	-----	
6. AADT GPS LANE	-----	

NOTE: COMPLETE ONE SHEET FOR EACH COUNTING SESSION.

NAME OF PREPARER _____	PHONE # _____
DATE PREPARED _____	

LTPP TRAFFIC DATA

VEHICLE CLASSIFICATION DATA
FHWA 13-CLASS SYSTEM

*STATE ASSIGNED ID [5907]

*STATE CODE [46]

*SHRP SECTION ID [5025]

HIGHWAY RT. NO. (THIS COUNT) _____ MILEPOST# (THIS COUNT) _____

LOCATION (THIS COUNT) _____ FUNCTIONAL CLASS _____

BEGINNING DATE _____ ENDING DATE _____

BEGINNING TIME _____ ENDING TIME _____ DURATION (HRS) _____

TYPE 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 _____ # TRUCKS _____ % TRUCKS _____

NO. OF TRUCKS IN GPS LANE _____ % OF TRUCKS IN GPS LANE _____

VEHICLE 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

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)	_____	_____	_____
2. FHWA CLASS 4 (Buses)	_____	_____	_____
3. FHWA CLASS 5 (Two Axle, 6-Tire, SU Truck)	_____	_____	_____
4. FHWA CLASS 6 (3 AXLE SU TRUCK)	_____	_____	_____
5. FHWA CLASS 7 (4 or more Axle SU Truck)	_____	_____	_____
6. FHWA CLASS 8 (4 or less axle 1-Trlr.Truck)	_____	_____	_____
7. FHWA CLASS 9 (5 Axle, 1-Trlr.Truck)	_____	_____	_____
8. FHWA CLASS 10 (6 or more Axle, 1-Trlr.Truck)	_____	_____	_____
9. FHWA CLASS 11 (5 or less Axle, Multi-Trlr.Truck)	_____	_____	_____
10. FHWA CLASS 12 (6 Axle, Multi-Trlr.Truck)	_____	_____	_____
11. FHWA CLASS 13 (7 or more Axle, Multi-Trlr.Truck)	_____	_____	_____
12. OTHER VEHICLES	_____	_____	_____
GRAND TOTAL	_____	_____	_____

NAME OF PREPARER _____ PHONE # _____

DATE PREPARED _____

SHEET 6
LTPP TRAFFIC DATA

VEHICLE CLASSIFICATION DATA
AGENCY DEFINED CLASSES

*STATE ASSIGNED ID [5907]

*STATE CODE [46]

*SHRP SECTION ID [5025]

FOR 4-BIN OR OTHER CLASSIFICATION SYSTEMS

HIGHWAY ROUTE NO. (THIS COUNT) _____ MILEPOST # (THIS COUNT) _____

BEGINNING DATE _____ ENDING DATE _____

BEGINNING TIME _____ ENDING TIME _____ DURATION (HRS) _____

VEHICLE CLASSES (DESCRIBE VEHICLE TYPES IN EACH CLASS OR AXLE SPACING CATEGORY)	TOTAL NUMBER OF VEHICLES TWO-WAY	TOTAL NUMBER OF VEHICLES GPS DIRECTION	TOTAL NUMBER OF VEHICLES GPS LANE
A. _____	_____	_____	_____
B. _____	_____	_____	_____
C. _____	_____	_____	_____
D. _____	_____	_____	_____
E. _____	_____	_____	_____
F. _____	_____	_____	_____
G. _____	_____	_____	_____
H. _____	_____	_____	_____
I. _____	_____	_____	_____
J. _____	_____	_____	_____
K. _____	_____	_____	_____
L. _____	_____	_____	_____
M. _____	_____	_____	_____
N. _____	_____	_____	_____
O. _____	_____	_____	_____
P. _____	_____	_____	_____
Q. _____	_____	_____	_____
R. _____	_____	_____	_____
S. _____	_____	_____	_____
T. _____	_____	_____	_____

GRAND TOTAL _____

NAME OF PREPARER _____ PHONE # _____
DATE PREPARED _____

<p>SHEET 7</p> <p>LTPP TRAFFIC DATA</p> <p>VEHICLE CLASSIFICATION CONVERSION CHART</p>	<p>*STATE ASSIGNED ID [<u>5907</u>]</p> <p>*STATE CODE [<u>46</u>]</p> <p>*SRP SECTION ID [<u>5025</u>]</p>
--	---

FOR 4-BIN, 6-BIN, OR OTHER NON FHWA CLASSIFICATION SYSTEMS

USE THIS SHEET TO DESCRIBE HOW THE AGENCY'S CLASSIFICATION SYSTEM CAN BE CONVERTED TO THE FHWA 13-CLASSES. ENTER PERCENTAGE OF TOTAL SHA CLASS DISTRIBUTED TO EACH FHWA CLASS. APPLICABLE PERIOD FROM _____ TO _____

FHWA CLASSES													
SHA CLASS	1-3	4	5	6	7	8	9	10	11	12	13	OTHER	TOTAL
A	---	---	---	---	---	---	---	---	---	---	---	---	---
B	---	---	---	---	---	---	---	---	---	---	---	---	---
C	---	---	---	---	---	---	---	---	---	---	---	---	---
D	---	---	---	---	---	---	---	---	---	---	---	---	---
E	---	---	---	---	---	---	---	---	---	---	---	---	---
F	---	---	---	---	---	---	---	---	---	---	---	---	---
G	---	---	---	---	---	---	---	---	---	---	---	---	---
H	---	---	---	---	---	---	---	---	---	---	---	---	---
I	---	---	---	---	---	---	---	---	---	---	---	---	---
J	---	---	---	---	---	---	---	---	---	---	---	---	---
K	---	---	---	---	---	---	---	---	---	---	---	---	---
L	---	---	---	---	---	---	---	---	---	---	---	---	---
M	---	---	---	---	---	---	---	---	---	---	---	---	---
N	---	---	---	---	---	---	---	---	---	---	---	---	---
O	---	---	---	---	---	---	---	---	---	---	---	---	---
P	---	---	---	---	---	---	---	---	---	---	---	---	---
Q	---	---	---	---	---	---	---	---	---	---	---	---	---
R	---	---	---	---	---	---	---	---	---	---	---	---	---
S	---	---	---	---	---	---	---	---	---	---	---	---	---
T	---	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---	---

NAME OF PREPARER _____	PHONE # _____
DATE PREPARED _____	

SHEET 8 LTPP TRAFFIC DATA TRUCK WEIGHT SESSION INFORMATION	*STATE ASSIGNED ID [5907] *STATE CODE [46] *SHRP SECTION ID [2025]
---	--

HIGHWAY RT. NO.(THIS SESSION) _____ MILEPOST # (THIS SESSION) _____

LOCATION (THIS SESSION) _____

FUNCTIONAL CLASSIFICATION _____ DIRECTION OF TRAVEL _____

1. FHWA STATION IDENTIFICATION NUMBER _____

2. TYPE OF WEIGHING EQUIPMENT: PERM. SCALE _____ PERM. WIM _____
 PORT. SCALE _____ PORT. WIM _____

3. COUNT DURATION (HOURS) _____ COUNT LANE _____

4. BEGINNING TIME (MONTH, DAY, YEAR, TIME) ____-____-____-____

5. ENDING TIME (MONTH, DAY, YEAR, TIME) ____-____-____-____

6. EQUIPMENT MANUFACTURER / MODEL # _____

7. PURPOSE OF WEIGHT SESSION:
 DATA COLLECTION _____ ENFORCEMENT _____

8. VEHICLE CLASSIFICATION SCHEME: FHWA _____ OTHER _____ # BINS _____

9. PAVEMENT TYPE: AC _____ PCC _____ OTHER _____

10. METHOD OF CALIBRATION AND FREQUENCY: _____

NOTE: IF THIS WEIGHT SESSION IS NOT BASED UPON THE FHWA 13-BIN CLASSIFICATION SYSTEM, USE SHEET 7 TO DESCRIBE HOW THE SHA WOULD EXPAND OR COLLAPSE THE AGENCY CLASSIFICATION SYSTEM TO CORRESPOND WITH THE FHWA 13 CLASSES. ALSO PROVIDE A DESCRIPTION OF THE CLASSIFICATION SCHEME THAT WAS USED.

NAME OF PREPARER _____	PHONE # _____
DATE PREPARED _____	

<p>SHEET 9</p> <p>LTPP TRAFFIC DATA</p> <p>TRUCK AXLE LOAD MEASUREMENTS BY VEHICLE CLASSIFICATION</p>	<p>*STATE ASSIGNED ID [5907]</p> <p>*STATE CODE [46]</p> <p>*SHRP SECTION ID [5025]</p>
---	---

FHWA CLASSIFICATION SCHEME: FHWA _____ OTHER _____ #BINS _____

NOTE: FOR CLASSIFICATION SCHEMES OTHER THAN FHWA, ATTACH SHEET 7
DESCRIBING CONVERSION FROM AGENCY CLASSIFICATION SCHEME TO
FHWA 13 CLASSES.

1. VEHICLE CLASS _____

2. TOTAL NUMBER VEHICLES COUNTED _____

3. SINGLE AXLES LOAD RANGE	NUMBER OF SINGLE AXLES WEIGHED	4. TANDEM AXLES LOAD RANGE	NUMBER OF TANDEM AXLES WEIGHED	5. TRIPLE AXLES LOAD RANGE	NUMBER OF TRIPLE AXLES WEIGHED
< 3000	-----	< 6000	-----	< 12000	-----
3000 - 3999	-----	6000 - 7999	-----	12000 - 14999	-----
4000 - 4999	-----	8000 - 9999	-----	15000 - 17999	-----
5000 - 5999	-----	10000 - 11999	-----	18000 - 20999	-----
6000 - 6999	-----	12000 - 13999	-----	21000 - 23999	-----
7000 - 7999	-----	14000 - 15999	-----	24000 - 26999	-----
8000 - 8999	-----	16000 - 17999	-----	27000 - 29999	-----
9000 - 9999	-----	18000 - 19999	-----	30000 - 32999	-----
10000 - 10999	-----	20000 - 21999	-----	33000 - 35999	-----
11000 - 11999	-----	22000 - 23999	-----	36000 - 38999	-----
12000 - 12999	-----	24000 - 25999	-----	39000 - 41999	-----
13000 - 13999	-----	26000 - 27999	-----	42000 - 44999	-----
14000 - 14999	-----	28000 - 29999	-----	45000 - 47999	-----
15000 - 15999	-----	30000 - 31999	-----	48000 - 50999	-----
16000 - 16999	-----	32000 - 33999	-----	51000 - 53999	-----
17000 - 17999	-----	34000 - 35999	-----	54000 - 56999	-----
18000 - 18999	-----	36000 - 37999	-----	57000 - 59999	-----
19000 - 19999	-----	38000 - 39999	-----	60000 - 62999	-----
20000 - 20999	-----	40000 - 41999	-----	63000 - 65999	-----
21000 - 21999	-----	42000 - 43999	-----	66000 - 68999	-----
22000 - 22999	-----	44000 - 45999	-----	69000 - 71999	-----
23000 - 23999	-----	46000 - 47999	-----	72000 - 74999	-----
24000 - 24999	-----	48000 - 49999	-----	75000 - 77999	-----
25000 - 25999	-----	50000 - 51999	-----	78000 - 79999	-----
26000 - 26999	-----	52000 - 53999	-----	> 80000	-----
27000 - 27999	-----	54000 - 55999	-----		
28000 - 28999	-----	56000 - 57999	-----		
29000 - 29999	-----	58000 - 59999	-----		
> 30000	-----	> 60000	-----		

6. USE SECOND PAGE FOR FOUR AXLE GROUPS.

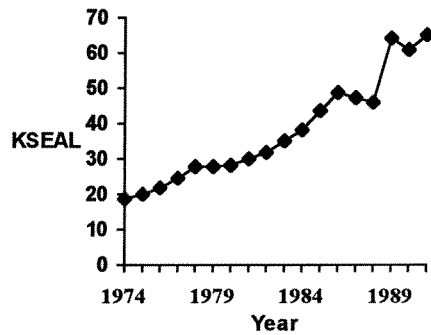
NAME OF PREPARER _____	PHONE # _____
DATE PREPARED _____	

Agency ID: 46

SHRP ID: 5025

Agency Name: South Dakota

Historical Traffic Data



Year:	KESAL:	SRO:
1990	61	
1991	65	

Site Location I-90 EB

MP or Station MP 128.94

Design KESAL 150

Level P

Number of Lanes 4

Lanes Monitored 2E/2W

Equipment Location 3.4 MLW

Construction Event 1

Layer Number	Layer Type	Thickness0	Thickness4
1	SS		
2	GB	4	4
3	PC	8.1	8.1