# SPECIAL <br> ORIGIN AND DESTINATION STUDY CEDAR COUNTY 

December 1962

love state mianuay commission

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The purpose of this study is to present an analysis of the average 1962 December weekday traffic crossing the Cedar River at the Cedar Bluff and Cedar Valley bridges in Cedar County.

To obtain data used in this study, vehicle drivers crossing the Cedar Bluff and Cedar Valley bridges were interviewed during a sixteen hour period from 2 PM until 10 PM on December 4, 1962, and from 6 AM until 2 PM on December 5, 1962. Each driver was asked the origin, destination, and purpose of his trip. The interviewer also recorded the direction of travel, type of vehicle, state of registration, county of registration of Iowa vehicles, and the number of occupants in the vehicle. Automatic traffic recorders were used to aid in expanding the 16 hour interviews to an average 1962 December weekday traffic volume.

The results of the study are presented in the charts and tables described in the following paragraphs.

Chart \#l and Chart \#2 are traffic flow charts illustrating the dispersion of traffic between points of origin and/or destination through the interview stations at the Cedar Bluff and Cedar Valley bridges.

These charts are not intended to show exact routes, but rather to show approximate routes and the cumulative volume of traffic as it approaches or leaves the interview station. Trip origins and destinations are not differentiated and the individual totals may be considered as either origin or destination. Chart \#l reflects the average 1962 December weekday traffic flow at the Cedar Bluff bridge, and Chart \#2 reflects the traffic flow at the Cedar Valley bridge. It should be noted origins and destinations pertain to the farm unit if the location is rural, and to the municipality if the location is urban.

Chart \#3 is a desire line chart which illustrates the straight line movement between the origins and destinations of all trips crossing the Cedar Bluff and Cedar Valley bridges without regard to existing routes or actual routes traveled.

Chart \#4 is an accumulated desire of travel chart which represents graphically the accumulated trip desires in crossing the Cedar River in the Cedar Bluff-Cedar Valley area, with no out-of-distance travel involved.

In this chart, a base line was established parallel to the Cedar River and represents the ten-mile study area. Each trip was individually examined and added to the total of each of the l-mile base line segments along which it could pass in traveling from the origin to the destination with no "Out-of-Distance Travel". It should be noted that each trip was traced parallel to the base line from the origin to a point through which a line to the destination would be perpendicular to the "oase line. The trip was then added to each segment along the parallel portion of the line. In this procedure, existing routes are disregarded entirely, and all movements are traced along lines either parallel or perpendicular
to the base line.
The total number of trips which could pass through a mile segment of the base line is represented graphically by a bar scale which originates at the base line and corresponds in width and placement to the mile segment to which it pertains. The bar scale of each segment is composed of three trip length categories, identified by color. Brown represents the total number of trips from 0-10 miles in length, green $10-20$ miles. and heliotrope over 20 miles in length.

Examination of this graph reveals the number and trip length of vehicular movements which could pass through each mile segment of the 10 mile study area without out-of-distance travel based on an average 1962 December weekday.

Table \#l is a listing of the origins and/or destinations of all trips crossing the bridge at Cedar Bluff. The trip totals shown have been expanded to a 24 hour average 1962 December weekday.

Table \#2 is a listing of the origins and/or destinations of all trips crossing the bridge at Cedar Valley. The trip totals shown have been expanded to a 24 hour average 1962 December weekday.





TABLE NO. 1
ORIGIN AND/OR DESTINATION OF TRIPS CROSSING THE BRIDGE AT

CEDAR BLUFF
IN CEDAR COUNTY

December Average Weekday Traffic 1962

| Trip Terminal | Trip Terminal | Total No. of Trips |
| :---: | :---: | :---: |
| Cedar Bluff | Cedar Valley | 3 |
| Cedar Bluff | Cedar Rapids | 1 |
| Cedar Bluff | Iowa City | 11 |
| Cedar Bluff | Kalona | 1 |
| Cedar Bluff | Solon | 4 |
| Cedar Bluff | West Branch | 8 |
| Cedar Bluff | 16-81-4W-29-1* | 24 |
| Cedar Bluff | 52-81-5W-23-3* | 1 |
| Cedar Bluff | 16-81-4W-33-3* | 12 |
| Cedar Bluff | 52-81-5W-24-3* | 3 |
| Cedar Bluff | 16-81-4W-32-12* | 3 |
| Cedar Bluff | 16-80-4W-15-4* | 3 |
| Cedar Bluff | 16-80-4W-09-1* | 3 |
| Cedar Bluff | 16-80-4W-0.4-3* | 3 |
| Cedar Rapids | Muscatine | 2 |
| Cedar Rapids | Tipton | 1 |
| Cedar Rapids | 16-80-2W-12-1* | 1 |
| Cedar Valley | Solon | 1 |
| Cedar Valley | Tipton | 2 |
| Davenport | 16-81-4W-19-3* | 1 |
| Iowa City | Mechanicsville | 1 |
| Iowa City | Tipton | 4 |
| Iowa City | 16-81-4W-27-4* | 1 |
| Iowa City | 16-81-4W-22-3* | 2 |
| Frytown | 16-81-4W-23-6* | 1 |
| Mechanicsville | Morse | 4 |
| Mechanicsville | West Branch | 6 |
| Mechanicsville | West Liberty | 1 |
| Mechanicsville | Solon | 1 |
| Mechanicsville | 16-81-4W-33-3* | 2 |
| Mechanicsville | 16-80-4W-15-4* | 1 |
| Mechanicsville | 16-80-4W-05-5* | 1 |
| Mechanicsville | 52-80-5W-03-2* | 1 |
| Mechanicsville | 52-80-5W-02-1* | 2 |
| Mechanicsville | 52-81-6W-20-6* | 3 |

* Rural locations are described by a series of five numbers denoting county, township, range, section, and road number, respectively.

December Average Weekday Traffic 1962

| Trip Terminal | Trip Terminal | Total No. of Trips |
| :---: | :---: | :---: |
| Morse | Stanwood | 1 |
| Morse | Tipton | 7 |
| Muscatine | 16-80-4W-06-1* | 1 |
| Paris | Tipton | 1 |
| Plato | Tipton | 6 |
| Solon | Bennett | 2 |
| Solon | Tipton | 8 |
| Solon | Stanwood | 1 |
| Solon | 16-81-4W-23-4* | 1 |
| Tipton | West Branch | 4 |
| Tipton | 16-79-3W-17-1* | 1 |
| Tipton | 16-82-3W-12-2* | 3 |
| Tipton | 16-81-4W-32-12* | 3 |
| Tipton | 16-81-4W-19-3* | 6 |
| Tipton | 16-80-4W-10-1* | 2 |
| Tipton | 16-81-4W-29-1* | 12 |
| Tipton | 52-79-5W-36-2* | 4 |
| Tipton | 16-81-4W-33-3* | 9 |
| Tipton | 16-80-4W-06-3* | 3 |
| Tipton | 52-81-5W-36-4* | 1 |
| Tipton | 52-81-6W-07-1* | 1 |
| Tipton | 16-80-4W-31-2* | 1 |
| Tipton | 52-79-5W-05-1* | 2 |
| Tipton | 16-81-4W-32-6* | 1 |
| Tipton | 16-80-4W-34-2* | 1 |
| Tipton | 16-80-4W-15-4* | 1 |
| West Branch | Stanwood | 2 |
| West Branch | 16-82-2W-2 5-1* | 1 |
| West Branch | 16-81-4W-20-3* | 1 |
| West Liberty | 16-81-4W-33-3* | 1 |
| 16-80-4W-24-1* | 16-81-4W-33-3* | 2 |
| 16-82-2W-30-2* | 16-80-4W-18-3* |  |
| 16-80-2W-31-2* | 16-81-4W-33-3* | 1 |
| 16-81-4W-23-4* | 16-81-4W-32-6* | 1 |
| 16-80-2W-31-2* | 16-80-4W-05-5* |  |
| Total |  | 214 |

* Rural locations are described by a series of five numbers denoting county, township, range, section, and road number, respectively.

TABLE NO. 2
ORIGIN AND/OR DESTINATION OF TRIPS
CROSSING THE BRIDGE AT
CEDAR VALLEY
IN CEDAR COUNTY

December Average Weekday Traffic 1962

| Trip Terminal | Trip Terminal | Total No. of Trips |
| :---: | :---: | :---: |
| Anamosa | West Liberty | 1 |
| Atalissa | 16-80-3W-18-9* | 1 |
| Buchanan | West Branch | 2 |
| Buchanan | 16-80-4W-05-3* | 1 |
| Cedar Bluffs | Rochester | 1 |
| Cedar Rapids | West Branch | 1 |
| Cedar Valley | Bennett | 1 |
| Cedar Valley | Buchanan | 1 |
| Cedar Valley | Cedar Bluff | 1 |
| Cedar Valley | Monticello | 1 |
| Cedar Valley | Solon | 1 |
| Cedar Valley | Wilton Junction | 3 |
| Cedar Valley | Tipton | 19 |
| Cedar Valley | 16-80-3W-17-5* | 5 |
| Cedar Valley | 16-80-3W-19-11* | 14 |
| Cedar Valley | 16-80-3W-18-4* | 2 |
| Cedar Valley | 16-80-3W-14-3* | 3 |
| Cedar Valley | 16-80-3W-08-5* | 6 |
| Cedar Valley | 16-80-3W-18-9* | 6 |
| Cedar Valley | 16-80-3W-18-3* | 2 |
| Cedar Valley | 16-79-2W-10-1* | 3 |
| Cedar Valley | 16-80-3W-21-4* | 2 |
| Cedar Valley | 16-80-3W-17-3* | 1 |
| Centerdale | Buchanan | 3 |
| Iowa City | Buchanan | 2 |
| Iowa City | Mechanicsville | 3 |
| Iowa City | Tipton | 5 |
| Davenport | 16-80-4W-10-4* | 1 |
| Hills | 16-80-4W-02-5* | 2 |
| Kalona | 16-80-3W-05-4* | 1 |
| Mechanicsville | West Liberty | 5 |
| Mechanicsville | 16-80-4W-21-1* | 4 |
| Mechanicsville | 16-80-3W-06-1* | 1 |
| Mechanicsville | 16-80-4W-28-1* | 1 |
| Monticello | 16-80-4W-10-4* | 3 |

* Rural locations are described by a series of five numbers denoting county, township, range, section, and road number respectively.

December Average Weekday Traffic 1962

| Trip Terminal | Trip Terminal | Total No. of Trips |
| :---: | :---: | :---: |
| Springdale | Lisbon | 1 |
| Springdale | Mechanicsville | 1 |
| Springdale | 16-80-3W-17-5* | 2 |
| Springdale | 16-81-4W-35-1* | 3 |
| Springdale | 16-80-4W-06-8* | 1 |
| Springdale | 16-80-3W-23-2* | 1 |
| Stanwood | Station | 1 |
| Station | 16-80-3W-18-9* | 1 |
| Tipton | Downey | 2 |
| Tipton | Plato | 1 |
| Tipton | Wayland | 1 |
| Tipton | West Branch | 5 |
| Tipton | Springdale | 4 |
| Tipton | Atalissa | 1 |
| Tipton | 16-80-4W-11-1* | 1 |
| Tipton | 16-80-4W-21-1* | 4 |
| Tipton | 16-80-4W-24-3* | 4 |
| Tipton | 16-80-4W-26-3* | 1 |
| Tipton | 16-80-4W-11-4* | 4 |
| Tipton | 16-80-4W-23-5* | 4 |
| Tipton | 16-80-4W-10-4* | 1 |
| Tipton | 16-80-4W-22-1* | 4 |
| Tipton | 16-80-4W-19-8* | 3 |
| Tipton | 16-80-3W-19-10* | 5 |
| Tipton | 16-80-4W-04-1* | 2 |
| Tipton | 16-79-4W-06-2* | 1 |
| Tipton | 16-80-4W-28-1* | 3 |
| Tipton | 16-80-4W-30-2* | 1 |
| West Branch | Stanwood | 1 |
| West Branch | 16-81-4W-01-1* | 1 |
| West Branch | 16-80-3W-15-3* | 1 |
| West Branch | 16-80-3W-18-9* | 4 |
| West Branch | 16-80-3W-08-5* | 2 |
| West Liberty | 16-80-3W-17-5* | 1 |
| 16-80-4W-24-3* | 16-80-3W-18-9* | 3 |
| 16-80-4W-10-1* | 16-80-3W-14-3* | 1 |
| 16-80-3W-08-3* | 16-80-4W-21-1* | 7 |
| 16-80-2W-31-2* | 16-80-4W-26-4* | 1 |
| 16-80-4W-20-1* | 16-80-3W-19-11* | 2 |
| 16-80-4W-11-4* | 16-80-3W-18-9* | 2 |

* Rural locations are described by a series of five numbers denoting county, township, range, section, and road number, respectively.

December Average Weekday Traffic 1962

| Trip Terminal | Trip Terminal | Total No. <br> of Trips |
| :--- | :---: | :---: |
| $16-80-3 W-17-3^{*}$ | $16-79-2 W-14-1^{*}$ | 1 |
| $16-80-3 W-15-3^{*}$ | $16-80-4 W-10-3^{*}$ | 1 |
| $16-80-4 W-24-1 *$ | $16-81-4 W-33-3^{*}$ | 1 |
| $16-80-2 W-33-4^{*}$ | $16-80-4 W-10-4^{*}$ | 1 |
| $16-80-3 W-18-9 *$ | $16-80-3 W-30-3^{*}$ | 1 |
| $16-80-3 W-09-3^{*}$ | $16-80-4 W-22-1^{*}$ | 2 |
| $16-80-3 W-18-9 *$ | $16-80-4 W-10-2^{*}$ | 1 |
| Total |  | 206 |

* Rural locations are described by a series of five numbers denoting county, township, range, section, and road number, respectively.

