TO: F. C. Marshall
Technical Services Division

FROM: James S. Reierson
Site Development Section

DATE: 10-27-80
PHONE: 296-5773

SUBJECT: I90 Rest Area Usage Survey
Highforest Rest Area E.B.
Blue Earth Rest Area E.B.

A five day rest area usage survey was conducted at the two above mentioned rest areas on I90. These two rest area facilities are 85 miles apart, and the survey was designed to provide information concerning user patterns, types of traffic and percent of vehicles stopping at each rest area. In this way, actual usage data can support the determination for another rest area within the 85 mile interval. It should be noted that the proposed E.B. Hayward rest area facility lies within this 85 mile travel interval between the Blue Earth and Highforest rest areas.

Based on the usage survey results, it is apparent that an additional safety rest area is warranted as originally identified in the Comprehensive Interstate Safety Rest Area program. The survey results reveal the following.

1. The percent of vehicles stopping at each rest area during the five days averaged:
   - Blue Earth E.B. 16.9%
   - Highforest E.B. 12.8%

   This can be compared to the 12.0% figure used in the 20 year design calculations. If the proposed Hayward facility were eliminated from the I90 E.B. system, the Blue Earth and Highforest rest areas would be subjected to severe user impacts and require upgrading and possible expansion in the near future.

2. Of the vehicles entering each rest area approximately 75% were from out of state.

3. Total usage, traffic volumes and percent stopping were not affected by last years fuel crisis.

4. Average time in rest areas and persons per vehicle have not changed.

Also included are some of the numerous comments received during the survey period. One comment often received at the Highforest rest area was the long drive, 85 miles, from the Blue Earth rest area to the Highforest rest area. Again, these comments reinforce the need for an intermediate rest area facility near Hayward.
Motorists were also asked if the gas shortage affected their summer vacation plans, 437 said yes and 1,017 said no. It would seem that people will adjust to the gas situation, providing time, money and resources required for vacations, tourism, recreation and family travel.

cc: R. Braun - R. McDonald
    W. Merritt
    G. Ofstead
    R. Larson - R. Klobuchar
    L. Nelson
    L. Eilts
    A. Bluhm
    D. Larson
    D. Adams - T. Thorson - S. Wyczawski
    R. Doerr
TO: Jim Reicerson  
Site and Development Unit  

FROM: Robert Doerr  
Sr. Highway Technician  

SUBJECT: Highforest Rest Area Usage Study, I90 Eastbound  

This rest area usage study was done to provide information on current use patterns. This information will be used in spacing rest areas and providing the proper numbers of facilities.

The information is obtained by giving each vehicle entering the rest area a questionnaire which is answered during their stay in the area. The questionnaire is then collected as the vehicle leaves the area. The study is performed for 5 consecutive days Thursday-Monday 8 hours per day.

The mainline traffic is counted and classified according to type of vehicle during the same time period. This allows us to derive averages for stopping and length of stay for each type of vehicle using the rest area.

The following information was collected:
SUMMARY

Date: July 31st - August 4th, 1980
Hours: 9 A.M. to 5 P.M.
Weather: Warm and partly cloudy, except for showers Monday morning

Total vehicles on mainline Eastbound 9,383
Vehicles entering rest area 9 A.M. to 5 P.M. 1,200
Percent of vehicles stopping 9 A.M. to 5 P.M. 12.8%

Total people using rest area 9 A.M. to 5 P.M. 3,149
Average persons per vehicle 2.6
Average time in rest area 15.6 min.

PURPOSE FOR ENTERING AREA

| Use rest rooms | 60.7% |
| Just to Rest | 11.2% |
| Eat/Picnic | 10.0% |
| Water | 6.6% |
| Other | 5.5% |
| Telephone | 2.1% |
| Use Refuse Containers | 1.9% |
| Use Travel Information Board | 1.6% |
| Dispose of Sewage | 0.4% |

PERCENT OF PEOPLE USING

| Rest Rooms | 71.6% |
| Drinking Water | 43.3% |

PERCENT OF VEHICLES USING

| Refuse Containers | 25.2% |
| Picnic Tables | 13.8% |
| Travel Information | 8.4% |
| Picnic Shelter | 6.5% |
| Telephone | 5.3% |
| Other | 5.1% |
| Electricity | 0.5% |

NUMBER OF VEHICLES THAT STOPPED 9 A.M. to 5 P.M.

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Vehicles Entering</th>
<th>Out of State</th>
<th>Vehicles on Mainline</th>
<th>Percent Stopping</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 31</td>
<td>Thur.</td>
<td>246</td>
<td>200</td>
<td>1,675</td>
<td>14.6</td>
</tr>
<tr>
<td>Aug. 1</td>
<td>Fri.</td>
<td>239</td>
<td>193</td>
<td>1,956</td>
<td>12.2</td>
</tr>
<tr>
<td>Aug. 2</td>
<td>Sat.</td>
<td>252</td>
<td>198</td>
<td>1,921</td>
<td>13.1</td>
</tr>
<tr>
<td>Aug. 3</td>
<td>Sun.</td>
<td>216</td>
<td>165</td>
<td>2,007</td>
<td>10.8</td>
</tr>
<tr>
<td>Aug. 4</td>
<td>Mon.</td>
<td>247</td>
<td>175</td>
<td>1,824</td>
<td>13.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1200</td>
<td>931</td>
<td>9,383</td>
<td>12.8</td>
</tr>
</tbody>
</table>
TIME VEHICLES ENTERED AREA

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9-10</td>
<td>17</td>
<td>21</td>
<td>21</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>10-11</td>
<td>31</td>
<td>32</td>
<td>27</td>
<td>30</td>
<td>32</td>
</tr>
<tr>
<td>11-12</td>
<td>35</td>
<td>22</td>
<td>53</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>12-1</td>
<td>36</td>
<td>31</td>
<td>51</td>
<td>38</td>
<td>39</td>
</tr>
<tr>
<td>1-2</td>
<td>31</td>
<td>31</td>
<td>20</td>
<td>33</td>
<td>41</td>
</tr>
<tr>
<td>2-3</td>
<td>36</td>
<td>35</td>
<td>33</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td>3-4</td>
<td>28</td>
<td>37</td>
<td>26</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>4-5</td>
<td>32</td>
<td>24</td>
<td>21</td>
<td>29</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>246</td>
<td>239</td>
<td>252</td>
<td>216</td>
<td>247</td>
</tr>
</tbody>
</table>

AVERAGE INFORMATION FOR EACH TYPE VEHICLE THAT ENTERED AREA

<table>
<thead>
<tr>
<th>Type Vehcile</th>
<th>Average Length of Stay</th>
<th>Average No. of People</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>13.8 min.</td>
<td>2.6</td>
<td>62.3</td>
<td>11.9</td>
</tr>
<tr>
<td>Car with camper trailer</td>
<td>19.3 min.</td>
<td>3.8</td>
<td>3.8</td>
<td>24.6</td>
</tr>
<tr>
<td>Car with house trailer</td>
<td>23.3 min.</td>
<td>1.7</td>
<td>1.8</td>
<td>17.6</td>
</tr>
<tr>
<td>Car with boat trailer</td>
<td>13.0 min.</td>
<td>2.8</td>
<td>0.3</td>
<td>9.3</td>
</tr>
<tr>
<td>Car with other trailer</td>
<td>7.4 min.</td>
<td>3.8</td>
<td>0.7</td>
<td>16.3</td>
</tr>
<tr>
<td>Single unit truck</td>
<td>16.5 min.</td>
<td>2.9</td>
<td>10.8</td>
<td>13.8</td>
</tr>
<tr>
<td>Truck with camper</td>
<td>19.4 min.</td>
<td>2.9</td>
<td>1.3</td>
<td>15.8</td>
</tr>
<tr>
<td>Truck with trailer</td>
<td>10.9 min.</td>
<td>3.1</td>
<td>0.8</td>
<td>11.1</td>
</tr>
<tr>
<td>Truck (commercial)</td>
<td>10.7 min.</td>
<td>1.2</td>
<td>1.3</td>
<td>8.9</td>
</tr>
<tr>
<td>Semi</td>
<td>16.2 min.</td>
<td>1.4</td>
<td>7.4</td>
<td>9.7</td>
</tr>
<tr>
<td>Motorhome</td>
<td>27.5 min.</td>
<td>3.1</td>
<td>5.2</td>
<td>25.9</td>
</tr>
<tr>
<td>Bus</td>
<td>25.5 min.</td>
<td>22.5</td>
<td>0.2</td>
<td>8.0</td>
</tr>
<tr>
<td>Other</td>
<td>21.3 min.</td>
<td>1.6</td>
<td>4.3</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>15.6 min.</td>
<td>2.6</td>
<td>100%</td>
<td>12.8</td>
</tr>
</tbody>
</table>

A refers to percentage of total number of vehicles using rest area
B refers to percentage of this vehicle that stopped in rest area, out of total number of vehicles that passed this rest area.

Vehicles with Pets 5.4%
65 vehicles containing 92 pets

Vehicles stopping at other rest areas 56%

Vehicles spending there vacation in Minnesota 27%

Vehicles who's plans had been affected by the gas shortage 30%

Vehicles on Vacation that were camping 13.5%
TO: Jim Reiersen  
Site and Development Unit

FROM: Robert Doerr  
Sr. Highway Technician

SUBJECT: Blue Earth Rest Area Usage Study, 190 East Bound

This rest area usage study was done to provide information on current use patterns. This information will be used in spacing rest areas and providing the proper numbers of facilities.

The information is obtained by giving each vehicle entering the rest area a questioneer which is answered during their stay in the area. The questioneer is then collected as the vehicle leaves the area. The study is performed for 5 consecutive days Thursday - Monday 8 hours per day.

The mainline traffic is counted and classified according to type of vehicle during the same time period. This allows us to derive averages for stopping and length of stay for each type of vehicle using the rest area.

The following information was collected:
SUMMARY

Date: July 31st - August 4th, 1980
Hours: 9 a.m. to 5 p.m.
Weather: Warm and partly cloudy, except for showers Monday morning

Total vehicles on mainline East Bound: 6,582
Vehicles entering rest area 9 a.m. to 5 p.m.: 1,112
Percent of vehicles stopping 9 a.m. to 5 p.m.: 16.9%
Total people using rest area 9 a.m. to 5 p.m.: 2,808
Average persons per vehicle: 2.5
Average time in rest area: 19.3 min.

PURPOSE FOR ENTERING AREA

Use rest rooms: 53.8%
Just to Rest: 14.3%
Eat/Picnic: 9.3%
Water: 8.4%
Other: 5.6%
Use Travel Information Board: 2.8%
Telephone: 2.6%
Use Refuse Containers: 2.6%
Dispose of Sewage: 0.6%

PERCENT OF PEOPLE USING

Rest Rooms: 83.2%
Drinking Water: 52.2%

PERCENT OF VEHICLES USING

Refuse Containers: 28.4%
Picnic Tables: 16.1%
Picnic Shelter: 11.3%
Other: 10.2%
Travel Information: 9.1%
Telephone: 4.8%
Electric Outlet: 0.5%

NUMBER OF VEHICLES THAT STOPPED 9 A.M. TO 5 P.M.

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Vehicles Entering</th>
<th>Out of State</th>
<th>Vehicles on Mainline</th>
<th>Percent Stopping</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 31</td>
<td>Thur.</td>
<td>221</td>
<td>165</td>
<td>1247</td>
<td>17.7</td>
</tr>
<tr>
<td>Aug. 1</td>
<td>Fri.</td>
<td>239</td>
<td>184</td>
<td>1446</td>
<td>16.5</td>
</tr>
<tr>
<td>Aug. 2</td>
<td>Sat.</td>
<td>230</td>
<td>187</td>
<td>1232</td>
<td>18.7</td>
</tr>
<tr>
<td>Aug. 3</td>
<td>Sun.</td>
<td>227</td>
<td>153</td>
<td>1393</td>
<td>16.3</td>
</tr>
<tr>
<td>Aug. 4</td>
<td>Mon.</td>
<td>195</td>
<td>146</td>
<td>1264</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1112</td>
<td>833</td>
<td>6582</td>
<td>16.9</td>
</tr>
</tbody>
</table>

TIME VEHICLES ENTERED AREA

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9-10</td>
<td>16</td>
<td>21</td>
<td>17</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>10-11</td>
<td>27</td>
<td>38</td>
<td>36</td>
<td>23</td>
<td>21</td>
</tr>
<tr>
<td>11-12</td>
<td>23</td>
<td>38</td>
<td>38</td>
<td>30</td>
<td>39</td>
</tr>
<tr>
<td>12-1</td>
<td>33</td>
<td>41</td>
<td>33</td>
<td>29</td>
<td>43</td>
</tr>
<tr>
<td>1-2</td>
<td>37</td>
<td>27</td>
<td>28</td>
<td>33</td>
<td>14</td>
</tr>
<tr>
<td>2-3</td>
<td>32</td>
<td>29</td>
<td>33</td>
<td>38</td>
<td>21</td>
</tr>
</tbody>
</table>
(cont.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6</td>
<td>35</td>
<td>27</td>
<td>23</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>4-5</td>
<td>18</td>
<td>18</td>
<td>22</td>
<td>27</td>
<td>21</td>
</tr>
</tbody>
</table>

AVERAGE INFORMATION FOR EACH TYPE VEHICLE THAT ENTERED AREA

<table>
<thead>
<tr>
<th>Type Vehicle</th>
<th>Average Length of Stay</th>
<th>Average No. of People</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>17.2 min.</td>
<td>2.5</td>
<td>61.1</td>
<td>17.2</td>
</tr>
<tr>
<td>Car with camper Trailer</td>
<td>22.1 min.</td>
<td>3.6</td>
<td>3.1</td>
<td>28.7</td>
</tr>
<tr>
<td>Car with house Trailer</td>
<td>30.5 min.</td>
<td>3.6</td>
<td>1.1</td>
<td>30.0</td>
</tr>
<tr>
<td>Car with boat Trailer</td>
<td>14.5 min.</td>
<td>4.0</td>
<td>0.2</td>
<td>10.5</td>
</tr>
<tr>
<td>Car with other Trailer</td>
<td>26.0 min.</td>
<td>2.9</td>
<td>0.6</td>
<td>23.3</td>
</tr>
<tr>
<td>Single unit truck</td>
<td>22.1 min.</td>
<td>2.8</td>
<td>11.8</td>
<td>16.6</td>
</tr>
<tr>
<td>Truck with camper</td>
<td>23.3 min.</td>
<td>2.9</td>
<td>2.9</td>
<td>25.6</td>
</tr>
<tr>
<td>Truck with trailer</td>
<td>27.2 min.</td>
<td>3.6</td>
<td>2.5</td>
<td>15.4</td>
</tr>
<tr>
<td>Truck (commercial)</td>
<td>15.6 min.</td>
<td>1.4</td>
<td>1.8</td>
<td>13.2</td>
</tr>
<tr>
<td>Semi</td>
<td>24.3 min.</td>
<td>1.4</td>
<td>6.5</td>
<td>10.0</td>
</tr>
<tr>
<td>Motorhome</td>
<td>22.1 min.</td>
<td>2.7</td>
<td>2.2</td>
<td>13.0</td>
</tr>
<tr>
<td>Bus</td>
<td>16.0 min.</td>
<td>15.0</td>
<td>0.1</td>
<td>10.0</td>
</tr>
<tr>
<td>Other</td>
<td>22.1 min.</td>
<td>1.6</td>
<td>6.1</td>
<td>25.3</td>
</tr>
<tr>
<td></td>
<td>19.3 min.</td>
<td>2.5</td>
<td>100</td>
<td>16.9</td>
</tr>
</tbody>
</table>

A refers to percentage of total number of vehicles using rest area.
B refers to percentage of this vehicle that stopped in rest area, out of total number of vehicles that passed this rest area.

Vehicles with Pets 7.0%
78 vehicles containing 96 pets

Vehicles stopping at other rest areas 55%

Vehicles spending there vacation in Minnesota 32%

Vehicles who's plans had been affected by gas shortage 20%

Vehicles on vacation that were camping 16%
COMMENTS:

We received over 600 comments at each rest area. The majority of the people mentioned how clean, well kept, good looking and well designed the rest areas are in Minnesota. One major comment at Highforest, over 35 times, was the long distance between Blue Earth and the next rest area.

Selected other comments are:

- We were very pleased with the nature conservancy at Blue Earth
- Should have vending machines (several comments)
- Close it up and install gas pumps
- Need more shade trees (several comments)
- Would be nice to have D.O.T. maps available
- Where are the dump stations (several comments)
- Minnesota has the best rest areas in the U.S. (Several comments)
- First Class!
- Should have paper towels, soap, faucets that stay on and how about a coke machine
- Get off Bumpy road
- Rest areas too far apart.
- Keep up the good work and show off the state
- Good use of taxpayers money
- Nicely landscaped
- Why not build rest areas in the median
- Wasted tax money
- Received Map (thank you)
- We could use more rest areas like this on state roads
- No beer what's the story
- Money well spent
- Need one every 30-40 miles
- Not enough parking
- Travel information very helpful
- I stop because there is an attendant so I don't have to be frightened to stop
- Need table to change baby
- Bikers have more fun than people
- I am very fond of rest areas especially when riding a cycle
- Like to see wildlife (Several comments)
- Excellent rest stop Felt Safe
- Playground great idea
- Like to see the passive solar here
- Should have a U.S. Mail Box
- Would like electric outlets to plug in air conditioner during lunch
- Very nice, If Montana only knew
- Built with both children and adults in mind
- Be back next year to see wildlife
- Employee's very courteous
- One of the best ways to spend tax dollars
GAS COMMENTS:

We asked 2,321 vehicles if they were on vacation, and if they were did the current gas shortage affect your vacation travels. They answered yes 437 times no 1,017 times and made approximately 200 comments. The comments were mostly that there is no shortage and gas is too expensive other comments are:

My bike uses so little gas it isn't worth talking about
No stations open at night
Less travel
We use diesel
Money Wise
Shorter trips, stay longer at Stop
Gas was expensive in National Parks
Not going as Far
Bought a compact car. (29 mpg)
No premium Motorcycles need it
Cut my income by 30%
Stayed closer to home
More is spent on gas less on recreation & Food
We camp at KOA's to save money for gas
Not using motorhome this trip
Need a small business loan to go 100 mi.
Diesel Rabbit 45 mpg on trip helps much
Used Motorcycle
I get 60 miles to gallon
We eat less
Traveling only in Minnesota
There is no shortage
More conscious of driving habits
Driving still cheaper than flying
I drive truck, it's very bad
DEAR MOTORIST:

THE MINNESOTA DEPARTMENT OF TRANSPORTATION IS DETERMINING WHAT SHOULD BE THE SPACING OF THE REST AREAS ALONG THE HIGHWAY AND WHAT FACILITIES THEY SHOULD PROVIDE TO SATISFY YOUR NEEDS. ONLY YOU CAN SUPPLY INFORMATION WE NEED TO PLAN REST AREA FACILITIES. PLEASE ANSWER THE FOLLOWING QUESTIONS.

**DAY OF WEEK** ___________  **VEHICLE TYPE** ___________  **NUMBER OF PEOPLE IN** ___________

**DATE** ___________  **TIME IN** ___________  **VEHICLE** ___________

**LICENSING STATE** ___________  **TIME OUT** ___________

**WHERE IS YOUR HOME (CITY OR COUNTY)?** ___________  **(STATE)** ___________

---

**REST AREA USE**

1. **WHAT WAS YOUR CHIEF PURPOSE FOR DRIVING INTO THIS REST AREA?** (check only one)
   
   1. __ Use rest room  
   2. __ Dispose of sewage  
   3. __ Water  
   4. __ Just to rest  
   5. __ Use Travel Information Board  
   6. __ Telephone  
   7. __ Eat/Picnic  
   8. __ Dispose of refuse  
   9. __ Other (please specify)  

2. **HOW MANY PEOPLE IN YOUR PARTY USED THE FOLLOWING?**

   Rest room facilities __  Drinking water supply __

3. **WHICH OF THE FOLLOWING FACILITIES WERE USED BY YOUR PARTY?**

   1. __ Picnic table  
   2. __ Travel information  
   3. __ Electrical outlet  
   4. __ Picnic shelter  
   5. __ Trash receptacle  
   6. __ Telephone  
   7. __ Other (Please specify) __  
   8. __ None of these

4. **DO YOU HAVE ANY PETS TRAVELING WITH YOU?** __  **NUMBER** __

5. **WERE YOU ON VACATION OR PARTICIPATING IN RELATED RECREATIONAL OR SOCIAL ACTIVITIES, PLEASE COMPLETE THE FOLLOWING QUESTIONS.**

   1. **Will you or did you spend your vacation or related time in Minnesota?** Yes __  No __
   2. **If you answered "yes" to the previous question, what City or Lake did you or will you stay near?** (City or Lake) ___________
   3. **Has the current gas shortage affected your vacation travels?** Yes __  No __  **Comment** ___________
   4. **How long are you planning on staying in Minnesota?** ___________  **Days**
   5. **Will you be camping or using campground facilities?** Yes __  No __

---

**REST AREA COMMENTS** ___________

---

PLEASE RETURN TO PEOPLE AT REST AREA EXIT

THANK YOU