

Approved 3-6-86
Date

MINUTES OF THE SENATE COMMITTEE ON TRANSPORTATION AND UTILITIES

The meeting was called to order by Sen. Bill Morris at
Chairperson

9:00 a.m./~~p.m.~~ on February 27, 1986 in room 254-E of the Capitol.

All members were present ~~except~~.

Committee staff present:

Arden Ensley, Revisor
Hank Avila, Legislative Research Department
Ben Barrett, Legislative Research Department
Louise Cunningham, Secretary

Conferees appearing before the committee:

Sen. D. Thiessen
Richard Schlegel, ABATE
Larry Mogge - Four-wheel Drive Association
Rick Brickei, Topeka
Mike O'Keefe, Department of Transportation
Harold Turntine, Department of Revenue
Sen. Hayden

The Chairman asked the committee if they wanted to hold a hearing on the POW license plate bill, S.B. 460. It was his feeling that it had taken five years to get this type of license plate for them and now was too soon to be back asking for consideration for their widows to keep the plates. He wanted to know the feeling of the committee on this bill.

Sen. Hoferer explained that she had worked with this group while she was in Sen. Kassebaum's office and the federal government does not do much for them. Some of them have long term medical problems and this means a lot to them and she felt it was a reasonable thing to ask.

The committee decided to hold hearings on March 7, 1986 on the bill.

HEARING ON S.B. 616 - Height of head lights on elevated vehicles.

Sen. Thiessen said this bill had been drafted at the request of an optometrist in Coffeyville. He said the glare of elevated headlights was hard on people who have had cataract surgery and also some of the elderly are bothered by the glare. The bill would provide that the lights could not be more than 4 inches higher than when the vehicle was originally assembled.

Richard Schlegel said he had some problem with the wording on lines 21 and 22 because it specified all vehicles shall be equipped with two lights and there was no exception for motorcycles. He was told this presently was existing law and there was no problem.

Larry Mogge, Four-wheel Drive Association, said if the 54" height was to be the standard it should apply to all vehicles and just to single out their elevated vehicles didn't seem right. It should also apply to tractor-trailers, concrete trucks, dump trucks, snow plows and all vehicles. He said there seemed to be a dislike for this type of vehicle and this was a backdoor attempt to restrict them. He said if this law passed they would have to put lights under their bumpers. This would not be feasible as the area under the bumper takes the shocks and it would cause all kinds of maintenance problems.

Rick Brickei, Topeka, said he has been in the business of modifying elevated vehicles for four years. He said his customers have a lot of money in their vehicles and they are not pleased with this bill. He said they would like to compromise on something but they do not want to lower their vehicles. He had a petition which he said contained over 1000 signatures against S.B. 616.

CONTINUATION SHEET

MINUTES OF THE SENATE COMMITTEE ON TRANSPORTATION AND UTILITIES,
room 254-E, Statehouse, at 9:00 a.m. ~~pm~~ on February 27, 19 86

Sen. Thiessen said there was nothing in the bill to force them to lower the chassis. They were only concerned about the headlights.

HEARING ON S.B. 610 - Selection of highway construction projects.

Sen. Hayden said there was much evidence to prove that trucks cause more maintenance problems on roads than other vehicles and more importance should be given to the Average Daily Traffic Count than the Department of Transportation uses in selecting highways in need of improvement. On Highway 83 there are many feedlots and packing plants and it gets a heavy load of eighteen wheelers. He said the trucking industry should be supportive of this. He said this bill was an attention-getter.

Sen. Frey also spoke of the predominance of trucks in his area and said this factor was not considered when it comes to maintenance. He said roads with narrow bridges were getting more attention as opposed to those areas with fewer bridges. The heavy trucks cause other problems such as crowding cars off of highways and narrow shoulders. Other formulas should be considered.

Mike O'Keefe, Department of Transportation, spoke of the way the formula works to rank priority. He considered they had the optimum formula and each project gets a priority score and they work from the top down until they run out of money. The money determines how far they get down the list. He said they always have some local units of government who feel that certain factors ought to carry a higher weight. When they help someone, someone else gets hurt. A copy of his statement is attached. (Attachment 1).

It was suggested this might be the subject of an interim study.

ACTION ON S.B. 603 - Relating to registration.

Harold Turntine was present from the Department of Revenue and was asked if they had any problems with this bill. He said the county offices might not all be closed on the same days. Some county commissioners might authorize closings. Most of the days should be uniform however.

A motion was made by Sen. Thiessen and was seconded by Sen. Vidricksen to recommend S.B. 603 favorably for passage. Motion carried.

DISCUSSION ON S.B. 626 - Registration of county owned or leased vehicles.

Mr. Turntine was asked if the registration was necessary every year. He said it would only update their records. The Chairman requested the Revisor's office to update this and the committee would take it up next week.

Meeting was adjourned at 10:05 a.m.

SENATE TRANSPORTATION AND UTILITIES COMMITTEE

Date 2-27-86 Place 254E Time 9:00

S.B. 616
610

GUEST LIST

NAME	ADDRESS	ORGANIZATION
PAT BARNES	TOPEKA	KS. MOTOR CAR DEALERS ASSN.
CHARLES BELT	WICHITA	CHAMBER OF COMMERCE
JIM SULLINS	TOPEKA	KS. MOTOR CAR DEALERS ASSN
Ron Calbest	Newton	U. I. U.
BRUCE GRAHAM	TOPEKA	KS MOTOR CARRIERS ASSN-
LY BILL JACOBS	TOPEKA	KANSAS HIGHWAY PATROL
Richard D. Schlegel	Manhattan	ABATE
Harold B. Furutis	Topeka	Dept of Rev.
Alan B Johnston	Topeka	citizen
Gregory Edwards	Topeka	citizen
Rodney Johnston	Topeka	TAXPAYER of KANSAS!
Joseph R. Moore	Topeka	CITIZEN
Ch D R	Topek	CITIZEN
Jack King	Topeka	CITIZEN
Greg R. Ren	Topeka	citizen

SENATE TRANSPORTATION AND UTILITIES COMMITTEE

Date 2-27 Place _____ Time _____

GUEST LIST

NAME

ADDRESS

ORGANIZATION

<i>Jim Kennedy</i>	<i>Boyst</i>	<i>citizen</i>
<i>Mary E. Wingfoot</i>	<i>Topeka</i>	<i>KANSAS MOTOR CARRIERS ASSO</i>
<i>Scott Self</i>	<i>Wichita KS</i>	<i>Off-Road Motorsports</i>
<i>Randall Ekannon</i>	<i>2215 S Spruce Wichita</i>	<i>Off-Road Motorsports</i>

WEIGHTS OF ATTRIBUTES AND ADJUSTMENT FACTORS
IN THE
PRIORITY FORMULAS FOR ROADS AND BRIDGES

In order to determine the priorities of roads and bridges on the state highway system, KDOT contracted with Woodward-Clyde Consultants to develop a system to rank roads and bridges by priority of need for improvement. The algorithm which was developed consists of two formulas, one for roads and one for bridges, that use input from KDOT's planning data base to measure the relative need for improvement of all roads and bridges on the state highway system.

The priority ranking that results from the use of these formulas is used to select projects for further consideration. A modification to the priority formulas is used in the further consideration of projects to determine the relative benefits of all feasible scopes of projects. Programming is accomplished in priority order selecting the scope of each project with the highest benefit/cost ratio.

The following is a summary of the attributes and adjustment factors contained in the priority formulas which are used to measure the priority of need for improvement of roads and bridges on the state highway system. These same factors are also used to measure the benefit of proposed improvements to roads and bridges.

ATTRIBUTES

1. Attributes which measure the need for improvement of roads and their associated relative weights are shown below:

<u>Attribute</u>	<u>Relative Weight*</u>
Number of narrow structures per mile	.086
Shoulder width	.089
Number of substandard stopping sight distances (SSSD) per mile	.069
Lane width	.101
Substandard horizontal curves (SSHC) per mile	.099
Volume/Capacity ratio	.091
Commercial traffic index	.065
Rideability	.088
Pavement structural evaluation	.208
Observed condition	.104

*Assumes no adjustments for accident rate, posted speed limit, type of facility, or shoulder type.

ATT. ①
S. TLU 2/27/81

2. Attributes which measure the need for improvement of bridges and their associated relative weights are shown below:

<u>Attribute</u>	<u>Relative Weight*</u>
Horizontal clearance	.196
Bridge roadway restriction	.088
Deck Condition	.232
Structural condition	.314
Operating rating	.170

*Assumes no adjustments for accident rate or posted speed limit.

ADJUSTMENT FACTORS

1. Factors which affect all items of the priority formulas for roads and bridges.

Functional Classification: An adjustment that accounts for the relative importance of a road or bridge to the state highway system.

<u>Functional Class</u>	<u>Weight</u>
Interstate	1.00
Principle Arterials	.95
Minor Arterials	.85
Major Collectors	.60

Traffic Volume: An adjustment that gives more weight to roads and bridges with higher amounts of traffic. This factor varies from 0.381 to 1.00 as traffic increases from 0 to 10,000 vpd .

Examples of some traffic adjustment factors are:

<u>AADT</u>	<u>Adjustment Factor</u>
0	.381
2,000	.512
4,000	.640
6,000	.763
8,000	.884
10,000	1.000

2. A factor which affects all items of the priority formula for bridges only.

Bridge Adjustment: An adjustment that accounts for the relative importance of bridges compared to roads and the difference in the numbers and weights of attributes in the priority formula for roads and bridges.

Bridge Adjustment Factor = 0.54

3. Factors that affect only parts of the priority formulas for roads and bridges.

Accident Rate: An adjustment that assigns more weight to roads and bridges which have a higher observed accident rate. This adjustment only affects those attributes that were determined to measure the safety of a road (narrow structures per mile, shoulder width, substandard stopping sight distances per mile, lane width and substandard horizontal curves per mile) or a bridge (horizontal clearance and bridge roadway restriction).

<u>Accident Rate</u>	<u>Adjustment</u>
High	1.000
Medium	0.858
Low	0.734

Posted Speed Limit: An adjustment that assigns more weight to roads and bridges which have a higher posted speed limit. This adjustment affects the same attributes as the adjustment factor for accident rate. This adjustment varies from 0 to 1.00 as the posted speed limit increases from 5 to 55 mph. Examples of some posted speed limit adjustments are:

<u>Posted Speed Limit</u>	<u>Adjustment</u>
20 mph	0.191
30 mph	0.360
40 mph	0.573
55 mph	1.000

Type of Facility: This adjustment gives more weight to undivided roads since they were determined to be generally in more need than divided highways. This adjustment only affects the formula for roads. The attributes shoulder width, lane width, and commercial traffic are each adjusted for the type of facility by the following factors:

<u>Attribute</u>	<u>Adjustment</u>	
	<u>Undivided</u>	<u>Divided</u>
Shoulder width	1.000	0.540
Lane width	1.000	0.500
Commercial traffic	1.000	0.376

Shoulder Type: This adjustment assigns more weight to roads with unstabilized shoulders than those with stabilized shoulders. This adjustment also only affects the formula for priority of roads. The attributes shoulder width and commercial are each adjusted for shoulder type by the following factors:

<u>Attribute</u>	<u>Adjustment</u>	
	<u>Unstabilized Shoulders</u>	<u>Stabilized Shoulders</u>
Shoulder width	1.000	0.607
Commercial traffic	1.000	0.519

TABLE SHOWING ATTRIBUTES AND ADJUSTMENTS USED IN THE
PRIORITY FORMULAS

Attribute	Rel. Wt.	ADJUSTMENT FACTORS*							
		Accident Rate			Posted Speed	Facility		Shoulders	
		High	Med.	Low		Div.	Undiv.	Stab.	Unst.
Roads:									
No. of narrow structures per mile	.086	1.000	.858	.734	0to1				
Shoulder width	.089	1.000	.858	.734	0to1	.540	1.000	.607	1.000
No. of SSSD per mi.	.069	1.000	.858	.734	0to1				
Lane width	.101	1.000	.858	.734	0to1	.500	1.000		
No. of SSHC per mi.	.099	1.000	.858	.734	0to1				
Volume/Capacity ratio	.091								
Commercial traffic	.065					.376	1.000	.519	1.000
Rideability	.088								
Pavement structural evaluation	.208								
Observed condition	.104								
Bridges:									
Horizontal clearance	.196	1.000	.858	.734	0to1				
Bridge roadway restriction	.088	1.000	.858	.734	0to1				
Deck condition	.232								
Structural condition	.314								
Operating rating	.170								

*In addition, roads and bridges are adjusted for functional classification and AADT as shown in the following tables:

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<u>Functional Class</u>	<u>Adjustment</u>
Interstate	1.00
Principle Arterial	.95
Minor Arterial	.85
Collector	.60

<u>AADT</u>	<u>Adjustment</u>
0	.381
2,000	.512
4,000	.640
6,000	.763
8,000	.884
10,000	1.000

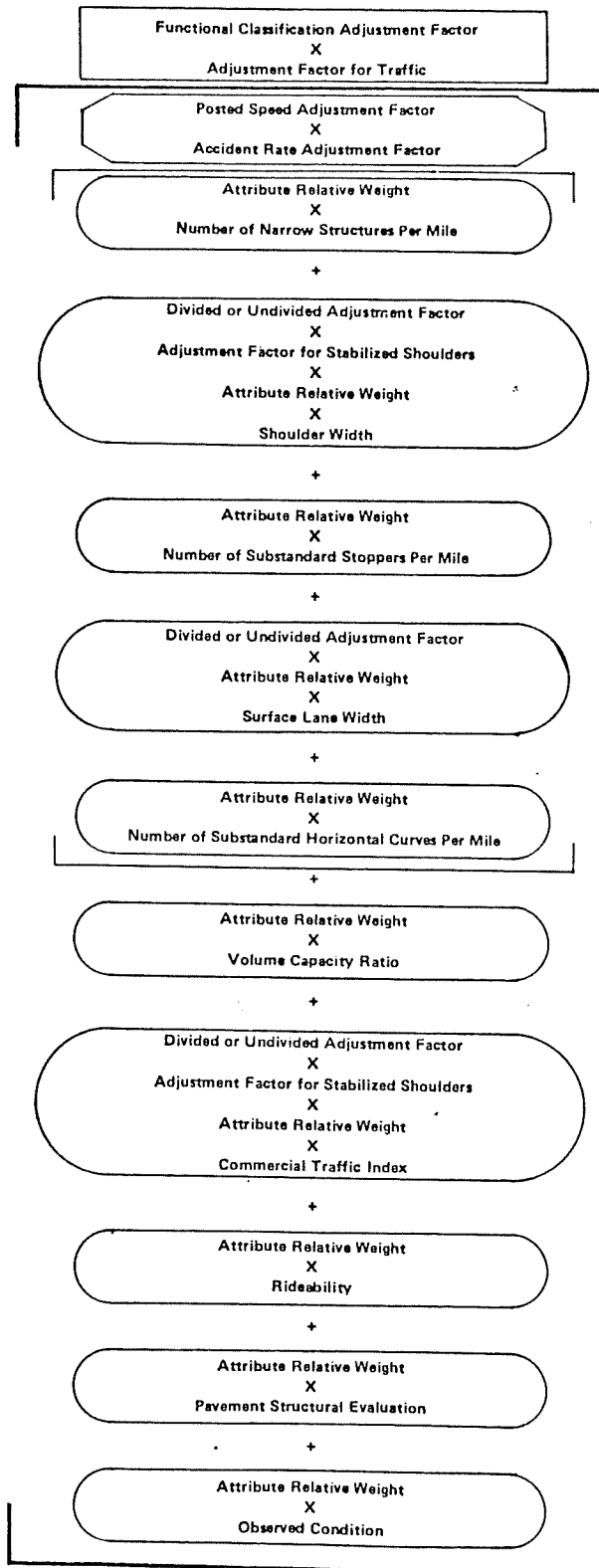
The adjustment for AADT is on a continuum from .381 to 1.000. Adjustments shown are for illustration.

Another Adjustment factor is used to account for the relative importance of bridges compared to roads. The bridge adjustment factor is applied to all terms in the bridge priority formula. $K_b = 0.53$.

PRIORITY FORMULA FOR CONTROL SECTIONS

Total Adjusted Need

=



PRIORITY FORMULA FOR BRIDGES

Total Adjusted Need

=

