

ALASKA STATE LEGISLATURE
SENATE TRANSPORTATION STANDING COMMITTEE

April 6, 2004

2:15 p.m.

TAPE(S) 04-16

MEMBERS PRESENT

Senator John Cowdery, Co-Chair
Senator Gene Therriault
Senator Georgianna Lincoln

MEMBERS ABSENT

Senator Thomas Wagoner, Co-Chair
Senator Donny Olson

COMMITTEE CALENDAR

OVERVIEW: Pavement Research by Gerald J. DesJarlais, President,
and Jack Hayden, Denali Materials Inc.

CS FOR SENATE BILL NO. 371(TRA)

"An Act relating to the powers and duties of the Department of
Transportation and Public Facilities; relating to a long-range
program for highway construction and maintenance; and providing
for an effective date."

MOVED CSSB 371(TRA) OUT OF COMMITTEE

PREVIOUS COMMITTEE ACTION

BILL: SB 371

SHORT TITLE: POWERS/DUTIES DOTPF

SPONSOR(s): STATE AFFAIRS

03/19/04	(S)	READ THE FIRST TIME - REFERRALS
03/19/04	(S)	TRA, FIN
03/30/04	(S)	TRA AT 1:30 PM CAPITOL 17
03/30/04	(S)	Senate Bill:
04/01/04	(S)	TRA AT 1:30 PM CAPITOL 17
04/01/04	(S)	-- Meeting Postponed to Fri, 4/2/04 --
04/06/04	(S)	TRA AT 2:00 PM BUTROVICH 205

WITNESS REGISTER

Mr. Gerald DesJarlais
Denali Materials
3815 W. 40th Ave. A
Anchorage AK 99517

POSITION STATEMENT: Presented pavement research overview.

Mr. Jack Hayden
Denali Materials
3815 W. 40th Ave. A
Anchorage AK 99517

POSITION STATEMENT: Presented pavement research overview.

Mr. Doug Letch
Staff to Senator Gary Stevens
Alaska State Capitol
Juneau, AK 99801-1182

POSITION STATEMENT: Commented on SB 371 for the sponsor.

Ms. Nona Wilson, Legislative Liaison
Department of Transportation &
Public Facilities
3132 Channel Dr.
Juneau, AK 99801-7898

POSITION STATEMENT: Commented on SB 371.

Mr. Bob Doll
Juneau AK

POSITION STATEMENT: Commented on SB 371.

Ms. Dee Essert
Sand Lake AK

POSITION STATEMENT: Opposes SB 371.

ACTION NARRATIVE

TAPE 04-16, SIDE A

^OVERVIEW: PAVEMENT RESEARCH BY GERALD DESJARLAIS AND JACK HAYDEN OF DENALI MATERIALS

CO-CHAIR JOHN COWDERY called the Senate Transportation Standing Committee meeting to order at 2:15 p.m. Present were Senators Therriault, Lincoln and Co-Chair Cowdery. The first order of business to come before the committee was the asphalt overview by Jack Hayden and Gerald DesJarlais with Denali Materials. This issue was prompted by the rutting in some of the asphalt roads in the Anchorage area.

MR. HAYDEN said Denali Materials makes liquid asphalt products and does a lot of work for the Alaska Department of Transportation and Public Facilities (DOTPF). Alaska has unique conditions that create challenges for them. He said the working life on many heavily traveled roads is five years or less as compared to 20 years down south; some have rutted almost immediately after paving. He reviewed different products available in Alaska saying that the one oil that is available produces a soft grade of liquid asphalt. He said that Chevron was the only producer of liquid asphalt in the state for years, but left because it was more hassle than it was worth to be here. There are two refineries in the state and it's unrealistic to think they are going to spend a lot of money to accommodate a relatively small market.

He explained that polymer, a form of rubber derived from petroleum, can be added to asphalt and it forms a rubber mesh within the liquid asphalt. Because it's elastic, it will fill up cracks as they develop. It's been effective in many areas, although there have been some terrible failures, as seen with rutting. Polymer cracks at the cold end. Another solution was developed in Europe to reduce its rutting problem with the use of stone matrix asphalt. The difference is that Europe has large stone available to use.

CO-CHAIR WAGONER said the last thing the state of Washington puts on its roadbeds before blacktop is a 6 to 8 inch gravel lift. "What percentage of the rutting is caused by this?"

MR. HAYDEN replied a third to a half. He continued saying that the gravel in Alaska is much smaller. Serious research needs to be done in this area. Almost all of the materials used in Alaska are river gravel, which are basically round. It is run through a series of crushers to break it down to a uniform grade with fractured faces. He said that studded tires are probably not the biggest contributor to rutting, but rather pavement flow and sub-grade movement.

CO-CHAIR COWDERY commented that he has seen asphalt up over the gutter and knew that came from grade movement.

SENATOR LINCOLN said that studded tires were identified in a DOT study about 10 years ago as making ruts over time. She didn't know if a final analysis was performed or not.

MR. DESJARLAIS said one of reasons he is testifying today is to get political support for a grant Denali Materials has applied for with the University of Alaska. He has looked at the DOT's rut tester, which now has had a piston added, to simulate studded tire wear, but another rut tester with a wheel produces about the same amount of wear.

He has just returned from a trip to Arizona that has solved the asphalt portion of rutting by putting 20 percent shredded tire rubber in it. It makes a very resilient upper surface, but only one inch is laid on a very hard base. It is almost impervious to studded tire wear and water infiltration to soften the sub-grade.

SENATOR LINCOLN said she heard the use of recycled rubber in asphalt is very slippery.

MR. DESJARLAIS replied that it actually improves traction and reduces tire noise by six decibels at 100 ft. For the research grant, he would take apart failing roads and figure out why they failed, then, come up with design criteria for experimental sections of road.

MR. HAYDEN added that the design work would be done in the lab where it's much cheaper to make a mistake. Different parts of the state might have different design requirements because of different weather conditions. The grant is for \$200,000.

SENATOR OLSON asked if the grant is for studying asphalt or the whole road system.

MR. HAYDEN replied that it is for a road section.

SENATOR OLSON asked how they could study the sub-grade material in a lab.

MR. HAYDEN replied, "You don't ever pave on top of native soil in Alaska. Never. You always build the sub grade. It's just a question of how deep you build it." He said that unsuitable soils will be taken out like clays and silt - that kind of thing - that are susceptible to frost.

CO-CHAIR WAGONER asked what is wrong with the mountains of material in Alaska.

MR. HAYDEN replied that the problem is if you're going to use quarry aggregate, which is quite expensive, it has to be the

kind that will stand up to heat, cold and wear. The most prevalent aggregate available to them in Alaska is river gravel. "I think we can design mixes using that that will work fine...."

MR. DESJARLAIS explained that asphalt is elastic and if you run a truck over it, it tends to flow out.

The rubber brings it back. If you run a truck fast over it, ordinary asphalt will never deform. It's at slow speeds and intersections where cars are getting traction taking off or slowing down - that's where you really have your damage.

MR. HAYDEN said he didn't want to focus entirely on rubber, but he thought it would work. It is one of the aspects that should be studied carefully.

SENATOR OLSON asked if cracked asphalt roads could just be resurfaced and resealed.

MR. HAYDEN replied that is correct as long as it hasn't been deformed too badly.

Unless you do the whole structure, no one thing is going to solve it. They [Arizona] put down a very hard asphalt. You've got to build a base under asphalt, because it's flexible. So,... you put black base, asphalt treated base, which they do in Washington a lot. That's what the state has just started doing.... Then put yourself down a good hard polymer modified asphalt - say two or three inches - and then cap it off with this thin lip.

MR. DESJARLAIS said the best mix for each place would be figured out using native gravels. He noted incredulously that DOT is considering barging limestone from Seattle to do Anchorage streets with. "This could easily save millions a year...."

SENATOR OLSON asked how the asphalt with rubber added acts with water erosion or when petroleum products are spilled on it.

MR. DESJARLAIS replied that rubber asphalt is more resistant than regular asphalt. He pointed out that the newer tires are made of stronger materials.

They have anti-oxidants and flex materials in them; they have an adhesive in them that sticks the asphalt

together better; they've got carbon black which is very resistant to wear. They've got a lot of good things.

MR. HAYDEN said one of the causes of pavement failure is the longitudinal joint where the mat meets. He showed the committee a crack sealer that he would apply between the joints before the second pavement is placed.

CO-CHAIR WAGONER asked how wide his pavers are.

MR. HAYDEN replied about 16 ft., which saves maintenance because of fewer joints. Airports require 25 ft.

CO-CHAIR COWDERY thanked the men for their testimony and closed the hearing.

^#SB371

SB 371-POWERS/DUTIES DOTPF

CO-CHAIR COWDERY announced SB 371 to be up for consideration.

SENATOR THERRIAULT moved to adopt CSSB 371(TRA), version /D. There were no objections and it was so ordered.

MR. DOUG LETCH, staff to Senator Gary Stevens, sponsor, explained that the CS deletes page 3, line 22 - page 4, line 8.

MS. NONA WILSON, Legislative Liaison, Department of Transportation and Public Facilities (DOTPF), said she would answer questions. She noted a rebuttal statement to Jeffery Parker's letter of March 25 from the department in the committee packets.

CO-CHAIR WAGONER said the members could do their own comparisons since they had the documents to go through.

MR. BOB DOLL, former director of Southeast Region of DOT, said:

It does not seem to me to make for good government to reduce the amount of information that the legislature and the public have in regard to the projects that DOT proposes to undertake. This is, of course, especially true now that the flow of federal transportation money seems to be ever increasing.

He said that the legislatures from the previous two terms wanted the benefits of an analysis to consider the projects in that period of time. He asked the committee to consider what the elimination of it would accomplish. DOTPF can conduct whatever kind of analysis it wants; it is capable of publishing regulations that would address most of its concerns. He thought that a cost benefit analysis was a reasonable exercise of the legislative oversight process over the Department of Transportation and how its funds are spent. It provides data regarding proposed projects that can be obtained in no other way and does not put an unreasonable burden on the department.

TAPE 04-16, SIDE B

MR. JEFF PARKER, plaintiff's counsel, in Trout Unlimited and Bob Gillam versus Alaska Department of Transportation and Public Facilities (DOTPF), had four concerns:

First, the bill should at least state the name of the court case correctly, which it doesn't do.

Second, section 1 is directed towards the injunction issued in January, which will probably only remain in effect until July 2004, because that is the date which the DOT has told the court when it would complete the cost benefit analysis pursuant to the court order. Nothing would be gained by overturning the injunction. What would be lost is the information available to the legislature that should address whether or not the project is cost effective for purposes of budgeting.

Thirdly, this bill is eliminating the only objective criteria in state statute for determining whether one project or another is more worthy. Without those criteria, I would like you to put on record how those prioritization decisions would be made.

Fourthly, the draft Valdez Regional Transportation Plan that was released January 5 shows \$1.2 billion in the out years in new road projects. The Southwest region has a \$379 million King Salmon to Chignik Road. Another \$100 million is proposed for new roads from Williams Port to Iliamna, plus South Central has the Knik River Bridge proposal, which has funds earmarked.

He estimated \$2 billion to \$3 billion in road projects in the next 20 years or about \$150 million per year. Current federal

funding is about \$305 million per year and the cost benefits pencil out very unfavorably.

CO-CHAIR WAGONER interrupted to point out that a lot of the projects he is alluding to don't have a lot to do with this project.

MR. PARKER said he was trying to explain why repealing a cost benefit analysis is detrimental to good decisions making.

MS. WILSON referred Mr. Parker to the DOT letter of rebuttal, a section of which she highlighted:

DOT agrees that the consideration of both costs and benefits is useful and indeed appropriate for many, but not all projects. What we consider inappropriate isn't being mandatory on every new project regardless of type, size or urgency. I would also point out that cost and benefit consideration is used routinely during project design even though it's not required by state law. [In] AS 44.42.050 it's required for project selection, but not during project design. But we still do it.

The key point is that CB [cost benefit] analysis should be used where it's meaningful and not universally.

CO-CHAIR WAGONER said that's why the department doesn't object to it being taken out of the statute.

MS. DEE ESSERT, Sand Lake CC, opposed SB 371. She said the cost of Anchorage Metropolitan Area Transportation Study (AMATS) projects has escalated because engineers and project managers fail to consider hidden costs of environmental impacts and other problems. The Knowles Coastal Trail south extension has increased from \$12 million to \$37 million. A recent cost estimate was \$80 million considering legal costs. The legislature needs to shape the planning process by adding statutes with objective criteria to the planning process.

MS. WILSON said that a required cost benefit analysis would interfere with every project that DOT is running, including those in construction phase, like the Soldotna Bridge project, which has been completely halted.

CO-CHAIR COWDERY moved to pass CSSB 371(TRA) from committee with individual recommendations and asked for unanimous consent. There were no objections and it was so ordered. There being no further business to come before the committee, Co-Chair Wagoner adjourned the meeting at 3:20 p.m.

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