

LTPP TRAFFIC DATA
SUMMARY TRANSMITTAL FORM

*STATE ASSIGNED ID [2293]

*STATE CODE [46]

*SHRP SECTION ID [3010]

STATE OR PROVINCE SOUTH DAKOTA COUNTY ROBERTHIGHWAY ROUTE NO. I-29 MILEPOST# 228.80NEAREST CITY/TOWN Sioux Falls (SHRP Section 12 South Side) NEAREST INTERSECTION SR 10FUNCTIONAL CLASS 1 NO. LANES EACH DIRECTION 2 TOTAL NO. LANES 4DIRECTION OF TRAVEL GPS LANE SB DATE OPENED TO TRAF. - - 83FIPS COUNTY CODE 109 FHWA STATION IDENTIFICATION NO. _____HPMS SAMPLE NO. 150029223960 HPMS SUBDIVISION NO. 0TYPE 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 Dan Stanton PHONE # _____DATE PREPARED 7-24-91

<p align="center">SHEET 2</p> <p align="center">LTPP TRAFFIC DATA</p> <p align="center">TRAFFIC VOLUMES AND LOAD ESTIMATES</p>	<p>*STATE ASSIGNED ID [2293]</p>
	<p>*STATE CODE [46]</p>
	<p>*SHRP SECTION ID [3010]</p>

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	2220	624	999	281	30.7	27.1
1988	2100	785	945	353	28.1	27.4
1987	2000	660	900	297	24.6	*
1986	1900	535	855	241	21.1	23.0
1985	2000	558	900	251	23.8	*
1984	2100	580	945	261	26.3	27.1
1983						
1982						
1981						
1980						
1979						
1978		* lines have been over-read				
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 [3222]

*STATE CODE [16]

*SHRP SECTION ID [2010]

1. Year Applicable 83-85

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: 90/10 estimate

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 3

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

*STATE ASSIGNED ID [3293]

*STATE CODE [40]

*SHRP SECTION ID [3010]

1. Year Applicable 86-89

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 map

4. METHOD FOR ESTIMATING AADT BY GPS LANE

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

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 [3 2 2 2] *STATE CODE [4 6] *SHRP SECTION ID [2 6 1 0]
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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)	_____	_____
2. ADJUSTMENT FACTORS (FILL IN AS APPLICABLE):		
A. ADJUSTMENT TO 24-HOUR COUNT	_____	_____
B. AXLE CORRECTION FACTOR	_____	_____
C. DAY OF WEEK FACTOR	_____	_____
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	_____	_____

N/A
Flow mps

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 [3293]

*STATE CODE [46]

*SHRP SECTION ID [3010]

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

	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 _____

N/A
Flow
maps

SHEET 6

LTPP TRAFFIC DATA

VEHICLE CLASSIFICATION DATA
AGENCY DEFINED CLASSES

*STATE ASSIGNED ID [3493]

*STATE CODE [46]

*SHRP SECTION ID [2010]

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. _____	_____	_____	_____

N/A

Flow m.

GRAND TOTAL _____

NAME OF PREPARER _____	PHONE # _____
DATE PREPARED _____	

<p>SHEET 7</p> <p>LTPP TRAFFIC DATA</p> <p>VEHICLE CLASSIFICATION</p> <p>CONVERSION CHART</p>	<p>*STATE ASSIGNED ID [<u>3293</u>]</p> <p>*STATE CODE [<u>46</u>]</p> <p>*SHRP SECTION ID [<u>3010</u>]</p>
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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 _____

SHA CLASS	FHWA CLASSES												
	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	---	---	---	---	---	---	---	---	---	---	---	---	---

N/A
Flow
Map

NAME OF PREPARER _____	PHONE # _____
DATE PREPARED _____	

TRUCK WEIGHT SESSION INFORMATION

*SHRP SECTION ID [3040]

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 _____

W-4
charts
submit
to SH

<p>SHEET 9</p> <p>LTPP TRAFFIC DATA</p> <p>TRUCK AXLE LOAD MEASUREMENTS BY VEHICLE CLASSIFICATION</p>	<p>*STATE ASSIGNED ID [3293]</p> <p>*STATE CODE [46]</p> <p>*SHRP SECTION ID [2010]</p>
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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.

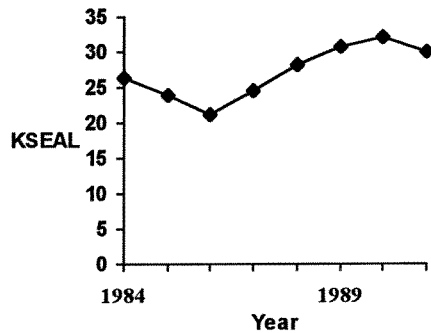
NAME OF PREPARER _____	PHONE # _____
DATE PREPARED _____	

Agency ID: 46

SHRP ID: 3010

Agency Name: South Dakota

Historical Traffic Data



Year:	KESAL:	SRO:
1990	32	
1991	30	

Permanent System AVC

Installation Date 12/1/93

Manufacturer StreeterAmet

Model TrafiCOMP III 241

Type Piezo Cable

Site Location I-29 SB

MP or Station MP 228.80

Design KESAL 92

Level M

Number of Lanes 4

Lanes Monitored 2S/2N

Equipment Location

Construction Event 1

Layer Number	Layer Type	Thickness0	Thickness5
1	SS		
2	GB	1.5	1.5
3	PC	9.2	9.2