2011 SENATE APPROPRIATIONS

SB 2325

2011 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee
Harvest Room, State Capitol

SB 2325
02-03-2011
Job #13907

☐ Conference Committee

Committee Clerk Signature Alice Delzer

Explanation or reason for introduction of bill/resolution:

A bill for an appropriation to DOT for a county and township road reconstruction program

Minutes: See Testimony Attached

Chairman Holmberg called the committee to order on Thursday, February 3, 2011 at 8:30 am in reference to SB 2325. Roll call was taken. All committee members were present except Senator Robinson and Senator Kilzer. Tad H. Torgerson, OMB and Becky J. Keller, Legislative Council were present.

Senator Wanzek, District 29: Introduced the Bill and submitted Attached Testimony #1. I've had opportunities over the years to participate in international round tables and a few years back I participated in the one in Chicago, 1 panel of Brazilian farmers, their cost, they can produce $2.70 a bushel, eyes were wide open, how can we compete. It took almost $5.00 to get their product to market. So infrastructure is important.

Doug Goehring, Agriculture Commissioner testified in favor of SB 2335 and provided Testimony attached #2. States #1 industry is agriculture. The infrastructure is vitally important.

Senator Fischer: Upper Great Plains Transportation, have they identified the roads that need repair from all types of damage? How far will $73 million go in repairing these roads?

Doug Goehring: We are looking at about $211million needed to repair those roads, agricultural haul roads and gravel roads that exist throughout the state. Part of the problem there has been some moderate funding for our roads, since 2004, we've seen an increase in operating costs, we haven't been able to keep up.

Tom Lilja, Executive Director of ND Corn Growers Association (NDCGA) testified in favor of SB 2325 and provided Testimony attached # 3.

Vice Chairman Bowman: As we've seen an increase in production, have we seen an increase in the mill levy? We are about $6 million behind because of the oil traffic.

Tom Lilja: 2 years ago they doubled the mill levy to the townships, but if you have a bad snow event like we are now, that gets eaten up pretty quick.

Vice Chairman Grindberg: The study was started last summer. This was completed just last month.

Denver Tolliver, Associate Director Upper Great Plains Transportation Institute testified in favor of SB 2325 and provided attached testimony #4, a Road investment Needs to Support Agricultural Logistics and Economic Development in ND. (36 page Study).

Senator Krebsbach: Pages 5 and 6 of the study, I look at the counties listed there and I don't see my county listed which is Ward. Is there a different schedule for some of the counties? What is the criteria?

Denver Tolliver: The table on page 6 only lists the estimated funding needs for the 36 counties that are outside of the oil and gas producing counties of North Dakota.

Scott Rising on behalf of Soybean Growers Association in ND testified in favor of SB 2325 and provided Testimony attached # 5.

Niles Hushka, Kadrmas, Lee and Jackson: We do a majority of the work for these counties. I'm here in support of this bill.

Terry Traynor, North Dakota Association of Counties testified in favor of SB 2325 and provided Testimony attached # 6.

Senator Wardner: In these counties, do they have a plan, with this much money you can't fix everything. Do they have a plan, we want to make sure if we do send dollars, that the roads are being taken care.

Terry Traynor: Every county sits down with DOT with their engineer and Community Service Division and goes through a road plan, and looks at the whole county infrastructure, funds are so limited. They have to plan out 3, 4, 5 years ahead. It varies from county to county.

Senator Christmann: Do you know how many of the counties do weight enforcement to make the roads last?

Terry Traynor: All of them do. They all have weight restrictions, but as far as having people dedicated to that, it is few, a number of county have agreements with the highway patrol.

Doyle Johannes, Vice President of North Dakota Farm Bureau: testified in favor of SB 2325 and testimony attached # 7. We like the accountability the counties and townships have that we think that is a good thing. We do support a DO PASS.

Chairman Holmberg: What is the position of the Farm Bureau on what the legislature should do about the current tax structure?

Doyle Johannes: Let the private sector do what they can.

Chairman Holmberg: What about the opposition of reduction of taxes?

Doyle Johannes: If you don't have it, you can't spend it.

Senator Wardner: one of the things we are wrestling, ongoing and one time, this would qualify as a one time, does your organization make a difference between one time and ongoing? We do get people telling us it doesn't matter, what does your organization feel about one time spending?

Doyle Johannes: The green house, what a fabulous thing to have in the state and get world class people to come to North Dakota. When you get programs, you get more people, those are ongoing, and these onetime funds we are generally in favor of those.

Neal Fisher, North Dakota Wheat Commission: Testified in favor of SB 2325. Wheat is still the chief cash crop in North Dakota. We are very proud of that, and your investment.

Vice Chairman Bowman: As we seen increase in production, see deterioration in roads, when you see an increase in oil production, are we missing the boat somewhere? I am a past farmer, I understand the needs, are we trying to protect ourselves when we can get it from someone else? Are we going to have to face this in reality, we will have to increase production and it takes better roads. Whose responsibility is it to take care of those roads when it is being caused by local people?

Neal Fisher: Every man women and child benefit from the robust agriculture industry, if I can conclude on that, everyone has the responsibility to see to it that we have the infrastructure necessary. I think this follows in that same vein. Someone said our agriculture commodities, would have colonial values that this committee and others have made in our ability to gather and market. I think this is a good study wish you well on your deliberation.

Denny Ova, Stutsman County Commission: Testified in favor of SB 2325 Testimony attached #8. We as farmers need to get our seed and fertilizer to town. That is our money, we spread it around. We also have a lot people need to get to work, buses need to run safe.

Larry Syverson, NDTownship Offices Association: Testified in favor of SB 2325. On the weight enforcement, many counties have looked into weight enforcement but since the counties can't keep the fines and fees, all money has to go back to the state. To point out one other thing, these semis are meeting school buses on the road, roads with soft shoulders.

Senator Christmann: When I brought up the issue of counties doing weight control, I didn't mean as a revenue source to build roads, but a couple years ago I thought how much damage they do. The DOT would probably vouch for this the damage, the reason, not because of cars driving, it's because a couple of trucks are driving on them with too much weight. The purpose of weight enforcement would be to prevent this kind of reinvestment in to roads.

Larry Syverson: It would help if counties could retain the monies.

Senator Christmann: The gentlemen from DOT, when we heard the governor's budget proposal, I don't remember the amount about one time funding what was going to political subdivisions and oil producing counties, can your refresh us on what that is?

Paul Bending, Local Govering Engineer: $142 million

Senator Christmann: When you have that pool in those counties, is that exactly in addition to what they probably would have gotten if we didn't have that money available to us?

Paul Benning, Local Government Engineer, DOT: That was dollars that were above and beyond, we do meet with all 53 counties, we do indicate, we ask for a 4 year list of projects. So these additional dollars would be above and beyond.

Senator Wanzek: I hope we at least left a message of the importance of the agriculture industry being competitive, like the study with oil with the $142 million, there is also $228 million for state roads, we are lifting the cap, this $73 million what I understand will be to address the extra ordinary repairs over and above the DOT's budget share of highway distribution that will be going to these counties. This is intended to do some updating, not just maintenance in my opinion.

Paul Benning: For updating additional needs that are out there.

Senator Wanzek: It will get closer to addressing the study that is correct?

Paul Benning: That is correct.

Connie Ova, CEO for the Jamestown/Stutsman Development Corporation (JSDC) submitted Testimony attached # 9 in support of SB 2325 but did not testify.

Chairman Holmberg closed the hearing on SB 2325.

2011 SENATE STANDING COMMITTEE MINUTES

Senate Appropriations Committee
Harvest Room, State Capitol

SB 2325
02-18-2011
Job # 14740 (Meter 17.07)

☐ Conference Committee

Committee Clerk Signature

Explanation or reason for introduction of bill/resolution:

A ROLL CALL VOTE RE County & township road reconstruction.

Minutes: You may make reference to "attached testimony."

Chairman Holmberg called the committee to order in reference to SB 2325. All committee members were present. Tad H. Torgerson, OMB and Roxanne Woeste, Legislative Council were also present. (Roll call votes on SB 2171 and 2242 also on this Job)

Senator Wanzek: I think we all know that in this session infrastructure is vital. It is the session where infrastructure is where a lot of investment will be made and those kinds of needs. Back home this is the first topic of discussion that comes up. There's a lot of road needs, and based on that agriculture study that indicate what I've always known, things have changed on the farm. Equipment's larger, elevators have consolidated, there places to deliver are fewer and further between, roads will built in a time when maybe they didn't anticipate this kind of change. There is truly an impact from modern agriculture on the roads. You hear "it's those farmers who are wrecking the roads", and maybe there's some truth to that, but we are only in the process of conducting our number one business in the state and I've studied the DOT budget, it hasn't even gotten over here and I've analyzed probably more thorough than any other budget before I got on to this committee trying to understand how that works and know in governor's executive budget there is a significant amount of money that is going to be increased and I wanted to make sure there was an awareness about the agriculture impact and the need that is out there as well. I know that asking for 73 new dollars is probably unrealistic I want to make sure that this need has come to your attention, and I think we have done that. Obviously I am going to vote for the bill, the point I hope to make is there are other needs out there and we are going to make a significant investment in infrastructure, I just want ot make sure that this needs gets addressed and if this bill fails I certainly will be paying close attention to the DOT budget when it comes over and to make sure there is some effort to alleviate some of the other infrastructure issues around the state as well as the oil impacted counties, which I'm going to support. I'm going to support a significant amount of investment out there as I understand the importance of that development and what it means to all of us in this state, but going to make it known there are some other needs that we need to address. I again believe this is an investment into our future more than an expenditure.

Senator Wanzek MOVED A DO PASS. Seconded by Senator Erbele.

V. Chair Bowman: I feel for the previous speaker's testimony because we have been down that road. We've had that before we ever hit the oil But all of sudden those roads multiply 10 fold a year in damages once those big trucks start going down them. First it was the county roads, then the township roads as they expanded out into the countryside, and there wasn't a township in the country that had the money to keep up with that. Look what's happening today. Today, it's not just the township or county roads, but now it's our state highways where this huge traffic volume is they are destroying these highways as fast as they keep up with them. They finally recognized that and this is the first time I've seen in a budget money to go to state highways from oil but it is because of the oil that's caused the damage. Now here is what's important about this: if you travel those roads, it's not about the bumps, it's about the families that have to meet those vehicles when you have the bumps and the safety issues that they encounter every single day. If you want a good example of it get on the road between Dickinson and Killdeer when those shift changes are and then visualize your family being with you and you see these pickups passing guys going 85 MPH up the hills because they are late for work. W have got to get those roads fixed first. I would think this bill would be about, maybe 4 years coming, and we should be able to address all of the roads in our state once we get this big impact area fixed and fixed right and then I would be 100% in support of spreading this out to other areas of the state, because I understand agriculture also.

Chairman Holmberg We have a motion and a second. Would you call the roll on a DO PASS ON 2325.

A Roll Call vote was taken. Yea:4; Nay: 9; Absent: 0. Motion failed.

V. Chair Bowman moved a DO NOT PASS. Seconded by Senator Wardner.

Senator Christmann had questions for Tad H. Torgerson regarding how the budget process begins and how DOT distributes that money for fixing road. There is money in the DOT for helping with country roads.

Tad H. Torgerson,OMB: I believe that the only money included in the DOT budget would be the federal allocations for those county collectors that are eligible for some federal aid. I don't believe that there's any state or county money that's included in the DOT budget.

Senator Christmann: As far as the state roads, they have it divided into districts,8 or 10, how do you decide if you're going to spend this much in one district and this much in that district or is it all just jackpotted and decided later?

Tad H. Torgerson: They go through a planning process. When the DOT's budget is over here we will hear a lot about that. It's called the STIP (Statewide Transportation Improvement Program) and it's a 4 year plan that they put together on an annual basis and they meet with the counties or the district people when they develop that plan. Dot can explain it better, but there is a planning process where how they allocate that money.

Senator Christmann: Separating out things for licensing, all those kinds of things, just actual road repair and rebuilding money and building bridges, when we get the DOT budget or at sometime could we see district by district cut of what's been done for the last 3 or 4 biennium

and as well as what's planned for the next one so we can kind of see how things are changing? Continually leaving the same people out or what? He also asked for a chart that shows each dollar amount for each district. He was told that can be provided to the committee.

Tad H. Torgerson: They have all that data. It's fairly comprehensive.

Senator Wanzek: As I understand the budget there is a highway distribution fund that is pro-rated and distributed equally to all the political subdivisions which is from the gas tax, registration fees and whatever. Every county will get their share of that. Then there's the Highway fund, which is probably wehre the money comes to do exactly what you are talking about, identifying those key areas in the state according to the program. In the budget over and above, this that is going to be coming to us, there's $228 million for state roads additional money for the oil counties. In addition to that there's another $142 million for county and townships in the 17 oil counties. In addition to that there's another $92 million in oil impact funds. This bill is designed exactly the way that $142 million was designed to be granted out based on a study from the upper Great Plains Transportation Institute. That oil impact study, the money is going to go to DOT and they're going to identify where the need is in those 17 counties. This does the same thing with agriculture. Exactly the same as that $142 million. All that money enlisted is over and above what is divided out amongst all the counties on a regular DOT budget. This is meant to try to provide reconstruction, updating, again as I said, it's not the normal maintenance I'm after, it's the updating and need for the infrastructure for a competitive agriculture environment just as we are talking about a competitive industry in the oil field. This 73 is exactly the same as the $142 million that will come in the DOT budget, but having said that, I understand where this is going, I understand why we need to do what you are going to do, but when the DOT budget gets over here, I want the record to show I PLAN TO RAISE SOME AWARENESS TO THE OTHER ROADS AND THE VITALITY OF THOSE ROADS TO OUR ECONOMY AS WELL. (Meter 32.25)

Senator Robinson stated he would echo Senator Wanzek's comments, and we have the same situation in Barnes and Ransom Counties, they have no money left, we've had bad winters back to back, on roads that were in terrible condition prior to these bad winters. We have heavy semi traffic with the agriculture industry and the wind farms, and when there's overweight trucks and we have them, those fines go to the state. There was a bill coming out of the transportation committee to put those fines back into local political subdivisions because they have to do the enforcement but that bill was killed in the House. We were in session in 2009, on April 17th, in our county we didn't have a road that was passable including I 94. Similar situation in Stutsman where there's been so many washouts and so much damage because of water and so on the counties are just clearly inundated trying to respond. I know it was a hot topic in Stutsman County in the election. Stutsman and Barnes and LaMoure have gone together to hire an officer and they are going to purchase scales and try to have some enforcement of loads. They had one semi go through at 137,000 pounds so we have a mess out there. it's not something that's a concern, it is a mess. And Senator Bowman, you are right, our school buses drive these roads. We've got any number of roads in Barnes County that are closed. Minimum maintenance and everything from EMT to our school buses, let alone the farm economy with the big semi trucks something has to give soon.

V. Chair Bowman: Before the DOT funded any state roads we had a series of meetings out in the oil filed. We were in Williston, Watford City, Stanley, Parshall, Dickinson, big impacted area, and all of the players came to the table and that was the number one interest was what are going to do because of what's happened. You got to understand, there's over 10,000 loads a day that go down them roads. It's not like a farm road, where I grew up you get 10 or 12 trucks a day, that's normal traffic. That is not normal traffic up there. Once we get those roads fixed, we need to look at the whole state as a whole and find out how much can we put into county roads, because we have county budgets to fix the roads. They don't have enough money to get the snow off but they also have just as much concern and it's going to take a lot of money but if we can get this infrastructure built out there, that should free up some money to help with the scenarios that you brought forward. I have a feel for what you are doing.

Senator Robinson: I want Senator Bowman to know I support western ND, every last penny. I think it is also safe to say that we have the resources now to address the issues that Senator Wanzek has brought up. Putting them off is just going to cost us that much more money. That's where we are coming from.

Chairman Holmberg: We have a motion before us, well discussed and we will be discussing bills later in the second half when we have DOT and maybe when some other issues come before us in the next few days. Would you call the roll on a DO NOT PASS on 2325.

A Roll Call vote was taken on a DO NOT PASS ON SB 2325. Yea: 8; Nay: 5; Absent 0. Motion carried. Senator Bowman will carry the bill.

Chairman Holmberg adjourned the meeting on SB 2325.

Date: 2-14-11
Roll Call Vote # 1

2011 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2325

Senate Senate Appropriations Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: ☒ Do Pass ☐ Do Not Pass ☐ Amended ☐ Adopt Amendment

☐ Rerefer to Appropriations ☐ Reconsider

Motion Made By Wanzek Seconded By Erbele

Senators	Yes	No	Senators	Yes	No
Chairman Holmberg		✓	Senator Warner		✓
Senator Bowman		✓	Senator O'Connell	✓	
Senator Grindberg		✓	Senator Robinson	✓	
Senator Christmann	✓	✓			
Senator Wardner	✓	✓			
Senator Kilzer		✓			
Senator Fischer		✓			
Senator Krebsbach		✓			
Senator Erbele	✓				
Senator Wanzek	✓				

Total (Yes) 4 No 9 Failed

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Date: 2-8-11
Roll Call Vote # 2

2011 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2325

Senate Senate Appropriation Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number _____

Action Taken: ☐ Do Pass ☒ Do Not Pass ☐ Amended ☐ Adopt Amendment

☐ Rerefer to Appropriations ☐ Reconsider

Motion Made By Bowman Seconded By Wardner

Senators	Yes	No	Senators	Yes	No
Chairman Holmberg	✓		Senator Warner		✓
Senator Bowman	✓		Senator O'Connell		✓
Senator Grindberg	✓		Senator Robinson		✓
Senator Christmann	✓				
Senator Wardner	✓				
Senator Kilzer	✓				
Senator Fischer	✓				
Senator Krebsbach	✓				
Senator Erbele		✓			
Senator Wanzek		✓			

Total (Yes) 8 No 5

0

Absent _____

Floor Assignment Bowman

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2325: Appropriations Committee (Sen. Holmberg, Chairman) recommends **DO NOT PASS** (8 YEAS, 5 NAYS, 0 ABSENT AND NOT VOTING). SB 2325 was placed on the Eleventh order on the calendar.

2011 HOUSE APPROPRIATIONS

SB 2325

2011 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Committee
Roughrider Room, State Capitol

SB 2325
3/17/11
15570

☐ Conference Committee

Committee Clerk Signature Meredith Traeholt

Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation to the department of transportation for a county and township road reconstruction program; and to provide an exemption.

Minutes: You may make reference to "attached testimony."

Chairman Delzer: Opened the hearing on SB 2325 and the title was read.

Senator Terry Wanzek, District 29: See attachment 1. I've seen farmers over the years that have tried to live on their depreciation, thinking they're making things work, but you can only do that for so long before you have to replace your equipment. I think the state has been having some good years, and I see this as an opportune time to catch up. The department of transportation (DOT) bill is now in the Senate Appropriations Committee, and I understand the House has made an effort to address some of these same issues. I believe in the end we'll have to come together, it doesn't necessarily have to be my bill that does this; I consider it a success if we can provide funding in whatever vehicle to address these needs.

Chairman Delzer: You've had the opportunity to hear the transportation budget. I don't know if you've really had a chance to look at what the House did to try to address this situation.

Senator Wanzek: We had a hearing yesterday. I was appointed to the subcommittee, so I will be getting an opportunity to more thoroughly understand what it is you did.

Chairman Delzer: We do understand we can't have two vehicles in the end. The House's position is that we would prefer to deal with it in HB 1012, which is where the funding for all the oil, as well as non-oil, counties should end up.

Senator Wanzek: I understand that. I'm not going to stand up here and tell you to kill my bill, but in the end the important thing is to get funding where it's needed.

Chairman Delzer: We did not have this bill before us while we worked on HB 1012, so we'd like you to go through how you came up with the $73.6 million.

Senator Wanzek: We looked at what the (Upper Great Plains Transportation Institute, or UGPTI) study had shown, and it says 211, 105 for paved and 110 for unpaved. They also broke that out and identified which were rural agriculture roads. It came down to what was needed annually for reconstruction, and we tried to go for 50% of the paved, asking local dollars to match that, and 100% of gravel for a year, which equals $73.6 million. Combined with annual distribution funding, it's not a fix to the total problem, but can hopefully address the highest priority roads.

Chairman Delzer: That was based on 100% of unpaved roads and 50% of paved from this study.

Senator Wanzek: Yes, on an annual basis.

Representative Nelson: Was the comparison you made in developing this bill in response to the executive budget, which had 25% of the vehicle excise tax put into the highway distribution fund? Was that a component of the local funding mechanism?

Senator Wanzek: The approach we took to this bill was very similar to the approach the governor took to the $142 million for the oil impacted counties. In my mind, they have the regular maintenance, the regular needs, distributed out through the regular distribution fund; and then there's those extraordinary needs over and above, roads that have needed updating, or upgrading, or rebuilding, or whatever, to give the local people some money to identify those priorities and do that, a longer term investment instead of just maintenance. I intended for it to be divided out according to that study; I do understand the study is not as intense in detail as the oil counties study. I liked it because I felt it was directing the DOT along with collaborating with the counties and identifying where those needs are, instead of just equally distributing the money out, but identifying those areas with the most significant importance to agriculture, just like the oil study is doing in the oil impacted area. It was meant to be similar to the way the $142 million is distributed out.

Representative Nelson: In your opinion, will the local political subdivisions have the ability to match the federal share of the cost of construction with the changes that have been made to the bill?

Senator Wanzek: The honest truth is, I don't understand all those issues yet. That issue was raised yesterday with removing the 25% excise tax and the loss maybe in matching federal dollars. I intend to be very attentive in the subcommittee.

Chairman Delzer: You may wish to stay if you're able, in case there are questions after other testimony. Further testimony in favor of SB 2325?

Doug Goehring, Agriculture Commissioner, North Dakota Department of Agriculture: See attachment 2.

Chairman Delzer: Questions by the committee? Did you testify in front of the section on HB 1012, for increased money for the ag side, or not?

Goehring: I did not. We have been tracking about 87 bills in our department, and unfortunately that was missed as we were monitoring other bills.

Scott Rising, Soybean Growers Association: See attachment 3, and supporting documents 3A and 3B.

Chairman Delzer: So the audience is aware, we have had this (UGPTI) report on both of these transportation fundings. Did they look at any of the oil counties when they did the non-oil counties, did they look at the five that received very little oil money? We had talked about addressing their road issues as well.

Denver Tolliver, UGPTI: Yes, in the agricultural roads study, we looked at all the counties in the state, but we did not specifically look at the oil routes in the 17 counties. The agricultural routes in the 17 counties were absolutely included in our study.

Chairman Delzer: And the dollar figures for this were for all counties, not just non-oil counties? 73 is 100% of the gravel and 50% of the pavement, in all counties?

Tolliver: Yes, the total is $211 million in the state for all counties.

Rising: Resumed testimony on page 6 and concluded.

Chairman Delzer: We'll continue to the next testimony

Lee Gessner, Chief, Devils Lake Rural Fire Department: Gave testimony as to the importance of county and township roads to emergency services. This testimony was pertinent to SB 2369 and included with those minutes for March 17, 2011.

Joe Belford, Ramsey County Commissioner: We've had to tear up 40 miles of blacktop in our county because we could not afford to keep it. I appreciate and totally support this bill because of the farming operations; activities are also getting larger, and the equipment is getting bigger. We need to update and add overlays to the existing blacktop that we have, but we do not have the funding to do it.

Chairman Delzer: This would be a grant process through the DOT. What do you think your chances are compared to everybody else when you are talking ag, and when we also have the next bill, 2369?

Belford: I'm coming at it from the commissioner's side, for ag. Agriculture is the backbone of Ramsey County. We need to support them.

Chairman Delzer: Is it better to go through the DOT and have them decide who gets the money, or is it better to distribute it to the counties and let them work?

Belford: In the past, working through the DOT has been very very good. They have been a great operation to work with.

Terry Traynor, Assistant Director, ND Association of Counties: See attachment 4.

Sheyna Strommen, ND Stockmen's Association: See attachment 5.

Larry Severson, Farmer, Township Supervisor, Traill County, and President, ND Township Office Association: NDTOA supports SB 2325, recognizing it as a vehicle to show support of ag-impacted infrastructure. We hope this funding can be carried forward, in this or another bill.

Chairman Delzer: Is there any opposition to 2325? I see none.

Representative Nelson: I have one question still. There's not a distinction between roads in oil-impacted areas, and they're still hauling grain on those roads. Are we doubling up in the study, are the same roads being funded for oil impact and for rural?

Tolliver: Yes, they could be, but in the oil study we only looked at those roads that would have significant oil truck traffic on them, we didn't consider any other road funding needs. In this study, we looked at the roads that had significant agricultural traffic on them. Some of the roads in the oil study could have had agricultural traffic on them. You are correct. One of those roads being improved for oil could also benefit agriculture.

Representative Nelson: Is there a way to pick those duplicative road situations out?

Tolliver: Yes, we can do that.

Representative Skarphol: The study you did for non oil counties with regard to ag roads, was that specific to non-oil counties only, or was it for the entire state?

Tolliver: The study has results for the entire state, as well as for the 36 non-oil producing counties.

Representative Skarphol: So they are segregated within the study, so we should be able to merely subtract.

Tolliver: Yes.

Chairman Delzer: The oil study was much more intense than the ag study, correct?

Tolliver: That is correct, we only had 40 days for the agricultural road study, so we weren't able to look at individual segments and their existing conditions. We had much more time and much more information on the oil roads study. I do have high confidence that we were able to predict the agricultural truck trips over the local and county roads, and the numbers we have come up with, I think, are quite representative; but if you were to ask me if I have absolute confidence that I understand the condition or the geometry of any particular road in that study, the answer would be not at the level of detail we did in the oil study.

Chairman Delzer: Thank you. We'll close the hearing on SB 2325. Representative Skarphol is going to present some information he has.

Representative Skarphol: Discussed a product being brought forward as an alternative solution to some of the infrastructure problems in the state, particular non-paved roads in the western part of the state. One mile of road was treated with the product last fall. The total cost for product and application was approximately $25,000. A sample of the product was passed around. It theoretically needs little or no maintenance. If it's viable, it's an alternative that should be considered.

Chairman Delzer: We'll continue to the next bill.

2011 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Committee
Roughrider Room, State Capitol

SB 2325
3/23/11
15864

☐ Conference Committee

Committee Clerk Signature Meredith Traeholt

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A BILL for an Act to provide an appropriation to the department of transportation for a county and township road reconstruction program; and to provide an exemption.

Minutes: You may make reference to "attached testimony."

Chairman Delzer: Opened discussion on SB 2325. This gives the money to the DOT for them to decide how it would go out to reconstruct county and township paved and unpaved roads, based somewhat on the Upper Great Plains (Transportation Institute, or UGPTI) study. When I look at this bill I see a few things. When we passed the DOT budget out, we put $50 million towards the non-oil counties, for basically the same thing. This bill goes to all counties. That would reduce it some. I also have concerns because the ag study just says how much money is needed, rather than going into which roads like the UGPTI oil study; it would be a challenge for DOT to know where this money should go, if this bill went forward. In the DOT budget, we put it out 60% to the counties, 20% to the cities, and 20% to the townships. The Senate has the bill and will make some adjustments, but the issue really does belong in the DOT budget. They money is up on the table, whatever they do, so be it. Senator Wanzek is on the Appropriations Committee, so he certainly has the ability to make changes he wants on that budget, and that's where I think we should handle this bill.

Representative Kempenich: I move Do Not Pass on 2325.

Representative Klein: Second.

Chairman Delzer: Discussion by the committee?

Representative Nelson: The governor's budget had 25% of the excise tax going to the highway distribution fund. That money was changed in the House. When we talk $50 million that was put in in the House, that's really not a fair statement, in my opinion; it's replacing what was in the governor's budget. What is the net difference between the 25% and the $50 million?

Chairman Delzer: To the nonoil counties, quite a bit. When they run that through the distribution fund, it goes 61.4% to the highway fund, which is to the state; then around 35% goes to all the counties in the state.

Representative Nelson: I understand that goes across the entire state and not just the non-oil counties. An argument could be made that the stability for counties, even though it may be less in net, would be more important to them through that formula.

Chairman Delzer: It should be a net of somewhere around $16-17 million.

Representative Brandenburg: The old formula was 61% to the state, 7% to the townships, 13% to the cities, and 19% to the counties. Now the way this $50 million is going out it's 60% to the counties, 20% to the townships, and 20% to the cities. The real winners are the townships, cities, and counties. It's definitely more proportionate to those people that need it.

Chairman Delzer: Roughly 34% of the $43 million would have gone to the counties and cities, 40% of all of it would have gone to counties, cities, and townships.

Representative Brandenburg: There was some controversy to figure how this was going to go out. This is a new method and formula, and it gets to the people that need it. I think that we're on the right path for the non-oil counties.

Chairman Delzer: If you say it's less than 40% because the highway fund takes 61.4%, transit takes 1.5%, so you have roughly 37.5 of the $43 million. If you do four times four, you have $16-17 million that would have gone out under the governor's plan, and we're putting $50 million out to the counties, cities, and townships under our plan.

Representative Nelson: I think we know where this is headed. This issue is not going to go away. What we're doing by killing this bill needs some attention. The money that's in the DOT budget that will probably appear again in relationship to the UGPTI study, which we've used as the template for oil counties, should be also used as the template for non-oil counties, in my opinion.

Chairman Delzer: There's a world of difference between those two studies. One is very very consolidated, with rig counts, where they expect them to be in the future, etc. The other one, as they themselves said, with the data they had it was good; but if you really want to look at it and decide how to use it, it doesn't say anything.

Representative Klein: There's one other factor that should be considered. Under the DOT bill $25 million goes out this year, and $25 million goes out next year, so they'd have that money immediately. Under the other bill, that doesn't happen.

Representative Skarphol: I'm fully supportive of $50 million and probably even more for the non-oil counties. I would support the Do Not Pass on this bill. I would like us to think about maybe we should hog house the bill, and that we should appropriate some money for UGPTI to continue to monitor and update their report on both oil and non-oil counties, and report to Legislative Council on those results. I think it's important to monitor what's

happening more adequately than we have in the past. I would think we should appropriate the money. We did, in the distribution bill I introduced, appropriate $350,000; I'm not sure that's entirely adequate if they're going to monitor and update the plan for the whole state. I think they need to do more with regard to the report on the non-oil producing counties. I do think this would be an appropriate vehicle for us to use to fund the UGPTI process.

Chairman Delzer: Would your thought be to fund it out of the impact dollars?

Representative Skarphol: I hadn't thought about the source of the revenue. I do think that we do need to have someone other than DOT, because their plate is pretty full, give us what they believe to be a good analysis of the needs for all roads in ND.

Chairman Delzer: We would have to see how the amendment was worded. I wouldn't want to take this as a verbal amendment.

Representative Kaldor: I want to go back to the day we had this hearing on the utilization of these funds. The oil study was more specific, but they did rely on what's already in place, between the counties and DOT. There's a priority list that exists; the counties do this analysis quite frequently. We have a list of the primary and secondary roads that need to be repaired. The need for the same kind of analysis that was required in oil patch was quite different relative to the non-oil counties, because they're already doing this work. I'm not opposed to the suggestion regarding UGPTI monitoring this, but we need to recognize that there is a significant amount of work already done in identifying which roads need the most work.

Chairman Delzer: Is the place for either of those issues to be in a separate bill, or is it better to be in the DOT budget? You know we're going to have a conference committee on DOT and HB 1013, which deals with the impact dollars. I think it's HB 1458 that had another $350,000 of funding to continue the UGPTI study on the oil industry.

Representative Skarphol: I had fairly lengthy discussions with Mr. Tolliver from UGPTI, and the work that they did in both cases was very dependent on what the counties told them. The $350,000 would have involved their staff going out and physically looking at the roads, and giving their analysis, as opposed to DOT's or anyone else's, of the condition of the roads. This would hopefully be an objective, third party view of it. I think that would be valuable to substantiate what other entities are telling us. If we're going to spend hundreds of millions of dollars fixing roads, a half million dollars to make sure we're doing it right is fairly insignificant.

Chairman Delzer: We have a Do Not Pass on the table; I think we should vote and hold onto this, and look at language that would do what Representative Skarphol is talking about for either 1013 or 1012, and I'd be willing to take it over to Senate Appropriations and ask them to consider putting it on, holding this bill from the Floor until we had some sort of resolution and then we could bring it back if we wanted to.

Representative Skarphol: I think HB 1012 and HB 1013 are going to be substantial enough in nature that a conference committee could be fairly involved. I think this could be

a separate issue that could be resolved rather quickly and we just get it out of the way if we leave it in a separate bill.

Chairman Delzer: We'll go ahead and hold this until I call the committee back, but we should try to put the language together that you want in valid form for discussion.

Representative Dahl: Just to clarify, when you do that amendment, this bill specifically deals with rural infrastructure, but some of the discussion this morning has been oil producing and non-oil producing counties. I think that's a somewhat different issue. Are we going to look at rural infrastructure, or non-oil producing counties?

Representative Skarphol: My thought would be to contract with UGPTI to monitor and update their study of all county and township roads in ND. All roads statewide get studied on an equal basis.

Chairman Delzer: You want to do that as one study, instead of splitting it into the two?

Representative Skarphol: I would assume as they travel across the state it's convenient for them to travel in the most effective manner. If you want the report in two studies, that's fine, we could have ag and oil, county by county; when they're done they'd be able to pretty well give us anything we want in the report form.

Vice Chairman Kempenich: They already have a basis on what oil is and spent a year on that. They didn't do a lot on agriculture. A lot of agriculture and oil runs together anyway. I don't see the reason to split it out, because it's roads out in the rural part of the state that would be their focus.

Chairman Delzer: If you would try to get some language together, we'll take a look at it, and hold this until our next meeting.

2011 HOUSE STANDING COMMITTEE MINUTES

House Appropriations Committee
Roughrider Room, State Capitol

SB 2325
3/24/11
15963

☐ Conference Committee

Committee Clerk Signature Meredith Traeholt

Explanation or reason for introduction of bill/resolution:

A BILL for an Act to provide an appropriation to the department of transportation for a county and township road reconstruction program; and to provide an exemption.

Minutes: You may make reference to "attached testimony."

Chairman Delzer: Opened discussion on 2325. He reminded the committee there was still a Do Not Pass motion on the table from the previous day. Representative Skarphol had asked for some amendments to be considered. My name is on it because I had called up to Legislative Council to request a clarification on some language, but it is really Representative Skarphol's amendment. We can deal with this in 1012 or 1013, or we can change this bill and put the study in here, or we can vote on the Do Not Pass. I am open to discussion.

Representative Nelson: I move a substitute motion to adopt amendment .02002.

Representative Skarphol: Second.

Chairman Delzer: I know there has been some talk both ways. I feel the issue of how the extra money for non-oil counties goes out and the amount that goes out belongs in HB 1012, the DOT funding bill, which currently sits in the Senate. In the House side we passed it out with $50 million to deal with non-oil counties, that issue will be dealt with in conference committee. We did have in 1458 a proposal to continue to use Upper Great Plains (Transportation Institute, or UGPTI) to continue their oil study; this one would ask them to continue their studies and do a better, in-depth study on the ag side, so we have good information if we have money enough to the same type of funding on infrastructure issues two years from now. We did have in 1451 where we are trying to set aside money to do that. I know there's been talk about having two bills go forward, or two bills in conference committee, but I think if we want to put this amendment on, I have no problem with that. If we go to conference and the Senate does not accept this, at that time I would say that we would have to bring the bill back to the Floor and defeat it, instead of changing our stance at that time.

Representative Nelson: I couldn't agree more on the reason for passing this budget. As to the vehicle it's attached to, in all due respect, I think this is the proper bill for this study to

take place. Yesterday, Representative Skarphol made a great suggestion that we continue this study and we treat agriculture, the largest industry in ND, as well as we are the oil industry. This bill is a policy piece, and this is policy. I think it's a very appropriate place for this study to take place in, and it gives the House something to work with if something falls apart in the Senate with their position. We are rather limited in vehicles of what we can use in conference. This would give us that. If it's added there and everything works out as far as the funding levels and we're in agreement, I would be the first to make the motion to get rid of this bill at that point. It's important we have this at our disposal, and I urge us to pass this bill. We do exactly what you asked for, take the money out, and put the study in.

Representative Dahl: To clarify, I asked Representative Skarphol about what we were doing because the bill in front of us related to agricultural infrastructure. Then there was discussion about studying oil and gas development and those roads. In addition, there was discussion about those non-oil producing counties and those roads. This amendment says we're to study oil and gas development and agriculture. Where do the non-oil producing counties come in?

Chairman Delzer: That is part of the agricultural study, that's statewide. At the same time they did that, they would check if anything had changed in their in-depth oil study. The bulk would be on the agriculture side.

Representative Skarphol: I think it's important to know that the UGPTI study that was done for oil and gas was the most thorough that's been done, but they relied heavily on information furnished by the county people as to the conditions and needs of their roads. The same thing applies to the ag study, but they didn't have near the amount of time to complete it. What this is intended to do is to do the same thoroughness of a study on the balance of the state that was done in oil country, and then provide us with more definitive information as to the needs across the state; to keep it updated as things change; and to monitor what's happening to ensure that what dollars are being appropriated for non-oil producing counties actually are doing what they're supposed to do, as well as in oil country. It's an effort to ensure we get the same caliber of information for both ag and oil.

Representative Dahl: I don't disagree with that, but I think those roads will also be studied. When it just says agriculture, I want to make sure we're talking about all of the non-oil producing counties. I want to make that clear.

Chairman Delzer: That is in the record now, and I think all of us agree with that.

Representative Kroeber: I'm sure the oil producing counties wouldn't be happy if they had to wait another two years to get some help. Outside of the oil producing counties, there are also some great needs that have to be taken care of now. I think there's plenty to be done in the non-oil producing counties without waiting two years, saying we don't know exactly what needs to be done.

Chairman Delzer: The House shared many of those same concerns. In HB 1012 there is $50 million for the non-oil counties. That is still there and we expect it will stay. If we drop this amendment, this will put a study out there so if we are in a position two years from now to have money again to invest in our infrastructure, we will have a good way to do it.

Representative Kroeber: We also have to always take and mention that of the $50 million we put in, it has to be reduced about $17.2 million because of the reduction of the 25% excise tax.

Chairman Delzer: That's real close to true, but not entirely. The excise tax was going to all counties, whereas the $50 million is just going to the non-oil counties, so it is a little different number than that. But your point is well taken.

Representative Kaldor: I'm still having some trouble with the fact that we're in a sense dismissing the original bill's intent on putting significantly more dollars in. Whether or not they were considering the $50 million we put in, or the motor vehicle excise tax, this is a significant difference from that. I think they based it on sound information, even though the UGPTI study wasn't quite as comprehensive as what was done in the oil patch. I'm satisfied that the need is significantly greater even than this appropriation. If passing this amendment will preserve this bill, and we've got two bills in conference committee on transportation, that's not the worst thing. I don't want us to ignore the study already done. I do trust the primary data that UGPTI got from the counties. In the oil patch it's different, because they've got new pathways made every week. They don't have the same pattern of usage as in the rural areas of the state in non-oil counties. I'm not sure this will be helpful.

Representative Nelson: I would like to reassure Representative Kroeber that whatever happens with this amendment, the status quo will not continue in regards to rural infrastructure. I think the study is important that we do it in an orderly fashion in the coming bienniums. This provides the House a vehicle to work with. What if the funding goes down on the Senate side? We won't have a voice. This is needed. It's a policy issue, and the money is appropriate to be in HB 1012.

Representative Kaldor: I agree, we don't have control of 1012 right now, but we do have control of this legislation. If we pass this amendment, we will never find out on the Floor of the House if there is support for funding at this level.

Chairman Delzer: Committee members, we have to understand this is double appropriated. It isn't a question of being $73 million or $50 million. If you pass 2325, it's $123 million, and there is a world of difference there. Further discussion on the substitute motion to amend?

Representative Dahl: Could we include language to say, 'for the purpose of oil and gas development and to non-oil producing county roads,' or something to that effect? Agriculture would be subsumed in that term, and that way we're being clear.

Representative Skarphol: I have no problem with that.

Chairman Delzer: Do you want to take agriculture out, or say, 'for non-oil producing counties' agricultural needs?'

Representative Skarphol: How about, 'transportation infrastructure needs of all county and township roads statewide.' Don't differentiate, we just want them all.

Representative Dahl: That's fine with me.

Chairman Delzer: I think in the end it's all going to end up being in one report, we're not expecting two reports, so that's probably not a bad change.

Representative Nelson: I will change my substitute motion to include that change in language.

Chairman Delzer: We have a substitute motion to amend the bill 'for the purpose of updating and maintaining a report for transportation infrastructure needs for county roads for the biennium beginning July 1, 2011 and ending June 30, 2013.' We'll do a voice vote, and the motion carries. We have the amended bill before us.

Representative Nelson: I move Do Pass as Amended on SB 2325.

Vice Chairman Kempenich: Second.

Chairman Delzer: We have a motion and a second. Discussion.

Representative Klein: Are we going to include township roads, or just county?

Chairman Delzer: If it's acceptable to everybody, we'll have it rewritten as 'county and township' because that is the essence of everybody's idea. I think township is implied, but if we want the word, so be it. Further discussion on the motion for a Do Pass as Amended. We'll call the roll. Motion carries 20-1-0. Representative Nelson will be the carrier. We'll stand adjourned.

Chairman Delzer later stated he would be the carrier on the bill.

Date: 3/23
Roll Call Vote #: 1

2011 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2325

House Appropriations Committee

Legislative Council Amendment Number _____

Action Taken: ☐ Do Pass ☒ Do Not Pass ☐ Amended ☐ Adopt Amendment
☐ Rerefer to Appropriations ☐ Reconsider

Motion Made By Rep. Kempenich Seconded By Rep Klein

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer			Representative Nelson		
Vice Chairman Kempenich			Representative Wieland		
Representative Pollert					
Representative Skarphol					
Representative Thoreson			Representative Glassheim		
Representative Bellew			Representative Kaldor		
Representative Brandenburg			Representative Kroeber		
Representative Dahl			Representative Metcalf		
Representative Dosch			Representative Williams		
Representative Hawken					
Representative Klein					
Representative Kreidt					
Representative Martinson					
Representative Monson					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

Date: 3/24
Roll Call Vote #: 1

2011 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2325

House Appropriations Committee

Legislative Council Amendment Number _____

Action Taken: ☐ Do Pass ☒ Do Not Pass ☐ Amended ☐ Adopt Amendment
☐ Rerefer to Appropriations ☐ Reconsider

Motion Made By Rep. Kempenich Seconded By Rep. Klein

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer			Representative Nelson		
Vice Chairman Kempenich			Representative Wieland		
Representative Pollert					
Representative Skarphol					
Representative Thoreson			Representative Glassheim		
Representative Bellew			Representative Kaldor		
Representative Brandenburg			Representative Kroeber		
Representative Dahl			Representative Metcalf		
Representative Dosch			Representative Williams		
Representative Hawken					
Representative Klein					
Representative Kreidt					
Representative Martinson					
Representative Monson					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

substitute motion

11.0755.02002
Title.

Prepared by the Legislative Council staff for
Representative Delzer
March 24, 2011

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2325

Page 1, line 1, remove "department of transportation for a county"

Page 1, line 2, replace "and township road reconstruction program; and to provide an exemption" with "upper great plains transportation institute; and to provide for a report"

Page 1, remove lines 4 through 24

Page 2, replace lines 1 through 21 with:

"**SECTION 1. APPROPRIATION - UPPER GREAT PLAINS TRANSPORTATION INSTITUTE - BUDGET SECTION REPORTS.** There is appropriated out of any moneys in the oil and gas impact grant fund in the state treasury, not otherwise appropriated, the sum of $350,000, or so much of the sum as may be necessary, to the upper great plains transportation institute for the purpose of updating and maintaining reports for transportation infrastructure needs relating to oil and gas development and to agriculture, for the biennium beginning July 1, 2011, and ending June 30, 2013. During the 2011-12 interim, the upper great plains transportation institute shall report at least annually to the budget section of the legislative management regarding the status of the reports and shall present updated reports to the sixty-third legislative assembly."

Renumber accordingly

Date: 3/24
Roll Call Vote #: 2

2011 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2325

House Appropriations Committee

Legislative Council Amendment Number .02002

Action Taken: ☐ Do Pass ☐ Do Not Pass ☐ Amended ☒ Adopt Amendment

☐ Rerefer to Appropriations ☐ Reconsider

Motion Made By Rep. Nelson Seconded By Rep. Skarphol

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer			Representative Nelson		
Vice Chairman Kempenich			Representative Wieland		
Representative Pollert					
Representative Skarphol					
Representative Thoreson			Representative Glassheim		
Representative Bellew			Representative Kaldor		
Representative Brandenburg			Representative Kroeber		
Representative Dahl			Representative Metcalf		
Representative Dosch			Representative Williams		
Representative Hawken					
Representative Klein					
Representative Kreidt					
Representative Martinson					
Representative Monson					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

.02002 + to include language that it is for all county + township roads statewide

voice vote carries

11.0755.02003
Title.03000

Prepared by the Legislative Council staff for
House Appropriations
March 24, 2011

VK
3/25/11

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2325

Page 1, line 1, remove "department of transportation for a county"

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Page 1, remove lines 4 through 24

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Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

This amendment removes the county and township road reconstruction program relating to agriculture and economic development, including the $73.6 million appropriation from the permanent oil tax trust fund for the program. A $350,000 appropriation is provided from the oil and gas impact grant fund to the Upper Great Plains Transportation Institute to update and maintain reports for transportation infrastructure needs for all county and township roads in the state. The Upper Great Plains Transportation Institute is to report at least annually to the Budget Section regarding the status of the reports and to provide updated reports to the 63rd Legislative Assembly.

Date: 3/24
Roll Call Vote #: 3

2011 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2325

House Appropriations Committee

Legislative Council Amendment Number

Action Taken: ☒ Do Pass ☐ Do Not Pass ☒ Amended ☐ Adopt Amendment
☐ Rerefer to Appropriations ☐ Reconsider

Motion Made By Rep. Nelson Seconded By Rep. Kempenich

Representatives	Yes	No	Representatives	Yes	No
Chairman Delzer	X		Representative Nelson	X	
Vice Chairman Kempenich	X		Representative Wieland	X	
Representative Pollert	X				
Representative Skarphol	X				
Representative Thoreson		X	Representative Glassheim	X	
Representative Bellew	X		Representative Kaldor	X	
Representative Brandenburg	X		Representative Kroeber	X	
Representative Dahl	X		Representative Metcalf	X	
Representative Dosch	X		Representative Williams	X	
Representative Hawken	X				
Representative Klein	X				
Representative Kreidt	X				
Representative Martinson	X				
Representative Monson	X				

Total (Yes) 20 No 1

Absent 0

Floor Assignment Chairman Delzer

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2325, as engrossed: Appropriations Committee (Rep. Delzer, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (20 YEAS, 1 NAYS, 0 ABSENT AND NOT VOTING). Engrossed SB 2325 was placed on the Sixth order on the calendar.

Page 1, line 1, remove "department of transportation for a county"

Page 1, line 2, replace "and township road reconstruction program; and to provide an exemption" with "upper great plains transportation institute; and to provide for a report"

Page 1, remove lines 4 through 24

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Renumber accordingly

STATEMENT OF PURPOSE OF AMENDMENT:

This amendment removes the county and township road reconstruction program relating to agriculture and economic development, including the $73.6 million appropriation from the permanent oil tax trust fund for the program. A $350,000 appropriation is provided from the oil and gas impact grant fund to the Upper Great Plains Transportation Institute to update and maintain reports for transportation infrastructure needs for all county and township roads in the state. The Upper Great Plains Transportation Institute is to report at least annually to the Budget Section regarding the status of the reports and to provide updated reports to the 63rd Legislative Assembly.

2011 TESTIMONY

SB 2325

SB 2325 Testimony

Senator Terry Wanzek

Chairman Holmberg and Senate Appropriations Members, my name is Terry Wanzek, district 29 State Senator. This session is the infrastructure session. There is a lot of attention given and dollars budgeted for infrastructure needs in the exciting oil & gas development areas and the unfortunate flooding impacted areas in our state, and rightfully so. I believe we are going to address these needs this session. There is another area of great need for infrastructure. It does not receive as much attention but none the less is vitally important to our state's economy. Mr. Chairman, ND leads the nation in the production of numerous agriculture crops. ND Agriculture in 2009 produced $5.5 billion of direct market value from its crops and livestock. Under rule of thumb, those dollars turn over 5 times in our agriculture communities which equal a $27.5 billion economic impact to ND economy. I believe 2010 will come in even better. It is still our # 1 industry.

A study has recently been completed by the Upper Great Plains Transportation Institute to identify the rural infrastructure needs to maintain a strong ND Ag economy. This study is separate from another study done by UGPTI addressing infrastructure needs attributable to the growth of the oil and gas industries in western ND. The purpose of this study was to analyze changes in agriculture production and logistics and the importance of roadway investments to the distribution of crops and livestock produced in ND. The study has identified $211.5 million dollars of annual need for county and local roads.

The importance of transportation to agriculture is profoundly expressed in a 2010 joint study by the US Departments of Agriculture and Transportation, which notes:

> ***"An effective transportation system supports rural economies, reducing the prices farmers pay for inputs, such as seed and fertilizer, raising the value of their crops, and greatly increasing their market access. The economies of rural areas are intertwined. As Agriculture thrives, so does its supporting communities. Providing effective transportation for a rural region stimulates the farms and businesses served, improving the standard of living....because it is so capital intensive, it generates much more economic activity in the community than just the jobs it creates!"***

Important changes have occurred over the past years that have impacted our rural roadways which are needed to conduct agriculture commerce. The UGPTI agriculture study lists the changes as:

1. Yields have been increasing resulting in more crop volume moving from farmland areas to markets.
2. Crop mix is changing (ex: wheat to corn) resulting in greater densities of production.
3. The # of elevators have been decreasing or consolidating resulting in fewer crop delivery options to market to.
4. Shipments have become more concentrated at fewer elevators thus longer hauls to market.
5. More grains being shipped from smaller to larger shuttle elevators resulting in longer trips.
6. Locations of in state processing and biofuels production facilities resulting in more intrastate trucking.

7. Funding for county and local roads exclusive of oil extraction funds has grown only modestly over time (when measured in real dollars) stressing county and local road systems used to market ND farm products.
8. Construction prices have increased dramatically for asphalt and gravel roads.

SB 2325 appropriates $73.8 million to NDDOT for county and township rural paved and unpaved roads. The funds will be more targeted according to need assessments outlined in the study. The purpose of the funds would be for reconstruction or rehabilitation of paved and unpaved roads.

Mr. Chairman and Senate Appropriations members, I know this bill is asking for a significant amount of funds to address these issues. I do believe though, if we are going to error on spending, an investment in our system of roads is the right side to error on. The logistic agricultural changes identified and the weather impacts of the past years have taken a toll on our state infrastructure. These dollars invested will provide ongoing returns for many years to come. Our ancestors made significant investments years ago when they initially built these roads which we all have benefited from. I believe in these times of prosperity it would be wise to make onetime investments into these valuable assets by updating our infrastructure to catch up with the times. Thank you for the opportunity to present my testimony.

COMMISSIONER
DOUG GOEHRING

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NORTH DAKOTA
DEPARTMENT OF AGRICULTURE
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Testimony of Agriculture Commissioner Doug Goehring
Senate Bill 2325
Senate Appropriation Committee
Harvest Room
8:30am, February 3, 2011

Chairman Holmberg and members of the Senate Appropriation Committee, I am Agriculture Commissioner, Doug Goehring. I am here today in support of SB 2325, which will appropriate $73.6 million to the Department of Transportation (DOT) for a county and township road reconstruction program.

Our farmers and ranchers are moving more crops and livestock than ever before and that is having a major impact on our already stressed rural road network. Funding for county and township roads have grown only modestly over the years while construction costs have soared. This bill will help support the number one industry in our state, agriculture, by updating our rural road network. North Dakota ranks eighth among the states in the value of agriculture exports at $3.2 billion.

Agriculture has evolved over the years. Just last growing season, North Dakota corn yield was 132 bushels per harvested acre, which is the highest on record for the state and in addition, soybean production broke a record at 134 million bushels. Because of the increasing crop yields and changes in the crop mix, we are hauling greater amounts of product at longer distances. Rural road usage is also being increased because of a decline in the number of elevators in our state, an increase in the number of processing plants, and a reduction in railroad trackage.

I have witnessed firsthand the conditions of our township and county roads throughout the state. The rural road system is in need of support. Good roads are essential in growing agriculture, which is our state's most important economic engine, accounting for 32% of the state economic base.

This appropriation is needed for our rural road network. Chairman Holmberg and committee members, I urge a "do pass" on SB 2325. I would be happy to answer any questions you may have.

Thank you.

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NORTH DAKOTA CORN GROWERS ASSOCIATION

Testimony for SB 2325

Mr. Chairman & Members of the Committee:

For the record my name is Tom Lilja. I am Executive Director of the North Dakota Corn Growers Association. The Association represents over 1,400 members.

In the summer of 2010 the ND Corn Growers along with the Soybean Growers, Wheat Commission, Ethanol Council and Association of Counties funded a study by the Upper Great Plains Transportation Institute to further look into a concern that I have heard repeatedly from our members since coming to work for this organization in 2007: Our Rural Road Infrastructure is deteriorating and something needs to be done about it.

I do not wish to repeat anything of what others are saying, but I will reference important points from the report and in my own mind that legislators need to be aware of.

1) Corn Yields have been increasing over time. THEY IN FACT HAVE NEARLY DOUBLED IN OUR STATE SINCE TECHNOLOGY AND TRAITS WERE INTRODUCED INTO CORN HYBRIDS IN THE MID 1990's. 100 bushel corn used to be considered a good yield. Now 180 bushel corn is a common yield goal for many growers across the state.
2) Elevator numbers have decreased to more concentrated locations handling expotentially larger volumes of crops. In addition, each of our states ethanol plants are handling in a range from 20 to 50 million bushels of corn annually

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NORTH DAKOTA CORN GROWERS ASSOCIATION

3) Most farms now have semi's that UGPTI has quantified as traveling an average of 26 miles vs. 13 miles in the early 1980's
4) Many county and most township roads in North Dakota were not designed for the semi trucks that today's sophisticated farmers are using
5) The last mass infusion of infrastructure funding came in the 1960's when the Interstate highway system was constructed in our state.
6) We have been suffering a wet cycle since 1992 which has compounded this problem
7) The Federal Conservation Reserve Program of set aside acres left many roads to minimal maintence throughout the 1990's and into today. Many of these contracts are set to expire in 2012 along with those that already have. In area's such as Stutsman county that had minimal production and now typically see 140 to 150 bushel corn yields it was a double whammy. Add the rains on top of this and you can start to get the picture.
8) Safety. If you reference page 22 of the UGPTI report, you will note that 38% of our rural roads are rated in poor condition, with a full 42% being rated poor to fair. I have heard concerns that rural ambulance and fire services can not get to certain areas. We all need to be understanding of the needs of our citizens in these areas.

It is for these reasons that the North Dakota Corn Growers Association supports SB 2325 that would appropriate funds for county and township road reconstruction

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Road Investments to Support Agricultural Logistics

Background

- In 2009, the total market value of agricultural goods produced in ND exceeded $5.5 billion
- USDA/USDOT: *An effective transportation system supports rural economies, reducing the prices farmers pay for inputs, such as seed and fertilizer, raising the value of their crops, and greatly increasing their market access. Providing effective transportation for a rural region stimulates the farms and businesses served, improving the standard of living ... because it (agriculture) is so capital-intensive, it generates much more economic activity in the community than just the jobs it creates.*
- Purpose: analyze changes in agricultural production and logistics and the importance of roadway investments to the distribution of crops produced in North Dakota; identify investments to provide for 20-year paved road design lives under heavy truck traffic.

Key Trends

- Yields have been increasing over time resulting in more crop volume and movements from a given land area.
- Crop mix has been changing over time resulting in greater densities of production.
- The number of elevators has decreased over time resulting in fewer delivery options.
- Shipments have become more concentrated at a fewer number of elevators; longer farm-to-elevator hauls are required.
- More grains are being transshipped from smaller to larger elevators resulting in longer combined truck trips.
- The location of in-state processing and biofuels production has resulted in more intrastate truck (as opposed to interstate rail) movements.
- Road construction prices have increased dramatically over time for asphalt and gravel roads.

Analysis Process

- Based on a detailed crop production and distribution model in which the crops produced in each county subdivision are transported to elevators and in-state processing plants to minimize distance/trucking cost.
- The model minimizes the total or route trip distance including transshipments from one elevator to another or from an elevator to an in-state processing plant.

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- The demands at elevators are derived from reports to the Public Service Commission, while the demands at ethanol plants are derived from confidential surveys.
- Once the trips are predicted, they are assigned to the highway network and traffic statistics are compiled for thousands of individual road segments included in agricultural distribution routes.
- The investment needs of each road segment are analyzed and the results accumulated.
- For paved roads, the future overlay thicknesses needed for 20-year lives are estimated.
- Investment needs for both agricultural and other roads are estimated.

Statewide Results

- The average predicted trip distance to elevators and in-state processors (including transshipment distances) is 26 miles, compared to 12 miles in 1980.
- Agricultural goods require roughly 600 million ton-miles of transportation annually.
- Roughly 44% of ton-miles are on local and county roads.
- 57% of agricultural truck travel on local and county roads is on gravel surfaces.
- More than 10,000 miles of gravel road have some agricultural traffic.
- Another 3,958 miles of paved roads have some agricultural traffic.
- Not all of these miles are heavily impacted.
- Estimated statewide need (exclusive of state highways and projected impacts from future oil development) is $211.5 million per year, including $100.5 million of paved road investment needs and $110 million of unpaved road investment needs.
- Approximately $59 million of paved road needs relate to agricultural haul roads.
- Approximately, $43.6 million of unpaved road needs relate to agricultural haul roads.

Results for Non-Oil Counties

- The total estimated road investment need in the 36 non-oil producing counties is approximately $149 million per year.
- The estimated annual paved road investment need in the 36 non-oil producing counties is $72.4 million. Approximately $47 million relates to agricultural haul roads.
- The estimated annual unpaved road investment needs in the 36 non-oil impacted counties is $76.6 million. Approximately $31.9 million relates to agricultural haul roads.

Road Investment Needs to Support Agricultural Logistics and Economic Development in North Dakota

Denver Tolliver, Associate Director

January 30, 2011

Contents

Summary

According to the Agricultural Statistics Service, North Dakota leads the United States in the production of spring wheat, durum wheat, sunflower, barley, dry edible beans, canola, and flaxseed. In 2009, the total market value of agricultural goods produced in the state exceeded $5.5 billion. Because of the importance of agriculture to the state's economy, this report focuses specifically on the investment needs of roads used to haul agricultural goods to market. The purpose of the study is to analyze changes in agricultural production and logistics and the importance of roadway investments to the distribution of crops produced in North Dakota.

Important changes have occurred during the last two decades that have implications for agricultural logistics and roadway investment needs:

(1) Yields have been increasing over time resulting in more crop volume and movements from a given land area.

(2) Crop mix has been changing over time resulting in greater densities of production.

(3) The number of elevators has decreased over time resulting in fewer delivery options.

(4) Shipments have become more concentrated at a fewer number of elevators. Consequently, longer farm-to-elevator hauls are required.

(5) More grains are being transshipped from smaller to larger elevators resulting in longer combined truck trips.

(6) The location of in-state processing and biofuels production has resulted in more intrastate truck (as opposed to interstate rail) movements.

(7) Funding for county and local roads exclusive of oil extraction funds has grown only modestly over time (when measured in real dollars).

(8) In contrast, construction prices have increased dramatically over time for asphalt and gravel roads. Collectively, these factors are stressing the county and local road systems used to market and distribute North Dakota products.

This study is based on a detailed crop production and distribution model in which the crops produced in each county subdivision are moved to elevators and in-state processing plants to minimize distance. Because trucking cost is typically measured on a per-mile basis, minimizing the distance of agricultural goods movements is parallel to minimizing trucking cost on a system-wide basis.

The model minimizes the total or route trip distance including transshipments from one elevator to another or from an elevator to an in-state processing plant. The demands at elevators are derived from reports to the Public Service Commission, while the demands at ethanol plants are derived from confidential surveys. Since crop supplies and demands are known, the objective of the distribution model is to predict truck movements to minimize the ton-miles of transportation needed to satisfy elevator and plant demands. In effect, the model identifies a logistically-efficient set of truck movements that minimizes use-related vehicle depreciation and maintenance and fuel consumption. However, the model does not predict that each grower will deliver his or her crops to the closest elevator. Instead, crops are moved to meet the demands of shuttle-train elevators, plants, and other facilities. The key predictions from the model are: (1) agricultural goods require roughly 600 million ton-miles of transportation annually, and (2) the average predicted trip distance to elevators and in-state processors (including transshipment distances) is 26 miles.

Once the trips are predicted, they are assigned to the highway network and traffic statistics are compiled for thousands of individual road segments included in agricultural distribution routes. Once the traffic forecasts have been accumulated, the investment needs of each road segment are analyzed and the results accumulated. In addition to specifically analyzing agricultural logistics routes, the investment needs for other local roads not significantly affected by agricultural goods movements are estimated so that the total statewide need can be quantified.

The estimated investment needed for county and local paved roads totals $100.5 million annually on a statewide basis. Approximately $59 million of these needs relate to agricultural haul roads. The remainder corresponds to other county and local roads. In addition, $110 million are needed annually for local unpaved roads. Approximately, $43.6 million of these needs relate to agricultural haul roads. The remainder corresponds to other local roads, especially township roads. Altogether, the total estimated statewide need is $211.5 million per year, including $100.5 million of paved road investment needs and $110.0 million of unpaved road investment needs.

The estimates developed in this study do not include the specific roadway investment needs attributable to the future growth of oil and gas industries in western North Dakota. Rather, the estimates presented in this report reflect the baseline investment needs throughout the state. The projected oil-related infrastructure needs presented in a separate report (Additional Road Investments Needed to Support Oil and Gas Production and Distribution in North Dakota) are in addition to the estimates presented in this study.

Response to Questions

The original report was issued on January 10, 2011. Since then, requests for detailed information have been posed by legislators. The answers to those questions are summarized in the following paragraphs.

Question 1: How much of the 26.2-mile average trip distance occurs on paved versus unpaved roads, and collector versus local roads?

The 26.2-mile average trip includes farm-to-elevator movements, transshipments from smaller elevators to shuttle-train elevators, and transshipments from elevators to in-state processing plants. As shown below, approximately 56 percent (or 14.8 miles) of the total average trip distance occurs on state highways. This portion of the trip reflects transshipments from smaller elevators to shuttle-train elevators and transshipments from elevators to in-state processing plants, as well as the final portions of many farm-to-elevator hauls. Twenty-five percent of the trip (or 6.5 miles) occurs on gravel roads (local roads or county major collectors). Another 17.5 percent of the trip (or 4.6 miles) occurs on paved county or local roads. About 1 percent of the trip occurs on graded and drained or unimproved roads or trails

Distribution of Average Trip Distance Among Roadway Classes and Surface Types

Functional Class	Surface Type	Percent of Ton-Miles
State Highway	Paved	56.4%
Local	Gravel	16.7%
Major Collector	Paved	15.1%
Major Collector	Gravel	8.3%
Local	Paved	1.7%
Minor Arterial	Paved	0.7%
Local	Graded & Drained	0.5%
Local	Trail	0.4%
Local	Unimproved	0.1%
Other		0.1%

In interpreting these percentages, it is important to note that local and county roads comprise a significantly greater percentage of farm-to-elevator and direct farm-to-processor movements when the transshipments that occur primarily on state highways are excluded. As shown below, 57% of agricultural truck travel off the state highway system occurs on county or local gravel roads. Approximately, 42% of agricultural truck travel off the state highway system occurs on paved county or local roads.

Distribution of Trip Distance Off the State Highway System Among County and Local Roadway Classes and Surface Types

Functional Class	Surface Type	Percent of Ton-Miles
Local	Gravel	38.3%
Major Collector	Paved	34.8%
Major Collector	Gravel	19.1%
Local	Paved	3.9%
Minor Arterial	Paved	1.5%
Local	Graded & Drained	1.1%
Local	Trail	< 1%
Local	Unimproved	< 1%

Question 2: How much of the estimated road funding need relates to the 36 counties that do not produce oil or gas?

As noted in the summary, the estimated annual paved road investment needs for the entire state (exclusive of state highways and projected impacts of future oil development) is $100.5 million. Approximately $59 million of these needs relate to agricultural haul roads. The remainder corresponds to other county and local roads. The estimated annual unpaved road investment needs for the entire state (exclusive of state highways and projected impacts from future oil development) is $110 million. Approximately, $43.6 million of these needs relate to agricultural haul roads. The remainder corresponds to other local roads. Thus, the total estimated statewide need is $211.5 million per year, including $100.5 million of paved road investment needs and $110 million of unpaved road investment needs.

The estimated annual paved road investment needs in the 36 non-oil producing counties is $72.4 million. Approximately $47 million of these needs relate to agricultural haul roads. The remainder corresponds to other county and local roads. The estimated annual unpaved road investment needs in the 36 non-oil impacted counties is $76.6 million. Approximately $31.9 million of these needs relate to agricultural haul roads. The remainder corresponds to other county and local roads. Thus, the total estimated statewide need the 36 non-oil producing counties is approximately $149 million per year. This information is summarized numerically in the following tables

Total Unpaved County and Local Road Funding Needs in North Dakota Exclusive of Funding Needs Attributable to Future Growth in Oil Production

Category	Miles	Annual Cost (millions)
Ag Impact	10,286	$43.63
Other	48,782	$67.32
Total	59,068	$109.95

Unpaved County and Local Road Funding Needs in Non-Oil Producing Counties

Category	Miles	Annual Cost (Million)
Ag Impact	7,163	$31.93
Other	32,367	$44.70
Total	39,530	$76.63

Total Paved County and Local Road Funding Needs in North Dakota Exclusive of Funding Needs Attributable to Future Growth in Oil Production

Category	Miles	Annualized Cost
Ag Impact	3,958	$58.88
Other	2,417	$41.58
Total	6,375	$100.46

Paved County and Local Road Funding Needs in Non-Oil Producing Counties

Category	Miles	Annualized Cost
Ag Impact	2,999	$47.32
Other	1,386	$25.09
Total	4,385	$72.41

Question 3: What is the distribution of funding needs within the 36 non-oil impacted counties?

Distribution of Estimated Local and County Road Funding Needs for Agricultural Logistics Routes Among Counties and Road Types in Non-Oil Impacted Counties

	Percent of Road Funding Needs	
County	Gravel Roads	Paved Roads
Adams	1.0%	0.0%
Barnes	5.8%	4.9%
Benson	3.9%	3.7%
Burleigh	4.2%	0.8%
Cass	10.4%	7.7%
Cavalier	4.0%	1.5%
Dickey	2.5%	4.9%

Distribution of Estimated Local and County Road Funding Needs for Agricultural Logistics Routes Among Counties and Road Types in Non-Oil Impacted Counties

	Percent of Road Funding Needs	
County	Gravel Roads	Paved Roads
Eddy	2.1%	2.7%
Emmons	1.3%	0.3%
Foster	1.7%	2.5%
Grand Forks	2.6%	6.8%
Grant	0.6%	0.0%
Griggs	4.8%	1.7%
Hettinger	2.2%	2.3%
Kidder	3.6%	1.3%
Lamoure	2.5%	3.5%
Logan	1.6%	0.2%
McIntosh	0.5%	0.6%
Morton	0.8%	1.2%
Nelson	2.9%	3.7%
Oliver	0.2%	0.6%
Pembina	1.1%	5.2%
Pierce	3.0%	0.4%
Ramsey	3.1%	3.2%
Ransom	2.1%	1.5%
Richland	1.6%	6.0%
Rolette	0.8%	1.2%
Sargent	1.7%	2.0%
Sheridan	2.1%	0.5%
Sioux	0.0%	0.0%
Steele	4.3%	3.7%
Stutsman	7.2%	7.1%
Towner	3.3%	0.1%
Trail	3.8%	7.7%
Walsh	2.4%	6.4%
Wells	4.1%	4.1%

Question 4: What will happen if all of the funding needs identified in the study cannot be provided? Will crops cease to be produced in these areas because of poorer roads? Will agricultural logistics flows be stopped or slowed?

The effects of limited road funding will not be seen immediately in most areas. The changes will occur gradually. Paved roads that cannot be resurfaced in a timely manner because of limited funds may deteriorate beyond the point of resurfacing and have to be

reconstructed at much higher costs, if they are to be salvaged at all. Instead of being reconstructed, some of these paved roads may be converted to gravel roads because the cost to rehabilitate them is too great. Moreover, all roads will not be improved on a cyclical basis and normal maintenance will be more sporadic. The effects will be manifested in higher vehicle operating costs for all travelers because of rougher roads or longer trip distances to detour around the most deteriorated roads.

The long-run effects are unknown and speculative. However, a poorer road system may affect the desirability of North Dakota as a future location for agricultural-related investments such as processing plants and biofuel facilities. Crops such as corn and soybeans can be grown in many states and regions, not just in North Dakota. A poorer road system creates uncertainties for industries that wish to minimize inventory costs at their plants. The cost of moving crops from farms to elevator and in-state processors affects the total supply-chain cost of goods produced in North Dakota.

Clearly, poorer roads will not stop agricultural flows in the short run. However, roads and other infrastructure are important factors in the long-term economic competiveness of states and regions. Another concern is that transportation cost increases are typically borne by farm producers. As transportation costs increase, the prices received by farmers for their crops are effectively reduced for two reasons: 1) it is more expensive to deliver to elevators, and 2) the proportion of elevator to market movements that go by truck are more expensive. Crops will continue to be produced regardless of road conditions. However, the amount of revenue earned by farm producers may be impacted, as well as the location of processing facilities.

1. Overview of Study

The purpose of this study is to analyze changes in agricultural production and logistics and the importance of roadway investments to the distribution of crops produced in North Dakota. According to the Agricultural Statistics Service, North Dakota leads the United States in the production of spring wheat, durum wheat, sunflower, barley, dry edible beans, canola, and flaxseed. In 2009, the total market value of agricultural goods produced in the state exceeded $5.5 billion. The top three commodities by value are: wheat ($1,822 million), soybeans ($1,074 million), and corn ($708 million). According to the United States Department of Commerce, the agriculture sector of North Dakota is responsible for approximately 11 percent of the state's total economic output.

Because of the importance of agriculture to the state's economy, this report focuses specifically on the investment needs of roads used to haul agricultural goods to market. The vital importance of transportation to agriculture is eloquently expressed in a 2010 joint study by the United States Departments of Agriculture and Transportation, which notes:

> *An effective transportation system supports rural economies, reducing the prices farmers pay for inputs, such as seed and fertilizer, raising the value of their crops, and greatly increasing their market access. The economies of rural areas are intertwined. As agriculture thrives, so does its supporting community. Providing effective transportation for a rural region stimulates the farms and businesses served, improving the standard of living ... because it (agriculture) is so capital-intensive, it generates much more economic activity in the community than just the jobs it creates.*[1]

Although this study focuses on roads used for agricultural distribution, generalized estimates of investments for other roads are presented to provide a context for interpreting the results. However, the estimates presented in this report do not include the specific roadway investment needs attributable to the future growth of oil and gas industries in western North Dakota. A separate report (Additional Road Investments Needed to Support Oil and Gas Production and Distribution in North Dakota) includes forecasts of future infrastructure needs in western North Dakota, based on specific production scenarios. The estimates presented in this report reflect the baseline investment needs throughout the state. Note that the projected oil-related infrastructure needs cited in the separate report are in addition to the estimates presented in this study. Only county and local roads are considered in this analysis. Investment needs for state highways have already been estimated by the North Dakota Department of Transportation.

[1]The United States Departments of Agriculture and Transportation, *Study of Rural Transportation Issues*, April 2010.

The report begins with an overview of important trends in agricultural production and logistics that create a context for analyzing investment needs in agricultural haul roads. After this overview, the primary data and methods used in the study are described, followed by a presentation of results and implications.

2. Background Trends

Many important changes have occurred during the last two decades that have implications for agricultural logistics and roadway investment needs. The key factors driving this study are summarized below:

1. Yields have been increasing over time resulting in more crop volume and movements from a given land area.
2. Crop mix has been changing over time resulting in greater densities of production.
3. The number of elevators has decreased over time resulting in fewer delivery options.
4. Shipments have become more concentrated at a fewer number of elevators.
5. From trends 3 and 4, it follows that longer farm-to-elevator hauls are required.
6. More grains are being transshipped from smaller to larger elevators resulting in longer combined truck trips.
7. The location of in-state processing and biofuels production has resulted in more intrastate truck (as opposed to interstate rail) movements.
8. Funding for county and local roads exclusive of oil extraction funds has grown only modestly over time (when measured in real dollars).
9. In contrast, construction prices have increased dramatically over time for asphalt and gravel roads.

The last two factors relate specifically to roadway funding limitations and their effects on roadway infrastructure. Each of the key factors is highlighted in the following sections.

2.1. Yield Increases

Due to increases in crop and production technology and improvements in management practices, crop yields in North Dakota have increased during the past 20 years. The degree of increase varies from year to year due to weather conditions, but the underlying trend is upward.

Figure 1 depicts the statewide yield trends for corn, soybeans, and spring wheat. In 1990, corn averaged 80 bushels per acre throughout the state. However, corn yields rose to 115 bushels per acre in 2009, down from a high of 124 bushels per acre in 2008. Soybean yields have remained relatively consistent throughout the period. Statewide average wheat yields have increased slightly during the past 20 years, with the average yield in the 1990s

being 31.85 bushels/acre versus 36.45 bushels/acre in 2000. Discussions with industry and research contacts indicate that yields are expected to continue to increase in the future primarily due to seed technology and genetics.

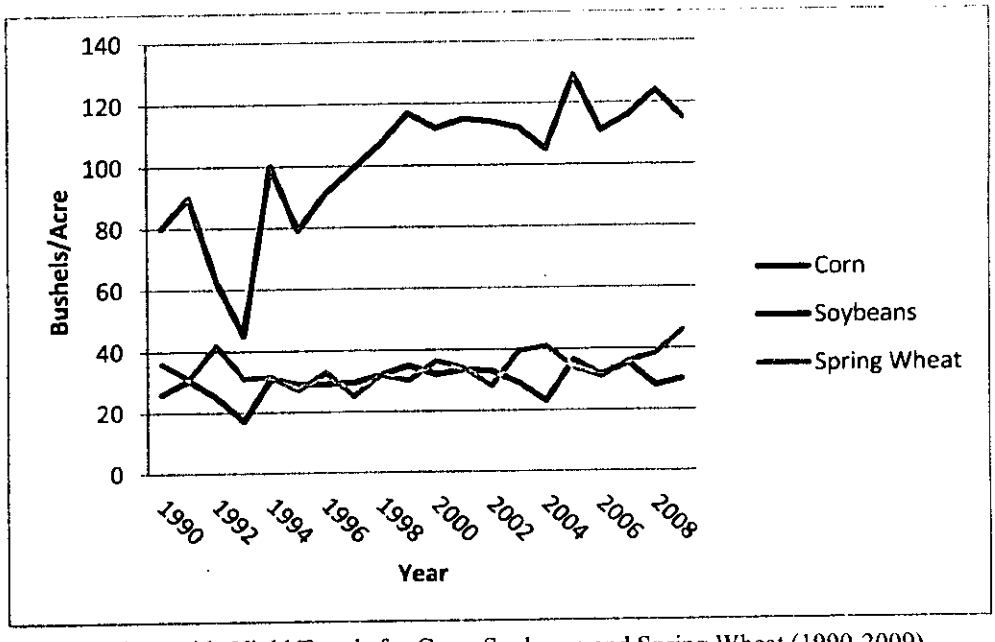


Figure 1 Statewide Yield Trends for Corn, Soybeans and Spring Wheat (1990-2009)

2.2. Changes in Crop Mix

A second production factor that has increased the volume of grain shipped in North Dakota is the changing crop mix. In 1990, roughly 60 percent of the crop land in North Dakota was planted to wheat (Figure 2). In 2009, this number was 45 percent. Over the same period, corn acres have increased from 5 to 10 percent of cropland and soybean acres have risen from 2 to 20 percent of crop land in North Dakota. The shift from wheat to soybeans does not contribute to increased truck volume because the yields are similar. However, the shift from wheat to corn production results in increased truck volumes because the relative yield of corn is more than double that of wheat on a statewide basis.

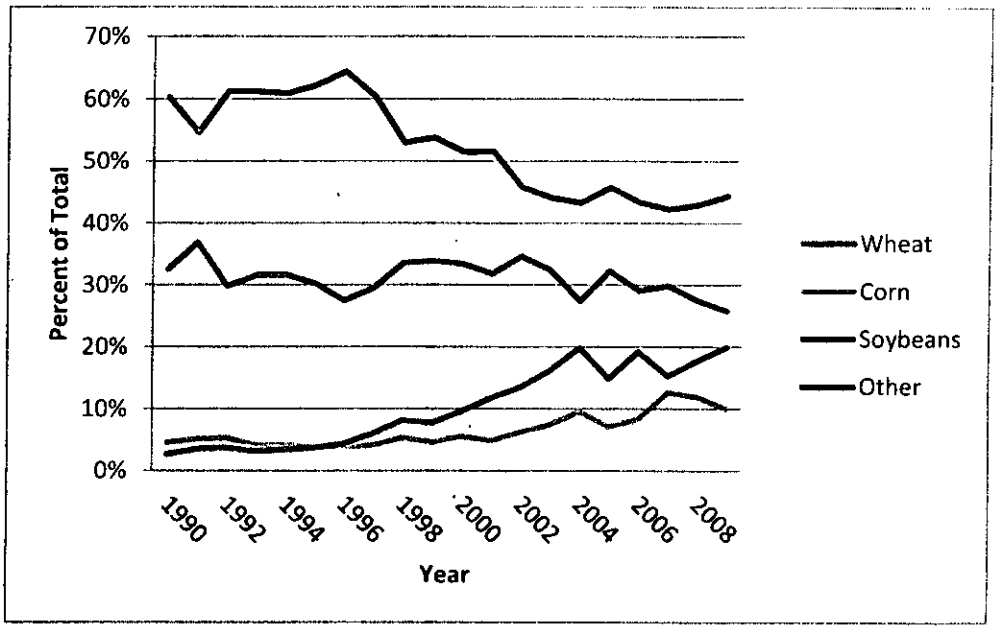


Figure 2 Statewide Percentages of Planted Acres for Corn, Soybeans and Spring Wheat

While Figure 2 illustrates changes in crop mix statewide, there are significant variations at the regional level, although the trends are similar. The figures presented in Appendix A depict specific changes in the proportions of acres devoted to the production of wheat, corn, soybeans and other crops at the Crop Reporting District (regional) level.

2.3. Changes in Elevator Numbers and Locations

To illustrate key trends, statistics were compiled on the numbers and locations of grain elevators in North Dakota from 1990 to 2009. Specifically, the North Dakota Public Service Commission's grain movement database was used to compile statistics on the number of licensed elevators in the state. The grain movement database assigns a unique identifier to each elevator served by each railroad. A small number of elevators are represented twice because they are served by more than one railroad.

During the 1990-2009 period when increasing yields and changes in crop mix were resulting in more output per acre and greater volumes were being shipped from farms to elevators, the number and size of elevator facilities were changing. As shown in Figure 3, the number of elevators shipping grains or oilseeds has decreased over the past 20 years. In 1990, 458 elevators shipped grains or oilseeds. By 2009, this number had decreased to 311 elevators. The elimination of elevators has resulted in fewer delivery options for farmers marketing grain.

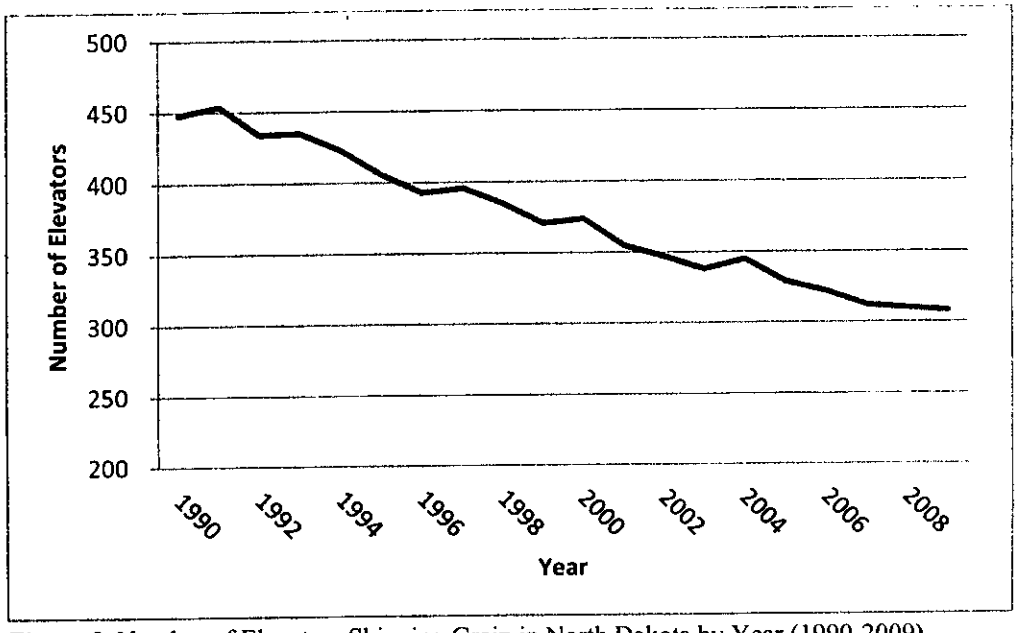


Figure 3 Number of Elevators Shipping Grain in North Dakota by Year (1990-2009)

2.4. Trends in Elevator Throughput

While the total number of elevators has decreased, the amount of grain handled by these facilities has increased. Figure 4 shows that the average tonnage shipped from elevators in North Dakota was relatively constant throughout the mid-1990s. From 1998 to present, there has been an increase in the average tonnage shipped from elevators in the state. In comparison, the median elevator throughput has remained constant over the past 20 years.

2.5. Shuttle Elevators

In the late 1990s, shuttle-train programs were introduced wherein an elevator may receive a reduced rail rate if it is able to meet certain conditions and satisfy minimum grain shipment volumes designated by the railroads. "Shuttle loading facilities influence commodity movement by rail, both in and out of state. They also impact the highway system, since trucks must move commodities to the shuttle facility for rail loading."[2]

Figure 5 shows the average tons shipped from shuttle and non-shuttle elevators in North Dakota. Prior to the shuttle-train program, elevator throughput statewide averaged 31,930 tons in the 1990s. This volume has remained relatively unchanged for non-shuttle elevators through this decade. However, for shuttle elevators, throughput volume has increased from 74,600 tons in 1997 to 240,640 tons in 2009.

[2] North Dakota Department of Transportation, *Rail Plan Update*, 2007.

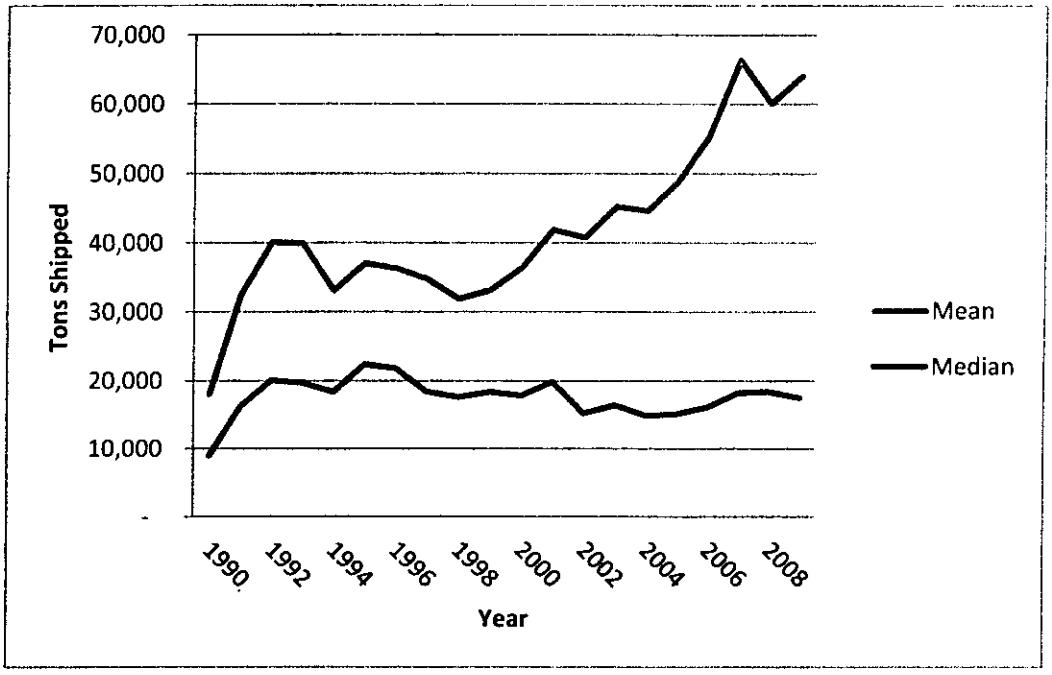


Figure 4 Mean and Median Tons Shipped by ND Elevators (1990-2009)

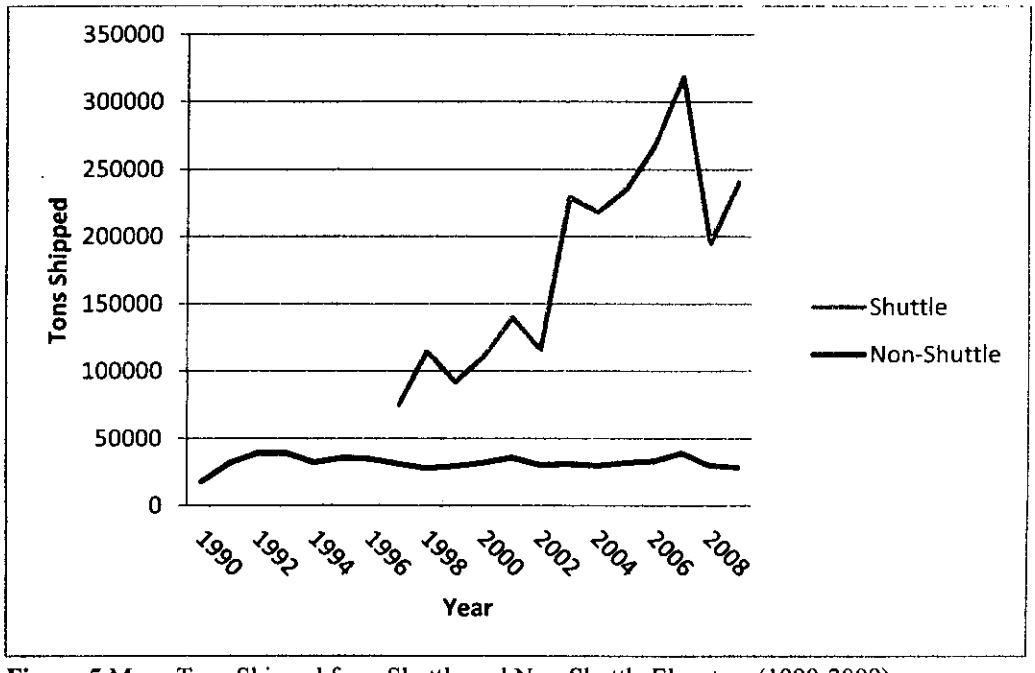


Figure 5 Mean Tons Shipped from Shuttle and Non-Shuttle Elevators (1990-2009)

2.6. Transshipments

In addition to higher volumes of grain being handled at shuttle elevators, there has been a recent increase in the amount of bushels transshipped within the state. These types of movements represent an elevator-to-elevator shipment, such as a satellite elevator shipping to a shuttle elevator. Figure 6 depicts the amount of grain transshipped via truck and rail over the past 20 years.

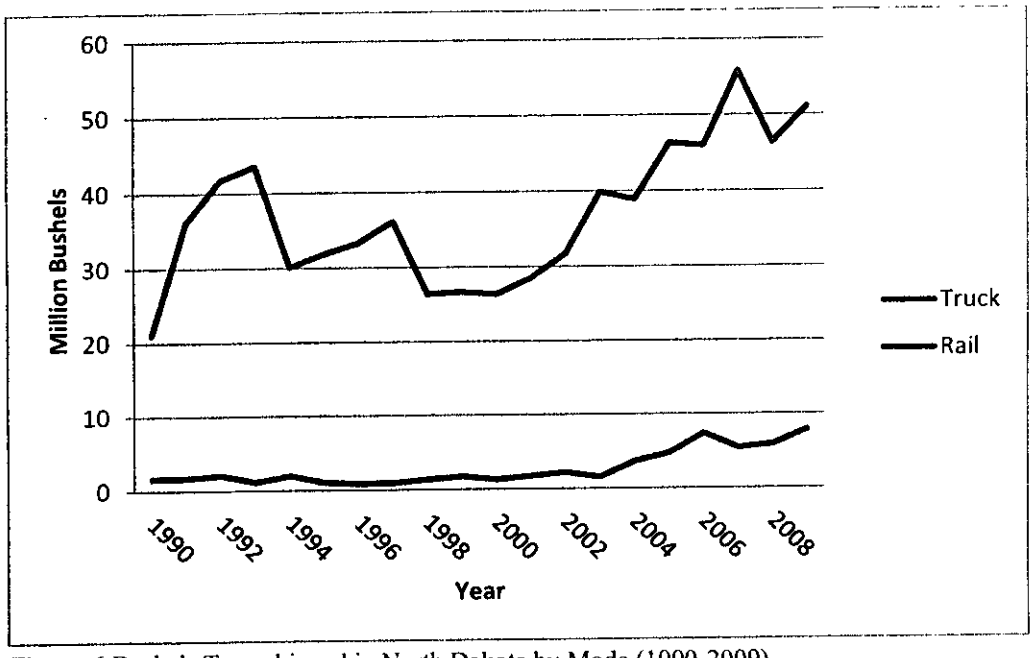


Figure 6 Bushels Transshipped in North Dakota by Mode (1990-2009)

2.7. Funding For Roads

Trends in roadway capital investment in current and constant 1994 dollars are illustrated in Figure 7. These represent only the funds invested or spent by local governments—e.g., county, township, and municipal governments. The period from 1994 to 1996 saw relatively little increase in local road funding as measured in constant 1994 dollars. However, an increase in capital investment occurred in 1996 to 1997, with the following five years from 1997 to 2001 exhibiting stable funding in constant dollars. However, capital outlays increased dramatically during 2002. The dramatic increase in 2002 was a singular event. Since 2003, capital funding (as measured in 1994 dollars) has generally decreased.

As shown in Figure 8, expenditures for road maintenance and traffic services have increased over time, especially in current dollars. However, the increase has been modest in real terms, approximately 1.5 percent per year from 1994 through 2007.

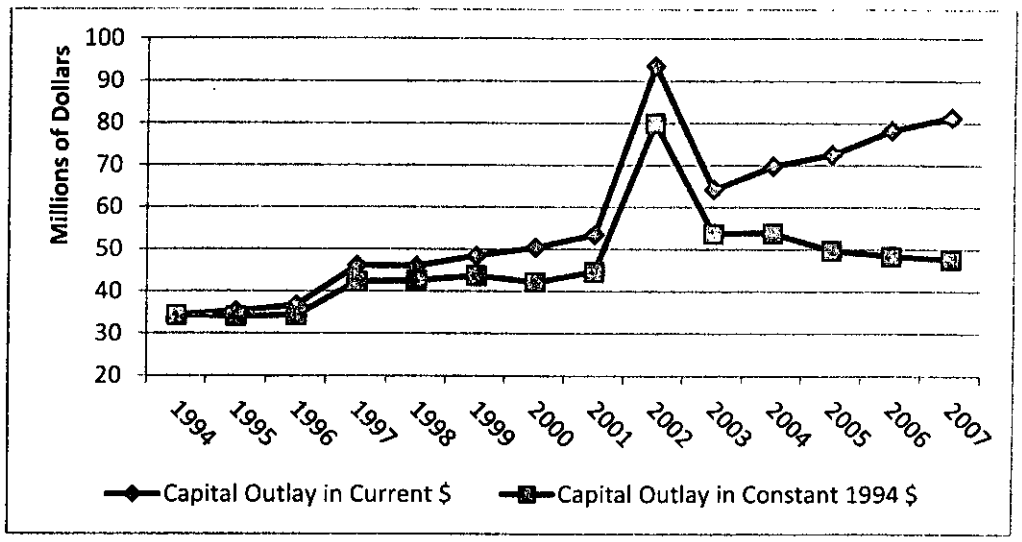


Figure 7 Capital Outlays for Roads in North Dakota in Current and Constant 1994 Dollars[3]

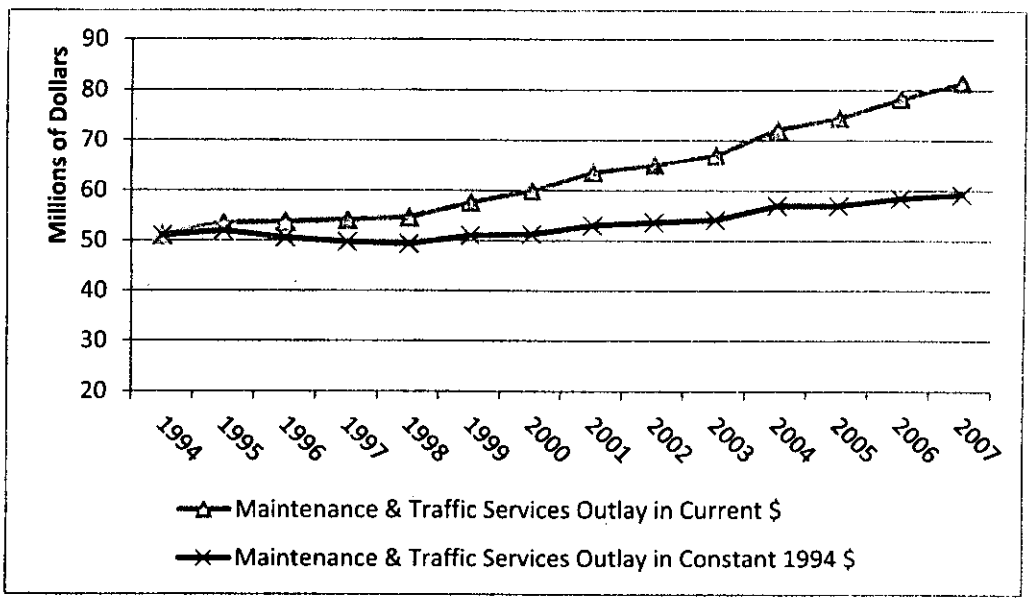


Figure 8 Outlays for Road Maintenance and Traffic Services in North Dakota

[3]Sources: United States Department of Transportation - Federal Highway Administration, 1994-2009 and the Bureau of Labor Statistics, 1994-2009.

2.8. Road Construction Prices

Although general inflationary trends are reflected in Figures 7 and 8, cost increases have strongly affected roadway construction and maintenance. In particular, construction prices have increased dramatically over time for asphalt and gravel roads. Throughout the last decade, increases in petroleum prices have been the primary contributor to increased construction costs at the state level. According to the Federal Highway Administration, in addition to higher fuel prices, consolidation of the construction industry, localized shortages of materials, shortages of skilled labor, regulatory restrictions, increased technical requirements in contracts, and other factors have contributed to higher construction bid prices.

Figure 9 shows the Producer Price Index for material and supply inputs to highway construction at the national level for the past 20 years. The price index does not include the cost of labor or administration, and focuses primarily on the components and materials used in road construction. As the figure shows, construction costs have increased throughout the entire period. However, the rate of increase has been much more pronounced from 2003 to 2008. During this period, the construction cost index increased from 136.6 to 222.4. Increases in construction costs result in fewer roadways being improved at a constant revenue level.

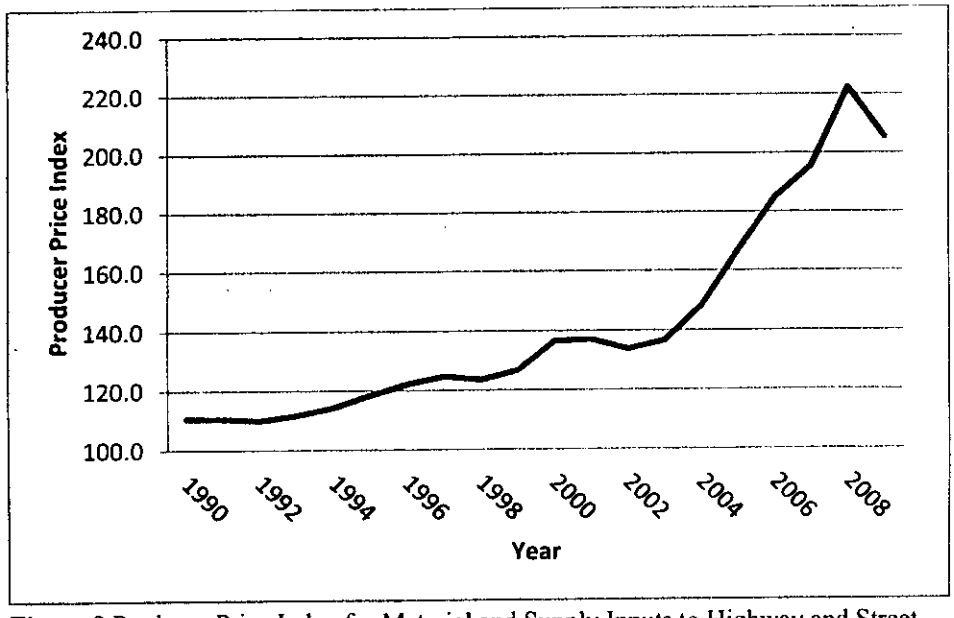


Figure 9 Producer Price Index for Material and Supply Inputs to Highway and Street Construction[4]

[4] Source: Bureau of Labor Statistics, 1990-2009.

The purpose of this section of the report has been to describe key trends in agricultural production and logistics, as well as trends in road funding and construction costs. The analysis depicts a set of factors that are collectively stressing the county and local road systems used to market and distribute North Dakota products. With this background, the report transitions to a description of the primary data and methods used to predict agricultural traffic flows and roadway investment needs.

3. Analysis Models and Data

The estimates presented in this report have strong analytical foundations. The study features the integration of four main models: (1) a crop production and location model; (2) a crop distribution model, in which movements or flows are predicted from crop-producing zones to elevators and processing plants; (3) a traffic model in which predicted flows are assigned to individual road segments; and (4) a road investment model, in which truck traffic and road characteristics are used to estimate investment needs. Models 1 and 3 are based on Geographic Information System (GIS) data and procedures, while the crop distribution model (Model 2) is grounded in mathematical programming logic. The road analysis model is based on highway planning and economic-engineering methods.

The first three types of models are summarized in the following sections. Roadway analysis methods for paved and gravel roads are described later in the report.

3.1. Crop Production and Location Model

In the analysis, it is vital to know not only the quantities of crops produced but their locations. More precise location information enables refinements in trip forecasting and the analysis of individual roadway segments. To provide greater accuracy, crop production estimates are generated for 1,340 county subdivisions in North Dakota.[5] USDA's 2009 crop satellite image is used for this purpose.

Using satellite imagery, the square miles of land devoted to the production of each crop in each county subdivision is estimated using GIS technology. However, the satellite image is only a snapshot of cultivation at a particular time. It is not an inventory of harvested crops. Moreover, it is an approximation subject to analytical limitations.

For these reasons, the predicted square miles devoted to crop production in each subdivision are adjusted based on the 2009 county production values published by the North Dakota Office of the National Agricultural Statistics Service (NASS). In this process, the predicted production of each crop in each subdivision is apportioned based on its share of cultivated land area within the county. For example, if five percent of the total

[5] For the most part, subdivisions are synonymous with organized townships.

cultivated acres in a county devoted to barley production lies within a certain township, this subdivision is assumed to produce five percent of the barley harvested in the county. This method implicitly assumes that barley yields are the same everywhere in the county.

While the estimates are subject to limitations, there is a high degree of accuracy in the predicted crop locations. In effect, the estimates are the most accurate possible without detailed field surveys, which are beyond the scope of this study. As discussed later, the predicted crop production levels in each county subdivision represent the zonal supplies of the distribution model.

3.2. Market Demands

The markets for the agricultural commodities produced in North Dakota are defined as processing plants within the state or elevators that ship crops out of state to various domestic and export locations. The demands at elevators are compiled from monthly reports submitted to the North Dakota Public Service Commission. The demands at ethanol plants are derived from several sources including: (1) reported shipments from North Dakota elevators to in-state processors, (2) the stated productive capacities of the plants, and (3) confidential survey information that describes the percentages of corn acquired from the local drawing areas around the plants and expected production volumes.

In effect, the demands at elevators and ethanol plants are known with high levels of confidence. The same cannot be said for all other demand sources. The lower boundary of demand at the Ladish Malt Plant in Spiritwood is known from the inbound shipments of barley from elevators in North Dakota. In the network model, this target is allowed to increase in relation to local supply in the nearby area. Consequently, the estimated demand at the facility should be close to actual levels. Less data are available regarding the final demands of specialty crops such as dry edible beans, peas, and lentils. Nonetheless, the demands for crops at specific locations are known with high levels of confidence overall.

3.3. Network Representation of Crop Distribution System

Terminology is important when describing the objectives and results of the crop distribution model. Such a model is comprised of a set of nodes and paths that connect the nodes. Shipments flow from node-to-node via the paths.

A path (such as one leading from a crop-producing subdivision to an elevator) is typically comprised of many individual road segments. Each segment (or link) is demarcated by two intersections or junctions in the road network. In many instances, two or more paths may be chained to form a trip chain or route. For example, a trip route may include a path from a crop-producing subdivision to an elevator, and a path from that elevator to a processing plant.

3.3.1. *Nodes*

The nodes consist of three types: origin, intermediate, and destination. The county subdivisions where the crops are produced are origin nodes. The elevators and in-state processing plants are destination nodes. However, elevators may also serve as intermediate nodes. As an intermediate or transshipment node, an elevator may receive shipments directly from subdivisions or from other elevators. Subdivisions may ship directly to in-state markets (e.g., ethanol plants).

Terminal elevators are defined as those that export crops out of state. A shuttle-train facility is a terminal elevator. Other elevators may function as terminal elevators when they export grains and oilseeds from the state. However, in other cases, these elevators function as intermediate or transshipment facilities.

A simplified grain distribution system is depicted in Figure 10. As the figure shows, farm producers from various subdivisions or townships may ship directly to a shuttle-train elevator, or to a smaller elevator located closer to the subdivision. The smaller elevator, in turn, may transship some of the grain it procures to the shuttle-train facility; which, in turn, ships large quantities by rail to markets located out of state. A similar network can be drawn by substituting a processing plant for the shuttle elevator. In this case, the primary outbound product will be ethanol, vegetable oil, malt, or flour.

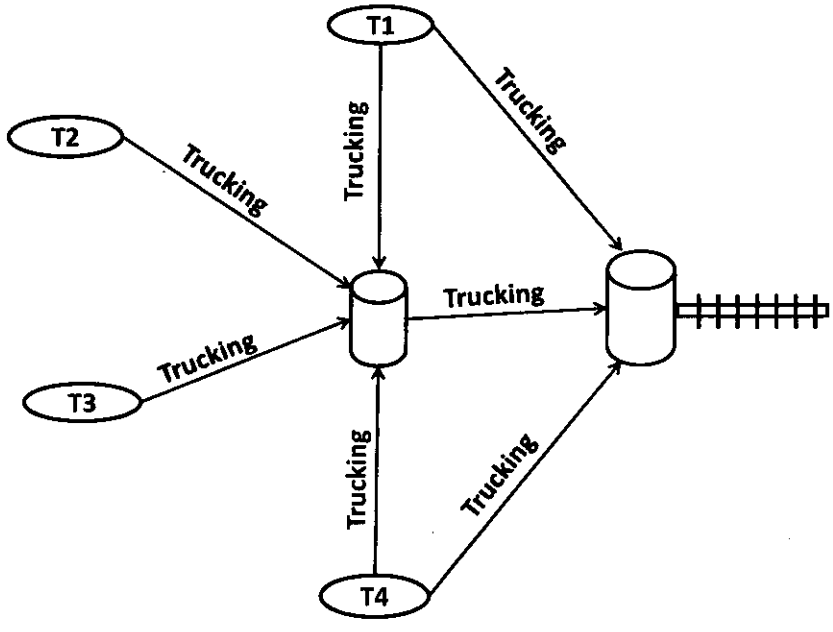


Figure 10 Crop Flows in Elevator Network

There are several types of truck shipments in a grain distribution network. A producer may haul crops to a smaller elevator in trucks owned and operated by the farm. At a later date, the grain may be trucked to a shuttle-train elevator or plant in commercial trucks. Alternatively, the farm producer may truck directly to a shuttle facility or plant. All types of flows are simulated in the model.

3.3.2. *Paths and Segments*

At a microscopic level, a path may consist of many individual road segments. For example, a subdivision-to-elevator path may include local gravel roads, paved county major collectors, and state arterial highways. In the GIS model, the fastest path through the network is identified from each subdivision to the nearest 10 to 20 elevators.[6] Because there are more than 150,000 unique road segments in the North Dakota GIS file, the input files are enormous and require extensive computable time. However, in the final analysis, flows are accumulated by individual road segments—which allow for greater detail in the roadway investment analysis.

3.4. Criteria and Objectives of Crop Distribution Model

The objective of the distribution model is to predict crop flows that minimize time or distance, while meeting the demands of in-state processing plants and terminal elevators. The fastest-path algorithm is used to generate paths from subdivisions to elevators and plants, and from elevator-to-elevator. Because some of the paths extend to distant elevators, the fastest-path criterion seems most reasonable. Over a short distance, a truck operator may follow a shorter zigzag path. However, for longer trips, truckers will quickly move toward the major collector/arterial network where the speeds are faster and more consistent.[7]

In identifying the fastest paths, maximum speeds are specified for each road segment based on the functional classification and surface type (e.g., paved or gravel). The maximum speeds range from 75 mph on Interstate highways to 10 mph on unimproved roads. While the fastest path criterion is the best for identifying paths over long distances, the predicted travel times are not accurate. The only information available is the speed limit, or the assumed speed for local roads or trails.

In reality, maximum speeds may not be consistently attainable or may vary greatly due to weather, traffic, and operating conditions. Thus, the selection of one path over another (e.g., a direct movement from a subdivision to one elevator versus another one) is based on

[6] In a few areas, the density of the elevator system is not sufficient to allow the connection of each crop-producing zone to 20 facilities.

[7] The shortest-path algorithm yields slightly shorter trip distances than the fastest-path algorithm—i.e., less than 2 percent on average. Thus, the selection of one method over the other does not significantly affect the results.

distance—i.e., the shortest of the two fastest alternative paths. Shorter distances minimize fuel consumption and use-related vehicle depreciation. Moreover, in contrast to the predicted trip times, the distances are relatively accurate and do not vary during the year.

3.4.1. *Minimum Distance Criterion*

The objective of the mathematical programming model is to minimize the distance of moving all agricultural commodities to plants or final elevators, from where they are shipped out of state. In effect, the model identifies an optimal or logistically efficient set of truck movements. These movements minimize use-related vehicle depreciation and maintenance, as well as fuel consumption. In many cases, the predicted movements may also minimize travel time. Because trucking cost is typically measured on a per-mile basis, minimizing the distance of agricultural goods movements is parallel to minimizing trucking cost on a system-wide basis.[8]

3.4.2. *Total Trip Distance*

The model minimizes the total or route trip distance including transshipments from one elevator to another or from an elevator to an in-state processing plant. Transshipments may occur when production in the primary draw area is not sufficient to meet the elevator's demands. In these cases, grains or oilseeds may be delivered by farmers from remote townships to elevators located on the periphery of the larger facility's draw area. These deliveries are processed at the smaller facilities and then resold to the shuttle- or unit-train elevator and shipped by commercial truck to that facility. In this case, the trip chain extends from the township to the shuttle- or unit-train elevator via the smaller elevator en-route. In many cases, a shuttle elevator or ethanol plant may contract with elevators to collect, process, and reship grain. In interpreting the results, it is important to recall that the route distance represents the total trip distance from farm to plant or terminal elevator, where the terminal elevator is one that ships the commodity out of state.

3.4.3. *Contextual Factors*

The realism of the crop distribution model depends on several factors. It assumes that price competition exists among elevators. As a result, a primary market or draw area surrounds each facility. Within this zone, crops are most likely to be delivered to the elevator or plant. Of course, the primary draw areas of shuttle-train and unit-train elevators may be larger than the draw areas of smaller elevators. Nevertheless, price relationships reflect the capability of smaller elevators to resell grains and oilseeds to larger elevators. For

[8] The prime interest of this study is estimating the ton-miles of agricultural goods movements via particular routes, as opposed to the trucking cost involved in delivering grains and oilseeds to markets. However, the predicted flow pattern is the same as that which would result from minimizing the average trucking cost per mile.

example, the price at a so-called satellite elevator that routinely resells grain to a shuttle elevator may reflect the price at the larger elevator plus the trucking cost from the smaller elevator to the larger one, plus the handling and processing cost at the smaller facility. These competitive relationships, along with truck cost factors, create tendencies for producers to deliver to closer elevators. These tendencies are intensified by higher fuel prices. Although diesel fuel prices have dropped since 2008, they have been on an upward trend since March of 2009. Although higher crop prices at shuttle elevators are attractive, higher fuel prices create greater impedances to long-distance travel.

3.4.4. *System versus Local Criteria*

Clearly, every farm producer will not deliver to the closest elevator, and the model does not predict this will occur. Rather, movements are restricted by elevator demands, which represent the known outbound shipments from each facility in crop year 2009-2010. Elevator volumes are reflections of the competitive landscape and market draw areas discussed previously. When an elevator's demand is fulfilled, no additional inbound movements are simulated. Even if the elevator is the most attractive facility for a producer on the fringe of its draw area, the producer's grains or oilseeds are shipped to another elevator whose demand must be filled.

In this model, the demands are known (and assumed to be fixed). The objective is to find the pattern of flows that moves the known supplies of crops from subdivisions to elevators and plants with the fewest ton-miles, while meeting the known demands of the facilities. This is far different from saying each farm producer delivers his or her crops to the closest elevator.

4. Predicted Flows

The predicted tons of each major crop are shown in Table 1, as well as the weighted-average lengths of haul. Note that the average distance includes the movement from farm to first elevator or plant, as well as any subsequent movements from the first elevator to other facilities—i.e., transshipments. In effect, it is the total trip distance discussed in Section 3.4. It reflects trips from farms to in-state processors, as well as to elevators. The oilseed category in Table 1 includes sunflowers and canola, while the other crop category includes dry edible beans, oats, and other specialty crops.

Approximately 21.89 million tons of crops are analyzed in this study. The total predicted distance of these movements (including transshipment distances) is 26.2 miles.[9] However, there are significant variations among crops. The average trip distance for barley reflects a

[9] When the shortest path algorithm is used (instead of the fastest path algorithm) in the initial selection of routes, the weighted-average distance drops to 25.6 miles.

spatial disconnect between supply and demand. Much of the barley grown in 2009 was cultivated in the north-central region including Bottineau County. However, most of the major demand sources are plants and elevators in eastern North Dakota, necessitating longer hauls than for other commodities. The weighted-average route distance for commodities other than barley is 21 miles, suggesting that the longer barley hauls significantly inflate the average.

Table 1. Predicted Tons of Agricultural Freight and Average Trip Lengths

Crop	Annual Tons	Average Trip Distance (mi.)
Barley	1,681,418	87.8
Corn	5,102,252	21.1
Oilseeds	578,929	26.6
Other	547,028	39.7
Soybeans	4,144,969	23.1
Beans	562,124	30.8
Wheat	9,268,699	18.1
All Crops	21,885,419	26.2

The predicted ton-miles of agricultural goods are shown in Tables 2 and 3, respectively. In Table 2, the predicted ton-miles are listed by type of pavement. In some cases, the owner (state or local government) is indicated. As the table shows, agricultural goods required roughly 600 million ton-miles of transportation during crop year 2009-2010. More than half of these ton-miles occurred on principal arterial highways, most of which are owned and maintained by the North Dakota Department of Transportation. The next greatest concentration of flows is on county major collectors: approximately 132 million ton-miles. Sixty-five percent of these ton-miles travel paved county major collector (CMC) roads (Table 4). The remaining 35 percent move on gravel CMC roads.

Table 2. Predicted Ton-Miles of Agricultural Freight by Road Type

Surface Type	Ton Miles	Percent
Paved: High-Type (State)	319,449,945	56.4%
Paved (County and Local)	99,563,913	17.6%
Graded & Drained	2,807,777	0.5%
Gravel	141,222,015	25.0%
Trail	2,233,471	0.4%
Unimproved	720,330	0.1%
All Roads	565,997,453	100.0%

Table 3. Predicted Ton-Miles of Agricultural Freight by Roadway Class

Functional Class	Ton-Miles	Percent
Principal Arterial	319,871,952	57%
Minor Arterial	3,804,845	1%
Major Collector	132,333,047	23%
Minor Collector	621,758	0%
Local	109,365,851	19%
All Roads	565,997,453	100%

Table 4 Distribution of Agricultural Ton-Miles Among Paved and Graveled County Major Collector Roads

Surface Type	Ton-Miles	Percent of Ton-Miles
Gravel	46,866,136	35.4%
Paved	85,459,102	64.6%
Trail	7,808	0.0%

With this overview of agricultural goods movements, the report now turns to the estimation of road impacts; starting with unpaved roads. Only county and local roads are considered in this analysis. Investment needs for state highways have already been estimated by the North Dakota Department of Transportation.

5. Unpaved Road Analysis

5.1. Cost and Practices Data

Survey responses from a 2009 study were used to compile gravel cost, gravel overlay thickness, application frequency, and blading frequency and cost. When survey responses were unavailable, the district average was used to represent the costs and practices.

The **gravel overlay thickness** represents the quality of the gravel surface as well as roadway condition. Responses indicate that the statewide average gravel thickness is 932 cubic yards/mile. However, there is substantial variation from one part of the state to another. Gravel loss factors such as weather conditions, traffic volume, traffic speed in addition to gravel cost and availability factors are likely reasons for the variations.

The **gravel interval** represents the quality of the gravel surface as well as the roadway condition and maintenance practices. Responses indicate that the statewide average gravel interval is 6 years, with 5 years being the most frequent response. However, there is substantial variation from one part of the state to another. Gravel loss factors such as

weather conditions, traffic volume, traffic speed in addition to gravel cost and availability factors are likely reasons for these variations.

As mentioned above, cost and availability of quality gravel likely impact the decisions of counties with respect to overlay thickness and timing. As was observed with the gravel overlay thickness and interval, wide variations in gravel cost were reported, both statewide as well as within regions. The statewide average was $6.54 per cubic yard, ranging from $3.00 to $14.00 per cubic yard.

The final activity used in estimating county level costs is the blading interval. The blading interval is representative of the counties' maintenance activities. Factors such as traffic volume, speed, and weather conditions influence the frequency and necessity of road maintenance.

5.2. Cost Estimation

The survey responses were the primary tool used to estimate district level costs. A spreadsheet model was constructed to calculate annualized gravel road improvement and maintenance costs for varying levels of gravel thickness, intervals, overlays, and blading intervals.

5.3. Classification

The network flow model generated agricultural related truck trips by impacted segment. This number was added to the baseline average daily traffic (ADT) to obtain the total ADT for impacted sections. Using the predicted ADT volumes, unpaved segments were classified by traffic volumes: 0-50, 50-100, 100-150 and 150-200. No gravel roads in this analysis exceeded 200 ADT. It is assumed that as traffic levels increase, the amount and/or frequency of gravel application and blading will increase to preserve surface condition.

Table 5 Miles of Gravel Road Included in the Analysis by ADT Class

ADT Class	ADT Range	Miles
1	0-50	5,466
2	50-100	4,804
3	100-150	15
4	150-200	1

5.4. Maintenance and Improvement

As mentioned above, as traffic increase on gravel roads, the frequency of maintenance activities must increase to preserve surface condition. Using the cost model, annualized costs were calculated for 5, 4, and 3 year gravel application intervals. Based upon these

annualized estimates, improvement costs for the three gravel ADT classes are estimated and presented in Table 6. While the first phase of the analysis considers only the roads impacted by agricultural traffic, the remaining roads must also be maintained. The annual cost estimates for these roads and the total estimates are also presented in the table below.

Table 6 Annual Cost Estimates for Gravel Roads in North Dakota ($2010)

Category	Miles	Cost
Ag Impact	10,286	$43,627,275
Other	48,782	$67,319,298
Total	59,068	$109,946,573

6. Paved Road Analysis

The factors that drive the paved road analysis are: (1) the number of trucks that travel the road segment, (2) the types of trucks and axle configurations used to haul agricultural commodities, (3) the structural characteristics of the roads in agricultural logistics routes, (4) the widths of the roads, and (5) their current surface conditions. Each of these factors is discussed in the following sections of the report.

6.1. Truck Types

A previous survey of elevators revealed the types of trucks used to haul grains and oilseeds and the frequencies of use. As shown in Table 7, approximately 56 percent of the inbound volume is transported to elevators in five-axle tractor-semitrailer trucks. Another four percent arrives in double trailer trucks—e.g., Rocky Mountain Doubles. Another twelve to thirteen percent arrives in four-axle trucks equipped with triple or tridem rear axles.

After considering entries in the other category, the following assumptions were made. Sixty-two percent of the grains and oilseeds arriving at elevators in North Dakota will arrive in combination trucks, as typified by the five-axle tractor-semitrailer. The remaining 38 percent will arrive in single-unit trucks, as typified by the three-axle truck.

Table 7 Types of Trucks Used to Transport Grain to Elevators in North Dakota

Truck Type	Percentage of Inbound Volume
Single unit three-axle truck (with tandem axle)	25.15%
Single unit four-axle truck (with tridem axle)	12.55%
Five-axle tractor-semitrailer	54.96%
Tractor-semitrailer with pup (7 axles)	3.62%
Other	3.72%

6.2. Truck Axle Weights

Truck loads are transmitted to the pavement through the truck's axles and wheels. Therefore, axle configurations and weights are important in this study. The pavement design equations of the American Association of State Highway and Transportation Officials (AASHTO) are used to analyze axle impacts. These same equations are used by most state transportation departments in the United States. The equations are expressed in *equivalent single axle loads* (ESALs). In this metric, the weights of various axle configurations (e.g., single, tandem, and tridem axles) are converted to a uniform measure of pavement impact. With this concept, the service life of a road can be expressed in ESALs instead of truck trips.

6.2.1. *Effects of Axle Weights*

An ESAL factor for a specific axle represents the impact of that axle in comparison to an 18,000-pound single axle. The effects are nonlinear.[10] For example, a 16,000-pound single axle followed by a 20,000-pound single axle generates a total of 2.19 ESALs, as compared to two ESALs for the passage of two 18,000-pound single axles.[11] An increase in a single-axle load from 18,000 to 22,000 pounds more than doubles the pavement impact, increasing the ESAL factor from 1.0 to 2.44. Because of these nonlinear relationships, even modest illegal overloads (e.g., 22,000 pounds on a single axle) can significantly reduce pavement life.

6.2.2. *ESAL Factors*

ESAL factors are estimated for the prototypical grain trucks mentioned earlier. This calculation is illustrated for a tractor-semitrailer weighing 80,000 pounds with a weight distribution of 12,000 pounds on the front (steering) axle and 34,000 pounds on each of the tandem axles. The ESAL factor for a 34,000-pound tandem axle is 1.07, which suggests that its impact is only marginally greater than the impact of an 18,000-pound single axle. The ESAL factor for the 12,000-pound single axle is 0.177 and the overall ESAL factor for the truck is $0.177 + 1.07 \times 2 = 2.32$. This means that for every loaded mile the truck travels it is consuming a small part of a pavement's life, as measured by 2.32 units or ESALs. A similar calculation for a 50,000-pound three-axle truck (with a tandem rear axle) yields an ESAL factor of 1.68—i.e., 0.61 + 1.07.

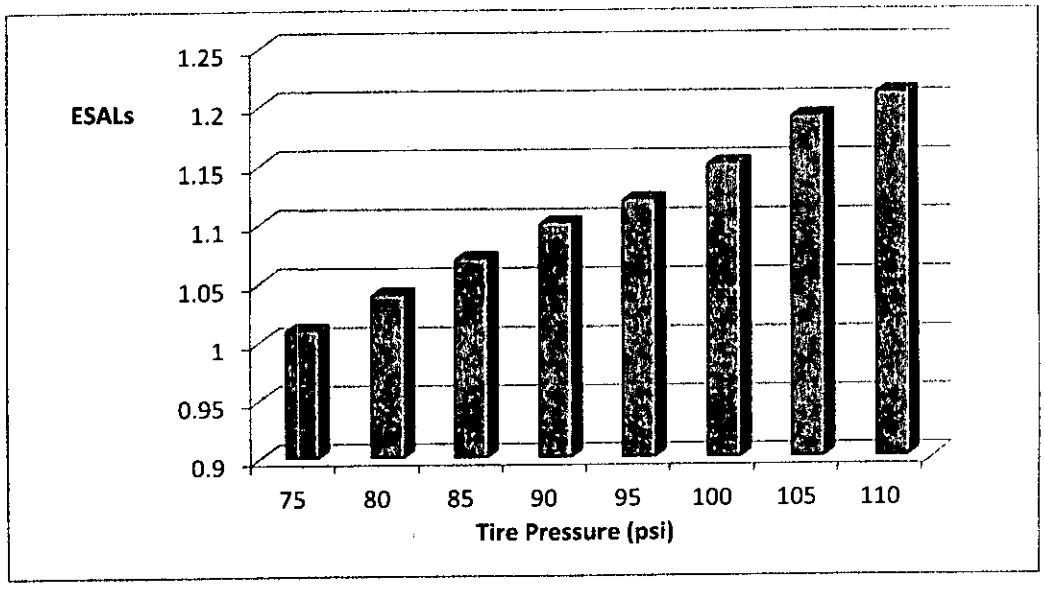
The AASHTO ESAL factors were originally estimated when tire pressures were much lower than they are today. As shown in Figure 11, modern tire pressures increase the

[10] The relationship between ESALs and axle loads is approximately a fourth power relationship.

[11] These calculations reflect a light pavement section with a structural number of 2.0 and a terminal serviceability (PSR) of 2.0.

ESAL factor by as much as 20%. In effect, the true ESAL factor of a tractor-semitrailer is 2.78 per loaded mile. All ending calculations in this study reflect adjustments for higher tire pressures.

The use of single instead of dual tires on drive and trailer axles may further impact the ESAL factor. With 6 inches of wander (e.g., lateral variation in the placement of tires on pavements), the use of single tires on drive and trailer axles may increase the ESAL factor by as much as 50%.[12] In this study, only the steering axle of the truck is assumed to be equipped with single tires. Therefore, no adjustments are necessary.



cial Report

6.3. Surface Conditions

Roads conditions are often assessed by examining the distress and roughness of the surface layer. Table 8 shows the results of a 2008 survey of county road managers in which they were asked to rate the current conditions of the roads in their counties, by functional class—i.e., county major collector or local road. The survey results have been weighted by the miles in each class and county. As the table shows, approximately nine percent of county major collector miles are in poor or fair-to-poor condition. In comparison, 42.5 percent of county local road miles are in poor or fair-to-poor condition. Most of the miles

[12] Transportation Research Board. *Truck Weight Limits: Issues & Options*, Special Report 225, National Academies Press, 1990.

in each classification are rated as fair. Less than 5 percent of county local road miles are in good condition.

Table 8 Percent of Miles by Condition Level and Functional Class

Surface Condition	County Major Collector	Local Roads
Good	26.98	4.51
Good/Fair	4.61	
Fair	59.63	52.99
Fair/Poor	3.11	4.41
Poor	5.68	38.09

6.4. Structural Numbers

The capability of a paved road to accommodate heavy truck traffic is reflected in its structural rating, which is measured through the structural number (SN). The structural number is a function of the thickness of the surface and base layers and the materials of these layers. The surface layer is typically composed of asphalt while the base layer is comprised of aggregate material. The amount of cracking and deterioration of the surface layer is considered in the structural number of an aging pavement. Moreover, the conditions of base layers and underlying soils are important considerations when assessing seasonal load limits and the year-round capabilities of roads.

The average thicknesses of pavement layers in county and local paved roads are shown in Table 9. These values represent weighted means derived from a 2008 survey. The estimates have been weighted by the miles of county major collector and local road in each reporting county.

Table 9 Weighted-Average Layer Thicknesses of County Collector and Local Roads in North Dakota

	County Major Collector	Local Road
Base layer thickness (inches)	5.1	3.9
Surface layer thickness (inches)	4.1	4.0

When estimating in-service structural numbers, a badly deteriorated layer is likely to be assigned a lower coefficient.[13] For example, the average in-service structural number of a

[13] The pavement design guide of the American Association of State Highway and Transportation Officials (AASHTO, 1993) suggests the use of asphalt surface coefficients ranging from 0.15 to 0.40 for in-service pavements, based on the extent of longitudinal patterned (e.g., alligator) cracking and transverse cracks. As a point of reference, a new asphalt surface is typically assigned a structural coefficient of 0.44. For aggregate base layers, the AASHTO guide suggests using coefficients of 0.0 to 0.11, depending upon the extent of degradation

county major collector in poor condition with substantial distress may be computed as 5.1 inches of base × 0.07 + 4.1 inches of asphalt × 0.20 = 1.2. Similarly, the average in-service structural number of a county local road in poor condition with substantial surface layer distress may be 1.1 (e.g., 3.9 inches of base × 0.07 + 4.0 inches of asphalt × 0.20).[14]

6.5. Potential Improvements to County Collector and Local Roads

The types of potential road improvements analyzed in this study are reconstruction and resurfacing. If a pavement is not too badly deteriorated, normal resurfacing is a cost-effective method of restoring the structural capacity of a road. In this type of improvement, a new asphalt layer is placed on top of the existing pavement. The thickness of the layer may vary. However, it may be as thick as five inches. Without extensive truck traffic, a relatively thin overlay (e.g., 2 to 3 inches) can often be effectively applied.

Reconstruction entails the *replacement* of a pavement in its entirety—i.e., the existing pavement is removed and replaced by one that is equivalent or superior. Reconstruction includes drainage work and shoulder improvements, as well as the widening of substandard lanes. In contrast, resurfacing leaves the pavement intact. In lieu of replacement, hot mix asphalt is placed on the existing surface in a quantity needed to return the pavement to an acceptable level of serviceability and *restore* its structural strength

6.5.1. *Reconstruction*

A road may be reconstructed for several reasons. (1) The pavement is too deteriorated to resurface. Roads in the poor and very poor classifications fall into this group. (2) The road has a degraded base that will provide little structural contribution to a resurfaced pavement. (3) The roadbed is comprised of poor soils that are susceptible to moisture. In this case, reconstruction is necessary to provide year-round service at the maximum legal weight. (4) The road is too narrow to accommodate thick overlays without widening. In this case, reconstruction may be the only alternative that does not reduce capacity or potentially affect safety.

6.5.2. *Feasibility of Overlays on Narrow Roads*

The graded width determines if a substantial new asphalt layer can be placed on top of the road without compromising its capacity. As the top of the road is elevated due to overlays,

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and contamination of aggregates with fine soil particles or abrasions.

[14] In comparison, the average in-service structural number of a county major collector in fair condition may be 1.6 (e.g., 5.1 inches of base × 0.08 + 4.1 inches of asphalt × 0.28). Similarly, the average in-service structural number of a county local road in fair condition may be 1.4 (e.g., 3.9 inches of base × 0.08+ 4.0 inches of asphalt × 0.28).

a cross-sectional slope must be maintained.[15] Consequently, the useable width may decline. Typically, this is not an issue for wider roads (e.g., 34-feet or more in width). However, for narrower roads, it may result in reduced lane and shoulder widths and/or the elimination of shoulders. In the ultimate case, the narrowest roads cannot be resurfaced. The probabilities of crashes increase when roadway widths are narrowed.[16]

6.5.3. *Improvement Logic*

In this study, segments with higher traffic volumes are considered for reconstruction because of width and operational concerns. Unfortunately, detailed information regarding graded widths could not be obtained for this study. Only aggregate values were obtainable. Without knowledge of the widths of individual segments, reconstruction improvements are allocated to segments in counties with insufficient roadway widths based on traffic until a modest level of traffic is reached.

At a minimum, reconstruction will prevent the loss of width. It may also provide for minor widening, shoulder and drainage improvements. As a result, reconstruction may enhance capacity (as measured in vehicles per hour) because of wider lanes and shoulders. Shoulder improvements may enhance safety. Last but not least, reconstruction will remove spring load restrictions and allow year-round operation at gross vehicle weights of 80,000 pounds or greater.[17] The allocation of reconstruction dollars to roads with higher traffic levels will maximize capacity and ride-quality benefits for all travelers.

Roads not selected for reconstruction are eligible for resurfacing. However, the thickness and cost of the overlay depends upon the expected truck traffic level.

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[15] Roads are "crowned" or elevated in the center primarily for drainage. With a cross-sectional slope, water readily drained off the crowned surface and into the ditches.

[16] For purposes of reference, a 24-foot graded width allows for an initial design of two 11-foot lanes with some shoulders. However, the lane widths and shoulders cannot be maintained as the height of the road is elevated during resurfacing. To illustrate, assume a 4:1 cross-sectional slope for both the initial construction and subsequent overlays. In this case, each inch of surface height results in a loss of approximately eight inches of top width. Thus, a road with an existing surface thickness of four inches may suffer an ultimate top-width loss of five feet with a new four-inch overlay. The upshot is that lanes and shoulders must be reduced to fit the reduced top width. In the case of a road with a 24-foot graded width, shoulders must be eliminated and lanes reduced to 10 feet or less.

[17] A thick structural overlay may remove spring load restrictions and allow year-round operation at the maximum legal weight. However, this result cannot be guaranteed. The outcome depends upon the existing road and its underlying soils. Old aggregate bases in roads that have never been reconstructed may be largely ineffective. Given the depths of the bases reported in the survey (i.e., from 2 to 6 inches) and their low implied coefficients, these bases are unlikely to provide significant structural contributions to a resurfaced pavement. Moreover, the bases may be degraded and contaminated with fines. In such cases, structural overlays are not guaranteed to remove spring load restrictions.

6.5.4. *Reconstruction of Segments in Agricultural Routes*

According to a 2008 survey, approximately seven percent of all miles of county major collector road clearly have insufficient graded widths to accommodate future overlays without substantially narrowing the roads. Another seven percent of the miles of county major collector road may have insufficient graded widths to accommodate future overlays without substantially narrowing the roads. However, it is impossible to verify this percentage without detailed field work. According to the same survey, approximately 86 percent of all miles of county local road have insufficient graded widths to accommodate future overlays without substantially narrowing the roads. This does not mean that the roads will be closed. However, it does mean that many miles of road will have no shoulders and 10- or 11-foot lanes.

Reconstruction is expensive, costing $1.25 million per mile. Thus, it can only be justified on roads with significant traffic volumes. Without knowledge of the widths of individual segments, reconstruction improvements are allocated based on overall traffic with a minimum frequency of grain trucks per day, subject to the overall constraints of 14 percent of impacted county major collector miles and 86 percent of impacted county local road miles. These constraints correspond to the statewide proportions of county major collector and county local road miles that are candidates for reconstruction due to insufficient widths.

Altogether, 147 miles of road with significant agricultural traffic met the minimum traffic thresholds for potential reconstruction. These segments represent are only a small portion of the 6,375 miles of paved county and local road in the state and the approximately 3,957 miles of paved roads used for agricultural logistics. However, some of the miles of county and local paved road have only one or two predicted grain trucks per day, coupled with light ADT; and, therefore, are not candidates for reconstruction.

In addition to wider roads, reconstruction is expected to provide year-round heavy-hauling capabilities. Since the vast majority of these segments are located in paths that feature county major collectors, access to key facilities (such as plants and large elevators) may be improved. Further, the allocation of reconstruction dollars to roads with higher traffic levels will maximize capacity and ride-quality benefits for all travelers.

6.5.5. *Resurfacing of Segments of Agricultural Routes*

Those roadway segments not selected for reconstruction are evaluated for overlays. The thickness of the overlay is a function of the grain truck traffic plus some allowance for other trucks traveling the roadways. These percentages are derived from the 2008 survey mentioned earlier.

Based on the estimated ESAL demand for the next 20 years, a new structural number is computed that considers the effective structural number of the existing surface and base layer at the time of resurfacing.[18] As shown in Table 10, the median overlay thickness needed on road segments in primary agricultural routes is four inches. For segments with lower truck traffic volumes, overlays of 2.5 to 3.0 inches will typically suffice. On the most heavily impacted miles, a 5-inch overlay may be needed. However, these segments are relatively few and are ones where considerable grain traffic is channeled in approaches to large facilities.

Table 10 Estimated Surface Thicknesses for Major County Collector Segments in Agricultural Logistics Routes

Weighted Percentiles of Distribution	Inches of New Asphalt Surface Layer
90th	4.7
75th (Upper Quartile)	4.0
50th (Median)	4.0
Mean	3.9
25th (Lower Quartile)	3.7

The resurfacing cost of each segment is estimated from the inches of overlay needed and a projected 2011 unit cost of $70,000 per inch per mile, which is applicable to two-lane rural roads.[19] With this unit cost, a four-inch overlay costs $280,000 per mile. A three-inch overlay costs $210,000 per mile, etc.

6.6. Routine Maintenance

Routine maintenance costs on paved roads include activities performed periodically (such as crack sealing, seal coats, and striping), as well as annual activities (such as patching). The cost relationships in Table 11 have been derived from a South Dakota Department of Transportation study, with the original cost factors updated to 2010 levels and annualized. For example, the annualized seal-coat cost would allow for at least two applications during a typical 20-year life-cycle for roads with ADT of 200 or more.

[18] The assumed structural coefficient of a deteriorated surface layer (that now serves as a base layer) is 0.14, while the assumed structural coefficient of the original base layer is 0.7. For local roads, this calculation results in a median residual structural number of 0.7. The analogous number for county major collectors is 1.0.

[19] This unit cost was derived from the North Dakota Department of Transportation's 2009 cost for a structural overlay—i.e., the DOT's average cost of $340,000 per mile was divided by five inches to obtain $68,000 per mile. This value was then indexed to 2011 assuming a three percent inflationary increase in construction costs.

Table 11 Routine Maintenance Cost Factors for Paved Roads by Traffic Level

ADT Traffic Range		Annualized Cost of Road Maintenance Activities			
Lower	Upper	Crack Sealing	Seal Coat	Striping	Patching
1	99	$540	$2,340	$76	$900
100	199	$540	$2,340	$113	$900
200	299	$720	$3,150	$126	$900
300	399	$720	$3,150	$126	$900
400	499	$576	$3,285	$140	$900
500	599	$480	$3,285	$144	$900
600	699	$480	$3,285	$162	$900
700	-	$480	$3,285	$162	$900

6.7. Highlights of Paved Road Analysis

There are approximately 6,375 miles of paved road under the jurisdiction of county, township, and municipal governments in North Dakota. However, not all of these segments are significantly affected by agricultural traffic. Some of the segments have only a few predicted tons that do not amount to a full truckload. These segments are not specifically analyzed as part of an agricultural distribution route. Instead, they are reclassified as non-agricultural segments.

As shown in Table 12, the annualized cost of maintaining and improving roads significantly impacted by agricultural traffic is $58.9 million. There are 2,417 miles remaining, which are not significantly impacted by agricultural transportation. The cost of improving and maintaining these miles is estimated to be $41.6 million annually.

Table 12. Paved County Collector and Local Road Miles and Cost by Impact Type

Category	Miles	Annualized Cost
Ag Impact	3,958	$58,883,223
Other	2,417	$41,580,950
Total	6,375	$100,464,172

The annualized cost in Table 12 reflects reconstruction, resurfacing, and annual maintenance cost. Annual maintenance cost was calculated for any segment with agricultural truck traffic. The estimated annualized maintenance cost of these 3,958 miles is $18.5 million over the 20-year period (Table 13). Of the 3,958 miles significantly impacted by agricultural traffic, 147 miles were selected for reconstruction due to deficiencies in roadway width. The estimated annualized cost of these reconstruction improvements is $9.2 million. An additional 2,541 miles were selected for resurfacing over the 20-year analysis period at an estimated annualized cost of $31.2 million. Those

segments with only one agricultural truck per day were not analyzed specifically to determine the pavement thickness, because it is assumed that the agricultural traffic will have no impact on the resurfacing decision. Rather, these segments are reclassified as non-impacted routes for purposes of resurfacing and their resurfacing costs are included with that group. The total estimated annualized cost for agriculture impacted roads is $58.9 million.

Table 13 Ag Impacted Paved Miles Improved and Maintained by Improvement Type

	Miles	Annualized Cost
Reconstruction	147.0	$9,192,586.55
Resurfacing	2,541	$31,240,378.00
Maintenance	3,958	$18,450,258.00
Total		$58,883,222.55

Table 14 shows the miles and annualized improvement and maintenance costs of roads not significantly impacted by agricultural traffic. In this analysis, the 2,417 miles not reflected in the maintenance cost estimate for agricultural routes are assumed to be maintained at an estimated annualized cost of $9.3 million, which reflects an average cost of $3,856 per mile per year. Moreover, all 2,417 non-impacted miles are assumed to receive a resurfacing treatment during the analysis period. In addition, those segments with only one agricultural truck per day that did not receive a resurfacing or reconstruction improvement in the agricultural analysis are included with this category. Altogether, 3,687 miles of road not significantly affected by agricultural traffic are assumed to receive a standard resurfacing improvement at an estimated annualized cost of $32.3 million. For these non-impacted roads, it is assumed that a 2.5-inch overlay of each segment will provide reasonable service for 20 years in the absence of significant agricultural truck traffic. In total, the cost of maintaining and improving paved local roads that were not significantly impacted by agricultural traffic is estimated to be $41.6 annually.

Table 14 Non-Impacted Paved Miles Improved and Maintained by Improvement Type

Improvement Type	Miles	Annualized Cost
Resurfacing	3,687	$32,261,075
Maintenance	2,417	$9,319,875
Total		$41,580,950

Comparatively, the estimated resurfacing cost of agricultural distribution routes is 40 percent greater than the estimated resurfacing cost of non-agricultural routes on a per-mile basis. Comparatively, the estimated maintenance cost of agricultural distribution routes is 21 percent greater than the estimated maintenance cost of non-agricultural routes on a per-mile basis. These differences reflect higher levels of truck traffic and average daily traffic on these routes. Since 90 percent of the paved county-road miles in agricultural

distribution routes are major collectors, these comparisons reinforce the current investment priorities of counties.

7. Conclusion

The purpose of this study is to analyze changes in agricultural production and logistics and the importance of roadway investments to the distribution of crops produced in North Dakota. The essential objective was to quantify the funding level required to maintain and improve the existing local road network.

In this study, a very detailed network model was developed to predict and route crop movements from 1,340 county subdivisions to elevators and ethanol plants. The predicted flows were used to specifically analyze investment needs for agricultural haul roads. In addition, the investment needs for other local roads not significantly affected by agricultural goods movements were estimated so that the total statewide local roadway needs could be quantified.

Statewide, estimated needs total $100.5 million annually for county and local paved roads. Approximately $59 million of these needs relate to agricultural haul roads. The remainder corresponds to other county and local roads. Also, statewide, estimated needs total $110 million annually for local unpaved roads. Approximately, $43.6 million of these needs relate to agricultural haul roads. The remainder corresponds to other local roads, especially township roads. Thus, the total estimated statewide need is $211.5 million per year, including $100.5 million of paved road investment needs and $110.0 million of unpaved road investment needs.

In conclusion, it is important to note that the study has limitations, most of them due to a short time frame (i.e., 40 days), difficulties in obtaining data, and a limited budget, which precluded any field work. All crop flows could not be represented in the distribution model because of difficulties and delays in getting data. Therefore, the total ton-miles shown in Table 3 may be somewhat understated. Based on information available, it is likely that more than 95 percent of all crop ton-miles are reflected in the estimates.

One of the issues not addressed in this study is the effect of spring load restrictions on farm producers, elevators, and plants. This is an issue that should be revisited and the major county collectors in agricultural logistics routes should be evaluated individually to assess the need for and cost of potential reconstructions or thicker overlays. Although county-wide surface conditions were available from a previous survey, these values could not be assigned to individual segments without additional interviews and modeling. As a result, it is quite possible that many additional miles of county and local road may need reconstruction because of poor condition. These detailed analyses were not possible within

a 40-day window. While further study is recommended, this report has identified the minimum threshold of county and local road investment needs.

8. Appendix A. Regional Trends in Crop Production North Dakota

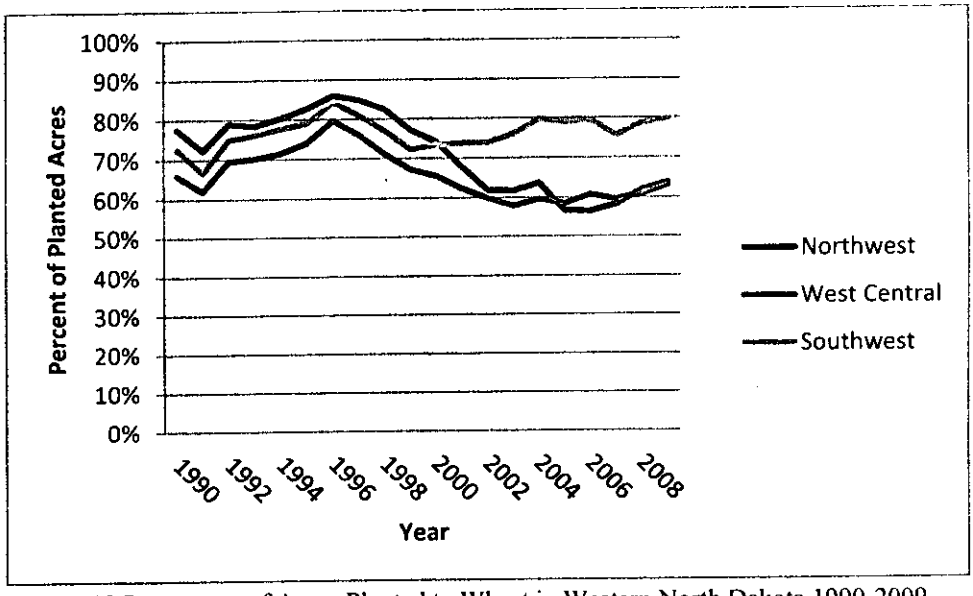


Figure 12 Percentage of Acres Planted to Wheat in Western North Dakota 1990-2009

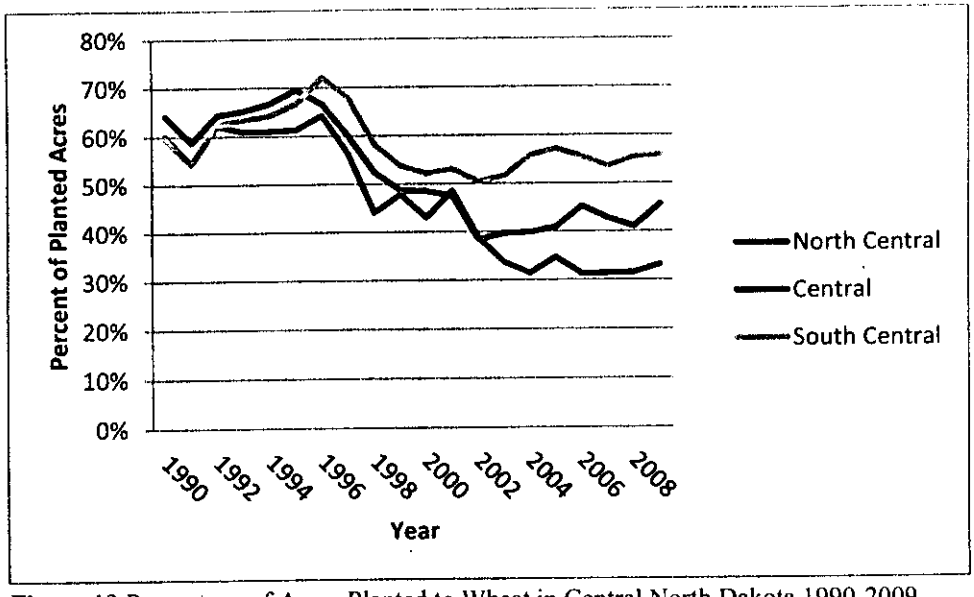


Figure 13 Percentage of Acres Planted to Wheat in Central North Dakota 1990-2009

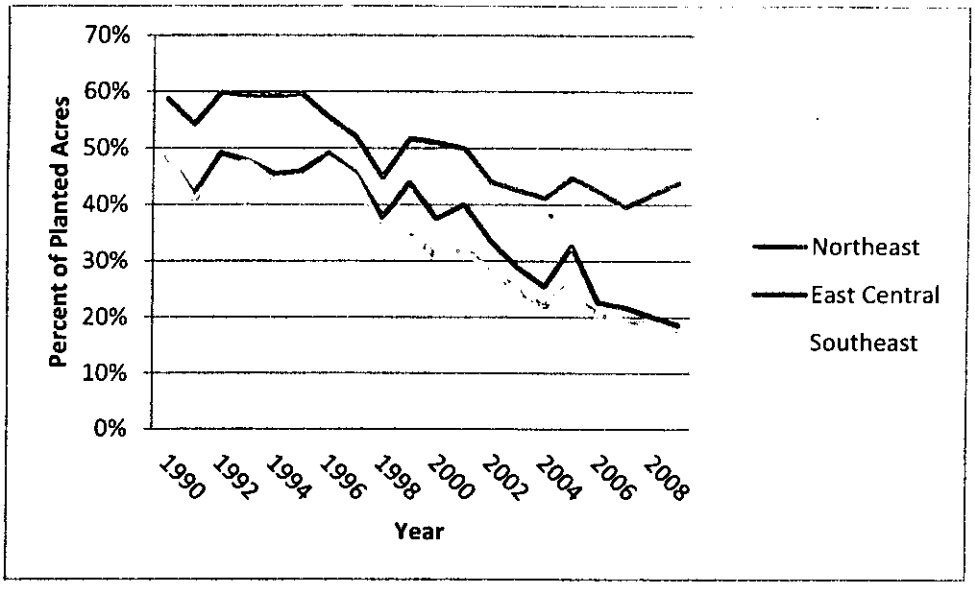


Figure 14 Percentage of Acres Planted to Wheat in Eastern North Dakota 1990-2009

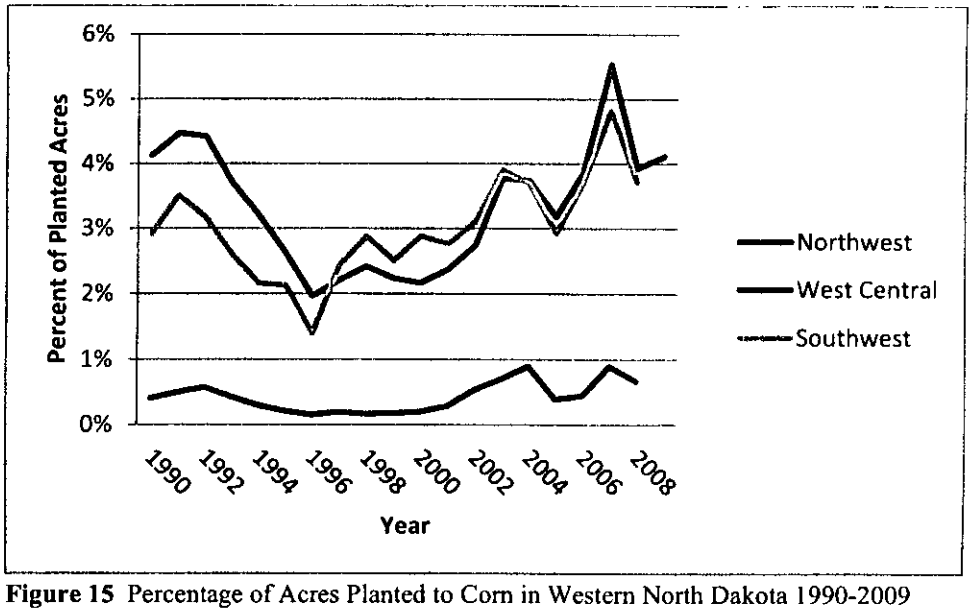


Figure 15 Percentage of Acres Planted to Corn in Western North Dakota 1990-2009

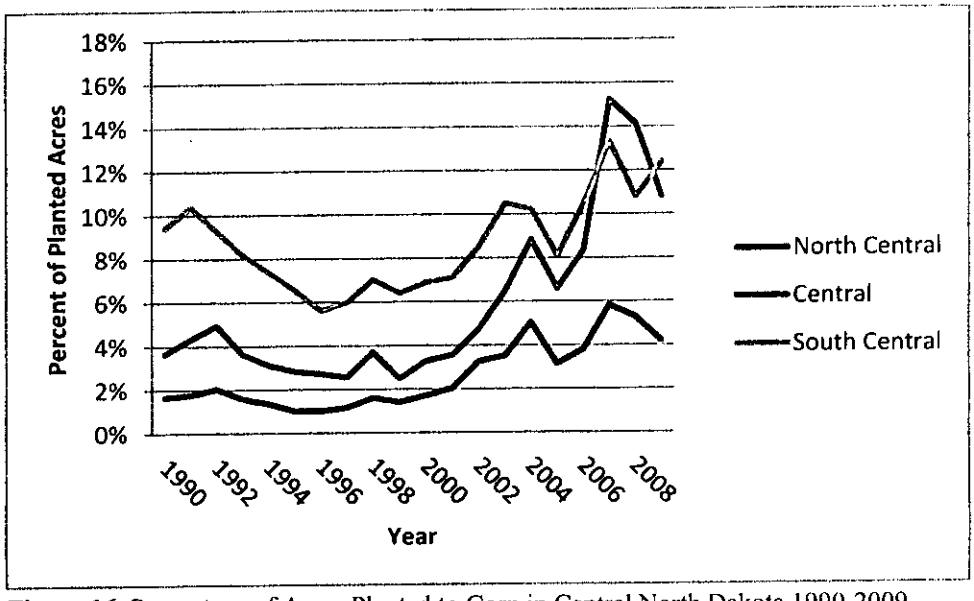


Figure 16 Percentage of Acres Planted to Corn in Central North Dakota 1990-2009

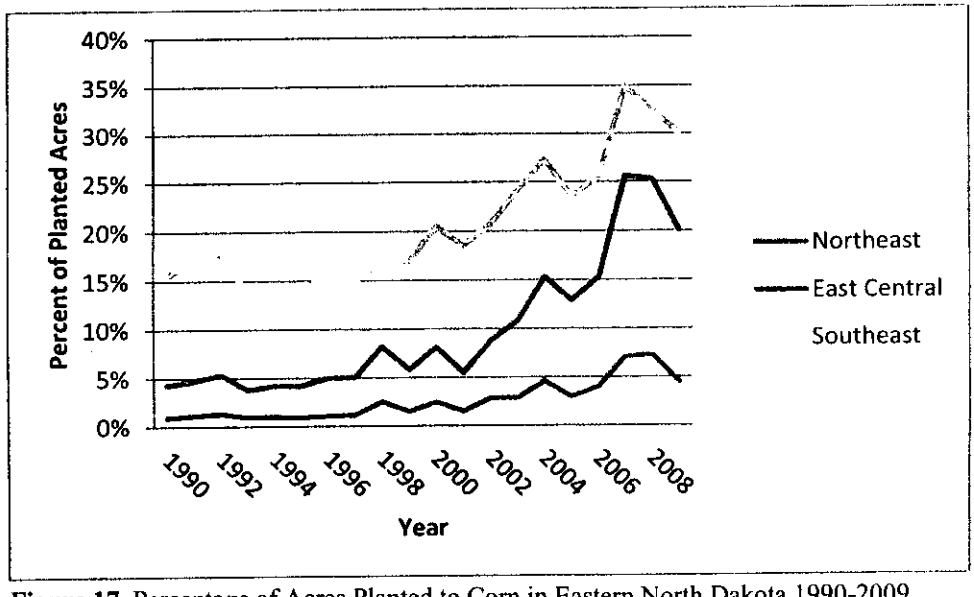


Figure 17 Percentage of Acres Planted to Corn in Eastern North Dakota 1990-2009

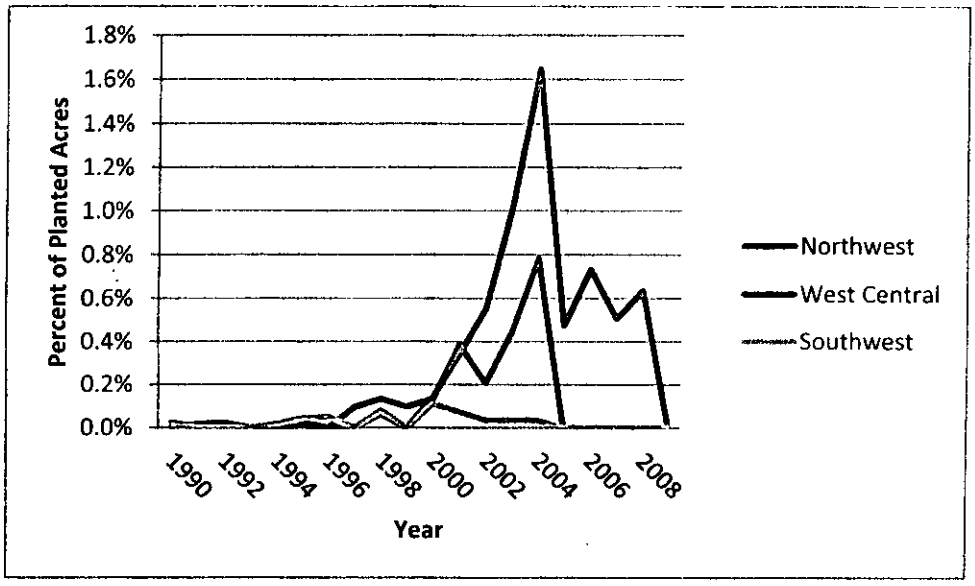


Figure 18 Percentage of Acres Planted to Soybeans in Western North Dakota 1990-2009

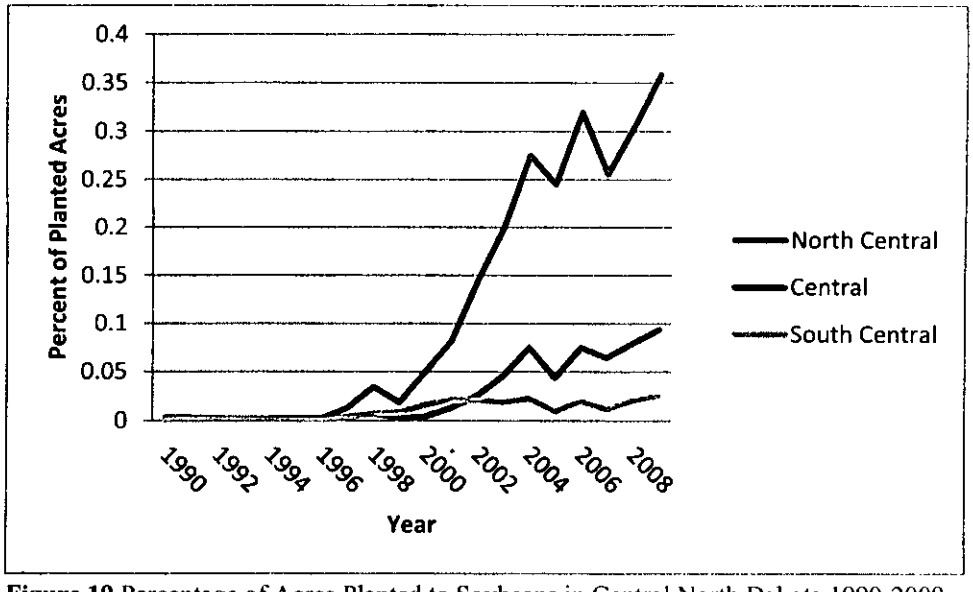


Figure 19 Percentage of Acres Planted to Soybeans in Central North Dakota 1990-2009

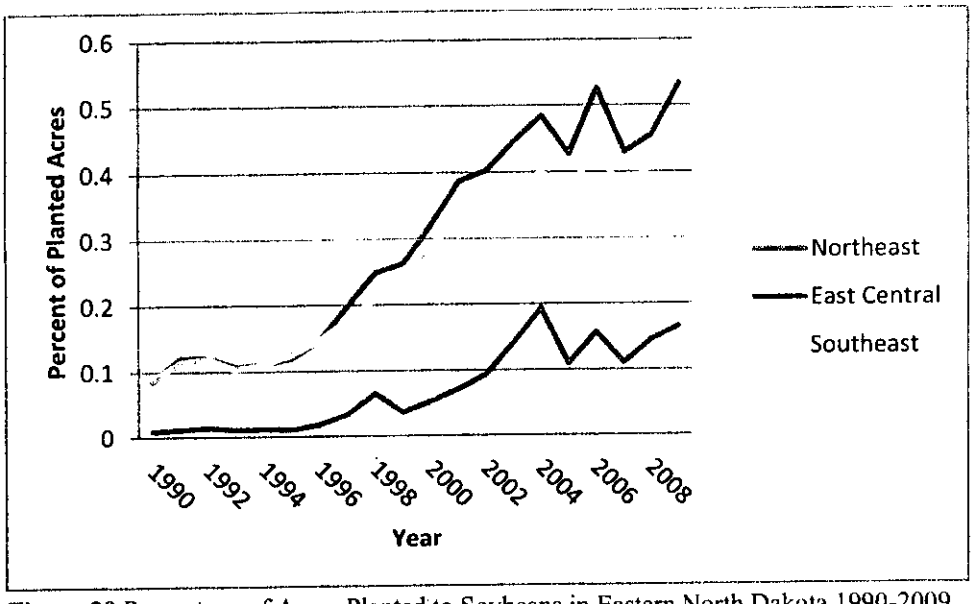


Figure 20 Percentage of Acres Planted to Soybeans in Eastern North Dakota 1990-2009

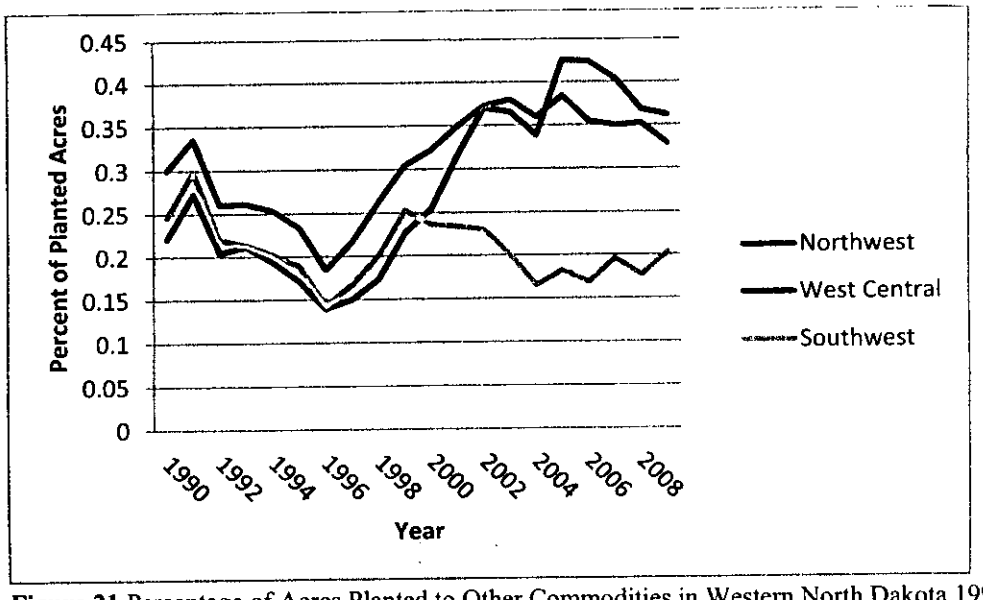


Figure 21 Percentage of Acres Planted to Other Commodities in Western North Dakota 1990-2009

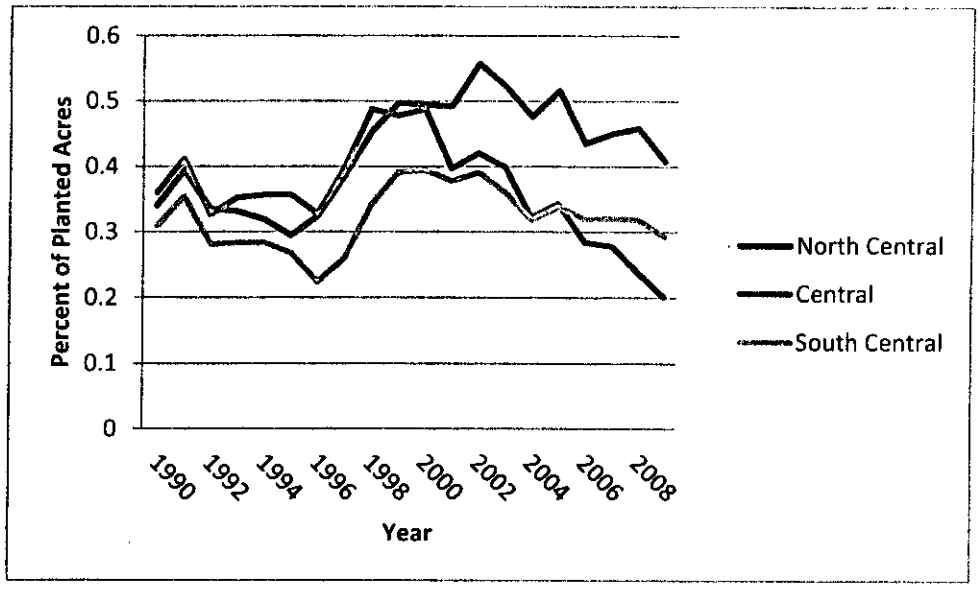


Figure 22 Percentage of Acres Planted to Other Commodities in Central North Dakota 1990-2009

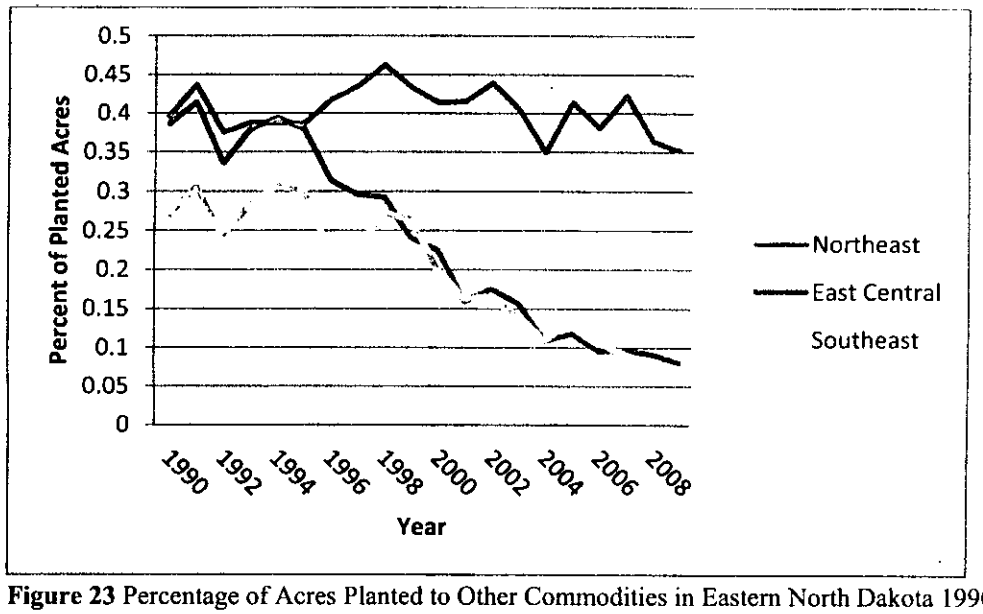


Figure 23 Percentage of Acres Planted to Other Commodities in Eastern North Dakota 1990-2009

North Dakota Soybean Growers Association

Testimony for SB 2325

Good morning Chairman Holmberg and Appropriations Committee Members. My name is Scott Rising. I am here this today on behalf of the Soybean Growers Association in North Dakota.

I am here today to encourage your support for the Infrastructure funding and process contained in SB 2325.

The infrastructure of our state is critical to every element in our state's number one industry, Agriculture. It is also critical to all other economic, educational and social activity we enjoy or contemplate.

The infrastructure needs throughout North Dakota were a big topic in the last session. As you might recall; in the early spring of 2009 the legislature approved emergency funding for snow removal and infrastructure repairs due to flooding issues in many areas of the state.

Nonemergency infrastructure issues were also discussed. There was a great deal of discussion about them, but as I recall, action was largely delayed because the infrastructure issue had not been quantified in any meaningful way and there were concerns about effective planning if money was simply thrown at the problem.

Today, with the two Upper Great Plains Transportation Institute studies quantify the infrastructure issues in a meaningful way. There is no ambiguity about what is said; we need $420 million per biennium for rural infrastructure across the state.

Also at issue last session was a planning factor. There was, and is, a strong desire for effective integrated planning among and across political subdivisions. SB 2325 provides for an extended expenditure timeline to for that planning to occur. Provisions in SB 2325 allow for funds to reside with our Department of Transportation so that reconstruction and renovation efforts across our political subdivisions provide complete routes to best serve the needs of the citizens of our state.

We have in front of us this morning a quantified and qualified need. The successful resolution of our infrastructure needs is critical to both the short and long term economic success of our citizens. We have the one-time funding resources to positively act upon that need.

Please give this legislative proposal your approval. Your action will do much to relieve a significant concern of our soybean growers, the Ag community and many, many of North Dakota's citizens.

Thank You for your concern and attention.

This concludes my prepared testimony and I will try and answer questions you may have of me.

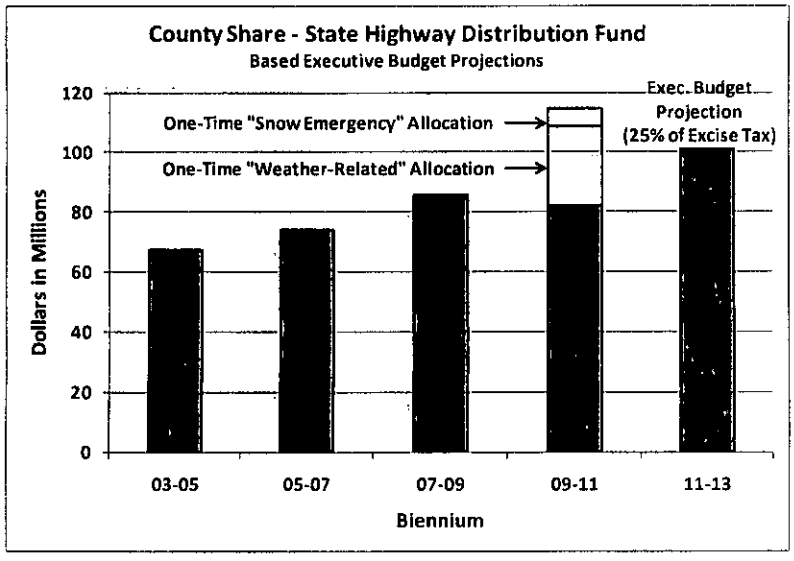
Contact Information: Scott Rising, 701-527-1073 (cell), Email: grwbeans@earthlink.net

Testimony To The
SENATE APPROPRIATIONS COMMITTEE
Prepared February 3, 2011 by
Terry Traynor, Assistant Director
North Dakota Association of Counties

REGARDING SENATE BILL No. 2325

Chairman Holmberg and members of the Committee, county officials are obviously very supportive of the funding proposed in Senate Bill 2325.

As the chart below illustrates, although an increase in base funding, the revenue proposed in the Executive Budget (HB1012) for county roads statewide is significantly less than the total provided in the current biennium – when one-time revenues are considered.

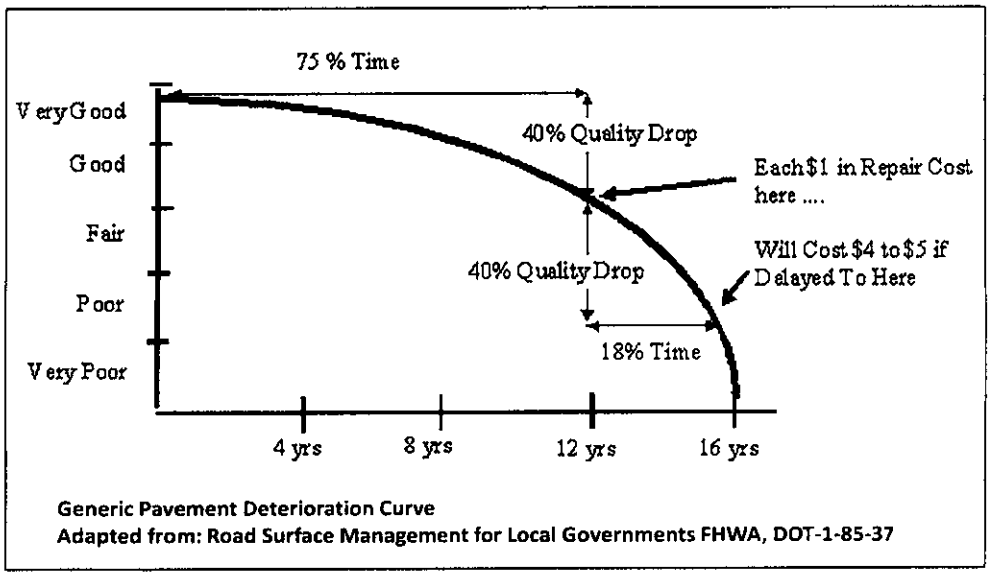


The UGPTI study clearly demonstrates that a combination of changing patterns of use, relatively flat federal and state funding, and rapidly increasing costs; aggravated by extraordinary weather conditions, have together impacted local roads to an unprecedented degree.

Senate Bill 2325 approaches this complex problem in a new and intriguing way. This bill would, for at least one biennium, target state resources directly at the needs indentified in a comprehensive statewide study.

This proposal fits extremely well with the science and research behind road management. The graphic on the next page is a generalized roadway deterioration curve – examining a paved road section. This diagram illustrates that in the early years of a pavement's design life, the rate of deterioration is fairly slow (assuming the

pavement is properly designed and constructed). The pavement condition gradually goes from very good to fair in the first 12 years after construction. After the pavement reaches approximately 75% of its design life, the rate of deterioration starts to accelerate more rapidly. The pavement condition quickly drops from fair to very poor - deteriorating another 40% in just the next 18% of its design life.



Generic Pavement Deterioration Curve
Adapted from: Road Surface Management for Local Governments FHWA, DOT-1-85-37

The diagram shows that for every dollar required to rehabilitate a pavement that has reached 75 percent of its design life, it will take at least four to five dollars to rehabilitate a pavement if rehabilitation is delayed 3 years. As the pavement ages, the type of repair necessary to properly upgrade the pavement becomes increasingly more expensive. Although the curves vary with different types of road construction, the concept remains the same.

The funding in SB2325 would permit counties to address some targeted road segments earlier – before the roadway is lost and the costs increase substantially.

It would be the hope of county officials from across the State that as you begin to construct your funding recommendations for rural roads, the concept described by SB2325 remains a part of your overall plan. The study cited here today, truly demonstrates the level of need that exists across the state and how vital the proposed funding would be to meet that need.

Senate Appropriations Committee
February 3, 2011
SB 2325 Testimony by North Dakota Farm Bureau
presented by Doyle Johannes, NDFB vice president

Good morning, Mr. Chairman and members of the committee. For the record, my name is Doyle Johannes, vice president of North Dakota Farm Bureau. My wife and I, along with our son and his family, have a diversified farm near Underwood, where we also manage a feedlot and cow/calf program.

North Dakota Farm Bureau supports SB 2325.

In my area of the state, we have some severe road problems on county and township roads. In many cases we cannot travel on some roads, so we have to go the long way around, miles out of our way, to reach our fields for planting and harvest or to haul our products to the elevator.

Because of rapidly increasing road maintenance and repair costs, our county and township are strapped for funds to fix these roads. Our Farm Bureau members tell us the same things are happening in their counties and townships all across the state.

Transportation infrastructure is important to agriculture. If we want to remain a leader in agricultural production in this country, it is critical that we have a transportation system that allows us to plant, harvest and then haul our commodities to market in the fastest, most efficient method possible.

Agriculture has changed. Today, we are moving larger farm equipment and semi-trucks on these roads. Our roads were not built for this large equipment and these heavy loads.

At the same time, yields have increased, so we are moving a heavier volume and more diversified species of crops. We also have fewer elevators in the state, so we have to move our products longer distances.

We certainly understand the need for transportation infrastructure in the western oil producing counties and support their request for road funding, also. We

simply ask that you consider the road concerns for other parts of the state, as well, and come up with a balanced transportation infrastructure bill that represents all the road needs of the state.

We trust that you will consider SB 2325 as part of that mix.

We particularly like the provisions of the bill that require a specific plan for each road project. That will provide accountability for the state funding.

We encourage you to give SB 2325 a "do pass" recommendation so that it can be a part of the final road funding package.

Thank you for your attention and I would try to answer any questions you might have.

Testimony in support of SB 2325
Dennis Ova, Stutsman County Commissioner
February 3, 2011

Good morning, Mr. Chairman and Committee members. Thank you for your time today to hear testimony on Senate Bill 2325. My name is **Denny Ova**; I am a Stutsman County Commissioner, farmer and rancher and father of a teenage son. Thank you Senator Wanzek, you summed it up well. I have a few comments to share with you and the committee members.

In 2010 the Stutsman County Commissioners made a hard decision to recycle nine miles of well travelled highway east of Jamestown called "old number 10". The road was not safe. We were not liked. We stored our recycler in private yards because we thought it would be vandalized if left along the road. This road ended up a lot wider after the recycling and seems to have a good base in most places. If we had extra money we could possibly put a 2-3 inch lift at the cost of $220,000/mile. If that is done we think it could be a good road for another 20 years. There would be no mitigation or engineering costs to this project if we do not have to use Federal dollars. I think this road, old # 10, could be a good trial to see if something like this would work and the state of ND could use this as an example for making future decision on other roads.

Another major concern in Stutsman County is roads going under water this spring. We could be looking at 30 plus places on county and township roads. We farmers need to get our seed and fertilizer to the fields and with luck we will need to get our crops harvested and hauled to town. We also have lots of employees and business owners that need to get to work and the buses need to run and be safe to take our kids to school.

Our future doesn't look good right now. We need Senate Bill 2325 approved and there will be a lot of us hoping this passes.

Thank you and I will be available for any questions.

DEVELOPMENT
JAMESTOWN / STUTSMAN COUNTY
growingjamestown.com

Testimony of Connie Ova, CEO
Jamestown/Stutsman Development Corporation
In support of
SB 2325
February 3, 2011

Chairman Wanzek and members of the Senate Appropriations Committee:

My name is Connie Ova. I am the CEO for the Jamestown/Stutsman Development Corporation (JSDC), a member of the Dakota Spirit Ag Energy Partnership and a partner in Ova Farms, established in 1974 in Stutsman County, mother to a teenage son who attends Medina High School and a member of the Medina Public School Board of Directors.

The Jamestown/Stutsman Development Corporation (JSDC) is dedicated to area economic development growth and diversification. Agriculture is the number one economic driver in Stutsman County as well as in the state of North Dakota. Agriculture is what makes our small towns thrive and survive. The road system, paved and unpaved, is in disrepair and needs significant updating to allow our producers to efficiently grow and market their crops. Change in cropping practices and increased efficiencies, as noted in the Upper Great Plains Institute Study, has tremendously changed the way local farmers transport their crops to the elevators. These changes have stressed our county and township roads sometimes to the point where the only solution is to close them or severely restrict usage.

The Dakota Spirit Ag Energy Partnership (DSA) is working to develop and build a biorefinery adjacent to Spiritwood Station, located in Spiritwood Township, Stutsman County. The biorefinery will promote economic development through the creation of 175+ construction jobs, 57 full time jobs and 25+ seasonal jobs to harvest, collect, store and transport crop residues. It also creates a new revenue stream for agriculture producers to help sustain North Dakota's agriculture economy. Overall local employment benefit is expected to be significantly greater, as the infrastructure to harvest, store, and transport the 480,000 tons of biomass feedstock is developed. The facility is expected to deliver significantly greater value to North Dakota agricultural products (specifically a new market for wheat straw), the infusion of new revenues into the surrounding communities and the State of North Dakota, and lead the way for the efficient and economic production of next generation transportation fuels, specialty chemicals, and

renewable power. Without good roads, the feedstock needed for this project to succeed will be difficult to obtain without significant cost to DSA and possibly to the local producers.

These vital county and township roads need to provide a safe commute for employees and business owners to their jobs in local towns and cities. As CEO of JSDC I personally commute 60 miles roundtrip each day and I am not alone in this type commute. According to the 2010 Jamestown Labor Availability 38% of the individuals surveyed are willing to commute 31 miles one way or further and most already make that commute. This study was done of the Jamestown Labor Market Area which is comprised of Stutsman, Barnes, and LaMoure counties as well as portions of Kidder, Foster, Griggs, Logan, and Cass counties. That daily commute is also made by school busses across the state and the concern for safe roads to travel to provide a good education to our most precious commodity, our children, is imperative.

I send this testimony today in support of SB 2325 and apologize for not being able to attend in person. The local county and township roads are the backbone of each and every community in North Dakota. Please, help us to correct the significant damage that has been done to the very fiber of our state. The Jamestown/Stutsman Development Corporation, Dakota Spirit Ag Energy Partnership, agricultural producers, local employees and business owners as well as parents and school board members across the state urge you to recommend passage of SB 2325. Thank you for your time.

SB 2325
March 17, 2011
Attachment 1

SB 2325 Testimony

Senator Terry Wanzek

Chairman Delzer and House Appropriations Members, my name is Terry Wanzek, district 29 State Senator. This session is the infrastructure session. There is a lot of attention given and dollars budgeted for infrastructure needs in the exciting oil & gas development areas and the unfortunate flooding impacted areas in our state, and rightfully so. I believe we are going to address these needs this session. There is another area of great need for infrastructure. It does not receive as much attention but none the less is vitally important to our state's economy. Mr. Chairman, ND leads the nation in the production of numerous agriculture crops. ND Agriculture in 2009 produced $5.5 billion of direct market value from its crops and livestock. Under rule of thumb, those dollars turn over 5 times in our agriculture communities which equal a $27.5 billion economic impact to ND economy. I believe 2010 will come in even better. It is still our # 1 industry.

A study has recently been completed by the Upper Great Plains Transportation Institute to identify the rural infrastructure needs to maintain a strong ND Ag economy. This study is separate from another study done by UGPTI addressing infrastructure needs attributable to the growth of the oil and gas industries in western ND. The purpose of this study was to analyze changes in agriculture production and logistics and the importance of roadway investments to the distribution of crops and livestock produced in ND. The study has identified $211.5 million dollars of annual need for county and local roads.

The importance of transportation to agriculture is profoundly expressed in a 2010 joint study by the US Departments of Agriculture and Transportation, which notes:

> ***"An effective transportation system supports rural economies, reducing the prices farmers pay for inputs, such as seed and fertilizer, raising the value of their crops, and greatly increasing their market access. The economies of rural areas are intertwined. As Agriculture thrives, so does its supporting communities. Providing effective transportation for a rural region stimulates the farms and businesses served, improving the standard of living....because it is so capital intensive, it generates much more economic activity in the community than just the jobs it creates!"***

Important changes have occurred over the past years that have impacted our rural roadways which are needed to conduct agriculture commerce. The UGPTI agriculture study lists the changes as:

1. Yields have been increasing resulting in more crop volume moving from farmland areas to markets.
2. Crop mix is changing (ex: wheat to corn) resulting in greater densities of production.
3. The # of elevators have been decreasing or consolidating resulting in fewer crop delivery options to market to.
4. Shipments have become more concentrated at fewer elevators thus longer hauls to market.
5. More grains being shipped from smaller to larger shuttle elevators resulting in longer trips.
6. Locations of in state processing and biofuels production facilities resulting in more intrastate trucking.
7. Funding for county and local roads exclusive of oil extraction funds has grown only modestly over time (when measured in real dollars) stressing county and local road systems used to market ND farm products.
8. Construction prices have increased dramatically for asphalt and gravel roads.

SB 2325 appropriates $73.8 million to NDDOT for county and township rural paved and unpaved roads. The funds will be more targeted according to need assessments outlined in the study. The purpose of the funds would be for reconstruction or rehabilitation of paved and unpaved roads.

Mr. Chairman and Senate Appropriations members, I know this bill is asking for a significant amount of funds to address these issues. I do believe though, if we are going to error on spending, an investment in our system of roads is the right side to error on. The logistic agricultural changes identified and the weather impacts of the past years have taken a toll on our state infrastructure. These dollars invested will provide ongoing returns for many years to come. Our ancestors made significant investments years ago when they initially built these roads which we all have benefited from. I believe in these times of prosperity it would be wise to make onetime investments into these valuable assets by updating our infrastructure to catch up with the times. Thank you for the opportunity to present my testimony.

SB 2325
March 17, 2011
Attachment 2

COMMISSIONER
DOUG GOEHRING

ndda@nd.gov
www.agdepartment.com

NORTH DAKOTA
DEPARTMENT OF AGRICULTURE
STATE CAPITOL
600 E BOULEVARD AVE DEPT 602
BISMARCK ND 58505-0020

Testimony of Agriculture Commissioner Doug Goehring
Senate Bill 2325
House Appropriations Committee
Roughrider Room
9:15am, March 17, 2011

Chairman Delzer and members of the House Appropriations Committee, I am Agriculture Commissioner, Doug Goehring. I am here today in support of SB 2325, which will appropriate $73.6 million to the Department of Transportation (DOT) for a county and township road reconstruction program.

Our farmers and ranchers are moving more crops and livestock than ever before and that is having a major impact on our already stressed rural road network. Funding for county and township roads have grown only modestly over the years while construction costs have soared. This bill will help support the number one industry in our state, agriculture, by updating our rural road network. North Dakota ranks eighth among the states in the value of agriculture exports at $3.2 billion.

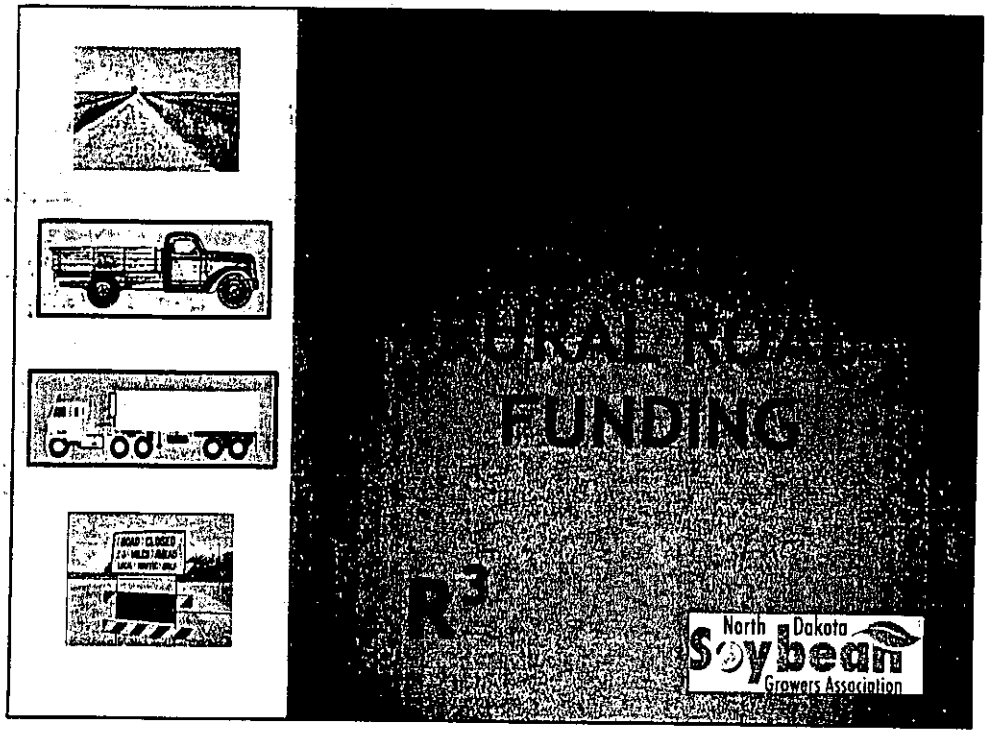
Agriculture has evolved over the years. Just last growing season, North Dakota corn yield was 132 bushels per harvested acre, which is the highest on record for the state and in addition, soybean production broke a record at 134 million bushels. Because of the increasing crop yields and changes in the crop mix, we are hauling greater amounts of product at longer distances. Rural road usage is also being increased because of a decline in the number of elevators in our state, an increase in the number of processing plants, and a reduction in railroad trackage.

I have witnessed firsthand the conditions of our township and county roads throughout the state. The rural road system is in need of support. Good roads are essential in growing agriculture, which is our state's most important economic engine, accounting for 24.5% of the state economic base.

This appropriation is needed for our rural road network. Chairman Delzer and committee members, I urge a "do pass" on SB 2325. I would be happy to answer any questions you may have.

Thank you.

SB 2325
March 17, 201
Attachment 3



Good Morning Chairman Delzer & House Appropriations Committee members.
I am Scott Rising. I am here today on behalf of ND's Soybean Growers Association.

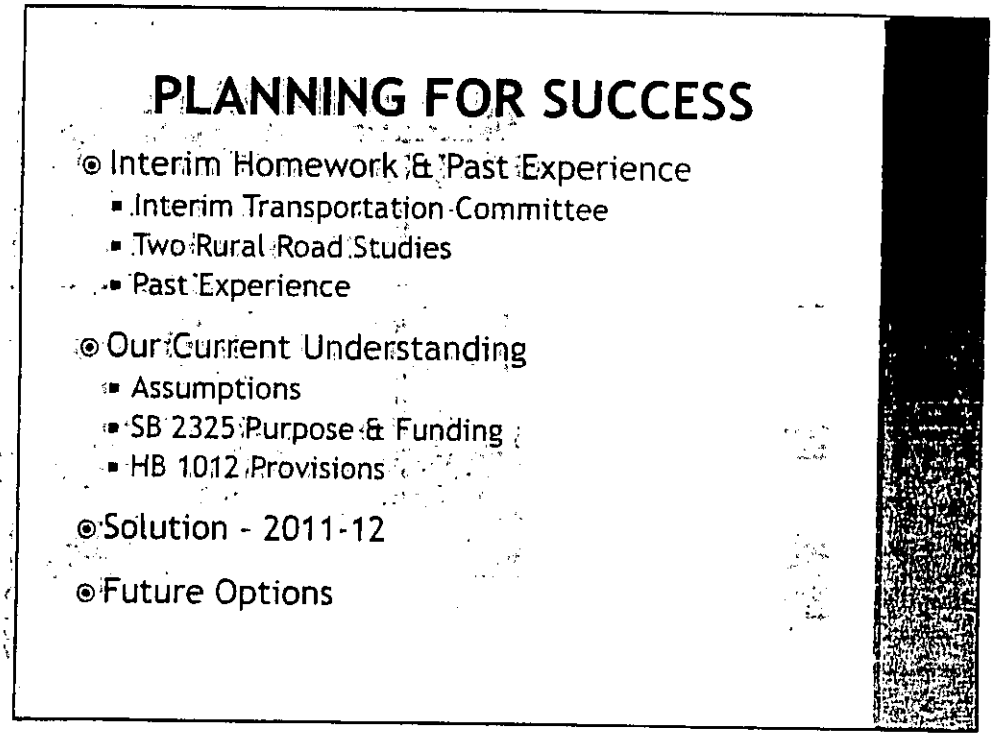
Let me share some information about myself.
I am fortunate to be able to the work I do. I agreed to do this on a part-time basis for an old friend and my long time passion is rural ND, so it is an easy & fun fit.
I spent the vast majority of my ANG career in planning processes, contingencies, events and 8 years doing War Planning as a primary responsibility.

Always . . . Always . . . Always . . . We planned for success. Failure is always an option, but planning to SUCCEED was <u>always required</u>! (Last, flawless execution)

The other aspect of my life I will share today, is something I learned over time . . .
Do <u>A</u> Right Thing - vs. the perceived <u>Thee</u> Right Thing (meaning only one possibility)
Do it <u>A</u> Right Way – (Above & No right to do wrong thing & Wrong ways to do right)
Do it at <u>A</u> Right Time – Timing can be of great importance.

R Cubed . . . A Right Thing, A Right Way, at A Right Time (last session departure)

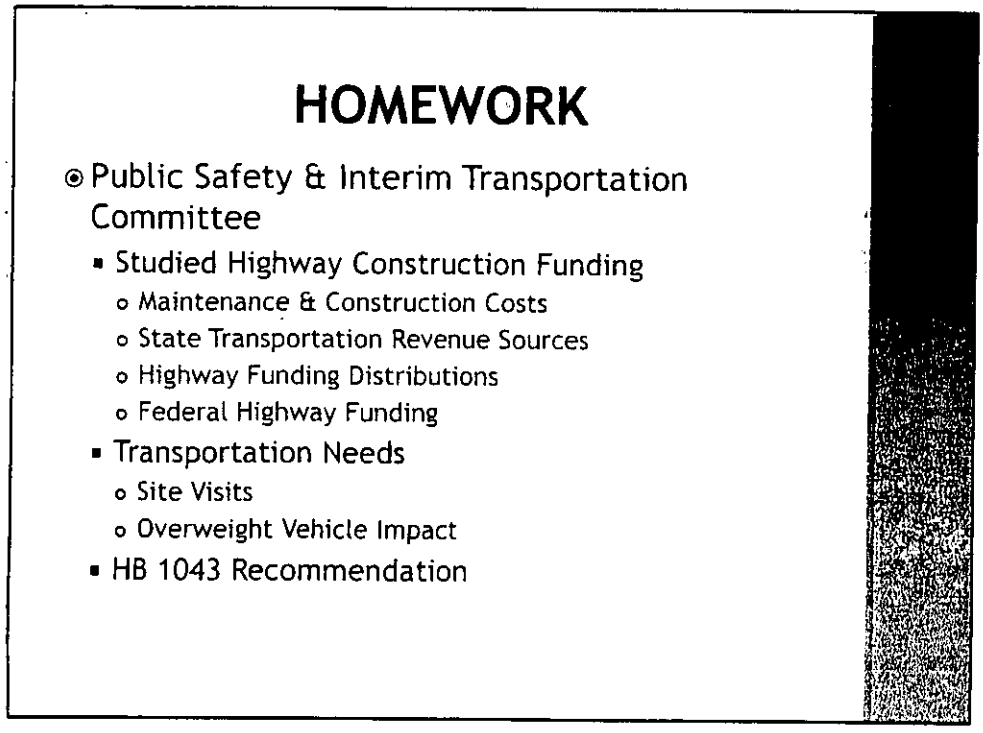
With that in mind, please ask questions when you are moved to so, and to those behind me, stop me if I say something wrong, to avoid confusion and error.
Expert Disclaimer – 2yrs Understanding – Still a work in progress.



Planning allows for the examination of our Assumptions.
Reveals failure possibilities & Plans must provide for Success Options.

Let talk about only 4 basic things as they relate to why we are here today.

1. The interim homework done between your last session and this session
2. Our/My current understanding of this session's activities
3. 2011 – 13 Proposed Solution Examination
4. And a Quick Look at the Future.



Funding

1. Study looked at miles of roads and cost of maintenance & construction by type.
2. The revenue source examination included gasoline/gasohol (ethanol) and special fuels taxes; motor vehicle registration fees; motor vehicle excise tax; and general fund transfers.
3. The look back examined (then) current and past distributions and formulas, and the 2009 weather-related cost-sharing distributions.
4. The committee also had an opportunity to learn about the Federal Highway Funding process and be made aware of its nuances.

Needs

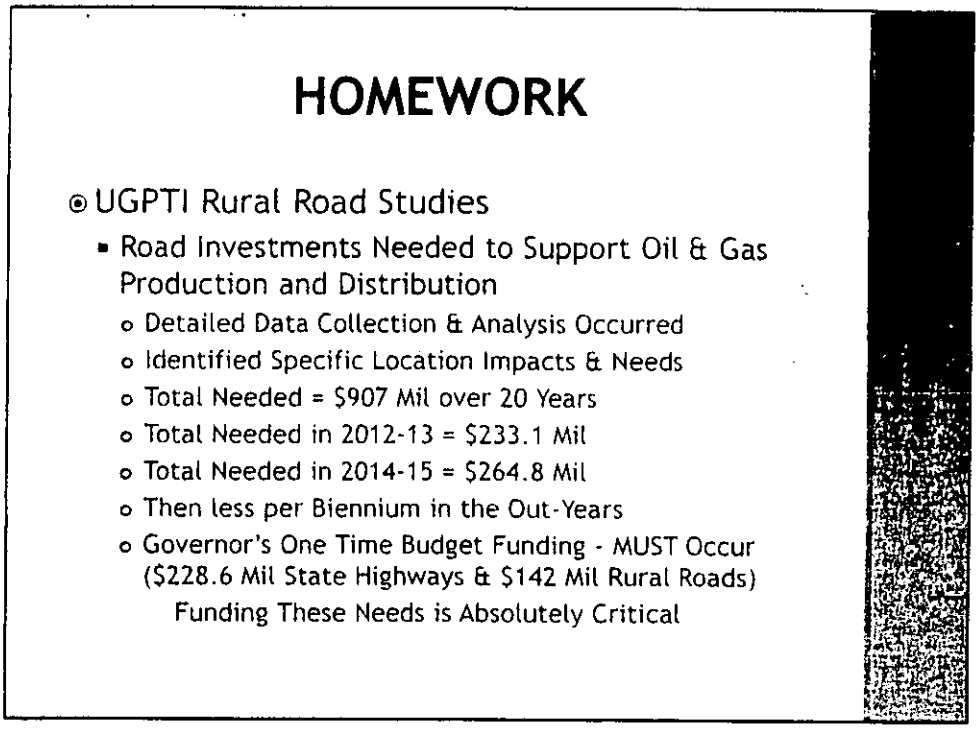
1. Committee met in Dickinson and Killdeer to look at and hear about oil impacted infrastructure needs; and in Bottineau and Fargo to examine infrastructure needs in those areas as well.
2. Overweight vehicle impacts were reviewed

Result (Reminder):

HB 1043 – Recommended employing 100% of the motor vehicle excise tax – approx $185 mil into the Highway Distribution Formula.

My impression at the time this recommendation was made, was that the committee realized that "action" was needed, but that this was not the perfect solution.

Subsequently, this proposal was Lost in House action. (Elusive solution)



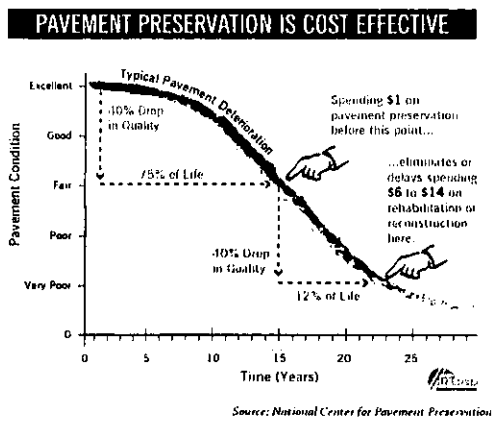
Denver Tolliver of the Upper Great Plains Transportation Institute is with us this morning.
I am certain that he is willing to answer your questions about the studies as well as their current and future impact potential.

<u>My understandings are these:</u>

$$ amounts identified are in 2010 dollars.

$ 233.1 Mil
<u>$ 264.8</u> Mil
$ 297.9 Mil or $ 500 Mil needed in first 4 years.

Reminder . . .

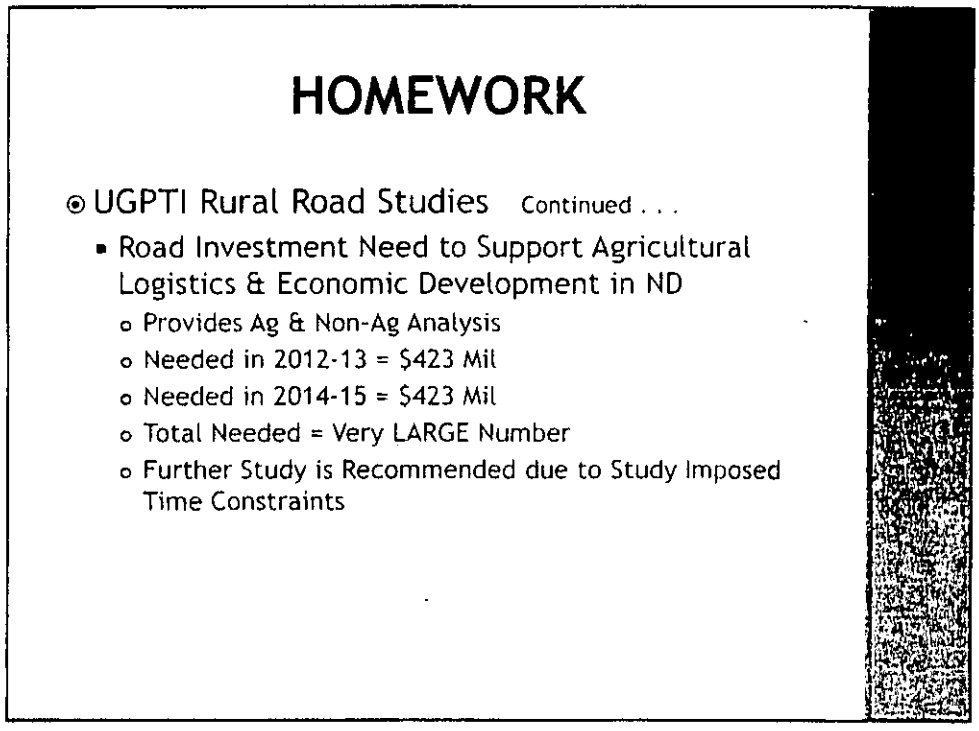


National Standard Deterioration Curve for Pavement.

I show this as a Quick Reminder . . .

Once we go past Mid-Point of the "Fair" Condition Rating,
Costs Increase Substantially.

I can say with some certainty, that the time frame of 15 years in the slide to achieve the Mid-Point of the "Fair" has been greatly accelerated in our oil producing counties due to the magnitude of both the quantity of traffic vs. original design, and the weights these beleaguered structures are bearing.



His study looks at all of ND's rural roads not included in the O & G study.
Study Fund by: Soybean & Corn Communities, the ND Wheat Commission, the Ethanol Council, the Association of Counties.

1. We waited last session for these needs to be brought forward beyond the emergency funding. I do not know who I thought would do that, if not us.
2. At the end of the last session, this issue begged to be quantified . . . NOW it is!
3. Go Though the Numbers.
4. UGPTI Shackled by time . . . Analysis includes Ag background trends; crop production and distribution analysis; flow predictions; paved & unpaved road analysis; reconstruction and maintenance cost analysis.

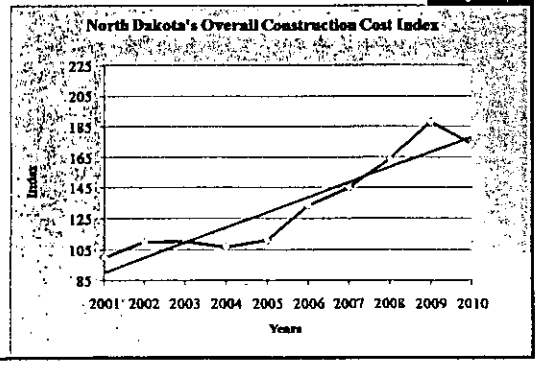
The study is an amazingly revealing work given its time constraints.
It identifies the MINIMUM threshold of county & local road investment needed and clearly suggests that additional study would be warranted.

The Mr. Tolliver may like to comment on study data.

What does a $100,000,000 dollars look like? What does it buy today?
- About 100 miles of total reconstruction on a two lane road ($985K/mile) **or**
- About 128 miles of asphalt reconstructed two lane road ($780K/mile) **or**
- About 285 miles of 3' Overlay ($350k/mile) **or** ????

COST OF DOING BUSINESS

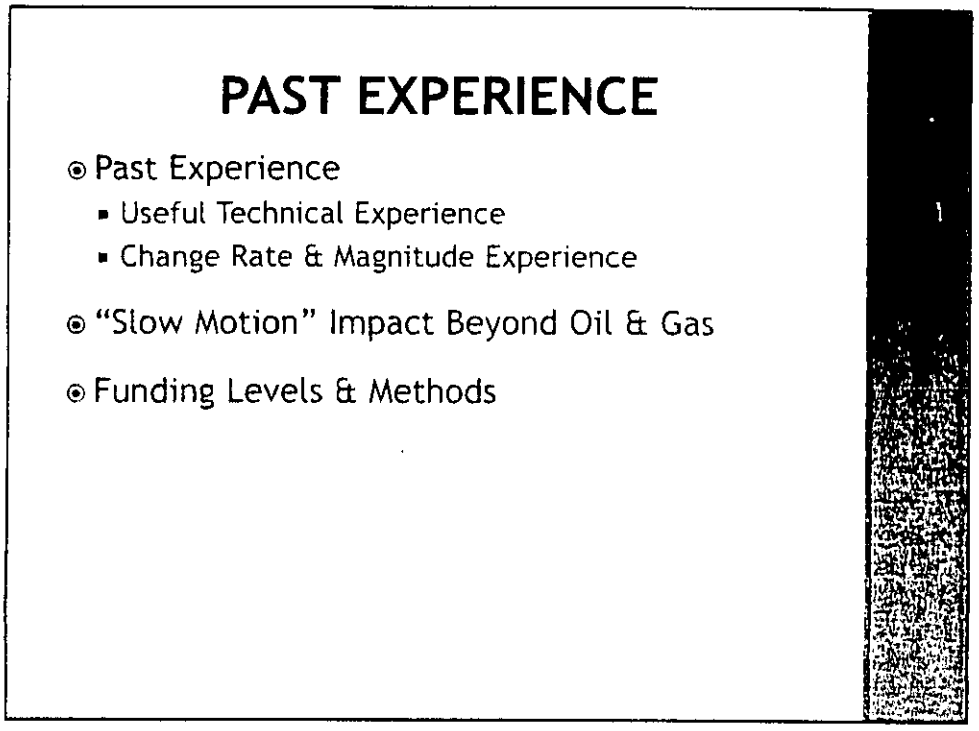
- One of the major challenges facing city, state, county and township levels of government as they try to provide transportation infrastructure is the rising cost of d business. Between 2001 and 2009 North Dakota's overall construction cost index r 88 percent. Much of this increase is attributable to the rising cost of petroleum-base building materials.
- For example, in 2004, a three inch asphalt overlay cost $150,000 and a seal coat c $16,000 per mile. In 2010, the same three inch overlay cost $300,000 per mile, a 1 increase, and a seal coat cost $35,000 per mile, a 119% increase.
- Between 2009 and 2010, the Construction Cost Index dropped due to the decrease in asphalt prices.
- Given the current projected increase in crude, diesel and gasoline prices, the cost of construction may raise significantly.



NDDOT
North Dakota Department of Transportation

I share this slide with you as a reminder that costs have escalated in this arena in significant ways. It is from DOT's HB 1012 presentation yesterday in the Senate Appropriations Committee.

The 3" Overlay in the second bullet rose 100%.



Our Past Experience . . .

Experiential learning GUN is a fickle process . . . Leap forward and then a step or two back, or vice-versa. Most would agree that in the longer-term it provides for:
• Opportunity for learning that moves us forward
• While simultaneously sewing the seeds of future failure, thus new learning opportunities.

The value of Technical Experience designing and building roads has great value.

The growing experience with the rapid onset of issues and their magnitude in Oil & Gas country will also pay large dividends as those learning experiences are incorporated into the activities of our State and County planners, technical staffs and leadership.

Similar events are unfolding, and have been for some time, in the rest of our State, although in "slow motion". Ag & non-Ag logistic requirements and methods have changed also.

We simply can not view what is going on today with only yesterday's solutions in mind, especially funding levels . . . And methods , which I'll address in a moment.

OUR CURRENT UNDERSTANDING

- SB 2325 Purpose & Funding Origin
  - Road Reconstruction and Rehabilitation
  - Purpose is to Fund Most Needed Projects, e.g. "Links" Between Good & Good.
  - Request is $73.6 Million One-Time Funding
  - Funding Origin is Rooted in Ag Needs
  - Intended For Use Over Next Two Biennium's
  - Grant Process with DOT Oversight

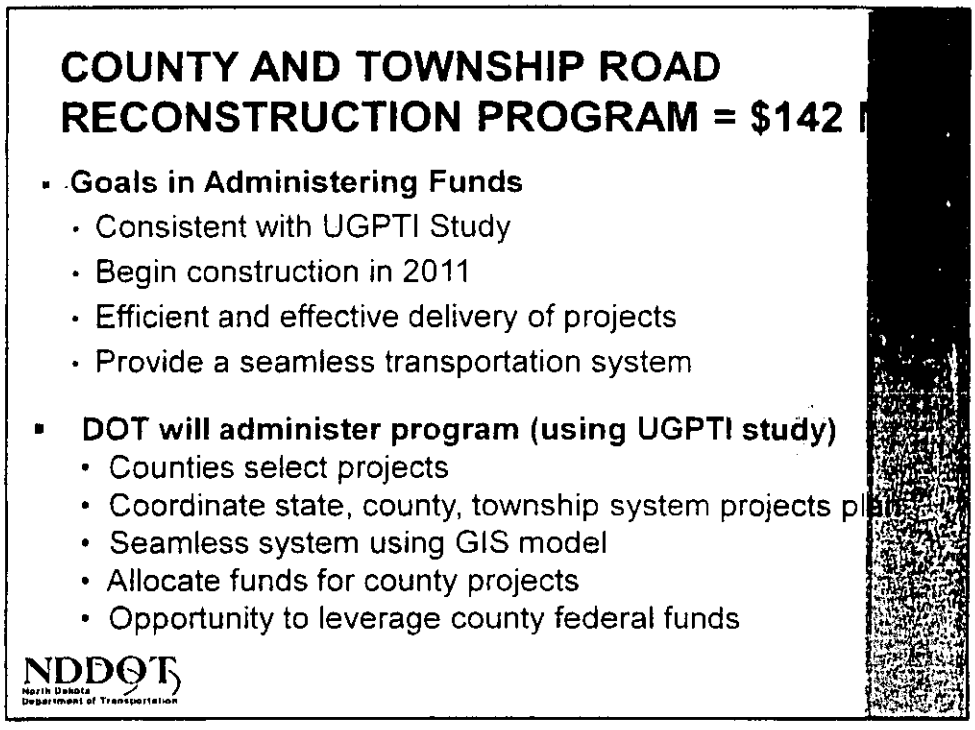
SB 2325 was intended for Reconstruction and Rehabilitation, similar to the Governor's proposal for the $142 Million for O & G Rural Infrastructure.

SB 2325 is intended for "Link" Good to Good, radiating out from processing or distribution facilities. Uses could be; a short stretch of local road to a facility to preclude weight restrictions; raise a road bed to preclude safety issues or detours on roads to facilities, bridge work, culverts, etc.

The request differs from the $50 Million in HB 1012 in two important ways:

1. In it's intent to rebuild or restore "broken", not to serve as ordinary maintenance funding for Counties or Townships.
2. In it's structure with DOT's oversight.

Incorporating these features leaves the funding more a kin to emergency funding than ordinary funding, and perhaps it is just that, emergency funding.



This slide is also from DOT's HB 1012 presentation yesterday in the Senate Appropriations Committee.

It addresses distributing the $142 Million of the Governor's Budget to rural road needs in the impacted Oil & Gas counties.

Unlike the O & G counties, the impact of the $73.6 Million proposed in SB 2325 may not reach all counties, based on the projects selected that are of greatest need.

OUR CURRENT UNDERSTANDING

- Current HB 1012 Rural Road Provisions
  - Funds Governor's One Time Budget Request for Oil & Gas Producing Counties ($142M)
  - Provides $50 Million One Time Funding for Non-Oil & Gas Counties for Road Maintenance
  - Provides Approximately $90.6 Million to Counties
  - Provides Approximately $11.1 Mil to Townships

$50 Mil = $25 Mil this biennium & $25 Mil in 11-12 biennium

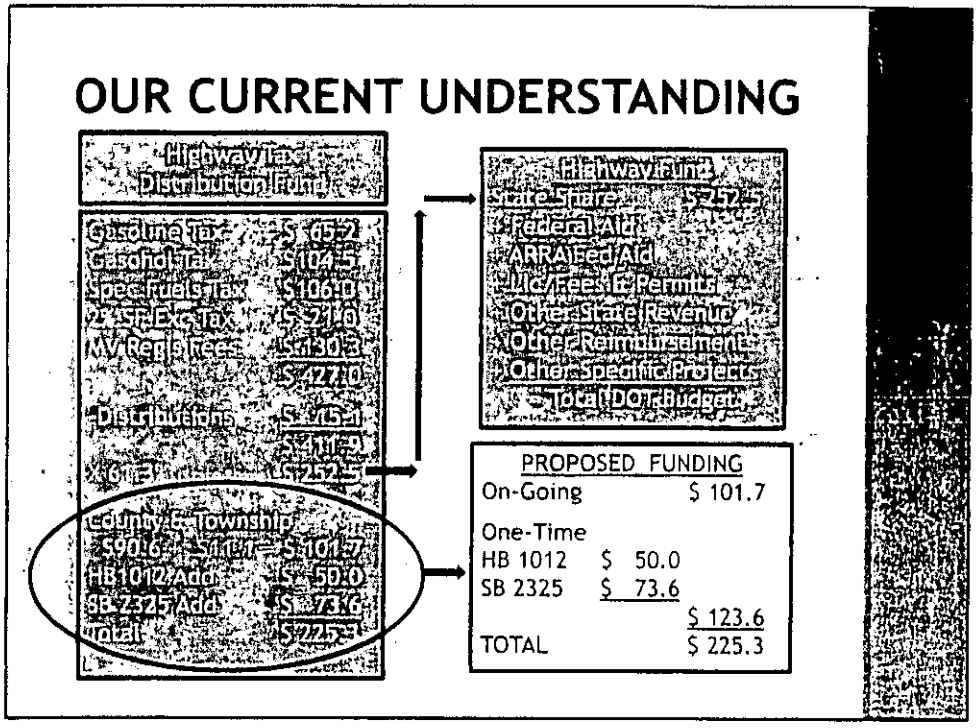
A new funding process is also asigned to the provisions of HB 1012.
60% to Counties
20% to Cities
20% to Townships

Removal of 25% Motor Vehicle Excise Tax ($46.3) reduced Counties from $100.8 to $90.6 million & Townships from $12.3 to $ 11.1 million.

Highway Tax Distribution Fund Formula:

State Highway Fund	61.3%
Counties	21.5%
Cities	13.0%
Townships	2.7%
Transit	1.5%

Let's look at how this package might work . . .



This is how the Highway Distribution Fund process might work . . . minus statutory distributions for Highway Patrol; ethanol provisions; Tribal Agreements; and admin assistance to transferees.

$252.5 Million goes to the Highway Fund

Our Primary Concern as it relates to this Bill:

1. Study Identified $423 Mil, Current Funding Level is $225.3 Mil
2. On-Going Need is $423 Mil and Identified Funding is $101.7

LETS Go On . . .

OUR CURRENT UNDERSTANDING

CURRENT FUNDING	
On-Going	
HB 1012 (Maintenance, etc.)	$ 101.7
One-Time	
HB 1012 (Maintenance, etc.)	$ 50.0
SB 2325 (DOT Grants)	$ 73.6
Total One-Time	$ 123.6

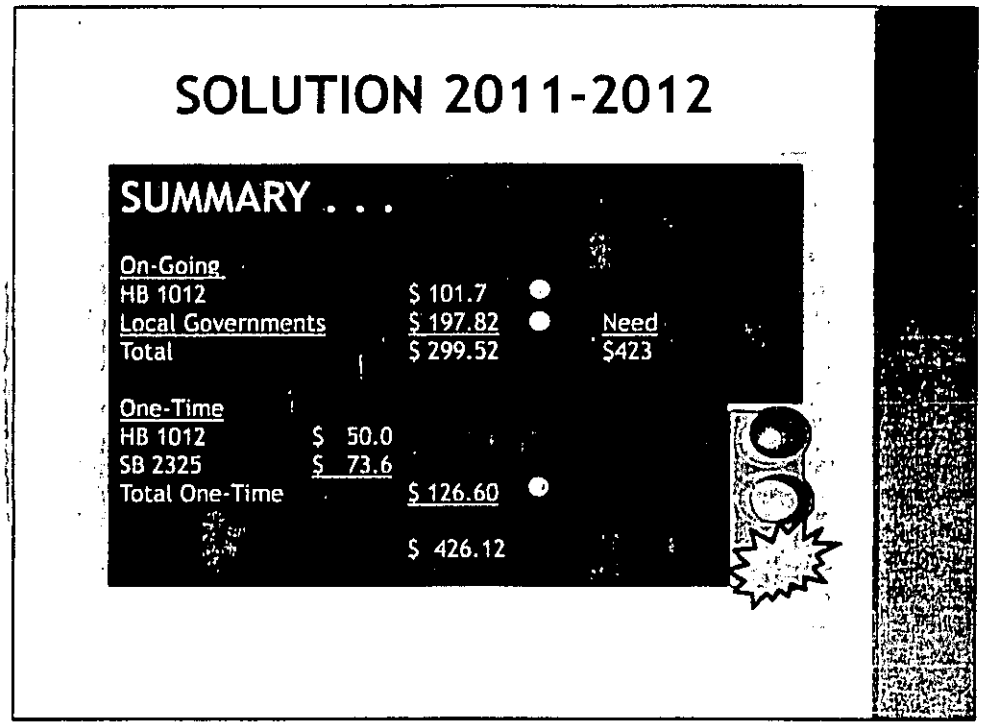
Debt Status	
Opening	$ 5;097,822
Closing	$ 10,287,156
Status	($ 4,302,038)

County & Township Local Funding (2009 #s)	
General Funds	$ 11.95
Property Tx/Asmt	$ 38.74
Sales Tax	$ 0.30
Other/Misc	$ 13.33
Other Specify ??	$ 6.83
Forest Service	$ 10.84
Other Fed Funds	$ 14.45
Total	$ 98.91
Times Two =	$ 197.82
2009 FEMA Funds	$ 24.47
State One-Time	$ 36.93
Pvt Contributions	$ 4.94
Debt Service	$ (2.15)

NOW . . . I'm really out on a limb.
County & Township Funding from ND Tax Department Analysis Jan 2011
Disclaimer – New Process. Data is useable, but could be categorized better.
OUR NEEDS . . . Identify what comes from local governments to fund roads.
IT IS CLOSE. (As close as we can get for now)

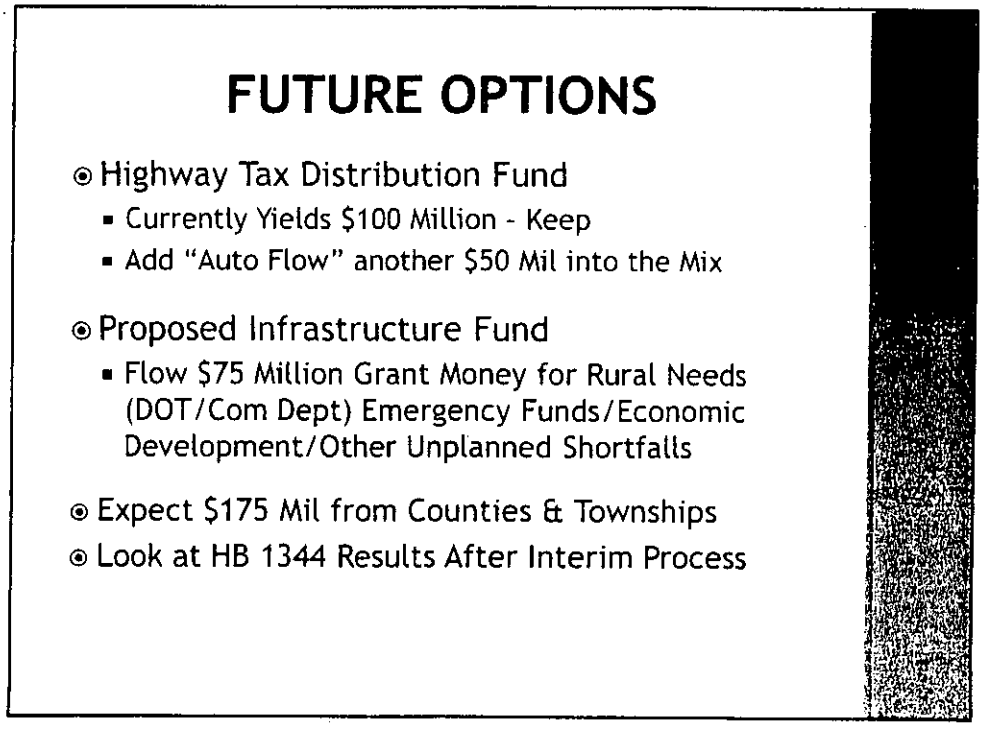
(In Millions of Dollars)
General Funds: County $9.65 + Twnshp $2.3 = $11.95 M
Property Tax & Assessments: County $27.01 + Twnshp $11.73 = $38.74
Sales Tax: County $0.28 + Twnshp $0.02 = $0.30
Other & Misc Local Receipts: County $12.13 + Twnshp $1.20 = $13.33
Private Contributions: County $1.79 + Twnshp $3.15 = $4.94
Fed Property Tax – Forest Service: County $10.82 + Twnshp $0.02 $24.47= $10.84
FEMA Emergency Money: County $16.75 + Twnshp $7.72 = $24.47
To replace broken at a depreciated rate
Other Fed Funding(?) County $14.14 + Twnshp $0.31 = $14.45
State One-Time: (?) County $27.50+ Twnshp $ 9.43= $ 36.93

DEBT INCREASE. Can't explain. But rising level may be a concern.



TOUCHDOWN . . . THE PLAN . . .

Does A Right Thing . . . Funds Critical Rural Infrastructure
Does it a right way . . . Probably the only avenue left.
Does it at A Right Time! We can not afford to wait any longer. There will be more to do and it will cost more!



A mix of funding for infrastructure lessens our dependence on any one source of funding.

We need a formula like the Highway Distribution Fund formula. It flows funding into the formula based on "vehicle" activity and shares that funding among entities that have needs related to transportation.

A fund like the an Infrastructure Fund can provide needed funds trough mechanisms in our economy that have impact on infrastructure assets and might be flourishing at any given moment.

Counties and Townships access Property Tax and Sales Taxes to further diversify revenue resourcing.

Lastly, HB 1344 seeks to explore these issues in the up coming interim period.

Thank You for you attention and your service to ND's citizens as legislators.

I'll field any questions you have of me . . . Thank You

Scott Rising, cel #: 701-527-1073, email; grwbeans@earthlink.net

SB 2325
March 17, 2011
Attachment 3A

Road Investments to Support Agricultural Logistics

Background

- In 2009, the total market value of agricultural goods produced in ND exceeded $5.5 billion
- USDA/USDOT: *An effective transportation system supports rural economies, reducing the prices farmers pay for inputs, such as seed and fertilizer, raising the value of their crops, and greatly increasing their market access. Providing effective transportation for a rural region stimulates the farms and businesses served, improving the standard of living ... because it (agriculture) is so capital-intensive, it generates much more economic activity in the community than just the jobs it creates.*
- Purpose: analyze changes in agricultural production and logistics and the importance of roadway investments to the distribution of crops produced in North Dakota; identify investments to provide for 20-year paved road design lives under heavy truck traffic.

Key Trends

- Yields have been increasing over time resulting in more crop volume and movements from a given land area.
- Crop mix has been changing over time resulting in greater densities of production.
- The number of elevators has decreased over time resulting in fewer delivery options.
- Shipments have become more concentrated at a fewer number of elevators; longer farm-to-elevator hauls are required.
- More grains are being transshipped from smaller to larger elevators resulting in longer combined truck trips.
- The location of in-state processing and biofuels production has resulted in more intrastate truck (as opposed to interstate rail) movements.
- Road construction prices have increased dramatically over time for asphalt and gravel roads.

Analysis Process

- Based on a detailed crop production and distribution model in which the crops produced in each county subdivision are transported to elevators and in-state processing plants to minimize distance/trucking cost.
- The model minimizes the total or route trip distance including transshipments from one elevator to another or from an elevator to an in-state processing plant.

- The demands at elevators are derived from reports to the Public Service Commission, while the demands at ethanol plants are derived from confidential surveys.
- Once the trips are predicted, they are assigned to the highway network and traffic statistics are compiled for thousands of individual road segments included in agricultural distribution routes.
- The investment needs of each road segment are analyzed and the results accumulated.
- For paved roads, the future overlay thicknesses needed for 20-year lives are estimated.
- Investment needs for both agricultural and other roads are estimated.

Statewide Results

- The average predicted trip distance to elevators and in-state processors (including transshipment distances) is 26 miles, compared to 12 miles in 1980.
- Agricultural goods require roughly 600 million ton-miles of transportation annually.
- Roughly 44% of ton-miles are on local and county roads.
- 57% of agricultural truck travel on local and county roads is on gravel surfaces.
- More than 10,000 miles of gravel road have some agricultural traffic.
- Another 3,958 miles of paved roads have some agricultural traffic.
- Not all of these miles are heavily impacted.
- Estimated statewide need (exclusive of state highways and projected impacts from future oil development) is $211.5 million per year, including $100.5 million of paved road investment needs and $110 million of unpaved road investment needs.
- Approximately $59 million of paved road needs relate to agricultural haul roads.
- Approximately, $43.6 million of unpaved road needs relate to agricultural haul roads.

Results for Non-Oil Counties

- The total estimated road investment need in the 36 non-oil producing counties is approximately $149 million per year.
- The estimated annual paved road investment need in the 36 non-oil producing counties is $72.4 million. Approximately $47 million relates to agricultural haul roads.
- The estimated annual unpaved road investment needs in the 36 non-oil impacted counties is $76.6 million. Approximately $31.9 million relates to agricultural haul roads.

SB 2325
March 17, 2011
Attachment 3B

Agricultural Roads Investment Needs: Summary of Annualized Costs and Priorities								
	Paved Roads*						Gravel Roads	
	Highest Priorities		Next Level Priorities		Total			
County	Miles	Cost ($000)	Miles	Cost ($000)	Miles	Cost ($000)	Miles	Cost ($000)
Adams					0.8	$8.6	95.7	$330.3
Barnes	3.0	$42.5	48.8	$538.1	126.1	$1,446.3	261.1	$1,859.2
Benson	6.4	$138.3	11.9	$257.1	62.2	$1,270.9	316.0	$1,255.4
Billings							50.3	$173.7
Bottineau	16.4	$239.9	10.7	$123.0	79.4	$1,023.5	240.9	$957.0
Bowman	3.1	$190.7	3.3	$99.4	36.4	$697.1	155.8	$537.6
Burke	6.3	$76.7	2.8	$34.4	15.1	$180.4	227.8	$819.9
Burleigh	0.8	$18.3	5.9	$184.4	14.2	$298.0	315.8	$1,345.5
Cass	32.5	$683.5	55.6	$633.0	172.0	$2,161.8	467.9	$3,333.3
Cavalier	11.2	$173.7	0.6	$7.9	43.3	$573.7	353.2	$1,272.2
Dickey	22.7	$1,418.8	11.9	$585.7	38.2	$2,062.7	207.8	$809.6
Divide	0.7	$45.3		$0.2	11.9	$211.1	183.7	$661.3
Dunn							52.4	$229.2
Eddy	0.7	$12.6	28.0	$370.6	55.1	$715.4	164.8	$662.0
Emmons	0.6	$31.1	4.8	$59.7	7.2	$103.9	98.6	$420.2
Foster	4.8	$65.6	35.7	$397.2	61.6	$643.8	133.3	$536.3
Golden Valley	0.9	$28.3	0.9	$28.3	1.9	$56.6	92.3	$318.4
Grand Forks	70.5	$786.5	34.7	$257.3	185.0	$1,710.0	230.8	$830.9
Grant			0.1	$0.7	1.2	$13.9	45.6	$194.4
Griggs	5.2	$121.9	2.1	$32.1	37.6	$611.6	213.5	$1,520.5
Hettinger	15.3	$955.4	1.2	$15.4	17.6	$981.4	200.1	$690.6
Kidder	2.9	$95.4	11.3	$357.6	28.8	$534.0	282.3	$1,134.4
Lamoure	18.2	$264.2	26.8	$310.1	84.5	$1,072.3	202.9	$790.3
Logan	0.1	$7.3	0.4	$22.5	6.9	$114.7	135.0	$525.8
McHenry			12.0	$139.9	35.3	$406.9	403.8	$1,604.4
McIntosh	4.7	$56.9			16.4	$204.8	42.3	$165.0
McKenzie		$0.0			5.1	$64.2	52.3	$228.7
McLean	5.4	$91.1	6.5	$75.8	53.8	$695.9	226.6	$991.9
Mercer	0.8	$11.7	6.0	$70.2	11.7	$140.1	53.3	$233.4
Morton	3.3	$62.3	5.7	$77.2	31.4	$445.0	61.0	$262.4
Mountrail		$0.0	6.3	$73.0	21.0	$243.5	296.8	$1,068.2
Nelson	9.8	$146.4	44.3	$645.5	79.7	$1,176.9	259.3	$933.4
Oliver	12.0	$198.8	0.2	$10.3	12.2	$209.1	17.6	$77.0
Pembina	0.1	$5.7	23.3	$348.0	123.8	$1,858.3	100.2	$360.6
Pierce	3.5	$51.4	0.3	$3.1	8.7	$102.5	239.7	$952.5
Ramsey	3.9	$54.3	13.5	$164.5	67.8	$854.6	277.3	$998.1
Ransom	6.0	$132.5	7.8	$118.8	44.3	$632.3	171.5	$668.3
Renville	0.1	$5.0	9.3	$110.6	36.8	$334.6	161.6	$581.6
Richland	27.9	$758.3	39.5	$527.7	152.0	$2,387.2	129.5	$527.9
Rolette				$1.7	27.8	$322.9	68.1	$270.6
Sargent	6.0	$157.5	10.7	$170.2	44.8	$753.4	137.0	$533.7
Sheridan					19.9	$250.8	170.1	$683.3
Slope							213.6	$737.1
Stark	25.7	$465.0	11.3	$161.2	55.9	$911.0	60.4	$208.3

Agricultural Roads Investment Needs: Summary of Annualized Costs and Priorities								
	Paved Roads*						Gravel Roads	
	Highest Priorities		Next Level Priorities		Total			
County	Miles	Cost ($000)	Miles	Cost ($000)	Miles	Cost ($000)	Miles	Cost ($000)
Steele	22.2	$710.8	13.4	$270.1	55.9	$1,217.3	191.9	$1,366.8
Stutsman	26.0	$593.6	20.9	$259.8	189.1	$2,653.2	570.3	$2,358.2
Towner	0.6	$9.7	0.4	$7.3	1.5	$24.6	290.3	$1,126.1
Traill	25.9	$1,619.0	27.0	$753.1	81.0	$2,869.9	168.9	$1,202.6
Walsh	21.4	$390.7	50.8	$663.2	134.9	$1,842.3	216.2	$778.3
Ward	6.9	$98.7	25.3	$246.9	147.3	$1,368.4	437.9	$2,007.2
Wells	15.9	$238.8	10.0	$116.6	98.3	$1,266.6	327.7	$1,320.8
Williams	2.8	$107.0	13.6	$159.3	65.9	$898.7	213.6	$768.8
* Paved road costs do not include maintenance; they reflect resurfacing and reconstruction costs only Costs are shown for only those roads with threshold levels of agricultural truck traffic								

Agricultural Road Priorities	
Paved High Priorities	$11,360
Paved Next Priorities	$9,489
Paved Priorities	**$20,849**

Summary of Annual Costs for All County and Local Roads	
Surface Type	Million Dollar
Paved	$100.5
Unpaved	$110.0
Total	**$211.5**

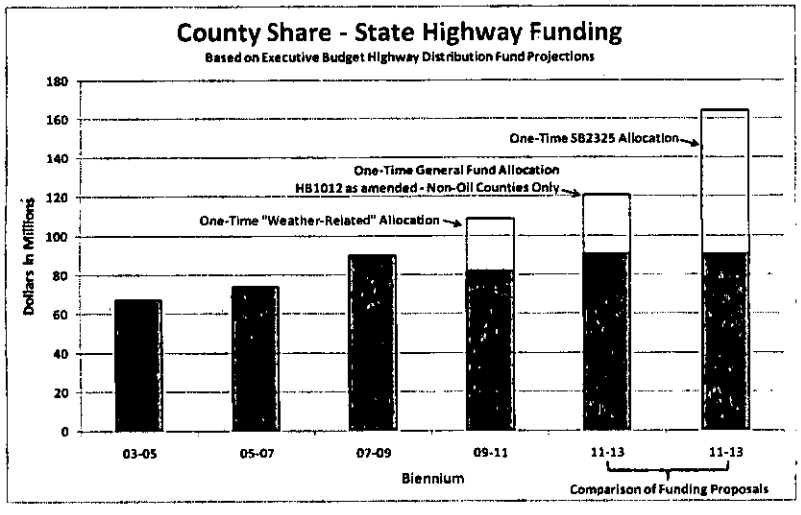
SB 2325
March 17, 2011
Attachment 4

Testimony To The
HOUSE APPROPRIATIONS COMMITTEE
Prepared March 17, 2011 by
Terry Traynor, Assistant Director
North Dakota Association of Counties

REGARDING ENGROSSED SENATE BILL No. 2325

Chairman Delzer and members of the Committee, county officials are obviously very supportive of the funding proposed in Senate Bill 2325.

As the chart below illustrates, although a slight increase in base funding, the revenue proposed in the House-amended NDDOT Budget (HB1012) for county roads statewide provides very modest growth in comparison to the escalating costs of road construction and maintenance.

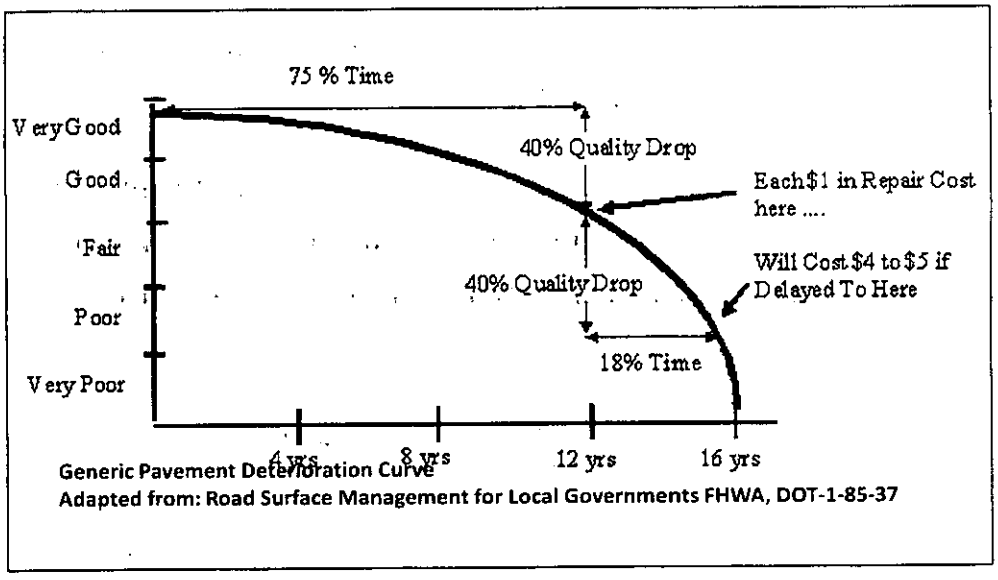


The UGPTI study clearly demonstrates that a combination of changing patterns of use, relatively flat federal and state funding, and rapidly increasing costs; aggravated by extraordinary weather conditions, have together impacted local roads to an unprecedented degree.

Senate Bill 2325 approaches this complex problem in a new and intriguing way. This bill would, for at least one biennium, target state resources directly at the needs indentified in a comprehensive statewide study.

This proposal fits extremely well with the science and research behind road management. The graphic on the next page is a generalized roadway deterioration curve – examining a paved road section. This diagram illustrates that in the early years of a pavement's design life, the rate of deterioration is fairly slow (assuming the

pavement is properly designed and constructed). The pavement condition gradually goes from very good to fair in the first 12 years after construction. After the pavement reaches approximately 75% of its design life, the rate of deterioration starts to accelerate more rapidly. The pavement condition quickly drops from fair to very poor - deteriorating another 40% in just the next 18% of its design life.



The diagram shows that for every dollar required to rehabilitate a pavement that has reached 75 percent of its design life, it will take at least four to five dollars to rehabilitate a pavement if rehabilitation is delayed 3 years. As the pavement ages, the type of repair necessary to properly upgrade the pavement becomes increasingly more expensive. Although the curves vary with different types of road construction, the concept remains the same.

The funding in SB2325 would permit counties to address some targeted road segments earlier – before the roadway is lost and the costs increase substantially.

It would be the hope of county officials from across the State that as you begin to construct your funding recommendations for rural roads, the concept described by SB2325 remains a part of your overall plan. The study cited here today, truly demonstrates the level of need that exists across the state and how vital the proposed funding would be to meet that need.

SB 2325
March 17, 2011
Attachment 5

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SB 2325

Good afternoon, Chairman and committee members. For the record, my name is Julie Ellingson and I represent the North Dakota Stockmen's Association.

Our association rises in support of SB 2325, which provides an appropriation to enhance county and township roads.

The state's beef cattle industry relies on a safe, reliable transportation system not only to move animals to market and to access our property, but also to live and work in rural areas of the state.

Rural infrastructure, as you well know, has been particularly taxed in recent years, due to flourishing industry, high-level moisture and other influences of Mother Nature. We need to reconstruct and rehabilitate many of these roadways so they can be safe and functional again. The Upper Great Plains Transportation Institute documented the need for and the priority locations to support agricultural logistics and economic development in a study released earlier this year.

For these reasons, we ask for your favorable consideration of this bill.