



Department of Transportation  
Board of Directors  
Notice of Public Meeting  
1263 South Stewart Street  
Third Floor Conference Room  
Carson City, Nevada  
February 11, 2013 – 9:00 a.m.

## AGENDA

1. Receive Director's Report – *Informational item only.*
2. Public Comment – limited to no more than three (3) minutes. The public may comment on Agenda items prior to action by submitting a request to speak to the Chairman before the Meeting begins. *Informational item only.*
3. Approval of January 14, 2013 Nevada Department of Transportation Board of Directors Meeting Minutes – *For possible action.*
4. Approval of Agreements over \$300,000 – *For possible action.*
5. Contracts, Agreements, and Settlements – *Informational item only.*
6. Approval of Amendments and Administrative Modifications to the FFY 2012-2015 Statewide Transportation Improvement Program (STIP) – *For possible action.*
7. Approval of the Strategic Highway Safety Plan Annual Report – *For possible action.*
8. Briefing on the Freeway Service Patrol Program – *Informational item only.*
9. 2012 State of Nevada Transportation Facts and Figures Book – *Informational item only.*
10. Briefing on the Status of Boulder City Bypass Phase 1 – *Informational Item only.*
11. Old Business
  - a. Report on Leasing Properties to Hold Vacant – *Informational item only.*
  - b. Report of Outside Counsel Costs on Open Matters – *Informational item only.*
  - c. Monthly Litigation Report – *Informational item only.*
  - d. 2012 Annual Fatality Report – *Informational item only.*
  - e. Briefing on Project NEON – *Informational item only.*
12. Public Comment – limited to no more than three (3) minutes. The public may comment on Agenda items prior to action by submitting a request to speak to the Chairman before the Meeting begins. *Informational item only.*
13. Adjournment – *For possible action.*

**Notes:**

- Items on the agenda may be taken out of order.
- The Board may combine two or more agenda items for consideration
- The Board may remove an item from the agenda or delay discussion relating to an item on the agenda at any time.
- Reasonable efforts will be made to assist and accommodate physically handicapped persons desiring to attend the meeting. Requests for auxiliary aids or services to assist individuals with disabilities or limited English proficiency should be made with as much advance notice as possible to the Department of Transportation at (775) 888-7440.
- This meeting is also expected to be available via video-conferencing, but is at least available via teleconferencing, at the Nevada Department of Transportation District One Office located at 123 East Washington, Las Vegas, Nevada in the Conference Room and at the District III Office located at 1951 Idaho Street, Elko, Nevada.
- Copies of non-confidential supporting materials provided to the Board are available upon request.

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1263 South Stewart Street  
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Governor Brian Sandoval  
Lieutenant Governor Brian Krolicki  
Controller Kim Wallin  
Frank Martin  
Len Savage  
Tom Fransway  
Rudy Malfabon  
Bill Hoffman  
Dennis Gallagher

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Sandoval: Good morning and welcome to the Department of Transportation Board of Director's Meeting. I'm glad you all made it. I know everyone wants to brag about who came from the coldest place. But I think Member Fransway wins because he left Winnemucca and he tells me it was minus 21 when he left his driveway today.

But anyway, we will commence with Item 1 on the Agenda. And, by the way, Happy New Year to everyone and it's good to get started in 2013. This item is the presentation of retirement plaques to 25 plus year employees. And just for -- to be sure, can you hear us there in -- where's -- Elko or Las Vegas?

Lee: Yes, we can hear you in Elko. Thanks.

Sandoval: There's Elko. All right. Director Malfabon.

Malfabon: Thank you, Governor. We have a retirement to commemorate today, Glenn Folkers, 25 years of service. And we also have some other awards. And we'll have each individual, if we could have the Board members kind of take some photos in front of the dais there. But we have AASHTO is the American Association of State Highway and Transportation Officials. And they keep track of the years of service for people that work in the transportation industry for DOT's. And I know that they kept track when I moved to another state DOT. So they always keep a running total and they wanted to acknowledge the years of service for three individuals today. Peter Booth retired last year from NDOT, but he's here with us today. Amir Soltani and Paul Saucedo work for NDOT currently. So not only do we have the retirement plaque for Glenn, but we also have these certificates and the 25-year service pins that it would be an honor if you could present those to these individuals, Governor.

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As I said, the photographer just requested that we just kind of just sit -- I mean, stand in front of the dais and have those award recipients come forward. First, Glenn.

Sandoval: Congratulations. Thank you for your years of service. We appreciate everything you've done for the State of Nevada.

Malfabon: Also for 25 years of service, Paul, I know that in right-of-way years that's even more.

Sandoval: Congratulations.

Malfabon: The head of our Project Management Division, Amir Soltani. Amir, congratulations on 25 years of service.

Sandoval: Congratulations.

Malfabon: I wanted to acknowledge some -- Governor, I wanted to acknowledge a couple that are not present here today, but also receive the 25-year recognition from AASHTO. Randy Hesterlee who's an Assistant District Engineer there in Ely. It's probably maybe as cold as Winnemucca probably in Ely today. And Tracy Larkin Thomason who is back in Washington, D.C. attending the Transportation Research Board. So I wanted to acknowledge them, too. A couple of...

Sandoval: Before you go on, let's give them a big hand.

Malfabon: Yes. I wanted to mention a couple of recent retirees also. Parvis Noori who was an Assistant Division Chief in the Materials Division here at NDOT. Recently retired. Now he's working for the Federal Highway Administration in North Dakota, is it?

Klekar: North Dakota.

Malfabon: Thank you, Sue.

Sandoval: Where it's warm.

Malfabon: And David Titzel. Dave Titzel was the Assistant District Engineer in charge of maintenance in District 2. He's traveled all the way to Guam. So he is actually warmer. So he's working for a consultant engineering company in Guam. We wish them well on their retirement from NDOT and continued success.

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So on to presentation of awards. Okay. Item No. 2. We are pleased to announce that NDOT received an award for the West Mesquite Interchange Design-Build Project. As you recall that was a very innovative design-build project where the contractor, design-builder, built the bridge on the side. Demolished the old bridge over the weekend, slid the new one in place, so very minimal delays to the public on that innovative project. NDOT was recognized by the American Public Works Association in the category of Project of the Year, \$10 to \$20 million. And also over \$20 million we won for John Terry was previously the Project Manager on I-15 South Design-Build Project.

So the design-build process has been a very successful delivery method for NDOT. It brings a lot of innovation to the table from the design-builders who come up with some ideas on how to build things more efficiently and cost effectively. So I wanted to acknowledge APWA's awards there and congratulate both the contractors, the engineering companies and the NDOT staff that worked on those projects.

We have the -- I won an award called the J. A. Tiberti Spirit Award. It's through the Associated General Contractors and Nevada Contractors Association. And I was really proud to receive this award. The Tiberti family has been involved in construction for decades in Nevada and has had a great presence in Las Vegas, particularly. And I was honored to receive this. Typically, this award goes to public agency representatives, so it shows that we're achieving our goal of being the employer of choice for our contractors. And I was honored to receive that award.

We also received the Intelligent Transportation Society of Nevada presented NDOT with the Best Intelligent Transportation System Award for the Washoe Valley Wind Warning System in the category ITS Project of the Year under \$2 million. We also won the I-80 Work Zone Intelligent Transportation System Award.

So we received a couple awards that are recognizing our use of technology to inform the public. I know that we've had several cases where we've had to actually put those warnings in place on the high wind area on the new freeway. So that system's working well. In the case of the I-80 Design-Build Project, we had -- a temporary construction-related ITS system was used to create a permanent system providing traveler friendly traffic cameras and more for Reno motorists. I know that it's very informative for people before they leave to see how traffic is moving on those video

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cameras. They can make decisions on their routes as far as their daily commutes. So I was honored to receive those awards.

We also received a recognition for the International Walk to School Day. NDOT staff supported Nevada's participation in International Walk to School Day statewide. Fifty-three Nevada schools participated in the event with many students encouraged to walk to school for health and the environment. And I wanted to mention the Safe Routes to School Program is in concert with that trying to get kids to walk or bike to school to address health issues with our kids, get them to be more healthy by biking or walking to school.

We also wanted to mention Nevada Bicycle and Pedestrian Advisory Board Bike and Pet Awards. Individual employee or agency awards went to Thor Dyson, NDOT District Engineer in District 2, Rebecca Kapuler in NDOT Planning, and Tim Rowe in NDOT Planning. Tim received a Lifetime Service Award. This recognizes the efforts of individuals, agencies and organizations related to bicycle and pedestrian planning, infrastructure, safety advocacy.

This year NDOT Transportation Planner Tim Rowe received the Lifetime Service Award for his work on the Nevada Bicycle and Pedestrian Advisory Board. NDOT District Engineer Thor Dyson and NDOT Planner Rebecca Kapuler were recognized for their improving bicycle and pedestrian connectivity and safety in Nevada. And that goes towards our multi-mode view of transportation in the state, not just highways, but also working with our transit partners across the state and with the bike and ped groups, in particular.

We also received the American Association of State Highway and Transportation Officials, AASHTO, President's Award for Highway Traffic Safety. We've mentioned that before. And, Governor, you had -- were able to acknowledge Jaime Tuddao's -- he's in our safety program, his efforts in that. And we are very proud to receive that from the AASTHO president.

The next award that we received that I mentioned last month. Julie had received recognition from AASHTO, Julie Duewel has awarded twice in AASHTO. Two of her photos were used in the 2012 Faces of Transportation Photo Contest. So they appeared in the calendar for AASHTO. And I believe that we're going to be getting some of those...

Sandoval: Do we have those?

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Malfabon: Have we ordered those? Okay, we have them on the way and we'll get them to the Board Members, Governor.

Sandoval: We don't have them today, though?

Malfabon: I don't believe so. We will get those to you. Here we're already in the middle of the month. We should have got you those sooner, so we'll work on that and get them delivered to you before the next Board meeting. And the photos that were used that Julie Duewel had taken, one was a highway worker on the I-80 Design-Build Project, Granite Construction's project. And we also had the photo of the walkers, bicyclists and vehicles at the Galena Creek Bridge where the I-80 fun run/walk/ride event took place before they actually opened the freeway. So I wanted to congratulate Julie on those awards or recognition of use of her photographs. And that concludes the awards that we received this last quarter.

Sandoval: Rudy, before you go on again, I want to personally congratulate everybody associated with these rewards. It's a big team effort, but it's very impressive to have such national recognitions, so congratulations and congratulations for the awards.

Malfabon: Thank you, Governor.

Sandoval: Let's proceed to Agenda Item No. 3, Director's Report.

Malfabon: Governor, I'm pleased to report that due to the efforts, the letters that you and Governor Brown from California had submitted, as well as the support letters from the RTC's in Nevada and NDOT, the USDOT Secretary of Transportation issued a letter to us saying that the Tahoe Metropolitan Planning Organization status for the Tahoe NPO has been reinstated. So they're looking at it with their legal folks, but administratively they feel that that could be -- that status can be reinstated. They do a lot of good work on the planning side up at Tahoe for us with all those communities and the visitors to that beautiful region of the state. So we're pleased to report that.

Governor, the next item I wanted to mention -- and we'll have a more detailed presentation at a future Board meeting, but I wanted to give you a quick status on the Boulder City Bypass. And the Boulder City Bypass Project has been broken out into two phases. Phase 1 is NDOT's responsibility and Phase 2 was given to the RTC of Southern Nevada as a possible toll road in the future. So the RTC has been working in partnership with NDOT holding the public meetings and the outreach and redoing the environmental document which did not consider tolling at the time that it

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was approved by the Federal Highway Administration. So that environmental impact statement will be revised with this tolling concept.

But as far as the Phase 1 project, which goes from south Henderson up to U.S. 95, just a little bit south of Railroad Pass there where that casino is, we've been acquiring property. We brought some of those cases forward as eminent domain issues to the Board. But we wanted to mention that there's some significant right-of-way costs associated with the acquisition of some properties. One of the cases could be upwards of 60 to over 100 million for that issue. Now, we haven't received all the information to substantiate those costs, but we did hire outside counsel to assist us in that effort. And that outside counsel's been doing a great job of informing NDOT, as an agency, and our engineers on how to avoid in the future these types of cases.

So we're going to be probably going to court on one of the major contested issues there in eminent domain. And it will take about one year to get the decision from the court we are estimating. So we anticipate that we will continue with using up some federal earmarks on that project. But we probably will have to slow the pace down if we do have significant right-of-way costs that were not considered due to inverse condemnation cases that are arising.

In inverse condemnation, that's when the owner's saying that we owe them money because of impacts to the value of their property. And we will keep the Board informed and, as I said, we'll give you a little bit more detailed presentation at a future Board meeting on the Boulder City Bypass and the status.

Sandoval: Are you keeping the local government officials briefed as well?

Malfabon: We will. We have been working with the City of Boulder City and the mayor and their public works officials, so we'll have -- anything that delays the project or slows it down, we'll give them more specific information.

Sandoval: Member Fransway has a question.

Fransway: Thank you. Rudy, you mentioned the tolling or a potential tolling. That would be on our side. Does that road -- or does it not terminate in the State of Arizona? And if it does, how will that tolling affect their side?

Malfabon: The road would -- the Boulder City Bypass Project would tie in near that interchange where people decide whether to get off at an interchange to go the -- visit the Hoover Dam Visitors Center. And it's before the bridge over

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the Colorado River. So the toll road would be that phase from U.S. 95 interchange -- future U.S. 95 interchange with the bypass and it would go around to the interchange with -- to the Hoover Dam Visitors Center. So there's a section of road, it's called Phase 2, that would be the toll road. And the public would still have use of the existing highway, U.S. 93 through Boulder City itself as a free alternative to that toll road.

Fransway: So Arizona wouldn't be...

Malfabon: No, it would -- the toll road would be entirely in Nevada on the Phase 2 portion of the bypass. And we'll show you some maps on the future presentation to kind of clarify the limits of the project. But there have been public meetings. There was a public hearing recently on the toll concept for Phase 2. So we're keeping the public informed and working with the RTC of Southern Nevada and Boulder City.

Sandoval: One last thing, the Lieutenant Governor suggested that you also keep Senator Hardy informed because I know he's been very involved in the project.

Malfabon: Definitely. The toll bill came out of his efforts last session, so we will. Good suggestion. Another thing to report, Governor, was I appeared before the Interim Finance Committee in December to talk about the Highway Fund balance. The Highway Fund balance has dipped as low as below \$30 million. But right now it's currently above \$100 million because of reimbursement from the Federal Highway Administration on our bond principle. So what we have been doing, though, is reporting to the IFC that we are taking steps to look at our costs and reduce our operating capital costs and personnel costs at the Department. They followed up with a request for a response to several questions, which we'll respond to. But I wanted to mention some of the cost saving measures that we implemented at NDOT.

We used to use a portion of the state highway funds that was generated from interest of that account to offset some of the match costs for buying transit vehicles. We'd give that money to RTC of Southern Nevada, the Washoe County RTC and the Carson Area NPO so they could use that money as a match for federal purchases through FHWA funds for transit.

The point of the -- the fund balance was so low it wasn't generating enough interest to -- for us to continue assisting them in that manner. So that was about \$660,000 commitment that we had to inform those NPO's that we are

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rescinding that. But we'll meet our obligations as far as what they've currently had in the works. But we couldn't continue doing that with the fund balance being so low and the interest being so low.

Another thing that we're looking at, Governor and Board members, is that the size of our construction program was -- we came off the biggest year ever last year. But we have seen that a lot of the one-shot funding, the (inaudible) funding through the federal stimulus, the funding that we use from Las Vegas Convention Visitors Authority, from room tax revenue, that funding is going -- has been spent. So those one-shots are going away. So we're going to be more our traditional level of spending from the state fuel tax revenue and federal fuel tax revenue.

So what we're seeing is with the downturn and the number of construction contracts expected we can still deliver our construction program while reducing one construction crew that oversees construction in Las Vegas and one construction crew reduction in Reno in District 2. So we think that eventually we can do that through attrition and have a substantial amount of savings in personnel costs.

Another thing that we're looking at is trying to maximize the amount of federal funds that we can receive. We've brought some of the settlements to this Board for your information and gone to the Board of Examiners for approval of those settlements on eminent domain cases. We had that issue with the water rights on Falcon Capital, on 580. And what we've been doing is submitting that for whatever's eligible for federal reimbursement. So we're still being effective at spending every dime of federal money that we can receive. And, hopefully, we put ourselves in a position where we can get money from other states at the end of the federal fiscal year that other state DOT's do not spend.

Sandoval: And, Rudy, if I may, when do you expect to hear back on some of those requests?

Malfabon: I think that we've actually received some reimbursement on what we have submitted. And in the case of Falcon Capital Water Rights Issue, we were still waiting for some more information, substantiation on the legal fees for the other party. So we haven't submitted everything that's -- because we haven't received it all yet. But everything, I think, that, to date, we've submitted on those major settlements for Project NEON and for the Falcon Capital Water Rights Issue, we've submitted it and received reimbursement. I don't have the dollar figure, but I've asked staff to look at that so that we

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can inform the Board in the future how much we've received in federal reimbursement on those.

And I wanted to acknowledge Sue Klekar and her staff. And they've been very helpful at receiving those and reviewing the necessary documentation for those requests for reimbursement. And we've been very successful at receiving that in a timely manner when we do see that.

Sandoval: Controller has a question for you.

Malfabon: Yes.

Wallin: Thank you, Governor. I have a couple questions here. And I appreciate the effort that you're doing to save money. You mentioned that we're going to be cutting back on one construction crew in Las Vegas and one construction crew in Reno. Are we also going to cut back on some of our consultants? Because I know we were doing all these projects, we had to hire consultants to oversee the consultants so...

Malfabon: Yes, that is another area, Madam Controller, that we are looking at cutting back. We feel that we have successfully used consultants and we continue to use consultants to deliver our program. But in the case of construction management, we use consultants when we don't have enough staff. And we feel that we can cover most of it next year. Maybe -- we anticipate this construction season that District 3 will have quite a bit of work on I-80. We'll actually send some crews from District 1 and District 2, some construction personnel to augment the amount of construction crews in District 3 this year.

So anytime that we can do things ourselves, that's one of the messages that I've been telling staff at NDOT is either look at using consultants, but what can we do ourselves or what can they train us so that we don't have to rely year after year on the consultants. So we have taken steps in that area of trying to use consultants wisely, but reduce things that we can do ourselves, self perform.

Wallin: Okay. And then just one follow up on that to the federal funds on these settlements and stuff. Can we get some type of report to see, you know, what we're getting reimbursed? That, I think, would be helpful and stuff.

Malfabon: Yes, we can do that.

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- Wallin: And I noticed that in the agreements -- and I don't know what the trend because I didn't have time to look at it, but it seems like where in that column it says federal funds, yes or no, there's a lot more no's in those columns than yes's. So I don't know if you're doing something to watch that.
- Malfabon: Yes, that's a good point. And that's one that I have discussed with staff. Anytime that something could be federally eligible, we've been asking those types of questions and noticing those types of -- when we see why is this not -- why is this being funded with state funds instead of federal. Often what we're finding out is that we just have to work through the programming issues and get it programmed that way in the STIP document which will be brought forward to the Transportation Board in the future months. So we're trying to get smarter about eligibility and using up the federal funds. It doesn't mean that we get any more federal money, but we use it wisely and use it as fast as we can so that we're in a better position to get other states federal funds that are left on the table.
- Wallin: Thank you.
- Sandoval: Prompted a question from me, Mr. Director, is when is that time when we have an opportunity to obtain funds that haven't been spent by other states?
- Malfabon: Usually I think it's August redistribution and then we get last day funds. So there's two possibilities of getting other states federal funds for transportation. And we've been very successful. I think that the number that Assistant Director Sisco had mentioned in the response that's going to IFC was that we've received over was it \$111 million over about the last seven, eight years, \$116 million of other states funds over -- since 2005 I believe it was. So quite a very successful amount of money to receive from other states.
- Sandoval: We like that. We like that.
- Malfabon: Sometimes we have to face them at AASHTO and say sorry.
- Sandoval: Member Fransway has a question.
- Fransway: Thank you, Governor. Rudy, I wonder if there's any way that we could get an idea of the percentage of eminent domain costs that are reimbursed from the feds versus what the state actually expends toward that litigation.

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Malfabon: We can put that in the report that will be provided to the -- at a future Board meeting. One of the things that I wanted to mention on eminent domain cases, we -- one of the programming issues that we found out was that if we hire outside counsel, we feel that it should be eligible, so we've been talking to the Federal Highway Administration Division Office about that. And that's one of the issues that they said if you program it that way, it can be eligible. It's just an issue of being smart about programming it up front, anticipating those types of expenses, and then once it's programmed, then we can get reimbursement from the feds. But we'll get that in our report in the future.

Fransway: Thank you.

Malfabon: And the last thing for the Director's Report, Governor and Board members, is we're looking forward to the start of the new session and your Wednesday state of the state address, Governor. We've been working with NACO on the bill draft for road relinquishments and I know that there's been some confusion about that. We feel that -- what we were trying to accomplish was try to get equity in that issue of road transfers and road relinquishments, but also allow the state to take the first step. So we feel that we can work out those issues with NACO. I wanted to acknowledge the efforts of Assistant Director Tom Greco in working with NACO and the League of Cities on that issue.

The other thing is we're obviously working with the Department of Motor Vehicles on our public-private partnerships BDR with respect to their issues with the tolling concept. So if there was a tolling project in Nevada that was approved, we would work out -- have those issues worked out with the DMV so that we know -- they understand how it would be implemented.

We also received a briefing from a political action committee in Clark County regarding the fuel tax indexing initiative in Clark County and will keep you and the Board informed as we receive more information on that. But what they intend to do is to approach the legislature to get -- the Clark County commissioners would be given the authority to index fuel similar to what's been done in Washoe County with fuel tax indexing. It raises additional revenue that the RTC in Washoe County's used to bond some major projects such as the Southeast Connector in Reno. And the idea is that Clark County now is going to be approaching the legislature to try to get that allowance for their county commission to consider. And that concludes the Director's Report.

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- Sandoval: Any questions from Board members? We'll move on to Agenda Item No. 4, public comment. Is there any member of the public here in Carson City that would like to provide comment to the Board? Anyone in Southern Nevada that would like to provide public comment to the Board?
- Martin: No, sir.
- Sandoval: Next item on the Agenda, No. 5, approval of December 10, 2012 Nevada Department of Transportation Board of Directors Meeting Minutes. Have all the members had an opportunity to review the minutes? If there are no changes, the Chair will accept a motion for approval.
- Martin: I have one.
- Sandoval: Oh, all right.
- Martin: At the top where it says who was in attendance I'm missing.
- Krolicki: So am I, but I wasn't there.
- Martin: But I was. Other than that, I'm good with it, Governor.
- Sandoval: All right. No, we want to make sure you're included. So we'll -- with that...
- Malfabon: We'll make that correction, Governor.
- Sandoval: With that correction we have a motion for approval from the Controller. Is there a second?
- Martin: Second.
- Sandoval: Second by Member Martin. Any questions or discussion on the motion? All in favor, please say aye.
- Group: Aye.
- Sandoval: Motion passes unanimously.
- Krolicki: Governor?
- Sandoval: Yes.
- Krolicki: If I can make just a comment on the minutes. And I apologize. I was traveling and couldn't be here. But I do appreciate the conversation that took place on the Tahoe transportation issues. Thank you to my colleagues

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for carrying some weight in the legacy questions from the meeting previous. But between travel schedule and the holidays, and I'm sorry I didn't have a chance to meet with them, but I would like to and I know Carl Hasty and my friend, Steve Teshara were participating. But I'm happy to work on the schedule to do that briefing. I did appreciate the fact that, you know, they did talk about the fact that a fire truck now can go on those lovely trails through Rob Meadow. So it has changed the feeling, if you will, of some of those places. But I would appreciate the opportunity to follow up and have that conversation.

Malfabon: Thank you, Mr. Lieutenant Governor.

Krolicki: Thank you.

Sandoval: Next item is No. 6, approval of contracts over \$5 million.

Malfabon: And this will be presented by Assistant Director for Administration Scott Sisco.

Sisco: Thank you. Thank you, Governor and members of the Board. Before I jump into Item No. 6 I just want to mention -- Rudy mentioned our cost saving measures. And they forgot the most important one of all. This is our new program 34 Degrees and We Won't Freeze and our new building temperature over the weekend here. So hopefully that's working out. I think we estimate we're going to save about \$17 for that, so it should be good.

Item No. 6, first item, approval of contracts over \$5 million for possible action, we have two for approval. And turning to page -- Attachment A, the first page of Attachment A, the first item for approval is a project to construct Snyder Avenue -- construct Snyder Avenue with a bridge over U.S. 395, retaining walls, drainage and retention basins on 395 and Carson Freeway from South Carson Street, 529, to Fairview Drive Package 2B. We had three bidders. The Director -- the engineer's estimate was \$11,503,969 and the Director is recommending awarding the contract to Granite Construction Company in the amount of \$9,545,454.

Sandoval: Any questions? Please proceed.

Sisco: The second contract on the Agenda today is a project to construct a new interchange on I-15 and Cactus Avenue in Las Vegas. We had six bidders with an engineer's estimate of \$49,893,258. And the Director is

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recommending awarding the contract to Las Vegas Paving Corporation in the amount of \$38,900,000.

Sandoval: Questions? Okay.

Sisco: The Director recommends approval of all contracts listed on Attachment A.

Sandoval: Perhaps one question. There's -- it's great, the direction -- the engineer's estimate was close to \$50 million and the final bid was close to \$39 million. Is there any explanation for that gap?

Sisco: I know we talked about it. I don't remember who -- who was that? Rudy, was that -- Rick, were you going to talk about that?

Malfabon: Well, Governor, we did look at -- do the bid review analysis and you can see that there's quite a difference between Las Vegas Paving's bid and the -- the other bidders were more in line with the estimate. But we didn't find anything out of sorts in their bid. And they pretty much felt that they can deliver that project for that price. They've got a very good bridge construction team. And I think that they just felt that they could do it for lesser costs than the others. And they probably wish that they had put more money on the bid, but we are pleased that -- yes, thank you, Bill. And, you know, when we do get those types of savings, we can definitely look at what other projects we can do with the savings, so...

Sandoval: But once that's done, do our folks get together and kind of look at where we came up with our numbers and...

Malfabon: Yes, yes. It's both the -- at the bid stage we do that type of review and also at the end of construction we've been reporting on a lot of that information to the Construction Working Group and looking at those. We try to have kind of a closeout meeting on these major projects to see what lessons learned also. So that will be done on this project.

Wallin: Governor?

Sandoval: Madam Controller has a question.

Wallin: I just have one question on that same contract because I was kind of surprised how low it was compared to the estimate. And there was a lot of the engineer's estimate that prices weren't available or something like that. And then, okay, the price seems slightly low or slightly high, but 100 sounds good. There was a lot of that. And so do you guys have something in place to -- in the future if you have something where you don't have any pricing

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history that you could find it from somewhere else? I mean, or was it different types of materials that had never been used before?

Malfabon: When there's newer materials, we usually try to inquire with other states. And we also do estimates -- the engineer's estimate is quite a bit different from the way the contractor prepares their bid. And that's one of the reasons why on those other types of projects that we do hire the independent cost estimator. But we do our best to try to estimate based on our labor rates, our materials costs and equipment. But it's quite a different process. We sometimes will inquire with other states if it's a new product or new material. But, for the most part, we just try to keep a database of what we've used and do our best to consider also the impacts of any limitations or restrictions on working hours or working times. Sometimes when you restrict those hours it drives up the price of construction. So we try to get that worked into the cost estimates, too.

Sisco: Rudy, also Paul Frost from our Design -- head of our Design Division here, he can mention just real fast what his perception of the issue is.

Frost: Good morning, Governor, members of the Board. Just in this particular case -- we do go back at each of these contracts and look at all the contractors' bid items versus what we reported and try to find a reason why maybe our estimate was off. In this particular case there's some really large box culverts on there that we thought the contractor was going to have a little more expense in constructing them. There were some shoring issues. And our database is limited on these very large box culverts, so we were probably on the conservative side and that -- if you look at that particular item and fix it, it's actually come very close to one another.

Sisco: Thank you.

Malfabon: That's a good point. A lot of times you might see a contractor's approach on shoring of some deep trenches be very innovative and they can construct something a lot more efficiently than their competition.

Sandoval: If there are no further questions, the Chair will accept a motion for approval of Agenda Item No. 6, the contracts described under Attachment A, Numbers 1 and 2.

Krolicki: Governor, (inaudible).

Martin: So moved, Governor.

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- Sandoval: We have a motion for approval by Member Martin, second by the Lieutenant Governor. Any questions on the motion? All in favor, please say aye.
- Group: Aye.
- Sandoval: Motion passes unanimously. Agenda Item No. 7, approval of agreements over \$300,000.
- Sisco: Thank you. Governor, today we have four agreements over \$300,000. Turning to Page 3 of 16, there's four agreements, three with the Chapman Law Firm and one with SB Strategic Consulting, Inc. And we will be happy to answer any questions on those.
- Malfabon: I wanted to mention, Governor, that we are looking at another law firm to pick up some of the eminent domain cases that will arise out of Project NEON so that we can share that experience and workload.
- Sandoval: And these expenses are the type that you described that may be reimbursable or should we...
- Malfabon: Yes, provided that we program it appropriately.
- Sandoval: Okay. Board members, do you have any questions with regard to the contracts described in Agenda Item No. 7? Member Fransway.
- Fransway: Thank you, Governor. A question on Line Item 4 which is relative to the state budget system and the federal timeline. The question is it looks to me like the \$96,000 amendment will need to be -- will be subject to legislative approval. Am I not correct?
- Malfabon: I don't think so. I'd have to investigate that. But I don't think that we've ever obtained legislative approval for this type of support in Washington, D.C. for our advocates that watch the congressional actions in kind of the national scene on transportation funding for us and give us kind of updates on where there's grant opportunities as well. So they do more of the policy analysis and lobbying, so to speak, or representation of us in Washington, D.C., but not in the state legislature.
- Fransway: Okay. Well, the way I'm reading it is that the original Agreement 288 was during -- was incurred at the last fiscal year or the current biennium. And the 96,000 will extend past that date.

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- Malfabon: Oh, I see. The (inaudible) was whatever support that they could give us also during the legislative session, but also get in alignment with the federal fiscal year. So we were doing an extension with reprocurement of that contract this year, but get it more in a cycle that would be more in line with the federal fiscal year. So that's why we were asking for the extension.
- Fransway: Okay. Thank you, Governor.
- Sandoval: If there are no further questions, the Chair will accept a motion for approval of the agreements over \$300,000 as described in Agenda Item No. 7.
- Wallin: Move to approve.
- Sandoval: I have a motion by Madam Controller for approval. Is there a second?
- Savage: I'll second.
- Sandoval: Second by Member Savage. Any questions on the motion? All in favor, please say aye.
- Group: Aye.
- Sandoval: Motion passes unanimously. We will move on to Agenda Item No. 8, contracts, agreements and settlements. Mr. Sisco.
- Sisco: Thank you, Governor and members of the Board. Today we have contracts that are greater than \$5 million that were awarded by the Director and then agreements -- no settlements this month. So first turning to Attachment A we have three different contracts that were awarded. Again, these are under \$5 million. The first contract awarded was a project to install temporary and permanent tortoise fencing around perimeter of the Boulder City Bypass, Part 1 and perform plant salvaging activity for construction of U.S. 395/95 mainline from one mile south of the junction then of U.S. 95/U.S. 93 to Foothills Road. Director awarded that contract November 20 to Las Vegas Paving Corporation in the amount of \$1,327,000.
- The second contract under \$5 million was a project for a signal system modification; Synthetic replacement of 5 section protective/permissive heads to 4 section protective/permissive heads utilizing flashing yellow arrows in multiple intersections in District 1, Las Vegas. And the Director awarded that contract November 13 to Transformers ITS LLC in the amount of \$1,753,671.20.

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And the third contract or agreement project to construct intelligent transportation system elements on I-15 North, Part 2, Package B in Las Vegas from Craig Road to Speedway in Clark County. And, again, the Director awarded that contract November 14 to Transcore ITS LLC in the amount of \$4,850,856. Those are the three contracts under \$5 million.

Unidentified: Did you say that was Contract No. 2?

Sisco: LLC...

Malfabon: It's Transcore also.

Sisco: Transcore, I'm sorry, Transcore ITS, yeah, sorry.

Sandoval: I thought I heard you say something different than Transcore.

Sisco: I apologize.

Sandoval: No, I just want to make sure.

Sisco: Yeah, and I may have. I try to zip through those fast in case everybody -- okay. Moving on to Attachment B in our agreement section. Again, as I've mentioned before, we kind of review these ahead of time, see if there's anything that we feel we need to point out to you. And then I'll let you take it from there in regards to questions. There is one that we'd like to point out to you on Page 11 of 13 is a contract -- amendment with ACS State & Local Solutions, Inc. And we just wanted to touch on this because we knew you would have questions on this one because it's been basically extended since 2003, I believe it is.

This particular contract, it was more of a working arrangement. We had a company that provided an online database where we're able to go on permits for over dimensional permits. Permits for over dimensional (inaudible) and we were basically paying them about \$350,000 a year and...

Unidentified: ACS, okay.

Unidentified: Thank you.

Sisco: Las Vegas, you need to mute your microphone. We were basically paying them about \$350,000 a year to issue these permits \$10 at a time. And our new ITS Division Administrator came along and working with our Administrative Services section discovered that, quite frankly, it was an extremely simplistic database. Went home and built it on the weekend and

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we're in the middle of putting this in place. And we anticipate saving about \$350,000 as a result of this. This amendment for \$65,000 just takes us through -- we're actually training this week. A little bit last week, but this week we're, well, working through the training. And this was just in case there were any final permits that we had to issue. But we are extracting our data back from that contractor and, again, this contract will save us about \$350,000 a year. So, again, as Mr. Malfabon mentioned as we started this process of looking at everything we were doing to see where we could save some money, this is one we're very proud of. Though not in question with that or any of the others, that was the one that we wanted to point out to your attention.

Sandoval: I was going to ask you about No. 19. And I would assume this has to do with the Falcon Capital case. And why are we amending this as of December 18 of 2012 and the increase was due to the trial date being vacated?

Sisco: Mr. Gallagher, jump in on this one?

Gallagher: Governor, the reason the contract's being amended is two-fold. One, additional assistance from our Water Engineer to review their Water Engineer's bills that they had submitted to the state for reimbursement. So it was an audit of that. Secondly, and perhaps more importantly, is to assist in getting an appraisal for the water rights that the state has acquired as a result of this decision. And, as you noted, the reason for the amendment is not correct.

Sandoval: It's just this is the gift that keeps on giving and...

Gallagher: And some...

Sandoval: You don't have to respond.

Gallagher: Thank you, Governor.

Krolicki: If I may follow up.

Sandoval: Yeah, Mr. Lieutenant Governor.

Krolicki: What was the amount of the billing by the Falcon Water Engineer?

Gallagher: Oh, geez...

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- Krolicki: I'm just trying to get it in perspective. If we're spending an extra \$36,000, I hope that the amount they were reviewing is significantly larger so we're looking to capture savings beyond what we anticipate amending the contract for.
- Gallagher: Lieutenant Governor, I don't remember the exact figure, but I can assure you it was much, much higher than this particular amendment. It was well into the six figures.
- Krolicki: So for the...
- Gallagher: Their water -- their Water Engineer's fees were well into the six figures.
- Krolicki: So, for the record, spending this additional \$36,000, there's a good likelihood or prospect based on your review that the savings on reviewing the other Water Engineers' time may be saved.
- Gallagher: Yes, Lieutenant Governor, I do believe that.
- Malfabon: And this was a not to exceed, so they might not expend the entire amount of the amendment.
- Sandoval: You're not making me feel any better, but, I mean, I can't do the math right off the top of my head, but \$36,000 at what amount per hour?
- Gallagher: Governor, between the engineers' hourly fees and the lawyers' hourly fees, I wouldn't want to throw a number out. I'll get it to you, though.
- Sandoval: But I'm just saying that's a lot of hours to review somebody else's billings.
- Gallagher: And the second part of that was also to assist in the appraisal for the water rights that the state is acquiring so that we can come back to this Board and say we've acquired X number of acre feet and its appraised value is.
- Sandoval: Okay. Because that goes back to whatever meeting we have had that my comment and hope was that we would be able to market those water rights that currently are not marketable. At least that was my recollection.
- Gallagher: Correct.
- Sandoval: Thank you. Other questions? Madam Controller.
- Wallin: Yeah, that contract there -- and what did we pay, \$9.2 million for those water rights? So I hope the appraisal comes in for more than that, but, you know. I have a question. It's on No. 20 there, too. Jacobs Engineering, it

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says here that it's to support additional CMAR projects statewide. Can you explain what they're doing for us statewide and...

Malfabon: On the construction manager at risk program we still have the projects that are underway, the Carlin Tunnel Project on I-80 in Elko. We also have the one up at Lake Tahoe, the bike path. So it's just to provide support for those. And this is one of the areas where we've asked our Project Management Division to look at self performing some of these. Get Jacobs to teach us how to administer these projects so that we can end that agreement.

Wallin: Good. And then Item No. 36, that is with Link Technologies electronic document support. Can you just talk about what they're doing for us? Because didn't we do something with Link before just recently?

Sisco: I'm trying to remember who's this was. This particular contract is for an MSA that we bring in through the State Purchasing and Master Services Agreement. And as I recall on this particular one we're working on and electronic documents thing. And every year we have to renew these contracts. So right now we've gone through the bidding process. The process has been awarded. I believe actually we're buying an AASHTO customized software for it. And this particular MSA will actually be working with them to customize it and bring it into the Department.

Sandoval: Questions from other Board Members?

Martin: I have a -- Governor, going back to that ITS LLC, I just did some quick math. They've left well over ten percent on the table on each one of those two contracts. Is this the same as it would be with a construction contract where we get payment performance bonds from these folks?

Sisco: Mr. Hoffman, did you want to take that one? I see you nodding your head.

Hoffman: Hi, Bill Hoffman, Deputy Director. I would assume all the ITS projects that we've put out before do indeed, they are administered and awarded exactly the same way as other construction projects. But we can get back to you, Member Martin, with that information if that's different from what I just discussed.

Martin: I would appreciate it.

Hoffman: Yes.

Martin: Because as I do the math, they've left almost \$700,000 on the table.

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Hoffman: Right. So I've just received confirmation from our Admin Services group. And they are shaking their head, yes, that this is like any other standard construction project.

Martin: Okay. Thank you.

Hoffman: You're welcome.

Sandoval: Member Savage.

Savage: Thank you, Governor. And I, too, voice the same frustration, I think, with some of the consultants and some of the fees, especially Item No. 19. And I know we're well aware, Governor, in the CWG meetings that we have, it is holding the consultants accountable. And if we have to go against their E&O's we will because it's a team here and they have to take the good with the bad. And they can't (inaudible), so I think we're well aware of some of the consultants and holding them accountable.

With that being said, Mr. Sisco, I have a comment on there were a lot of time extensions granted throughout some of these different Attachment B's. And with that time extension, does the Department request cost modifications as well?

Sisco: It depends on what it is. The majority of our time extensions have to do with our inclement weather here in the State of Nevada. So they give them X number of months to complete a project. And then what happens is because they can't pave or do whatever they need to do, we end up usually - - you'll see more of the time extensions about this particular -- around this particular time of year than you will in other periods of time. But they just can't do it and so we have to extend the contract before it expires or we have to get a whole new contract. So the majority of them are about that.

Every now and then you'll see -- and we've worked real hard to change the note section of this, the purpose, so that we can explain a time extension to do what, what exactly is it that we're planning, put that right in there so you have as much information as you can possibly have in doing it. But in going through these, the majority of them are about just time needed to complete the project. And if there's additional money involved or if there was a scope change, again, we will list that specifically in that description.

Savage: Because that's always my fear is you grant the extension and then eight to ten months down the road they come up with additional dollars. So it might be wise for the Department to ask in order of magnitude if there are going to

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be any dollars so that we know up front, again, rather than having the horse pulling the cart. So thank you, Mr. Sisco. Thank you, Governor.

Sandoval: Tom, did you have questions?

Fransway: I did, thank you, Governor.

Sandoval: Yeah, please proceed.

Fransway: That Item 19 seems to be getting a lot of scrutiny and my question may be fundamental in nature. But I'm wondering shouldn't the original agreement amount and the amended amount equal the payable amount?

Sisco: We've gone back on here wherever we can and tried to increase the size of the description under the note section to take it from the original contract so that they can be added up. But not always because usually -- we're still finding some of these older files where we had an original contract amount. We actually had another one or two amendments in there. And now we have a new amendment that takes it to the total thing. So that apparently is one that we may not have caught. Is it in there?

Malfabon: Yeah, the amended amount -- amendment amount is for the current amendment that's before the Board for consideration. And then the -- in the notes, as Mr. Sisco indicated, that's where the additional authority was -- increased it. So we include the amounts of previous amendments in the notes. But the column that says amendment amount is only for what's before the Board in the current month.

Sisco: And just to mention in that particular one I take it back. We actually do. It started at 20. It was raised to 45. And this time we added 36 to get it to 81. So that would be the ultimate payable amount.

Fransway: So what you're saying is they've been amended before.

Sisco: It's been amended before, yes.

Fransway: Okay.

Sisco: The original amount of that contract was 20. It was then amended to 45. And then it was amended again now to 81.

Fransway: For clarity's sake maybe somehow the spreadsheet should indicate that rather than on the note.

Sisco: Okay.

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- Fransway: Because it happened in another one also. It happened on Item 24, the same thing.
- Sisco: Okay, okay. Just so you know, this particular spreadsheet is actually an extract from our contractor payment systems and our financial management systems. And about the only place we have a lot of flexibility is in the notes. So we try to go in there -- without paying a programmer big money to change it. So we try to go in there and make sure that it's detailed. And I apologize because one of my jobs I go through there, read it and say, okay, do I get from here to there and understand what's happening here. But we will continue to look at that.
- Fransway: That would help because as far as at least this Board member, if we're amending something numerous times, it may pose a problem if it's ongoing with this particular line item. And, anyway...
- Sisco: Yeah.
- Fransway: ...you may be able to clarify that in some way in the future.
- Wallin: Governor, can...
- Terry: Just to kind of clear up two issues and kind of on the same issue and on full disclosure, you had questioned Item No. 20. And that has that exact issue that you just brought up on the other one. In other words, we show an agreement -- understand the amendment amount is 285,000. The original agreement was 800,000. So what you're really approving is a \$285,000 amendment to an \$800,000 original agreement to a total of 1.25. So since you had brought up this issue and since you had brought up Item 20 before, I'd just like to be clear what you're approving here.
- Wallin: Can I comment, Governor?
- Sandoval: Madam Controller has a comment.
- Wallin: All right. Now, I'm very confused here because, first, let me just -- to Member Fransway's comments, this might be a suggestion. Maybe if in your little notes there to say original -- over there have original contract and then Amendment 1, Amendment 2 and then it adds up. That might be easier for people to see.
- Sisco: Well, and that's kind of what I was trying to explain.
- Wallin: I can see that, yeah.

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- Sisco: We tried to go through there and catch most of them. But every now and then we pull one that's far enough back and we assumed we got it on the last one and didn't.
- Wallin: Yeah, but I can see that. But now -- so you're saying here that on No. 20 it's coming across to us that it's not an amendment, that it's an original agreement amount. So really it was...
- Terry: And I agree. It does appear to be that way and that's not the case. The case is we're doing an amendment for 285,000 to an agreement that was \$800,000 originally.
- Malfabon: Oh, those are the task order, John.
- Terry: What's that?
- Malfabon: That's a task order. So could you explain how task orders work?
- Terry: Well, I'd have to get clarity that it is a task order. I mean, I have the written up 2A form here where it is an amendment to an agreement.
- Malfabon: Amir Saltoni...
- Terry: CMAR Program Management Services in 2011, September 1, was for 800,000. And this is an amendment of 285,000 in addition to that 800,000. It's not a task order. It is an amendment to an agreement.
- Sandoval: Member Fransway has a comment. Tom.
- Fransway: Governor, I'm just -- actually I'm talking to myself a little bit. I'm still -- it's not clear. It seems to me like the payable amount when you're talking is over a million dollars and...
- Terry: And that's what, I believe, it should show. But it's not the way the spreadsheet shows it in this particular case.
- Fransway: Okay. Well, just as a suggestion, I don't know, but I think maybe we should put our heads together and see how we can fix that to where the Board understands what they're approving.
- Terry: And I apologize. Just before this meeting in reviewing for this packet I caught this discrepancy and so it was not changed in the spreadsheet.
- Sandoval: No, and that'll be good to know because I went right over the top of this one because it didn't look like we had spent any additional dollars. And so I

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don't want to cast out on any of the rest of the report because there are similarly situated contracts that express the same type of information to different numbers.

Sisco: We will take a look into our financial systems and our -- like I say, we have seven different systems that are all tied together and spit this thing out and try to see where -- somewhere along the line somebody clicked a yes versus a no or something that said whether this was a contract amendment or whatever and try to find out what that situation was.

Sandoval: Lieutenant Governor, did you have a comment?

Krolicki: I'm afraid to ask it. And thank you for what you just said. I know this is terribly frustrating. It's complicated. There are many parts. But from a Board's position looking at these, it's terribly frustrating to try to follow around and often just kind of pounce into something that we didn't know was an item of discrepancy. So if we can format the spreadsheet to make it very clear so we don't have these rabbit chases, that would be a wonderful thing for everyone, especially you, Mr. Sisco. And I appreciate that.

My question was actually on No. 24, the Union Pacific Railroad. That bridge does not exist I assume, but I guess not so much this specific contract, but if this is a Union Pacific Railroad bridge, no...

Malfabon: This was the railroad bridge over I-15. It was on that design-build project. And the expenses for the preliminary engineering that the UPRR -- they hire an outside engineer to review the plans that our design-builder had submitted to them. So we cover those costs and these costs were reimbursed from the Las Vegas Convention Visitors Authority funding on this project. So it was cost that the UPRR incurred.

Krolicki: So the room tax money paid for it.

Malfabon: Yes.

Terry: If I could...

Krolicki: But is that standard procedure?

Malfabon: This one was distinctive in that they had a special type of construction method. You had the bridge mover that kind of moved stuff in place, so a lot of things that they had to look at. Go ahead, John.

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- Terry: Again, John Terry, Assistant Director for Engineering. This was a complicated bridge. Yes, we reimbursed Union Pacific Railroad for their legitimate engineering cost to review our design. This was the bridge over Interstate 15. We used a special SPMT device to move a girder into place in one weekend. It had the new end spans that were added to it. We do look at their engineering cost. I would like to point out that this was a risk sharing as a part of the design-build contract. There were significant costs incurred by Union Pacific Railroad as a part of their construction to put the rail back and to do other things. Those were paid by the design-build firm through us because it was construction. These are legitimate engineering. This was complicated engineering. They chose to use a consultant to review our engineering. We did review those costs. And it was a complicated process to do this.
- Krolicki: So normally we would not be doing that. It's just a very complicated situation. We essentially forced them to do it. And because there were questions, we agreed to compensate for that bridge.
- Terry: No. Usually we would reimburse them, but it would be nowhere near these kinds of amounts because this was complicated. Usually it'd be a very straightforward review and quite small costs on their part. But we would reimburse them for their engineering.
- Sandoval: Any further questions? Member Fransway.
- Fransway: Thank you, Governor. We did discuss 26, I believe, in some fashion. I think maybe Madam Controller brought it up, but I see things on that one, too, that beg a question from me.
- Sisco: Mr. Fransway? Real quick, yeah. I was the one that brought it up. This is the one where we're eliminating this database. This last amendment is just to get us to ensure that we can issue any over dimensional permits needed. And we're going to eliminate this and save about \$350,000 a year through getting rid of this and programming our own very simple database.
- Fransway: What I'm wondering is why Amendments 1 through 6 aren't on the spreadsheet. I see that only 6 and 5 increase the authority. But they're not on here, 6 and 5. The rest of them extend the termination date. I understand that.
- Sisco: Right.
- Fransway: But 6 and 5 are relative to dollars.

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- Sisco: That's correct. And, again, this was kind of an open-ended contract for all of its years and all of its amendment. It was more about \$10 a permit because that's what it says in the statute we'll pay -- you know, we will pay up to \$10 a permit to have these issued. And so they're just extending the dates. Again, we tried to go back and recapture a history from 2003 forward. Never should an agreement be out there that's extended that long, but this was kind of one of those situations where the Department got into business, if you will, with this permit providing company. And, like I say, we fortunately took a good look at it this year and thought what the heck are we paying all that money for and are getting out of it. But, yes, the notations -- we had a real hard time reconstructing the history that's there. So I apologize for those two not being documented. But everything that we found we put in there.
- Malfabon: But to the point of Member Fransway's question, we will look at how we could amend this spreadsheet in the future to include the amendments in the correct column that you would like to see.
- Fransway: Thank you.
- Sandoval: Any other questions on Agenda Item No. 8?
- Martin: I have one. Is it possible to approve this Agenda item holding Item No. 20, the Jacobs Engineering, until we get a firm handle on exactly what's going on here?
- Sisco: Governor?
- Sandoval: It's actually not an action item, Member Savage. This is for informational purposes. Did I say you?
- Martin: Okay.
- Sandoval: Member Martin. Mr. Sisco, do you have any further presentation?
- Sisco: No. Those were the two items under Item No. 8. That was...
- Sandoval: You understand what we need to do moving forward?
- Sisco: I believe we do, yes.
- Sandoval: Okay, thank you very much.
- Sisco: Yes.

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- Sandoval: Agenda Item No. 9, quit claim deed.
- Malfabon: Thank you, Governor. This is to request approval from the Board to dispose of NDOT's interest in this property. It's located along State Route 341, Geiger Grade at Veterans Parkway in the City of Reno, Washoe County. And the information is attached there that shows the subject parcel.
- Sandoval: Board members, do you have any questions with regard to Agenda Item No. 9? If there are none, the -- did you have a question?
- Krolicki: I was just going to say if there are no questions then I'm happy to make the motion to approve.
- Sandoval: Please proceed.
- Krolicki: Then I will do so. So for Agenda Item No. 9, quit claim deed, I would move to approve.
- Wallin: Second.
- Sandoval: Lieutenant Governor has moved for approval of the quit claim deed as described in Agenda Item No. 9. Madam Controller has made a second. Are there any questions on the motion? All in favor, please say aye.
- Group: Aye.
- Sandoval: Motion passes unanimously. Agenda Item No. 10, request for approval of a sweeper.
- Malfabon: Thank you, Governor. As you recall we had previously last month brought to the Board approval for sweepers in District 2 in Reno using congestion mitigation and air quality money, CMAC funds, which are federal funds. And those covered 100 percent of the sweeper costs on those. I believe it was five sweepers.
- What we had was a grant opportunity up at Lake Tahoe to improve water quality by having a PM10 sweeper, which is a very expensive piece of equipment. But it was funded by the Southern Nevada Public Lands Management Act. So we will also have to -- because this wasn't -- this isn't a case of receiving a grant opportunity. We have to go back to the legislature to get approval to expend that grant money. But we feel that it's a good bargain for the Department to acquire a sweeper that will improve water quality up at Lake Tahoe through the use of this sweeper. And wanted to acknowledge the efforts of our Hydraulics Division, Matt

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Nussbaumer had been the one to bring it to our attention that he could chase this grant and was successful in getting it using the SNPLMA money.

Sandoval: Questions from Board members? Member Fransway.

Fransway: Thank you, Governor. It caught my eye that this was being funded through the Southern Nevada Public Land Management Act.

Malfabon: Yes.

Fransway: And I understand why because that's to help maintain different things of environmental significance. I'm wondering if there may be some funds through that same source for our culvert cleanup efforts. And I think it was, like, 70 -- I can't remember the amount now. But the rationale for doing it was the same reason to keep particulate matter out of the lake. And if there's funding for a street sweeper, then perhaps it may roll over to rationale to fund the culvert cleanup.

Malfabon: We will have our Hydraulics Division look into that, Member Fransway.

Fransway: Thank you. Thanks, Governor.

Sandoval: And, Mr. Director, without the effort of NDOT, this is money that would just remain in that fund or...

Malfabon: Yes, it would be expended by others. Typically, this Southern Nevada Public Lands Management Act funds have been used for a lot of trails, construction of a trail system in Las Vegas. And there's been some money that's been granted up -- used up at Tahoe, as well.

Sandoval: Any further questions? Chair will accept a motion for approval for the purchase of a sweeper as described in Agenda Item No. 10.

Fransway: So moved.

Sandoval: Motion by Member Fransway. Is there a second?

Wallin: Second.

Sandoval: Second by Madam Controller. Any questions on the motion? All in favor, please say aye.

Group: Aye.

Sandoval: Motion passes unanimously. We will move on to Agenda Item No. 11, approval of amendments and administrative modifications to the STIP.

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Malfabon: Thank you, Governor. The current STIP was approved by the Board and these amendments come through periodically. From the Carson Area MPO we have Amendment CAMPO No. 2 which is shown on Attachment A. This action adjusts the cost estimate for U.S. 50/Fortune Drive intersection improvements from 1.2 million to \$500,000 in fiscal year 2013. It also adds Project NV20130003 consisting of a feasibility study for expansion of the fleet maintenance facility at 3303 Butti Way. And moves funding for a vehicle purchase for Public Transit Service in Carson City, Project No. NV20110009 from 2013 to fiscal year 2014.

Also in the Statewide/Rural category, Amendment Statewide No. 4, this action is for the purchase of the street sweeper for the Tahoe Basin which was previously approved for purchase.

The other amendments on Attachment B, Administrative Modification to CAMPO No. 3, CAMPO 2, FTA Section 5307. This modification is an action to increase the amount of funding available over the next four years, fiscal years 2013 to 2016, for Project NV20110015, bus stop improvements resultant of HUD Community Development Block Grant funding being added as a match to the FTA Section 5307 funds. That's the administrative modifications to the STIP.

Sandoval: Thank you, Mr. Director. Do any Board members have any questions with regard to the presentation on Agenda Item No. 11? If there are none, Chair will accept a motion for approval of the amendments and administrative modifications to the FFY 2012/2015 STIP.

Savage: So moved, Governor.

Krolicki: Second.

Sandoval: Motion by Member Savage, second by the Lieutenant Governor. Any questions on the motion? All in favor, please say aye.

Group: Aye.

Sandoval: Motion passes unanimously. Agenda Item No. 12, briefing on the 2013 State Highway Preservation Report.

Malfabon: Thank you, Governor. Deputy Director Bill Hoffman will present this item. While you're getting that up, I'll just do the introduction, Bill.

Hoffman: Thank you.

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- Malfabon: Pursuant to NRS 408.203 we provide a report to the legislature on the odd-numbered years of our progress on state highway preservation. We look at our roads and our bridges in this preservation report. NDOT has been one of the, you know, top ranking states in condition of our system. But we tend to do this preservation report on those odd-numbered years and Bill Hoffman can take over from here.
- Hoffman: Well, I missed that opportunity.
- Malfabon: You're rolling, Bill.
- Sandoval: Take a few drinks.
- Hoffman: I might need that. So good morning, thank you very much. Governor, Transportation Board members, Bill Hoffman, Deputy Director. What we'd like to do -- not sure if we've done this before. I did some research on how we've handled the State Highway Preservation Report. I don't think we've officially brought this to the Board for comment, so we wanted to make sure that we did the courteous thing and bring this to the Transportation Board before it goes to the legislature officially on February 1.
- Sandoval: No, and that was going to be one of my first questions. And I know it hasn't been done historically, but wouldn't you think that if you're going to do a State Highway Preservation Report that you would make the Board aware of it before it goes to the legislature?
- Hoffman: Yes, sir, absolutely. So before February 1 we do have some workload and resource issues by the group that does this. It's actually the same group that does the Pavement Management Report, as well. So we would have liked to have gotten this out probably a month or two earlier, but that just didn't happen. So we wanted to make sure we got this to you before February 1.
- Malfabon: And so there is an opportunity, Governor and Board members, for your input to get into this actual report.
- Sandoval: But I think I'm the only one who actually has it.
- Savage: Yes, I was going to make that request, Governor, if we could receive a paper copy.
- Wallin: Well, and you said that you were going to send it electronic, but I don't have an electronic copy of it either.
- Savage: Yeah, we didn't get anything.

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- Hoffman: Well, we apologize for that. We will make sure -- well, here comes -- not really going to do any good now to take your comments.
- Malfabon: Yes, I think the email submitted a link and I don't know if that link worked or not, but it was sent electronically and I don't believe it was...
- Martin: I have it, guys.
- Malfabon: Oh, you got the attachment.
- Martin: Yes, sir.
- Malfabon: PDF, okay, thanks, Frank.
- Hoffman: Well, I think what we're going to have to do is touch bases with the Transportation Board members and ask each and every one of you how would it be most beneficial to receive this document, whether we post it, you download it on your iPads or whatever electronic device you have, or how you might want to receive it, email, because we seem to be doing this.
- Sandoval: Well, and this one only comes every two years, so...
- Hoffman: Right. So we will make efforts to make sure everyone has a copy of that. The way I understood it is it would be emailed out or available on our website for download in a PDF format, so -- but we will check into that. Okay.
- So I will move forward here and I will move very quickly through this. Two things, I wanted to pull some highlights out of the report. I wanted to shed some light on our Bridge Division and on our pavement preservation efforts, our 3R group. But I also wanted to use this as an opportunity to educate the Board as to how we go through our 3R and pavement preservation efforts. I do firmly believe that we are leading the nation in terms of innovation and pavement preservation and our approach to that.
- So with that -- and we're not alone. There are other states. I would suggest or recommend that -- or I would suggest that probably every other state does submit some sort of pavement or bridge condition report to their Transportation Board or their legislature. So this isn't something in Nevada that we do alone by ourselves.
- So just very quickly, so the history of the State Highway Preservation Report, it is an NRS requirement. We do have to report this to the legislature by February 4 of every odd year. I do believe that we've been

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submitting this since 1999. I still need to confirm that, but evidence shows that we've doing that since 1999. The format has generally been the same over all of these years. We are required to report on the pavement condition and future needs, same thing with the bridge condition. And then we're supposed to project the needs of the pavement and bridge 12 years into the future. So there is talk about a 12-year plan. That's really -- we keep track of all our needs through several different categories that I will share with you in just a few minutes and then that's projected 12 years into the future.

Sandoval: Has that 12-year plan ever been presented to the Board?

Hoffman: I do not believe it has. Other than past reports where there is talk about the 12-year plan, some of the projects. We do talk about it in the report, but in specific...

Sandoval: But that's a report that has never been presented to this Board.

Hoffman: Yes, Governor, that is correct. So, no, it has not been formally presented to the Board. And we can most certainly do that. And I would like to actually do...

Sandoval: And I, as a Board Member, would actually like to have -- know what you think the 12-year plan is.

Hoffman: Actually I will talk in very general terms about what the 12-year plan is. I will touch on that just a little bit.

Sandoval: We haven't -- yeah.

Hoffman: All right. Okay. So I'll just briefly continue here. So we're just going to jump right into this. So bridge preservation highlights, anytime I have direct pullouts from the State Highway Preservation Report, I show that up in the corner. So we're doing very well in bridges. I think everybody within the state pretty much knows that we rank second nationally in bridge condition. That's due mainly -- we have a very young bridge system. And also the climate, especially in Southern Nevada, certainly helps with that quite a bit. And we have a very proactive bridge preservation program.

Now, I apologize for the date. It's a bit dated, but I think, for the most part, it will pull out information that isn't -- maybe a couple of percentage points here or there, maybe, is all that's changed. But I just -- I wanted some mechanism to show the Board how well we do with bridge and pavement preservation. So I've pulled this out. Like I said, 2008's a little bit old.

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Actually, at this time it showed us as number one in the nation back in '08, probably based on '06/'07 data. But compared to the rest of the country we do very well with bridge condition.

Sandoval: No, and that's an excellent statistic. But when you say -- how do you define a deficient bridge? I don't want everyone to have the impression that they should be concerned as they drive across a bridge.

Hoffman: Well, sure. There's functionally obsolete, which is, you know, a condition on the bridge where maybe the lane widths aren't -- or the bridge doesn't allow for the proper number of lane widths across the bridge. It's not a safety issue. And it's just really a change in design standards or design guides, which leaves the bridge functionally obsolete.

And then structurally deficient is we go out and rate our bridges every other year. We may do that more frequently if the structural deficiency number is low. But we do this on such a frequent basis and are in such control of the program that we would post a bridge for lower weights or there would some sort of communication -- if the bridge was not safe to drive across, we would know about it and we most certainly would take those steps to protect the public. I'll just put it as simple as that.

Malfabon: And with respect to that terminology, Governor, I know that the Federal Highway Administration is looking at changing that terminology to prevent that type of gut reaction to the terms, because these bridges are safe to drive on. It's just that the term structurally deficient just brings to mind some other concerns with driving across a bridge.

Sandoval: Well, it brings Minnesota to mind and that's obviously what we don't want to happen.

Krolicki: Ten percent of Nevada's bridges are not up to the most current standards, something like that.

Hoffman: That's probably a good -- that's probably a fair -- that's a fair -- that's a fair...

Sandoval: For design standards?

Hoffman: But -- right, so we are on top of this I assure you from a bridge preservation standpoint and the numbers show it, so -- nationally. So next -- that was very brief. We're good in bridges. Please don't worry about our bridges. They're in good shape, so okay.

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Our pavements are in good shape, too. And I'm going to go through and show you this, some of the highlights from the State Highway Preservation Report. Back in '11 and '12, fiscal years '11 and '12, NDOT invested \$544 million in pavements. Okay. This was 274.5 million in federal funds. So if you split that in half, about 137 million a year in federal funds invested in our pavements. State gas tax funds about 134 million a year or over that biennium \$268 million. So this 544 million was 150 million more than the previous biennium. And of that 544 million, 461 million was contracted out. So these went out as projects to contractors.

One of the charts you'll see, which is probably a little bit confusing if you do have your reports now. I hope you do. So not quite sure this is towards the front end of -- I can't remember exactly which page. I guess if I kind of helped -- Page 3. Okay. Yes, so you'll notice on the top that there are preventative maintenance, corrective maintenance, overlay reconstruction. If you really just kind of do this crosswalk technique and excellent are the blues are in excellent shape. Good is corrective maintenance. We just kind of have a different terminology that has a meaning internally. Overlay is fair and reconstruction is poor. Okay. So those are the actual conditions of the roadways.

And then from left to right what you have are the interstates, non-interstate, freeways and then it moves down in terms of highway user numbers, both in trucks and -- so down at this end you'd have very lightly traveled state routes. Okay. But it is from left to right higher traffic volumes, higher truck traffic from left to right. Okay.

So what this translates into is statewide our pavement condition is 22.3 percent in the excellent range, 44.3 percent in the good, 11.1 percent fair and 22.3 percent in the poor condition. So 67 percent of our pavements are in good or excellent condition. But as I'll explain in just a minute, this poor condition here is really what costs us a lot of money in terms of preservation funding.

So some more of these charts. Again, I apologize for the information that's probably just a hair out of date. But percent of rural interstates that are in poor condition, so the poor condition, worse condition, is going to cost you the most to repair, we had zero. So these are areas on the interstates out away from Reno, out away from Las Vegas and Elko. So zero percent. You can see how we compare to surrounding states and across the country. So

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that puts us in the top. I guess with all zeroes there's a big tie for first. I don't know how you would go about that, but anyway.

So percent of urban interstates, so these are interstates in the urban area, so in Las Vegas, in Reno, in poor condition 1.59 percent. So that certainly put us in the top 20. But I also will say since 2008 we've done a design-build north on I-15, a design-build south on I-15, an I-80 design-build, an I-580 widening project. So those projects, I'm sure, have helped us -- help bolster our position nationally in terms of interstates in poor condition.

Sandoval: And the same question from me on poor condition. Does that include design and lanes and...

Hoffman: Well, really, no. Poor condition is you can see it. I mean, there are big cracks, a lot of cracks in the pavement. It's very difficult to maintain and really costs quite a bit of money to repair. But poor you can see it, you can feel it. It's a very rough ride. So it's not like the bridge condition assessment where they're looking under the bridge and around bearings and things like that, so...

Sandoval: Well, you're right. There's a lot that's happened both in Clark and Washoe Counties since '08.

Hoffman: Right. So I would think that that percentage would drop substantially. Okay. Percent of rural or other principle arterials in poor condition, so these are your U.S. 395's north of Reno, U.S. 95 north of Las Vegas, also probably U.S. 50 very low percentage. So we're still -- and we've done work on U.S. 95 and 395, so those, compared to the rest of the states, if we've done more work, then maybe we -- but we're certainly in the top 20. I would say probably in the top 15 looking at the rest of the states.

And what I do want to mention here is that there are -- there's a national perspective, a national standard, on pavement preservation. So all the states across the country have a very good idea and a standard practice as it relates to pavement preservation when you do treatments on the roadway, how that helps you save money as a state DOT. So timing and your strategy about when you're going to do repair work is extremely important. So Federal Highway Administration, you can see all of the information here, National Center for Pavement Preservation. So what I want to say is preservation within the U.S. and among DOT's is very standardized and we pride ourselves in following this standardized approach.

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So NDOT Pavement Management, so this is kind of how we go about it. Six steps to good pavement management. So you need a road inventory. You need to know what work is going on on your roads, what the condition of that road is. You need to have that in real time. And we do have that or somewhat real time. You need to have a set timing and strategies for your pavements. You need to know what you need to do at a certain time. And that really drives the economics and the lifecycle costs of the pavements.

Now, Items 1 and 2, road inventory and timing and strategies, if you blend those or integrate those together, you come up with a pavement management system or a database of all of that, which we have. We do have that. We do run economic analysis or lifecycle costs on every project when -- in every segment really. When it comes time for a treatment, we actually go through that process to see when the optimal time would be to do a treatment so that we can really extend the life of that pavement.

We go through a project prioritization -- it's easy, here, let me -- you told me to take a big drink didn't you. It's dry in here because of all the space heaters that we're warming the room up with. So, okay, project prioritization. That's much better. And then, of course, we need to go through the project design and delivery. We have to take this information, look at options and then design and actually advertise it.

So very quickly, inventory of the entire system, I'm just going to show you kind of a snapshot of all of these things that I've talked about. So this, of course, is not the inventory of our entire system. We have many more lane miles than that. But just shows you an example. So in a database we have the route, county, when the last job was done and what was done and what the category is. We have that throughout the entire state. And these are things that are probably not going to be in the report, things where I'm just trying to touch on the education portion of this. So we have every road segment in the state, all 13,100 plus miles of roadway are in our pavement management system. Okay.

The timing, I talked about, we need to have a timing and a strategy. We need to stick to that. So based on -- now, when I was talking about the chart from most heavily traveled on the left to the right, most heavily traveled from the top down, and we do have strategies. And what some people who haven't come up through and fully understand pavement preservation is you do treatments to the roadway before you see cracks. If you see a crack, it's too late. Then now you're in the overlay or the reconstruction phase. So

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just because a roadway looks somewhat decent doesn't mean you shouldn't be doing anything to it like sealing it, rejuvenating the surface. You're really trying to seal and protect that very top three quarters of an inch of the pavement surface. The last thing you want is water, any type of moisture to get down into the pavement.

So we do. We have a strategy based on how many cars and trucks. The easel here is truck loading really. And this is just average daily traffic, so number of vehicles. So we do have a strategy based on how many vehicles and how many trucks are on that roadway. And it's a lot less, the attention we give the pavements, although there's the same amount of care, it's just not as frequent. So we do have a very good strategy. This fits nationally with what a lot of other proactive states are doing.

So timing strategy and economics, this is just a standard. So if you have a pavement that's brand new, it's in the excellent condition, okay, over time it will naturally deteriorate. So if you do nothing to the pavement at all, it'll just deteriorate and essentially would just turn into a gravel road eventually, it really will. So what we try to do -- and this is a national practice. This is a chart put out by the National Center for Pavement Preservation. You spend one dollar up in here, before the pavement reaches 75 percent of its life, you'll actually save \$6 to \$14. And I know that's kind of a wide range, but it depends on what part of this curve you're in as to how much that's going to cost you. Because if you get down here, you're removing the pavement structure. You're going down into the base, aggregate material. You're having to really pull the whole pavement out and put it back in, which is very costly.

Up here if you do a surface treatment on the first couple of, you know, first four to five years -- and I'll show you. These are some of the treatments we have. So same thing, so pavement excellent condition, fail, pavement -- so the age. What we typically try to do are some sealings, a joint crack sealing surface seals, to keep the pavement, you know, in good condition that can resist moisture.

And then the pavement will age a little bit and we'll have to go in and maybe do a very thin overlay or some patching. We're still crack sealing. We're trying to keep the water out of the pavement. And then over time the pavement will need an overlay or cold in place recycle. And really what we're doing here, yeah, so we're changing the slope, we're changing the curve here. So this is where you get the bang for your buck, so to speak, by

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doing treatments up here. You're really keeping the deterioration curve slope from really steepening. So it does save a lot of money to push this work out and extend the pavement life of the surface.

So in terms of tradeoff lifecycle cost analysis, these are things we do. I won't get into a whole lot of detail, but, again, this is your highly traveled, a lot of truck traffic, so interstate U.S. 395, U.S. 95 all the way down to 5's here. Category 5 are your very, very low traveled state routes. So because the pavement deteriorates so quickly on the interstate with all the trucks, it really pays to go in and try to do some of this reactive stuff or, sorry, strike that, proactive stuff before you're having to react because the deterioration rate is just -- it's amazing.

So this is just our general philosophy. We think this is how much money we'll save on any given unit of roadway or any annual funding scenario we're looking at. So here's a prioritization example. So really just -- I just want to re-emphasize the same thing that very rapid deterioration rate on I-80, whereas, you know, you get a really -- a few cars a day on SR552. It would make more sense to put your money into this pavement first before it deteriorates and then you're really having to spend a lot of money on the interstate. So just kind of our general prioritization process.

So pavement backlog, this gets a lot of questions. Every year we send this out. We get a lot of questions back on what is this pavement backlog and why is it so big. Well, it's pavement which has fallen into the fair or poor condition categories. So that's -- we either need to overlay that or we need to -- we need to reconstruct it. Those are the two highest costly rehabilitation strategies that we use.

And over the last few years we've accumulated 4,664 lane miles in need of overlay or reconstruction work. So very simply those treatments have come and gone and those projects have not gone out the door to do the work that's needed based on our strategy and timing. Okay. That doesn't necessarily mean the pavements are falling apart. We do go out and collect condition assessments, but those are pavements that have passed that opportunity to go out and do that work when, based on empirical data that we've studied over the last 20, 25 years, have shown that we should go out and do something by this time. So that's what that means.

We have put construction cost estimates together for all 4,664 miles. From here to New York is 2,700 miles. So that just gives you an idea how many lane miles are in need of this work. And current estimates show this work --

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so this construction cost estimates for this work -- for this work overlaying reconstruction \$1.9 billion to perform the work. Okay.

- Sandoval: Question from Lieutenant Governor.
- Krolicki: Bill...
- Hoffman: Yes.
- Krolicki: ...you might be about to speak to this, but context is hard here. You've just put up some pretty dramatic figures.
- Hoffman: Right.
- Krolicki: Context is important. You know, we've got, what, 5,300 miles of road. You're saying, you know, is that 4,600 part of the 5,300?
- Hoffman: Well, actually we have -- the 5,300 is a number that you'll see frequently. That's the center lane -- or center lane miles. So if you're traveling down a four-lane road and you go one mile, you actually have four lane miles of roadway.
- Krolicki: Yeah, understood.
- Hoffman: But it's referred to as one center lane mile.
- Krolicki: But it is apples to apples.
- Hoffman: Well, what...
- Krolicki: You're saying...
- Hoffman: ...apples to apples here...
- Krolicki: ...the 4,600 out of the 5,300 lane miles in Nevada are in need or fall into the fair or poor condition category.
- Hoffman: Well, I would say that 4,664 lane miles of the 13,100 plus lane miles that we take care of.
- Krolicki: Okay. So it's not apples to apples. I don't know where the 1,300...
- Hoffman: Well, there's a chart in -- there's a few charts that speak to the 13,100 and it's actually in this pavement backlog section.
- Krolicki: Okay. So that's a report I just received, so...

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- Hoffman: So I apologize for that.
- Krolicki: ...in our document is 5,300.
- Hoffman: Mm-hmm.
- Krolicki: So, you know, it's my impression from years past, and you've said that we've increased spending or (inaudible) we have a...
- Hoffman: Yes, we have, yeah.
- Krolicki: Somehow we have failed to maintain our roads is the impression I'm receiving from these figures. But everything I've heard empirically suggests that's not the case. So, you know, I'm having trouble...
- Hoffman: Okay.
- Krolicki: ...understanding why -- this is an -- I find this not ordinary maintenance.
- Hoffman: Right.
- Krolicki: I find it fixing a problem that's accumulated. Is that correct?
- Hoffman: That's true. And I will speak to the point that you made just a minute ago which was we're doing a poor job maintaining our roads. No, that's not the case at all. This is work that has come and gone and there was no action, okay, but that does not mean that the roads are falling apart. We need to still verify that that work is still needed. But based on our records and empirical research and analysis that we've done, we should have gone out sometime and done either overlay or reconstruction work. We're verifying that right now. So it is just -- and let me just -- let me just -- if I could just move on here.
- So Washington State DOT, they reported to their state legislature in 2010. And their report was almost identical to ours. So what I'm saying is, no, we're not doing a poor job of taking care of our roads. As a matter of fact, I think we're doing a really darn good job. We're very proactive. We understand what pavement preservation is. We have extremely talented maintenance workers in the field. They're doing a lot of crack sealing and preventive maintenance. And we jump on roadways, especially when they present safety problems, from a roadway pavement perspective. So we're very proactive when it comes to that, so...

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Krolicki: But despite that record spending in years past, we have a \$2 billion accumulated problem to address.

Hoffman: Yes, Lieutenant Governor.

Krolicki: So spending a dollar today saves \$5 to \$12 in the future.

Hoffman: Right. Well, if I could -- and the reason I brought in the Washington DOT legislative report and then rough roads ahead, just in general -- this is a national problem, really. And it has to do with transportation infrastructure nationally. There is so much infrastructure to take care of, there just isn't -- I mean, nationally there just isn't enough funding to handle the overall need. So we have Oregon, similar needs. Texas 73 billion, wow. That would be - - that's incredible. And what really is shocking, Rhode Island is such a small state, they need 640 million annually. So for a very small state, they must have a lot of bridges or something.

But the point I want to make is, do we have enough money to do everything we need within the state from a bridge and pavement standpoint? We don't, not from a federal and state standpoint. Are we doing the very best that we possibly can to keep the roads safe? And are we very good financial stewards and look at lifecycle costs and prioritization and do all of that? Yes, yes, we do. So I think we're doing a really, really good job. I showed you how we're doing relative to the rest of the country. We're doing really good. But it's a national issue that we're talking about in terms of funding and the amount of infrastructure that all the DOT's have to maintain and balance.

Sandoval: Member Savage and then Madam Controller.

Savage: Thank you, Governor. And, Mr. Hoffman, I voice the same concerns that the Lieutenant Governor has said.

Hoffman: Okay.

Savage: And one example, again, at first blush the report looks very challenging. As you know we didn't receive it until a few moments ago, so at first blush it looks challenging. But to hear you speak, it's much, much more positive than what it looks like. One example would be Page 47 of the brochure. And I'm saying this, before we go to the legislature, I would highly suggest that the Department review this packet...

Hoffman: Right.

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- Savage: ...and possibly make some corrections. For example, Page 47, locations of structural deficient and functionally obsolete bridges. Well, it looks good. There's only one red one. But it's right there on I-80. Well, you had said earlier it's not functionally obsolete. It's a functional bridge that is travelable.
- Hoffman: Yes, yes, sir.
- Savage: And so this type of -- Figure 26C would alert me and probably a few legislators before -- and I'm not saying, you know, we're not trying to be untruthful or say something that's not correct, but you're very diligent with the Department along with staff and administration. And I think it's vitally important that the Department reviews this packet before it carries on to the legislature. Thank you, Governor.
- Sandoval: Now, when I look at this Page 47, this is probably every bridge in Washoe County.
- Hoffman: Yes, Governor, it's a whole lot of them, but...
- Sandoval: I can't find -- well, I mean, I don't know, it's not that small, but it looks like every overpass, every...
- Hoffman: Right. So functionally obsolete, all of those bridges you're seeing there really is, I would say -- and I would have to check. I'm just kind of going out on a limb. I'm thinking, like, 90 to 95 percent of the functionally obsolete are lateral under clearance issues, which, I mean, there's nobody in danger of running into the bridge if they're driving a truck. This is lateral. So this is how big is the opening. Well it, you know, there's new design guides, new standards.
- Sandoval: No, and I -- you know that...
- Hoffman: Yeah, yeah.
- Sandoval: ...because you're an engineer.
- Hoffman: Right.
- Sandoval: And that's your expertise.
- Hoffman: Right.
- Sandoval: But a member of the public looks at this...

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- Hoffman: Right.
- Sandoval: ...and they're going to think, oh, my God, we have -- almost every bridge in Washoe County is either structurally deficient or functionally obsolete.
- Hoffman: Right. Well...
- Sandoval: Is it safe for me to drive?
- Hoffman: Yeah. Well, and those are very good points. And that's really the reason we wanted you guys, the Transportation Board, to take a look at this so that we could get comments. And just as you said, Governor, I'm an engineer. I look at that and know exactly what that means or pretty close to it. The public doesn't. The legislature doesn't. So we probably need to explain this a little clearer.
- Sandoval: Yeah.
- Hoffman: And the report does kind of explain that in terms of lateral clearance and things, but it's not right next. So if somebody gets a hold of this chart, they're not going to know what that is, so...
- Sandoval: That and those charts that you showed is as to how we compare to other states aren't contained in this packet.
- Hoffman: Right. And that I kind of went out on my own over the weekend and dug out old pavement condition. That's why it was a little out of date and...
- Sandoval: But that's part of the context...
- Hoffman: Right.
- Sandoval: ...that, I believe, Member Savage and the Lieutenant Governor are talking about.
- Hoffman: Right. Point well taken, Governor, thank you.
- Sandoval: Madam Controller has a question.
- Wallin: Yeah, Governor, to kind of follow up on that, you know, the comparison of ourselves to other states, yes, we're doing a good job. We look good. But we could be just like them because I think, you know, with the limited number of funds that we have available, we could go and say, well, we're doing really good, we don't need to worry. And then we'll be red light

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California. Okay. So we can't paint it that everything's rosy and wonderful because it really isn't.

And then I just have a question. Can you just kind of clarify on your prioritization about how you decide to go and do the preventative maintenance? You've got limited dollars. You do the preventative maintenance or do you work on a road that's going to slip into the poor status first? How do you...

Hoffman: Well, that's a good question. We try to go out after a pavement is brand new. So after we put new pavement down or it's new capacity project that we've done and there's new lanes, we try to go out within the first four years and put some sort of surface treatment on it. And that's really just to prolong the life of that oil in the pavement within that first four years.

Now, when it comes to -- let me see if I can go find that. When it comes to prioritization, you bring up a good point in that -- remember the pavement deterioration curve? Well, it's much steeper for an I-80. Okay. It's going to drop off in a hurry and then you're going to have to remove everything within a matter of probably less than two years. So once it starts, it goes very quickly.

On U.S. 95, let's say the segment, you know, north of Vegas out of the urban area, if that's in a fair condition, you have moderate deterioration. So, of course, you know, the amount of trucks and traffic aren't as great as I-80. And what we do is we put -- and then you have SR552 at the bottom. But what you do is you -- what's the -- see, the treatment for, I don't know, whatever length of project this is, is \$10 million for each. But where's the biggest bang for where you're putting your money? And it really is in the interstate because it's going to save you in the long run because you're not going to spend as many dollars.

And if this starts slipping into poor, the poor condition, it's got, I don't know, 15, 20, 30 cars a day, as long as the safety aspect of the roadway is maintained, then it really doesn't pay to go back and rebuild this road for 15 cars. But it sure does for I-80 with the commerce, the trucking, freight, all the people trying to get to work. That is extremely beneficial to spend 10 million today instead of 40 million in two years to rebuild the entire roadway.

Wallin: Got it. Okay. So...

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- Hoffman: So, yes, we do go through that prioritization. This is just a three project, just as an example, but we do that with every pavement project that we have. We go through this analysis.
- Wallin: So you look at the safety, as well, because there could be some poor roads that they don't get that many cars on them, but safety wise they're very (inaudible).
- Hoffman: Absolutely. So if there's a skid resistance problem or friction problem on the roadway, we would go out and chip seal this road.
- Wallin: Okay. And then also -- and this is something that -- this is just what it costs us, but when the roads start to deteriorate and they get rough, that increases the maintenance costs for the drivers on the roads and stuff.
- Hoffman: Exactly right. Exactly. So there are national studies that say one dollar spent to preserve the roads and try to make them smooth will save you -- will save the public 500 -- or 500, that would be a huge...
- Wallin: Well, it is a...
- Hoffman: But, like, \$5, I think, is...
- Wallin: Yeah.
- Hoffman: ...what they get back from a dollar spent on preservation in terms of vehicle maintenance costs, you know, fuel costs. So a smoother road costs less to travel.
- Wallin: And I think that that's something that kind of needs to be pointed out because I don't think everyone really understands it. Maybe show the dollars on that.
- Hoffman: Okay, very good.
- Wallin: All right, thank you.
- Hoffman: Yes.
- Sandoval: Well, that number's in there, but it's based on a D.C. based transportation advocacy group.
- Hoffman: Okay. So TRIP?
- Sandoval: Yes.

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- Hoffman: Yes, right. Well, actually, and TRIP is the one that -- they're the ones that partnered up with AASHTO on this report, too.
- Sandoval: So who do they advocate for?
- Hoffman: You know, I'm not sure. I don't know.
- Malfabon: But typically they work with road transportation builders, so contractors, material suppliers, engineering companies. So definitely the advocacy groups have an interest in there, but it's also for the benefit of the traveling public. We try to have a balanced program, Governor, as far as having some capacity projects. Just as the Board approved that new interchange in Las Vegas at Cactus, we try to address some of the backlog of needs on capacity, too, with our limited amount of transportation funds. But we try to take all of this into consideration in having a balanced program that's presented to the Board in your annual work program approvals and your STIP program approval.
- Sandoval: No, we have all those things. But those -- when those were presented, it didn't include this type of information.
- Hoffman: Right.
- Sandoval: And that would have been good to know. I mean, there's a line in this summary, it says the Nevada legislature has an opportunity to reinvigorate the investment policy for the state's infrastructure by ensuring that adequate funds are available to properly preserve the pavement and bridge infrastructure. I mean, that implies that we're not properly preserving the pavement and bridge infrastructure to reinvigorate when we have already spent \$150 million more as what was presented earlier in this meeting than we did two years ago. That's pretty invigorating.
- Hoffman: Yes, Governor, it is. It is. You're absolutely right. You're absolutely right.
- Sandoval: So I agree with the Controller. I just want a fair and balanced representation of what, really, the condition is here. And this seems to lean toward the cataclysmic side. And we spent the first part of this meeting talking about how great we're doing and how we compare to the country. Yet, now, you know, it says a safe, efficient and reliable roadway network is a matter of importance and it promotes the general welfare of the people of the State of Nevada. Adequate preservation funding is necessary because deteriorated roads can impede. I think all this suggests that we're not doing that right now when you say that we are. And it confuses me as Chairman of this

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Board and the other Board members because I've sat her for two years now and I haven't heard anything close to this.

Hoffman: Okay. Well, I will say that as a Department of Transportation, we do very, very good. And I'm typically a humble and modest guy. We do a really good job here, no question. Now, what I -- and the point that I was trying to make before, if we want to take care of every foot of bridge, pavement, guardrail from a federal and state standpoint, we could use more funding. That's my point. That's all. The cataclysmic, are we going to fall off a cliff, you know, as a Department of Transportation? No, it's not. We're just trying to make the point that, as a whole, nationally, transportation, we feel, is underfunded. There are a lot of other states that feel the same way. And that was why I showed you some of those excerpts out of that report. Just nationally transportation is underfunded. We will continue to do the very best job that we can to preserve our bridges and pavements.

Sandoval: That's the thing. I mean, if you read -- and I haven't had a chance to read this whole thing. But you read some of the highlights and you feel like I'm afraid to drive across a bridge. And when I hit the road, I'm going to hit a pothole that's going to take my wheels off the axle.

Hoffman: Right. No, and actually I'm very glad that we've brought this to you and that you now can give us feedback as to what your perception of this is, because this has just been kind of like an engineering document and we hand it over to the legislature. This is the exact reason we wanted to bring it before you. Okay.

Sandoval: Member Fransway.

Fransway: Thank you, Governor. Mr. Hoffman...

Hoffman: Yes, sir.

Fransway: ...you keep referring to we, and I don't believe I heard who is we. Who is responsible for collecting this data? Who is responsible for evaluating the roads and actually grading them? And you mentioned advocacy groups. And I'm wondering is the Nevada Highway Users Association part of that advocacy group? If not, should they be?

Hoffman: Well, I'll take your last question first. In terms of advocacy group, there was no one that had any input into this document at all. So I don't know if that was -- or no one contributed to this other than NDOT. Now, the groups that are out collecting the condition assessment data, that's our materials --

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our pavement materials group and that's also our maintenance workers. So they're out -- they look at the roadways on a consistent and regular basis. And it is our maintenance, Anita Bush in our Maintenance and Operations Division, it's Reed Kaiser in our Materials Division and it's Paul Frost in our Roadway Design Division, are really the sponsors for this program and make sure that our roadways are in good condition.

Fransway: Okay. So you have a team within the Department that is dedicated to preservation.

Hoffman: Absolutely, yes, we do. And have had for 15 years, yes. Okay. Thank you. I'm going to just sail right through the rest of this. The point I wanted to make here is we don't just have preservation needs. We also have congestion needs. Okay. And that's the balancing act that Rudy was talking about before. So here's where we -- you know, we rank 31 to 40 in terms of urban interstate congestion. But I will put out there again, we have done several design-build in capacity projects in both Southern and Northern Nevada. And I think the congestion has improved dramatically. So I would expect that this -- I would expect that we would move up in the rankings.

But there's very good reason for that, too, from 1990 to 2009 we're the fastest growing state in the nation. We went from 1.2 million to 2.6 million people. That's huge over such a short time period. And then vehicle miles traveled, same timeframe, 10.2 billion vehicle miles traveled to 20.4, doubling it. That's huge. That's a huge increase and need of our transportation system. So to do so well in the preservation area over the last few years and then to try to balance that with congestion is remarkable and NDOT should be very proud of themselves for that.

And I just want to -- here are the projects since 2008 that we've put out that's both helped. Now, some groups within the Department will say putting out capacity projects just add more lane miles that we have to take care of, but we do smooth out the pavements for them and repair the pavements that are existing when we go out there. We take that opportunity.

So just very quickly, SAFETEA-LU, that's the old federal funding bill that was out there, went from 11 or 12 programs down to these 6 programs. We don't really use the TIFIA loan program. We haven't used it. We're considering it. But there's a lot more flexibility in funding and how we spend our funding. So interstate maintenance was only interstate pavement projects that we used this category for. That's now in with our bridge

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program. So it gives us more flexibility to do what we think we need from a prioritization standpoint what we need to do.

So these are the total dollar amounts in each of the categories. Nationally this is, on the right here, is what NDOT is expected to receive. And then, of course, you have last day and some of the additional funds that we generally try to pick up. So that just gives you kind of an overview of the new MAP-21 bill and the flexibility. Now that there's fewer categories, funding categories, there's more opportunity for us to be more flexible.

So the short-term action plan, we need to focus on keeping the interstate and highest travel roadways in good condition. That's what we need to do. Emphasize preservation needs in our five-year project plan. So we have a five-year plan. We need to make sure the preservation is certainly a discussion topic with emphasis in prioritization of preservation in that plan. We need to take advantage of the flexibility I just talked about, the MAP-21 federal funding bill. We need to continue to look for ways to be innovative. We have, at times, been the leader preservation nationally. I still believe we are and we need to continue that. So materials, innovations, new ways to do things, new equipment, materials, we need to certainly look at ways to keep our pavements and bridges in good condition.

So with that, that is it. And thank you. And I haven't been up here an hour, have I, really? I was going to try to reduce the time I spent in front of you guys. It also seems like I always draw the short straw, too, in terms of the presentations.

Sandoval: There's some confusing requests in here. It's recommended that the Transportation Board accept the 2011/2012 State Highway Preservation Report. Yet this is listed as...

Hoffman: Information only.

Sandoval: ...information only.

Hoffman: So that was a mistake, Governor. I apologize.

Sandoval: I know. Which one?

Hoffman: Oh, it was informational. It was an informational item, because then that way I think we can work probably more effectively with each one of the Transportation Board members to try to get your input, feedback and see how we can do a better job.

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- Sandoval: Well, I appreciate, I mean, that this has been brought to our attention, because historically it has gone by the Board and straight to the legislature. So it's helpful that this was on our Agenda, yet we were looking at a -- the Member's got the report, some of them, today. I got this on Friday.
- Hoffman: Okay.
- Sandoval: And I want to thank the Director for getting that. But, as I said, I think that, as you say, you're an engineer and your staff are engineers and they've prepared this from that paradigm...
- Hoffman: Right.
- Sandoval: ...yet there seems to be -- and then you presented today how we stack up and how we've been doing pretty well.
- Hoffman: Mm-hmm.
- Sandoval: But that's not reflected in this report.
- Hoffman: Right, good point, Governor.
- Sandoval: So, as I said, I don't know if this Board doesn't -- we actually don't have a say unless we -- unless today you've taken on -- will take on some of our suggestions in terms of what you present to the state legislature. I know I would like to see the final draft...
- Hoffman: Sure.
- Sandoval: ...of what is going to be presented to the legislature. And one last comment before I leave it to other Board members. This is really important information that I wasn't aware of. And I think it's, as we move forward, that this be the type of information that this Board has. So when we're considering the decisions that we make in approving STIP's and projects and such, how that compares to that which is contained in this report.
- Hoffman: Right. Well, and, Governor, if I could say that Director Malfabon and I realize that this is the type of stuff that needs to be brought to you. And we need to educate and inform and make sure that you have all the information as we continue to work together, you know, over the next several months and years. So we'll be bringing more of this to you. Now, there's...
- Sandoval: And, I mean, I know it's one those be careful what you wish for because we're going to be -- get a lot of information. But when this gets presented,

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it's not just the Department. It's this Board, as well. And if it's -- there's going to be, perhaps, the indication that we've approved this, yet not seen it, then it puts us in a situation where we can get blindsided...

Hoffman: Right.

Sandoval: ...and not know what's contained in a report that's been presented to the legislature and thereafter be a public item.

Hoffman: Right.

Sandoval: So, Member Fransway, you have a comment?

Fransway: Yeah, one last comment. Thank you, Governor. I think it was mentioned that you're going to take the discussion items and the input from the Board and rethink some of this document before it is presented to the legislature and you only have two weeks to do that. But I think that if I heard the Board that we need to make it more clear. And it's vague in some parts that need to be clarified before it goes to the legislature. And when that happens, it'll be the general public.

Hoffman: Right. Well...

Fransway: So that's my hope. And I concur with the Governor. I certainly would like to see a final draft.

Hoffman: Yes. Well, and we will most certainly do that. I give you my word that I will contact each and every one of you and make sure that you have an opportunity to comment. And we will strategize as to how we can best move this forward in the next two weeks so that we can submit this report and make sure that it has been seen and vetted by the Transportation Board.

Sandoval: Member Savage.

Savage: Thank you, Governor. And just briefly, you know, I've stated earlier that along with the same concerns of other Board members. The presentation of this report is for support of funds being requested? That's my confusion. I mean, I see some of the numbers in here, but is it to substantiate the request that the Department is going to ask for in funding?

Hoffman: Member Savage, no. The report just talks about the transportation funding needs. It doesn't really talk about -- it doesn't talk about the budget request that we, as a state agency, have put in. So it's two totally different things. It's here's all the infrastructure we have. Here's the timeline that all of these

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items, pavement, bridges, are due in terms of how we spend transportation funding on. They have passed that due date. They are now due and now we start counting them as overlay or rehabilitation. But the two are not connected.

Savage: Okay. That was my misunderstanding. I thank...

Hoffman: Because we've -- yeah.

Savage: ...I thank you for the clarity. And I look forward to the revised report.

Hoffman: Sure.

Sandoval: Mr. Lieutenant Governor has a question or comment.

Krolicki: It follows up on Member Savage. And, again, I appreciate hearing it and you are the messengers, good on you, but you're getting the brunt of this. I'm still going back to my original comments on the context. Member Savage's question I actually think should be integrated into the budget. I mean, we have a -- here you say in a perfect world, I think, that \$285 million in addition to whatever it is that we're doing will need to be spent to maintain the existing network in its current condition.

From a budget standpoint, and what members may not know, but certainly the Governor, we talk about the cabinet. The Director has to go in front of the Legislative Commission here, you know, next week or something as the legislature prepares to convene, which is always a strange phenomenon. But, you know, these kind of comments must be integrated into the budget approach because he will likely be asked because we have people like Mr. Ryan from The Sun who will be writing about this and talking about the bogie that we now have. But how do you -- that \$285 million, you know, what is the ask? I mean, what kind of monies are we talking about? I mean, fuel tax or is it -- are you looking for an appropriation from the general fund? I mean...

Hoffman: Well, Lieutenant Governor...

Krolicki: How does that money get created for the legislature to even begin to discuss a remedy for those funding issues?

Hoffman: Lieutenant Governor, all's it is, is just an accounting exercise in terms of current day prices and future cost increases as to what the infrastructure needs are. It's not -- and it's based on past funding amounts that we've had, both federal and state, in past years. So we just look back and then we just

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project forward. So that step of asking for budget authority is not done in that document.

Krolicki: Okay. So we are sending them a report that we are not asking to do anything. We are presenting a status quo factoid and we will go backwards on the quality of a road significantly over the next decade. You know, I'm just wondering what's actionable here. I mean, we're presenting a picture that, you know, is like most other states.

Hoffman: Right.

Krolicki: Maybe we're doing well, but it's still not a very attractive picture. And, you know, I just hate to say there's a big problem in a Board that's responsible for NDOT and, you know, the folks who work so hard at NDOT to do the incredible job that you've done to maintain the existing infrastructure. We're not giving a game plan moving forward. We're just saying it's bad and it's going to get worse. You know, if this is just complying with a two-year report submission, then, I guess, so be it, but I just find it empty. I would just like to understand a remedy approach. We're going to throw this on the lap of the legislators and, you know, they're not going to be pleased and that's just not a very pleasant situation for anyone, especially you all here at NDOT.

Hoffman: Well, Lieutenant Governor, if I could, this is the first time we've brought it to the Transportation Board.

Krolicki: And aren't you glad you did?

Hoffman: Well, it needs to be done, you know. I have thick skin. I don't take any of this personally. I understand. We're just trying to get it right. Honest to goodness, we're just trying to get it right. We want the Transportation Board to be in the loop. I would recommend that we certainly include you much earlier from now on in the future for this report. And we have a facts and figures book that's coming out that needs to go to the legislature by February 1 that we want you to see before it goes over, too. But there's not going to be a Board meeting to formally agendaize that. So we'd like you to take a look at that, as well. That's a little more straightforward than funding needs and infrastructure. But I most definitely would like to work on getting to a better place in terms of what the report represents and what the message is, so...

Krolicki: Again, I absolutely appreciate what's being done here today and the attempt. I'm just looking for a cure. We're giving a problem without a remedy. You

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know, the Governor has crafted the budget with his Department heads for, you know, many, many, many months. This need is not integrated into that budget. And, you know, I think that puts everyone in a somewhat uncomfortable position, especially, as you know, we all think -- we all know how important this is, but, you know, for the Governor's world and portfolio, he's got to triage this against a lot of other things. And, you know, to get it at this minute makes it very difficult. Again, I'm not trying to accost the messengers. We appreciate it, but I'm looking for innovative solutions. You know, how much federal money could be, you know, secured...

Hoffman: Well...

Krolicki: ...to address this \$285 million number. You know, those are the kind of things I would like -- you know, here's a report and here's some things that might help us digest it, metabolize it and, you know, resource it. And I don't think we're doing the latter.

Hoffman: Well, and, Lieutenant Governor, it doesn't show exactly in that report, but Director Malfabon's cost cutting measures, we're looking to cut five percent within the Department. We're looking at other areas within the Department to make cuts. We're looking at the MAP-21 flexibility that -- so there are opportunities to try and fund more of the needs.

Malfabon: I think, just to add to that, we've recognized that it's a national issue. We were pleased to see the comments from the new Chair of the House Transportation Committee about the need for more federal funding. MAP-21 expires in a couple of years and we don't know what we'll get from the federal government after that, but we hope that it's at least as much as we've been getting. We submit our budget in a balanced approach looking at the revenues that we traditionally receive from the federal government as well as the state gas tax, fuel taxes.

So we do have a report here that lays out a lot of backlog, a lot of needs. And we will take into consideration a lot of the Board's comments about the positives of NDOT's program and what we've been doing and what we've achieved over the recent years to improve the preservation of our roads. But the bottom line is we have a lot of needs that are unmet by current funding levels from the fuel tax, both at the state and the federal level.

Sandoval: Member Fransway.

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- Fransway: Thank you. We've belabored this, but I think for good cause you mentioned a recommendation that this document be presented to the Board at an earlier date. I think that that should be a prerequisite.
- Hoffman: Yes, sir.
- Fransway: And just as something to throw out there, do you remember what we did with CMAR? We had individual briefings and...
- Hoffman: Mm-hmm.
- Fransway: ...from this Board member's perspective, it was very, very helpful. And maybe that same approach should be done with the highway preservation document also.
- Hoffman: Yes, sir, Member Fransway, Director Malfabon and I have talked at length about going to each individual Board member and presenting a state of the Department of Transportation type of here we are, this is what we do, this is how we do it, this is why we do it, just because he and I are new in our new positions and we just want to make sure that we're open and transparent and the Transportation Board knows all that we're doing.
- Fransway: And it is, to me it's paramount that the Board fully understands this document and digests it and so that we can give what input we can back to you and the staff.
- Hoffman: Yes, sir.
- Fransway: Thank you.
- Hoffman: Question. When can Rudy and I say that we're new still? How long...
- Sandoval: I think the honeymoon is over, yeah.
- Hoffman: Is it over? Doggone it, all right, okay. Well, that's all I had if...
- Sandoval: Well, I think that is the perfect segue to Agenda Item No. 13, which is a report on construction contracts completed.
- Malfabon: Thank you, Governor.
- Unidentified: Thank you, Mr. Hoffman.
- Hoffman: Oh, you're welcome.
- Sandoval: Thank you very much, Mr. Hoffman.

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Malfabon: Assistant Director for Operations Rick Nelson will cover this item. And I just wanted to add that we really appreciate the additional effort from the Board members that are on the Construction Working Group. Len Savage and Madam Controller and Frank Martin have really been an asset to the Board in looking into these details of the construction program in that Working Group.

Nelson: Good morning, Governor, members of the Board. For the record, my name's Rick Nelson. I'm the Assistant Director of Operations. And thank you for the time to give you an update on where we stand with construction contracts that have been completed over the last year. As you recall, it was about 11 months ago when this report was first presented. And, in fact, it generated a tremendous amount of questions which led to the creation of the Construction Working Group, which, I think, has been an outstanding venue to go over these kinds of issues with some regularity.

I would like to mention that we cover this material every two months. During every two-month's meeting we go over these projects somewhat in depth to fill the Construction Working Group in on the progress that we're making, not only with closing projects out, but with the status of our active construction projects. And we also transition into a closed session where the Attorney General's Office has an opportunity to brief the Construction Working Group on claims and potential litigation and those kinds of things. So we believe we're giving this group a very robust picture of the status of our construction program.

At the very first meeting we introduced some construction terms. And I really don't want to go over those again, but we did add one. One term that we're beginning to use now with some regularity is the agreement estimate. And what the agreement estimate is, is it's the amount of money that we have budgeted for the particularly project. And these are contingencies that we take into account above the construction bid. Things like asphalt escalation, steel escalation. And there are also some minor contingency amounts for unforeseen things that happen to occur during the conduct of a project. And so the agreement estimate is, in fact, the number that we use as our budget.

Highlights for 2012, we closed out 37 construction projects. Of those 37 projects, 67 percent of them were completed under the budget, which is, again, that agreement estimate amount. Twelve did finish over budget. If you take all 37 contracts in total and you aggregate the expenditures for

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those, we did finish within the budget set aside for those 37 projects. So even though some were over and some were under, it worked out in the wash that we were right at budget. We also list the number -- what contractors are represented and we, in fact, had 18 contractors that constructed those 37 projects for us.

The settlements for these 37 projects that we closed out, there were no settlements that went to the Board of Examiners and so on. All of the contract costs were covered within the project through the normal contractual arrangements. It's not saying there were not disputes, but they were -- those disputes were settled under the terms of the contract.

Close out duration, this is something that we've been focusing on with the Construction Working Group over the last year. This gives a graphical representation of the amount of time it has taken us to close out these projects. On average it's taken us 17 months. However, those outliers, those two very stale projects are dragging our average down and it's our desire to get all of those old ones taken care of in addition to moving that curve up so that we're dealing with the majority of our projects in that 6 to 12 month range.

Again, the statistics for the year, there were 34 construction contracts awarded this year and we closed out 37. And that's opposed to the 27 that we closed out during last year's reporting cycle. So kudos to the staff that have been working on this and cranking out ten more projects than the year prior.

The bid -- you can do the math yourself. The bid value, \$342 million. Our change order rate was at 1.8 percent for this last year's projects, which is about what it was for 2011. Quantity adjustments, these are those items where the estimated amount of quantity that we thought we were going to do become inflated or deflated based on the actual amount that had to be completed. That's down for this group of projects quite a bit from the previous year. That's an indication that we're doing much better at estimating our projects.

The total amount paid was \$357 million, which is 4.3 percent higher than the bid amount. Now, there is a correction I'd like to make in the write-up for this. In the first paragraph of the analysis section we talk about construction totaling \$360 million. I apologize for that error. That \$360 million was the budgeted amount. So for these 37 projects we had budgeted

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\$360 million. And we paid our contractors 357, so we're just slightly under budget for that.

Looking forward, as of January 1 these are the projects that we have on our schedule for closeout. Right now we're currently tracking 59 projects. Now, when a construction project reaches about 90 percent completion, we put them on the tracking document for project closeout. And the reason that's important to us is there are things that need to occur; paperwork that needs to be submitted, certifications that need to be submitted, payrolls that need to be verified and that sort of thing. And we want to start looking at those before construction actually is complete. So we're tracking 59 projects. Thirty-nine projects have been completed. And so hopefully all of these bars add up to 39.

This represents -- there's two major steps that take place when we complete construction and that's when the clock really starts ticking from, I think, Mr. Martin's perspective on getting these things closed out. And then there's an intermediate step where we pick up the books. As the Resident Engineer and their crew are inspecting and monitoring the progress of the contract, they fill out some very elaborate field manuals. And we've spent lots of time talking about this in the Construction Working Group. And there's a hand off that takes place between the Resident Engineer and their crew and the construction office where we actually audit those documents to make sure that we've paid everything and documented everything appropriately. So on this particular chart there's the completed projects, but they have not been closed out. And then the subset of that are those that have been completed but not picked up. So, again, what we're trying to do is drive these bars closer to the 6 to 12-month range.

Every two months, as I mentioned, we get together with the Construction Working Group and we cover these projects. And every time we go through that exercise, we try to think of things of how we can make some continuous improvement in this progress. The biggest thing that has taken place are monthly closeout meetings that take place with the District personnel, so these projects continuously come up. We continuously discuss them; things that need to be done, what can we do to facilitate this handoff, what can we do to make the closeout much quicker. Basically what gets monitored gets done and through these monthly meetings we're looking at every single one of these projects.

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I can't remember if this is my last slide or not. It was. With that, I would be happy -- oh, one thing I would like to bring up. In your packet there is a spreadsheet that's been included with these summary statistics along the right-hand side. This spreadsheet is what gets presented to the Construction Working Group every two months. We look and ask questions about each of these numbers, particularly the PE rates, the preliminary engineering costs, and the construction engineering costs, who the Resident Engineer is, who the designer is, who the contractor is.

Behind that are individual detail sheets associated with each of the 37 projects that we've closed out. So we can go through and look at all those summary statistics and what we've spent in preliminary engineering and right-of-way and that sort of thing.

And one thing I'd like to mention in looking at these detailed sheets, which we never really did before we started reporting on these projects, we sort of discovered a little glitch in our system. You know, the obvious question is if you issue a contract that's Contract 3400, why can't you say how much money you've spent on Contract 3400? And so one of the little perturbances that we found is when we track the costs, particularly for preliminary engineering and right-of-way, is we look at those based on a federal project number. And if you have a particularly large project that has multiple phases, there may be one project number for right-of-way for all the multiple phases. And it's been a bit difficult to go in and say, okay, if we had this project on Blue Diamond, for example, that covers, I don't know, I'm making this up, 15 miles and we build it in three five-mile segments, how do we go back and say this right-of-way was required for this five-mile segment, this right-of-way was required for this five-mile segment? So that's something that we are working on right now. Now if we went in and we said, okay, how much did we spend on Blue Diamond, all of the phases, we absolutely can give you a correct accounting of all of that by aggregating all the individual projects together.

But it's become a little bit tricky where we take one project and we start cutting it up into different parts and pieces to try to report individually on that. Now, we can absolutely tell you how much we gave the contractor -- how much we paid the contractor to do that contract number. And we can tell you how much we spent doing construction engineering. But the preliminary engineering and the right-of-way have been a little bit of a challenge.

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And then the very last page -- last two or three pages of this report are another spreadsheet that lists the status, the detailed status, of each of those projects that we're working on closing out and all the pieces that are there. So those are for your reference to sort of give you a feel for the kinds of things we're tracking and how we're trying to report on those. So with that, I would be happy to entertain any questions that you may have.

Sandoval: Questions from Board members. Will we get a litigation report on how much money we've expended for litigation expenses for our attorneys, the other side's attorneys if we didn't get a successful outcome or there was an award of attorneys' fees and costs?

Nelson: Yes. If one of those projects happen to land in this group, we would absolutely include those in there. The desire is to represent to the Board all of those costs associated with these projects, and, particularly, if they went into a settlement or a litigation. But it's just happened that this particular group of 37 I don't believe had any litigation associated with it.

Sandoval: And we get the monthly litigation report. Will we get an annual report? I'm just kind of curious, for example, that engineering bill that we got for expert fees for us and we get these snapshots each month. But it'd be interesting for me to at least see how much we pay in attorneys' fees annually. For instance, in that Falcon Capital there was an award of attorneys' fees and costs against us. And I'm curious how much we have to pay out for that or in any other case. And then, finally, on the inverse condemnation cases or the condemnation cases, how much our appraisal was and how much we ended up paying out. We'll move on to Agenda Item No. 14, old business. Thank you very much, Mr. Nelson.

Malfabon: Thank you, Rick. What we have is -- on old business we have several items to provide updates on. First is Attachment A to Item 14, which is an update on the status of Project NEON, the public-private partnership RFP. We've issued the request for qualifications for the legal and financial advisors that the Board had previously authorized us to proceed with. So we did receive those qualifications. Now we're -- we anticipate that in March we'll have the actual selection and the contracts negotiated to bring back to the Board for your approval.

Sandoval: How many entities did we have that responded to the RFQ?

Malfabon: I believe that we had was it three?

Gallagher: Three and five.

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- Malfabon: Do you know which one was which?
- Sandoval: Based on each phase? Is that -- when you say three and five.
- Malfabon: Three -- there was three for -- was it legal or financial? Anybody?
- Hoffman: Well, that was being held as confidential information, but what we had is either legal or financial there were three. And either legal or financial opposite of what wasn't in the first was five. So there were either three or five responses to the RFQ's.
- Malfabon: They get real picky on confidentiality, I guess.
- Sandoval: No, and I don't want to...
- Malfabon: I didn't even know.
- Sandoval: ...do anything that (inaudible).
- Malfabon: All I heard three and five, but I didn't know which was which. And I asked the question though, Governor, and I got the same response that you did.
- Hoffman: Me, too.
- Sandoval: Member Fransway.
- Fransway: Thank you, Governor. You say that these RFP's have been developed for Phase 3. Have there been any for Phase 1 yet? Because isn't Phase 1 and 3 we gave the go ahead for, correct?
- Malfabon: Yes. So this was for the financial arrangement that would come to pass for Phase 1 and 3, construction on Project NEON, that is correct.
- Fransway: Phase 1 and 3?
- Malfabon: Yes. And a lot, obviously, is going to depend on the negotiations for the actual P3 agreement to finance the project, see what we can -- but that was our hope is to finance Phase 1 and Phase 3 of the project.

The other thing to mention is the -- we're adding the -- using the existing budget with CH2M Hill, which is the engineering firm that's providing support to NDOT on Project NEON to assist us on the delivery method, so program management of the P3 project doesn't add any additional cost. It's just that we're not paying them to advance the design to 100 percent because we're going to be looking at a design-build project. So the design-builder will actually finish the design of the project. So we can use them for

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program management services through amending their scope. So that's it. Any other questions on Attachment A?

Attachment B, Rick was pretty thorough in the efforts of the Construction Working Group. And this is just additional information as a biannual report on the efforts of that group.

Savage: Governor?

Sandoval: Member Savage.

Savage: Director Malfabon and Governor, just a few words on this. You were kind enough to thank us. And I would like to, at this time, both thank the NDOT administration and the staff, as well, along with Madam Controller and Member Martin for their cooperation, your responsiveness, understanding, patience and utmost diligence to get better at what we do. Remaining accountable with our industry, it's very important with the relationship we have with the private contractors. And I just believe we're on the right track.

I think meeting every other month is very important. And reporting, originally, Governor, we were requested to report on a quarterly basis to the Board. And I respectfully request that we report on a biannual basis rather than quarterly if that would be appropriate.

And a couple highlights would be the contract retention. There's been a lot of discussion on the retention and the biweekly payments that we pay the contractors rather than, for instance, on Public Works they pay once a month, NDOT pays twice a month. So we're engaged in discussions on a meeting basis to a lot of the specifics. So I thank you. Thank you, Director. Thank you, Governor.

Malfabon: Thank you.

Sandoval: And I, too, would like to thank you, Member Savage, and everybody associated with that subcommittee. That's a lot of extra work and...

Savage: It's worth it.

Sandoval: But it is. It is worth it and it's very beneficial for me and for all and for the community. So it wouldn't happen without your leadership and the participation of the other subcommittee members as well as the hard work of the staff of NDOT.

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- Savage: Thank you, Governor.
- Sandoval: Thank you.
- Malfabon: Thank you, Governor. On Attachment C we have the table that has outside counsel contracts as of December 19. And Dennis Gallagher is here to answer any questions you may have on that item.
- Sandoval: And I have no questions. As I said, my previous request is...
- Malfabon: It's in addition to this.
- Sandoval: ...pretty much what we have here, but just to get a bottom line is all.
- Gallagher: Will do, Governor.
- Malfabon: And Attachment D is the monthly litigation report, which includes condemnations, inverse condemnation cases as well as tort claims against the Department, contract disputes and personnel matters. We can't go into any specific details, but information is provided.
- Sandoval: You know, and just these condemnations and inverse condemnations are growing. Obviously there's nothing we can do about that because we, you know, for Project NEON I would imagine most of these are associated with.
- Gallagher: That's correct, Governor.
- Malfabon: And finally, Attachment E, nearly an annual summary, but we'll get the actual annual summary so that you can compare. But in general we've reported it in the past that the fatalities on our state highways and streets rose dramatically in Clark County despite the efforts of our Safety Division and the efforts that we do with law enforcement, with emergency medical responders and educators on our Strategic Highway Safety Plan implementation. So it's a tragic uptick in fatalities in Clark County, but we did see decreases in some other counties across the state. And hopefully we'll see those numbers turn around to be more favorable in reduction of fatalities next year -- this year, pardon me.
- Sandoval: And, Mr. Director, I saw this weekend one of our commercials, which I don't know if those public service announcements run regularly scheduled or if it's up to the stations, but it's good to have that message out there. I saw the one where it's a gentleman and his wife and his kids and he's said there's no way we'll ever hit zero. And then I saw my family and I thought, yeah, maybe we should hit zero.

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Malfabon: That's exactly -- the point of that personalizing it so that we all do our part in safety on the traffic -- highway traffic safety.

Sandoval: Member Fransway has a comment.

Fransway: Thank you, Governor. When I was en route for today's meeting, it just so happened that the radio mentioned NDOT's report on fatalities and the fact that we were up. But they always -- also mention that the serious injuries from accidents were down. And I didn't know exactly how that computed, but the fatalities are up and the serious injuries are down. So in that respect it's good. I don't quite understand how that could be, but...

Malfabon: Well, definitely...

Fransway: So there is some good news in the report, yes.

Malfabon: ...the use of seatbelts might be something to tie into that. Obviously as vehicles become more safe with the use of airbags for passengers as well as the driver. Definitely, we like that kind of statistic. I wanted to mention that the Attorney General had asked about drug impairment on drivers, as well. And I don't think that we were able to capture that level of information on the statistics.

Hoffman: Right, that's right, yes.

Sandoval: I'd imagine most of these are the pedestrian fatalities versus vehicle on vehicle; is that accurate or is that included in this?

Malfabon: This includes the pedestrian fatalities as well. I wanted to mention, also, that we have an operations group that's our traffic operations folks and the District's. And particularly in Las Vegas we work with the RTC's arm called the FAST group. So they take care of our dynamic message signs, put the messages up there. And one of the things that this operations group is considering through that committee is putting fatality statistics for Nevada highways up on those message boards so it brings it more to mind.

I know that it can be viewed negatively, but the more that people understand what our numbers are, the more it personalizes it, I think. And we've seen this successful in other states that have put it up there. It's a bit controversial at first, but it gets people talking about it and thinking about what they can do to drive down those numbers.

Sandoval: Any further comments? Does that complete Agenda Item 14?

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- Malfabon: Yes.
- Sandoval: Thank you, Mr. Director. Agenda Item 15, public comment. I think we've worn everybody out. Is there any member of the public present here in Carson City that would like to provide comment to the Board? Southern Nevada, any public comment?
- Martin: None, sir.
- Sandoval: We will move for adjournment. Is there a motion for adjournment?
- Fransway: Moved.
- Martin: Second.
- Sandoval: A motion by Member Fransway for adjournment, second by Member Martin. All in favor, please say aye.
- Group: Aye.
- Sandoval: Motion passes. This meeting's adjourned. Thank you, ladies and gentlemen.

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Secretary to the Board

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Preparer of Minutes



## MEMORANDUM

February 4, 2013

**TO:** Department of Transportation Board of Directors  
**FROM:** Rudy Malfabon, Director  
**SUBJECT:** February 11, 2013 Transportation Board of Directors Meeting  
**Item # 4:** Approval of Agreements Over \$300,000 - For Possible Action

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### **Summary:**

The purpose of this item is to provide the Board a list of agreements over \$300,000 for discussion and approval following the process approved at the July 11, 2011 Transportation Board meeting. This list consists of any design build contracts and all agreements (and amendments) for non-construction matters, such as consultants, service providers, etc. that obligate total funds of over \$300,000, during the period from December 22, 2012 to January 18, 2013.

### **Background:**

The Department contracts for services relating to the development, construction, operation and maintenance of the State's multi-modal transportation system. The attached agreements constitute all new agreements, new task orders on existing agreements, and all amendments which take the total agreement above \$300,000 during the period from December 22, 2012 to January 18, 2013.

### **Analysis:**

These agreements have been prepared following the Code of Federal Regulations, Nevada Revised Statutes, Nevada Administrative Code, State Administrative Manual, and/or Department policies and procedures. They represent the necessary support services needed to deliver the State of Nevada's multi-modal transportation system.

### **List of Attachments:**

- A) State of Nevada Department of Transportation Agreements over \$300,000, December 22, 2012 to January 18, 2013.

### **Recommendation for Board Action:**

Approval of all agreements listed on Attachment A.

**Prepared by:** Scott K. Sisco, Assistant Director - Administration

# Attachment

# A

State of Nevada Department of Transportation  
 Agreements for Approval  
 December 22, 2012 to January 18, 2013

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
1	03313	0	0	INFO TECH, INC.	IMPLEMENT E-DOC SYSTEM	N	\$ 422,800.00	\$ -	\$ 422,800.00	\$ -	11-Feb-13	30-Jun-14	-	Service Provider	2-11-13: IMPLEMENT AN ELECTRONIC DOCUMENTATION SYSTEM TO INCREASE EFFICIENCY OF RECORDING CONSTRUCTION ACTIVITIES TO MAKE PROGRESS PAYMENTS TO CONTRACTORS. NV B/L#: NV20091437646
2	14911	0	3	PENNA POWERS BRIAN HAYNES	ZERO FATALITIES PROGRAM	Y	\$ 688,166.00	\$ 487,634.33	\$ 2,217,436.77	\$ -	1-Apr-11	30-Sep-13	-	Service Provider	AMD 3 2-11-13: INCREASE AUTHORITY BY \$487,634.33 TO \$2,217,436.77 AND EXTEND END DATE TO 9-30-13 TO COMBINE THE TWO SEPARATE SAFETY TRAFFIC CAMPAIGNS OF NDOT AND DEPT OF PUBLIC SAFETY-OFFICE OF TRAFFIC SAFETY INTO ONE CAMPAIGN. AMD 2 3-12-12: INCREASE AUTHORITY BY \$941,636.44 TO \$1,729,802.44 TO EXTEND THE REACH AND AWARENESS OF THE MARKETING CAMPAIGN, AND EXTEND END DATE TO 3-31-13. AMD 1 10-25-11: INCREASE AUTHORITY BY \$100,000 TO \$788,166. ENHANCEMENT WIDENING THE REACH AND AWARENESS OF THE ZERO FATALITIES MARKETING PROGRAM AMONG THE PUBLIC 4-1-11: PROVIDE SERVICES FOR ZERO FATALITIES MARKETING PROGRAM. NV B/L: NV20111035305

# Line Item 1

**STATE OF NEVADA  
DEPARTMENT OF TRANSPORTATION**

**M E M O R A N D U M**

January 10, 2013

**TO:** Richard Nelson, P.E., Assistant Director

**FROM:** Jeff Shapiro, P.E., Chief Construction Engineer   
Ann Conlin, Project Manager 

**SUBJECT:** Negotiation Summary for Electronic Construction Documentation System (EDOC)

Bids were received for the Electronic Construction Documentation Request for Proposal (RFP) in July 2012 from 4 software development companies. The RFP included a not to exceed clause stating the total EDOC project costs and services are not to exceed \$1,500,000. This amount was based on the Technology Information Request (TIR) completed during the budget process in the previous biennium.

Info Tech was selected by the evaluation team as the best software provider based on several criteria: project approach, project team, past performance, design and architecture and cost. The selection resulted in a fixed price deliverables-based contract in the amount of \$422,800.00. No further negotiations took place as the contract price is based upon the cost submitted by the Service Provider in the RFP. It should be noted Info Tech is the implementor of the software. There are associated annual license fees paid to the American Association of State Highway and Transportation Officials (AASHTO) in the amount of \$78,000 a year.

The scope of the software services for the EDOC project provided by Info Tech was reaffirmed by both parties at the onset and included the following deliverables:

1. Planning and Administration
2. Test Technical Environments
3. Proof of Concept and Detailed Functional Requirements
4. Detail System Design
5. System Development and Configuration
6. System Integration Testing
7. Documentation and System Operating Procedures
8. Training and Acceptance Testing
9. System Warranty and Maintenance Support

The contract is deliverables-based and the contractor will prepare a project schedule with a time frame for each deliverable. The estimated timeframe is 1 year.

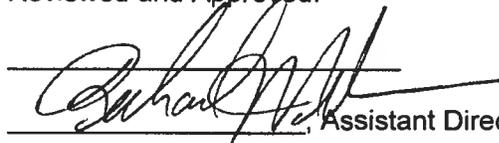
Key personnel who will be dedicated to this project are as follows:

Chad Schafer, Senior Manager, Construction Services  
Eric Erskine, Project Manager

The contract includes the following major milestones:

SCOPE OF WORK SECTION	DELIVERABLE	TOTAL COST
7.1	Planning and Administration	\$39,500.00
7.2	Test and Production Technical Environments	\$25,650.00
7.3	Proof of Concept and Detailed Functional Requirements	\$32,700
7.4	Detail System Design	\$27,550
7.5	System Development and Configuration	\$108,550.00
7.6	Conversion Design, Specification, Development and Unit Testing – No conversion will be done	0.00
7.7	System Integration Testing	\$17,800.00
7.8	Documentation	\$27,000.00
7.9	System Operating Procedures – included in the documentation and software license	0.00
7.10	Training	\$22,300.00
7.11	Acceptance Testing - included in the documentation and software license	0.00
7.12	Production System Implementation - included in the documentation and software license	0.00
7.12	Production System Implementation - included in the documentation and software license	0.00
7.13	Post Implementation Evaluation and Review- - included in the documentation and software license	0.00
7.14	System Warranty and Maintenance Support	\$121,750
	<b>PROJECT IMPLEMENTATION COSTS</b>	<b>\$422,800</b>

Reviewed and Approved:

  
Assistant Director

AC

cc: Mario Gomez, District 1 – Chief Engineer  
Thor Dyson, District 2 – Chief Engineer  
Kevin Lee, District 3 – Chief Engineer

# Line Item 2

**STATE OF NEVADA  
DEPARTMENT OF TRANSPORTATION**

**M E M O R A N D U M**

November 28, 2012

**TO:** 1. Jaimarie Dagdagan, Budget Section  
2. Elaine Martin, Project Accounting *DD for CM.*  
3. Rudy Malfabon, P.E., Director

**FROM:** *CWR*  
Chuck Reider, Chief Safety Engineer

**SUBJECT:** REQUEST APPROVAL FOR AMENDMENT 3 TO AGREEMENT NO P149-11-016 AND OBTAIN BUDGET APPROVAL AND TIME EXTENSION TO CONTINUE THE ZERO FATALITIES MARKETING CAMPAIGN.

To further enhance and coordinate our traffic safety public outreach during a time when traffic fatalities are rising, NDOT Safety Engineering and Department of Public Safety through the Office of Traffic Safety (OTS) look to combine our two separate traffic safety campaigns (such as Zero Fatalities, DUI, pedestrian, and seatbelt campaign) into one combined, cohesive and more impactful campaign. Integrating the two agencies' advertising campaigns will eliminate inconsistent advertising, reduce competition for advertising space and audiences, lessen duplication of efforts and provide more cost efficiencies and cost savings when purchasing advertising space. This strategy can reach approximately 86% of the population with 9.7 million messages delivered to the target audience compared to 70% by separate campaigns (please see attached analysis). This will result in a more effective use of federal funds. The combined additional bonus media impressions across these campaigns have an estimated total value of \$276,962.

Both agencies are using Penna Powers Brian Haynes (PPBH) as their consultant for traffic safety advertising. NDOT's current agreement with PPBH for the Zero Fatalities campaign will expire on March 31, 2013, while the OTS annual advertising campaign cycle ends September 30, 2013.

To fully realize the benefits of combining the two agencies' advertising campaigns, NDOT Safety Engineering is requesting to extend the PPBH agreement from March 31, 2013 to September 30, 2013 to align with the OTS annual advertising cycle. An additional cost of \$535,000.00 will be incurred from April 1, 2013 to September 30, 2013. This additional amount is nearly identical to the funding that was necessary to complete the tasks requested of the consultant during the same six month period in 2012. Therefore, the total amount of Agreement P149-11-016 will become \$2,264,802.44, 95% Federal-aid 5% state funding.

NDOT Safety Engineering will continue with a Request for Proposal (RFP) for the Zero Fatalities Marketing Program as previously requested (approved Form 2a) to have the successful consultant under contract by October 1, 2013.

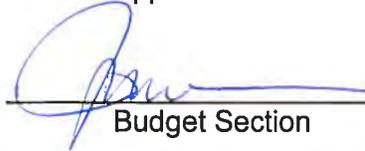
Approval of this memo by the Project Accounting Section and the Budget Section indicates funding authority is available for Budget Category 06, Object 814P, Organization C816. The A04 Financial Data Warehouse Budget by Organization Report No. NBDM30 is attached. Please return this memo to the originator for inclusion in the project.

Approval of this memo by the Director's Office authorizes this request.

Approved:

  
\_\_\_\_\_  
Director

Approved:

  
\_\_\_\_\_  
Budget Section

COMMENTS:

Will be paid by existing project 73612 EA

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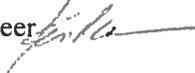
*Allows bulk purchase of advertising if campaigns align in timing. - Rudy M.*

**STATE OF NEVADA  
DEPARTMENT OF TRANSPORTATION**

# M E M O R A N D U M

January 15, 2013

**TO:** Tom Greco, Assistant Director Planning

**FROM:** Chuck Reider, Chief Safety Engineer 

**SUBJECT:** Negotiation Summary for Amendment 3 to Agreement No P149-11-016, to provide services for the continued support of the Zero Fatalities goal by combining into one the two separate traffic safety campaigns of NDOT and DPS-OTS

A negotiation meeting was held at the NDOT building in Carson City on January 10, 2013 with Penna Powers Brian Haynes staff members (conference call) and NDOT Safety Engineering staff in attendance. The Service Provider chosen was the most qualified through the Request for Proposal (RFP).

The scope of the services to be provided by the Service Provider was reaffirmed by both parties at the outset. The agreed scope of services and schedule (from April 1, 2013 to September 30, 2013) are shown in Appendices A & B respectively.

Key personnel who will be dedicated to this project are as follows:

Brent Wilhite ----- Project Manager	Eric Larson ----- Senior Art Director
Clayton Carter ----- Ad Supervisor	Jane Putman ----- PR Account Manager
Marc Stryker ----- Media Director	Erico Bisquera ----- Creative Director
Kyle Kubovchik ----- NV Campaign Director	Mitch Vice ----- Interactive Director
Bobby Brinton ----- Senior Copy Writer	Chris page ----- Interactive Developer
Frank Harnden ----- Production Manager	

The proposal was reviewed by tasks. Refer to the table shown below for comparison of the cost estimate. The Service Provider overhead rate of 148.11% was verified and provided by the Internal Audit Division.

The negotiation yielded the following:

Description	NDOT Estimate	Service Provider original proposal	January 10, 2013 negotiation	January 11, 2013 negotiation
Total Est. cost	\$535,000.00	\$614,425.79	\$492,377.26	<b>\$487,634.33*</b>
Total Man-hours		2231	2001	1956.00
Fixed fee	10%	10%	10%	10%
Direct labor cost		\$205,411.29	\$183,912.76	\$179,169.83
Other direct cost		\$409,014.50	\$308,464.50	\$308,464.50
<b>Total</b>	<b>\$535,000.00</b>	<b>\$614,425.79</b>	<b>\$492,377.26</b>	<b>\$487,634.33*</b>

The total negotiated cost for this agreement, including direct labor, overhead, fee and other direct costs will be **\$487,634.33\***.

\*The Service Provider (Penna Powers Brian Haynes) agrees that no mark up and or commission will be added or charged for the compensation by the Service Provider in the production and or media buying for the implementation of any tasks specified in the scope of services (Appendix A).

cc: Agreement Services

**Task 1: Update Strategic Communication Plan**

*Deliverable includes a report detailing the elements outlined below.*

- a. Analyze public opinion research results and traffic safety statistics. Assess tactics used in the previous campaign year.
- b. Update the previous year's plan identifying target audiences, key messages, strategies and tactics, using the assessments to determine the most effective communication tools for reaching the target audiences.
- c. Timeline for the plan will cover the time period from April 1, 2013 to September 30, 2013.

**Task 2: TV Advertising**

*Deliverables include TV spots.*

- a. Develop TV spots, focusing on the messages determined to be most critical by the Strategic Communication Plan.
  - Two :30 Spots (two final concepts).
  - Two :15 Spots (re-cuts of same concepts).
  - Two :10 Spots (tie-in to same concepts) (no talent, simple).
  - Online format conversion for all spots.
  - Optimize / distribute to online media partners.
  - Will also use previous creative when available and appropriate for campaign messaging
- b. Purchase talent usage rights for six months on new spots. Renew talent on "Crash" and "Family Ties" spots for 6 months.
- c. Task includes the research, placement and reporting of paid media.
- d. Develop, continually maintain and provide to NDOT a calendar and verification report of distribution/airing of all TV advertising, including performance measures such as gross rating points, reach and frequency.
- e. Correlate with NHTSA and Nevada OTS traffic safety message calendars.
- f. Proactively solicit and coordinate any added-value opportunities that may be available for media buys and/or other services.

**Task 3: Radio Advertising**

*Deliverables include radio spots and scripts.*

- a. Develop radio spots focusing on the messages determined to be most critical by the Strategic Communication Plan.
  - Four :30 Spots (four final concepts).
  - Four :15 Spots (re-cuts of same concepts) for Pandora.
  - Four :10 live read scripts.
  - Will also use previous creative when available and appropriate for campaign messaging
- b. Purchase talent rights for six months.
- c. Provide radio copy for added value live reads.
- d. Task also includes the research, placement and reporting of paid media.
- e. Develop, continually maintain and provide to NDOT a calendar and verification of distribution/airing of all radio advertising, including performance measures such as gross rating points, reach and frequency.
- f. Correlate with NHTSA and Nevada OTS traffic safety message calendars.
- g. Proactively solicit and coordinate any added-value opportunities that may be available for media buys and/or other services.

**Task 4: Outdoor Advertising**

*Deliverables include vinyl bulletins and/or billboard posters.*

- a. Concept and design outdoor advertising messages specific to both urban traffic behaviors and rural driving to run statewide.
  - Two bulletins / billboards (two final concepts) (with photography).
  - Includes printing and installation.
  - Will also use previous creative when available and appropriate for campaign messaging
- b. Task also includes the research, placement and reporting of paid media and all production costs.

**Task 5: Online Advertising**

*Deliverable includes text and banner ads for display through website and social ad networks.*

- a. Concept and design text, static and animated banner ads

- Two Full sets of animated / static banners (two final concepts - 4 animated, 3 static each time)
  - Two sets of static text ads for SEM efforts
  - Serving / managing banners from our ad server
  - Will also use previous creative when available and appropriate for campaign messaging
- b. Task includes search engine optimization and research, placement and reporting of online paid media.

**Task 6: New Media Advertising**

*Deliverables include use of additional new media options approved by NDOT.*

- a. Engage new digital and non-traditional media channels to extend the reach of our campaigns and further impact fragmented audiences online.
- b. Some options include online video networks, targeted online display networks and mobile app networks

**Task 7: Website Updates & Hosting**

*Deliverables include website updates and edits requested and/or approved by NDOT.*

- a. Revise organization and content of Zero Fatalities site.
- Significant new emphasis on behaviors.
  - Highlight online video content more prominently.
  - New graphics for page (header images) – resize creative as we produce it.
- b. Website maintenance, postings and updates as needed for current content.
- c. Six months of Web hosting – secure servers and Web hosting available 24/7 response

**Task 8: Grassroots Outreach**

*Deliverables include a schedule of proposed events and sponsorships and associated materials as approved by NDOT.*

- a. Plan, staff and conduct grassroots outreach activities and sponsorships including, but not limited to school events, sporting events, community events and other advertising and educational outreach outlets as NDOT deems appropriate.
- b. Provide support for social media efforts.
- c. Produce promotional giveaway items and display materials within efficient timeframes.
- d. Provide a current calendar of planned outreach events to NDOT monthly.

**Task 9: Partnerships & Sponsorships**

*Deliverables include support of community or professional organizations as requested and/or approved by NDOT.*

- a. Seek out new grassroots or professional partnerships within the community and sponsor them.
- b. Provide strategic support for their efforts on behalf of Zero Fatalities, thus aligning our messages with other audiences engaged in the cause of public roadway safety.
- b. Provide professional services support such as design, programming, scripting, or help with social media efforts.

**Task 10: Account Management**

*Deliverable includes Final Analysis Report of the Zero Fatalities program.*

- a. Manage account details including, but not limited to providing proposal research and analysis, staffing for events, monthly status reports, invoicing for services, travel and regular meetings.
- b. Travel by PPBH team members to Nevada from Utah as needed for planning, production and coordination purposes.
- c. Prepare a final report detailing the efforts (including paid media reporting), successes and weaknesses of the program.



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## MEMORANDUM

February 4, 2013

**TO:** Department of Transportation Board of Directors  
**FROM:** Rudy Malfabon, Director  
**SUBJECT:** February 11, 2013 Transportation Board of Directors Meeting  
**Item # 5:** Contracts, Agreements, and Settlements – Informational Item Only

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### **Summary:**

The purpose of this item is to inform the Board of the following:

- Construction contracts under \$5,000,000 awarded December 22, 2012 to January 18, 2013
- Agreements under \$300,000 executed December 22, 2012 to January 18, 2013
- Settlements entered into by the Department which were presented for approval to the Board of Examiners December 22, 2012 to January 18, 2013

Any emergency agreements authorized by statute will be presented here as an informational item.

### **Background:**

Pursuant to NRS 408.131(5), the Transportation Board has authority to “[e]xecute or approve all instruments and documents in the name of the State or Department necessary to carry out the provisions of the chapter”. Additionally, the Director may execute all contracts necessary to carry out the provisions of Chapter 408 of NRS with the approval of the board, except those construction contracts that must be executed by the chairman of the board. Other contracts or agreements not related to the construction, reconstruction, improvement and maintenance of highways must be presented to and approved by the Board of Examiners. This item is intended to inform the Board of various matters relating to the Department of Transportation but which do not require any formal action by the Board.

The Department contracts for services relating to the construction, operation and maintenance of the State’s multi-modal transportation system. Contracts listed in this item are all low-bid per statute and executed by the Governor in his capacity as Board Chairman. The projects are part of the STIP document approved by the Board. In addition, the Department negotiates settlements with contractors, property owners, and other parties to resolve disputes. These proposed settlements are presented to the Board of Examiners, with the support and advisement of the Attorney General’s Office, for approval. Other matters included in this item would be any emergency agreements entered into by the Department during the reporting period.

The attached construction contracts, settlements and agreements constitute all that were awarded for construction from December 22, 2012 to January 18, 2013 and agreements executed by the Department from December 22, 2012 to January 18, 2013. There were no construction contracts under \$5,000,000 awarded during the reporting period. There were no settlements during the reporting period.

**Analysis:**

These contracts have been executed following the Code of Federal Regulations, Nevada Revised Statutes, Nevada Administrative Code, State Administrative Manual, and/or Department policies and procedures.

**List of Attachments:**

- A) State of Nevada Department of Transportation Executed Agreements – Under \$300,000, December 22, 2012 to January 18, 2013

**Recommendation for Board Action:** Informational item only

**Prepared by:** Scott K. Sisco, Assistant Director - Administration

# Attachment

# A

**State of Nevada Department of Transportation  
Executed Agreements - Under \$300,000  
December 22, 2012 to January 18, 2013**

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
1	02213	00	00	TCA PROPERTIES LLC	MANHOLE PRCL 1-080-WA-008.750	N	\$ -	\$ -	\$ -	\$ -	16-Jan-13	16-Jan-15	-	Acquisition	1-17-13: TO ACCESS, INSPECT, CLEAN AND MAINTAIN THE MANHOLE PARCEL #1-080-WA-008.750, WASHOE COUNTY. NV B/L#: NV20001023005
2	53312	00	00	BEKINS A-1 MOVERS	MOVE ELIGIBLE PARTY	Y	\$ 2,700.00	\$ -	\$ 2,700.00	\$ -	10-Dec-12	10-Dec-15	-	Acquisition	12-31-12: TO MOVE ELIGIBLE PARTY FOR PROJECT NEON RIGHT OF WAY ACQUISITION, CLARK COUNTY. NV B/L#: NV20001188398
3	02613	00	00	NV ENERGY	PWR POLE FOR CC FREEWAY	N	\$ 2,500.00	\$ -	\$ 2,500.00	\$ -	16-Jan-13	16-Jan-14	-	Facility	1-17-13: POWER POLE FOR USE IN THE CARSON CITY FREEWAY PROJECT, CARSON CITY. NV B/L#: NV19831015840
4	00213	00	00	LARRY OPHEIM	EMIGRANT 245 HOUSE	N	\$ -	\$ -	\$ -	\$ 5,300.00	20-Nov-12	13-Nov-16	-	Lease	1-3-13: LEASE OF A MAINTENANCE STATION HOUSE (EMIGRANT #245) TO NDOT EMPLOYEE TO LOCATE STAFF IN REMOTE LOCATION IN EUREKA COUNTY. NV B/L#: EXEMPT
5	00513	00	00	JOHN MCLEAN	QUINN RIVER #5	N	\$ -	\$ -	\$ -	\$ 2,900.00	4-Jan-13	29-Oct-16	-	Lease	1-4-13: LEASE OF A MAINTENANCE STATION HOUSE (QUINN RIVER #5) TO NDOT EMPLOYEE TO LOCATE STAFF IN REMOTE LOCATION IN HUMBOLDT COUNTY. NV B/L#: EXEMPT
6	00613	00	00	JEROMIE SORHOJET	OROVADA #1	N	\$ -	\$ -	\$ -	\$ 3,860.00	4-Jan-13	13-Nov-16	-	Lease	1-4-13: LEASE OF A MAINTENANCE STATION HOUSE (OROVADA #1) TO NDOT EMPLOYEE TO LOCATE STAFF IN REMOTE LOCATION IN HUMBOLDT COUNTY. NV B/L#: EXEMPT
7	00813	00	00	THE RIBIERO COMPANIES	OFFICE SPACE LEASE CREW 905	N	\$ 69,990.00	\$ -	\$ 69,990.00	\$ -	9-Jan-13	16-Mar-16	-	Lease	1-9-13: LEASE OF OFFICE SPACE FOR TWO YEARS THROUGH STATE BUILDINGS & GROUNDS FOR CONSTRUCTION CREW 905, WASHOE COUNTY. NV B/L#: NV19991037933
8	00913	00	00	THE RIBIERO COMPANIES	OFFICE LEASE FOR CREW 905	N	\$ 2,828.90	\$ -	\$ 2,828.00	\$ -	9-Jan-13	30-Jun-13	-	Lease	1-9-13: MONTH TO MONTH LEASE OF OFFICE SPACE THROUGH STATE BUILDINGS & GROUNDS FOR CONSTRUCTION CREW 905 UNTIL LONG TERM LEASE IS EXECUTED. WASHOE COUNTY. NV B/L#: NV19991037933
9	02813	00	00	BRIAN HAYNES	EMIGRANT MS HOUSE 242	N	\$ -	\$ -	\$ -	\$ 5,300.00	5-Jan-13	31-Dec-16	-	Lease	1-5-13: LEASE OF A MAINTENANCE STATION HOUSE (EMIGRANT #242) TO NDOT EMPLOYEE TO LOCATE STAFF IN REMOTE LOCATION IN EUREKA COUNTY. NV B/L#: EXEMPT

**State of Nevada Department of Transportation  
Executed Agreements - Under \$300,000  
December 22, 2012 to January 18, 2013**

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
10	02913	00	00	DAVID COSIO	MS BLUE JAY 1	N	\$ -	\$ -	\$ -	\$ 2,400.00	3-Jan-13	31-Jan-17	-	Lease	1-3-13: LEASE OF A MAINTENANCE STATION HOUSE (BLUE JAY #1) TO NDOT EMPLOYEE TO LOCATE STAFF IN REMOTE LOCATION IN NYE COUNTY. NV B/L#: EXEMPT
11	42612	00	00	CAMPAGNI PROPERTIES	LEASE S-529-CC-001.439	N	\$ -	\$ -	\$ -	\$ 16,900.00	9-Oct-12	31-Oct-17	-	Lease	LEASE OF PARCELS: S-529-CC-001.439 & 001.492, CARSON CITY. NV B/L#: NV20101197881
12	42712	00	00	PEPPERMILL CASINOS INC	LEASE PARCEL I-080-EL-132.001	N	\$ -	\$ -	\$ -	\$ 41,850.00	9-Oct-12	31-Dec-17	-	Lease	1-2-13: TO LEASE I-080-EL-132.011 AND PORTION OF PARCEL I-080-EL-131.795, ELKO COUNTY. NV B/L#: NV19931050930
13	52512	00	00	SOUTHTOWNE CROSSING LLC	PARCEL IU.395-WA-017.15 XS1	N	\$ -	\$ -	\$ -	\$ 36,465.83	10-Dec-12	10-Mar-13	-	Property Sale	12-10-12: LAND SALE AGREEMENT FOR PARCEL IU.395-WA-017.15 XS1 BETWEEN WASHOE COUNTY AND THE CITY OF RENO, WASHOE COUNTY. NV B/L#: EXEMPT
14	53212	00	00	ROSALIO GARCIA	PROPERTY SALE GARCIA	N	\$ -	\$ -	\$ 84,345.60	\$ -	26-Dec-12	5-Mar-13	-	Property Sale	12-31-12: LAND SALE BETWEEN ROSALIO A AND ARGELIA GARCIA AS JOINT TENANTS, LOT 32 IN BLOCK B OF LAHONTAN SUBDIVISION UNIT #1, CARSON CITY. NV B/L#: EXEMPT
15	52612	00	00	AT&T NEVADA	MANHOLE/VALVE SR 431	Y	\$ 1,100.00	\$ -	\$ 1,100.00	\$ -	10-Dec-12	10-Dec-15	-	ROW Access	12-10-12: MANHOLE & VALVE COVER ADJUSTMENTS FOR SR 431, MT. ROSE FROM JUNCTION OF SR 28 TO INCLINE LAKE ROAD, WASHOE COUNTY. NV B/L#: NV19711002665
16	53012	00	00	STELLA BUTTERFIELD	QUITCLAIM PCL I-015-CL-041.111	Y	\$ 224,109.25	\$ -	\$ 224,109.25	\$ -	10-Dec-12	31-Dec-15	-	ROW Access	12-31-12: QUIT CLAIM DEED LOT 50 OF GLENBROOK ESTATES PARCEL I-015-CL-041.111, 1701 LOCH LOMOND WAY, CLARK COUNTY. NV B/L#: EXEMPT
17	53112	00	00	NV ENERGY	LINE EXTENSION FOR NEON	N	\$ -	\$ -	\$ -	\$ -	29-Nov-12	29-Nov-15	-	ROW Access	12-31-12: TO ALLOW NV ENERGY TO DESIGN INITIATION AGREEMENT TO MOVE FORWARD WITH DESIGN FOR THE LINE EXTENSION FOR PROJECT NEON, CLARK COUNTY. NV B/L#: NV19831015840

**State of Nevada Department of Transportation  
Executed Agreements - Under \$300,000  
December 22, 2012 to January 18, 2013**

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
18	02113	00	00	SOUTHWEST GAS CORP	RELOCATE GAS US93/US95	Y	\$ 6,581,160.00	\$ -	\$ 6,581,160.00	\$ -	16-Jan-13	16-Jan-19	-	ROW Access	2-11-13: RELOCATION AND ADJUSTMENT OF SOUTHWEST GAS CORP GAS LINE ALONG US93/US95 (BOULDER CITY BYPASS), CLARK COUNTY. NRS 408.407 PROVIDES FOR THE REIMBURSEMENT OF UTILITY RELOCATION COSTS THAT ARE REALIZED BY A UTILITY PROVIDER THAT MUST RELOCATE ITS FACILITIES IN CONFLICT WITH HIGHWAY CONSTRUCTION. REIMBURSEMENT OF THESE COSTS ARE CONTINGENT UPON THE UTILITY PROVIDER HAVING A PROPERTY RIGHT TO BE IN THEIR CURRENT LOCATION. NAC 408 AND 23 CFR FURTHER IDENTIFIES WHAT IS REIMBURSABLE AND THE DOCUMENTATION REQUIRED TO OBTAIN REIMBURSEMENT. THIS AGREEMENT WAS ASSEMBLED USING AN ITEMIZED ESTIMATE PREPARED BY SOUTHWEST GAS. SINCE THIS IS AN ESTIMATE THE DEPARTMENT IS RESPONSIBLE TO PAY THE ACTUAL, REASONABLE AND NECESSARY COSTS ASSOCIATED WITH THIS RELOCATION. NV B/L#: NV19571000091
19	01313	00	00	SAIC	PSAMS TEC DOC SUPPORT	N	\$ 75,000.00	\$ -	\$ 75,000.00	\$ -	7-Jan-13	30-Jun-13	-	Service	1-14-13: PROJECT SCHEDULING AND MANAGEMENT SYSTEM (PSAMS) TECHNICAL DOCUMENTATION OF SUPPORT AND CODE MAINTENANCE PROCEDURES, CARSON CITY. NV B/L#: NV19841001792

**State of Nevada Department of Transportation  
Executed Agreements - Under \$300,000  
December 22, 2012 to January 18, 2013**

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
20	34310	00	02	KIMLEY-HORN & ASSOCIATES, INC	STATEWIDE BICYCLE PLAN	N	\$ 199,799.00	\$ -	\$ 214,734.00	\$ -	8-Jul-11	28-Feb-13	26-Dec-12	Service	AMD 2 12-26-12: TERMINATION DATE EXTENDED FROM 12-31-12 TO 2-28-13 TO ALLOW FOR COMPLETION OF THE PROJECT. AMD 1 10-5-12: EXPAND SCOPE TO PROVIDE ASSISTANCE IN THE DEVELOPMENT AND IMPLEMENTATION OF A STATE BICYCLE AND PEDESTRIAN CONFERENCE IN LAS VEGAS. INCREASE AUTHORITY BY \$14,935.00 FROM \$199,799.00 TO BRING AGREEMENT TOTAL TO \$214,734.00. 7-8-11: DEVELOPMENT OF A STATEWIDE BICYCLE PLAN. STATEWIDE. NV B/L#: NV19911015458
21	39711	00	01	HDR ENGINEERING INC	I-80/CARLIN BRIDGE/TUNNEL REHAB	Y	\$ 1,690,555.00	\$ 192,952.00	\$ 1,883,507.00	\$ -	10-Oct-11	31-Dec-14	26-Dec-12	Service	12-26-12 AMD 1: INCREASE AUTHORITY BY \$192,952, FROM \$1,690,555 TO \$1,883,507 DUE TO THE NEED TO PARTICIPATE IN ADDITIONAL PROJECT MEETINGS, TO CONDUCT RISK/SCHEDULE WORKSHOPS AND TO DEVELOP ADDITIONAL BRIDGE REHAB PLANS. 10-10-11: PROVIDE STRUCTURAL DESIGN SERVICES FOR I-80/CARLIN BRIDGE AND TUNNEL REHABILITATION, ELKO COUNTY. NV B/L#: NV19851010291
22	52712	00	00	FUTURE TECHNOLOGIES, INC.	PRINTER, ETC REPAIR SERVICES	N	\$ 10,000.00	\$ -	\$ 10,000.00	\$ -	2-Jan-13	31-Jan-16	-	Service	1-2-13: PRINTER, SCANNER, FAX AND PLOTTER REPAIR SERVICES, CARSON CITY AND WASHOE COUNTY. NV B/L#: NV19981187988

**State of Nevada Department of Transportation  
Executed Agreements - Under \$300,000  
December 22, 2012 to January 18, 2013**

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
23	03309	00	05	HARRIS CORPORATION	800MHZ RADIO SYSTEM RECONFIG	N	\$ 849,522.83	\$ -	\$ 1,101,363.20	\$ -	21-Jan-09	31-Dec-13	26-Dec-12	Service Provider	<p>AMD 5 12-26-12: EXTEND TERMINATION DATE TO 12-31-13 DUE TO UNFORESEEN VARIABLES IMPACTING THE ORIGINAL ESTIMATED COMPLETION DATE, SUCH AS INCOMPLETE USER INVENTORIES AND ADDITIONAL SITES REQUIRING REPACKING.</p> <p>AMD 4 12-28-11: EXTEND TERMINATION DATE 12-31-12 DUE TO UNFORESEEN VARIABLES IMPACTING THE ORIGINAL ESTIMATED COMPLETION DATE, SUCH AS INCOMPLETE USER INVENTORIES AND ADDITIONAL SITES REQUIRING REPACKING.</p> <p>AMD 3 12-31-2010: TO EXTEND TERMINATION DATE TO 12-31-11 DUE TO RECONFIGURATION OF THE NV SHARED 800MHZ RADIO SYSTEM. STATEWIDE.</p> <p>AMD 2 9-28-10: EXTEND TERMINATION DATE TO 12-31-10 AND INCREASE AUTHORITY BY \$161,840.41 TO \$1,101,363.20 TO ALLOW FOR ADDITIONAL RECONFIGURATION AND PROJECT WORK.</p> <p>AMD 1 12-30-09: EXTEND TERMINATION DATE TO 9-30-10 TO ALLOW FOR FURTHER RECONFIGURATION.</p> <p>1-21-09: RECONFIGURATION OF THE NV SHARED 800MHZ RADIO SYSTEM. STATEWIDE. NV B/L#: NV19831009840</p>
24	26410	00	01	ATKINS/PBS&J	ITS DESIGN SVCS	N	\$ 500,000.00	\$ -	\$ 500,000.00	\$ -	23-Sep-10	31-Dec-14	26-Dec-12	Service Provider	<p>AMD 1 12-26-12: TERMINATION DATE EXTENDED FROM 12-31-12 TO 12-31-14 TO ALLOW FOR COMPLETION OF PROJECTS.</p> <p>9-23-2012:INTELLIGENT TRAFFIC SYSTEMS (ITS) DESIGN SERVICES, STATEWIDE. NV B/L#: NV19981347315</p>

**State of Nevada Department of Transportation  
Executed Agreements - Under \$300,000  
December 22, 2012 to January 18, 2013**

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
25	40409	00	02	ATKINS / PBS&J	WATER QUALITY/EROSION DESIGN	Y	\$ 850,404.00	\$ -	\$ 850,404.00	\$ -	23-Dec-09	31-Dec-14	26-Dec-12	Service Provider	AMD 2, 12-26-12: ADDITIONAL TIME NEEDED FOR REGULATORY REQUIREMENTS/GUIDELINES, TO EVALUATE BIKE PATH AND CORRIDOR MANAGEMENT PLAN IMPACTS TO THE PROJECT, AND TO CONSIDER THESE IMPACTS IN A FUTURE AMENDMENT FOR FINAL DESIGN. AMD 1, 10-6-11: WITH THE SIGNING OF THE LAKE TAHOE TOTAL MAXIMUM DAILY LOAD (TMDL), ADDITIONAL TIME IS NEEDED TO INCORPORATE NEW REGULATORY REQUIREMENTS AND GUIDELINES THAT WOULD BETTER DIRECT THE PROJECT AND TYPE OF IMPROVEMENTS NEEDED. 12-23-09: PLANNING AND ENGINEERING SERVICES THROUGH THE INTERMEDIATE DESIGN LEVEL FOR A WATER QUALITY AND EROSION CONTROL PROJECT ALONG SR28 IN THE LAKE TAHOE BASIN. INCLUDED PROVISIONS IN THE ORIGINAL RFP TO AMEND THE SCOPE TO ADVANCE THE DESIGN TO A FINAL DESIGN LEVEL. \$850,404 (\$729,000 OF WHICH WAS FROM SNPLMA FUNDING). NV B/L#: NV19981347315
26	02013	00	00	JOHN S WRIGHT & ASSOCIATES	WATER RIGHTS FOR FALCON CAPITAL	Y	\$ 20,000.00	\$ -	\$ 20,000.00	\$ -	1-Dec-12	1-Jan-15	-	Service Provider	1-17-13: APPRAISAL SERVICES FOR WATER RIGHTS RELATING TO THE FALCON CAPITAL CONDEMNATION CASE, WASHOE COUNTY. NV B/L#: NV20101169023

**State of Nevada Department of Transportation  
Executed Agreements - Under \$300,000  
December 22, 2012 to January 18, 2013**

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
27	02313	00	00	SONOMA TECHNOLOGY, INC	FOLLOW ON MSAT STUDY	Y	\$ 163,881.00	\$ -	\$ 163,881.00	\$ -	17-Jan-13	31-Dec-14	-	Service Provider	01-17-2013: SONOMA TECHNOLOGY, INC., PERFORMED THE ORIGINAL MOBILE SOURCE AIR TOXICS (MSAT) STUDY. THE SIERRA CLUB SETTLEMENT AGREEMENT REQUIRES THE DEPARTMENT TO MONITOR FOR MSATS AT THREE SCHOOLS (FYFE ELEMENTARY, ADCOCK ELEMENTARY, AND WESTERN HIGH SCHOOL) NEAR US 95 AND THE FILTRATION OF MSATS INSIDE THOSE SCHOOLS. CLARK COUNTY. NV B/L#: NV20031256749
28	30011	00	02	PAR ELECTRICAL CONTRACTING INC	INSTALL WIND GENERATOR	N	\$ 64,464.00	\$ -	\$ 64,464.00	\$ -	8-Jul-11	31-Dec-13	27-Nov-12	Service Provider	AMD 2 11-27-12: EXTENDING TERMINATION DATE TO 12-31-13 TO ALLOW FOR COMPLETION OF PROJECT. AMD 1 3-29-12: EXTENDING TERMINATION DATE TO 12-31-12 TO ALLOW FOR COMPLETION OF PROJECT. 7-8-11: Q2-003-11 TO INSTALL WIND GENERATOR TO POWER DYNAMIC MESSAGE SIGNS NEAR NIGHTENGALE ON SR402 NEAR I-80 IN CHURCHILL COUNTY. NV B/L#: 19931031312
29	32511	00	02	NNE CONSTRUCTION	RWIS IN DISTRICT I	N	\$ 612,446.37	\$ -	\$ 612,446.37	\$ -	2-Aug-11	31-Dec-13	27-Dec-12	Service Provider	AMD 2 12-27-12: EXTEND TERMINATION DATE TO 12-31-13 DUE TO COMPLETION OF RWIS WORK. AMD 1 10-24-11: EXTEND COMPLETION DATE TO 12-31-12 TO ALLOW FOR COMPLETION OF THE PROJECT 8-2-11: ROADWAY WEATHER INFORMATION SYSTEMS (RWIS) IN DISTRICT I AND STATEWIDE SENSOR REPLACEMENT (COUNTIES: CLARK, ESERALDA, NYE, MINERAL, LYON, PERSHING, WASHOE, ELKO, EUREKA, HUMBOLDT, LANDER AND WHITE PINE) NV B/L#: NV20001345027

**State of Nevada Department of Transportation  
Executed Agreements - Under \$300,000  
December 22, 2012 to January 18, 2013**

Line No	Agreement No	Task No	Amend No	Contractor	Purpose	Fed	Original Agreement Amount	Amendment Amount	Payable Amount	Receivable Amount	Start Date	End Date	Amend Date	Agree Type	Notes
30	59705	00	04	WOOD RODGERS	TAHOE ENVIRONMENTAL IMPROVEMENT	Y	\$ 3,480,000.00	\$ -	\$ 9,072,804.00	\$ -	3-Aug-05	31-Dec-14	27-Dec-12	Service Provider	AMD 4, 12-27-12: TIME EXTENSION NECESSARY TO INCORPORATE NEW REGULATORY REQUIREMENTS AND GUIDELINES THAT WOULD BETTER DIRECT THE PROJECT AND TYPE OF IMPROVEMENTS INCORPORATED. AMD 3, 4-20-10: INCREASE BUDGET BY \$1,600,000 TO BREAKOUT A PROJECT INTO TWO PHASES, ACCELERATE THE DESIGN, INCLUDE CONSTRUCTION SUPPORT, AND FURTHER EXTEND REQUIRED MONITORING AMD 2, 3-24-08: INCREASE BUDGET BY \$3,409,935 TO ADVANCE THE DESIGN OF 4 PROJECTS TO FINAL DESIGN AND CONTINUE MONITORING. AMD 1, 10-15-07: INCREASE BUDGET BY \$582,869 TO ADVANCE DESIGN OF TWO PROJECTS TO AN INTERMEDIATE DESIGN LEVEL. 8-3-05: DEVELOPMENT OF PHASE III LAKE TAHOE ENVIRONMENTAL IMPROVEMENT PROGRAM (EIP) AND REGULATORY REQUIRED MONITORING, \$3,480,000. INCLUDES PROVISIONS TO ADVANCE IDENTIFIED PROJECTS TO A HIGHER DESIGN LEVEL. NV B/L#: 200313004987



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## MEMORANDUM

January 17, 2013

**TO:** Department of Transportation Board of Directors  
**FROM:** Rudy Malfabon, P.E., Director  
**SUBJECT:** February 11, 2013 Transportation Board of Directors Meeting  
**ITEM #6:** Approval of Amendments and Administrative Modifications to the FFY 2012-2015 Statewide Transportation Improvement Program (STIP) – For Possible Action.

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### **Summary:**

At the October 10, 2011 State Transportation Board of Directors Meeting, the FY 2012 – 2015 Statewide Transportation Improvement Program (STIP) was approved as a part of the FY 2012-2021 Transportation Systems Projects (TSP). Amendments and Administrative Modifications are made throughout the year to the document in order to facilitate projects. NDOT staff works closely with the local Metropolitan Planning Organizations (MPO's) and local governments to facilitate these project changes. Attachment "A" lists Administrative Modifications and other state program projects. NDOT is requesting the State Transportation Board's approval of these changes as summarized in Attachment "A".

### **Background:**

NDOT staff works continuously all year with federal and regional agencies, local governments, and planning boards to develop the *Transportation System Projects* notebook. The fiscal years 2012-2021 document contains the:

Statewide Transportation Improvement Program (STIP), FY 2012-2015  
Annual Work Program (AWP), FY 2012  
Short Range Element (SRE), FY 2013-2014  
Long Range Element (LRE), FY 2015-2021

Attachment "A" details Amendments to projects which include any actions taken in Washoe, Clark, and CAMPO Transportation Improvement Plans (TIP) and areas outside of the MPO boundaries since the last time the Board approved changes to the STIP on January 14, 2013.

Attachment "B" details Administrative Modifications to projects which include any actions taken in Washoe, Clark, and CAMPO Transportation Improvement Plans (TIP) and areas outside of the MPO boundaries since the last time the Board approved changes to the STIP on January 14, 2013.

**Analysis:**

The attached listing of amendments and administrative modifications to projects are those completed since the January 14, 2013 Transportation Board approval of the *Transportation System Projects* notebook for fiscal years 2012-2021.

**Recommendation for Board Action:**

Approval of the Amendments/Administrative Modifications to the FY 2012 – 2015 Statewide Transportation Improvement Program (STIP).

**List of Attachments:**

- A. List of Amendments
- B. List of Administrative Modifications.

**Prepared by:**

Dennis Taylor, Chief, Transportation & Multimodal Planning Division

**Project Amendments List**

**RTC of Southern Nevada**

(NO AMENDMENTS MADE)

**Washoe County RTC**

**Washoe Amendment #4** to the 2012-2015 STIP:

- adds projects NV20130009 and NV20130010, Southeast Connector Phases 1 and 2, respectively
- includes updates to various funding categories
- incorporates the updated 2015 air quality conformity analysis

STIP funding source pages revised in assoc. with this action:

Washoe 3 (RTC Fuel Tax (Reno))	Washoe 4 (Regional Road Impact Fee)
Washoe 5 (Private Developer)	Washoe 6 (FTA 5307 (WA))
Washoe 7 (FTA 5309 (WA))	State 1 (National Highway System)
State 7 (Public Lands Highways)	State 15 (Trans, Comm & Sys Preservation)

**Washoe Amendment #5** to the 2008-2030 RTP:

- moves the Southeast Connector project from the 2016-2018 timeframe to the 2008-2015 timeframe
- updates the air quality conformity analysis for 2015

**Carson Area MPO**

(NO AMENDMENTS MADE)

**Statewide/Rural**

(NO AMENDMENTS MADE)

**List of Administrative Modifications**

**RTC of Southern Nevada**

**CL Administrative Modification #15**

This action changes the funding for NDOT project number CL20120106, *Evaluate the need for an Interstate facility connecting Phoenix and Las Vegas*, using Transportation, Community and System Preservation (TCSP), State Planning and Research (SPR), and State Matching funds.

STIP funding source pages revised in assoc. with this action:

Statewide 15 (TCSP)	Statewide 27 (State Match - Arizona)
Statewide 28 (State Match - Nevada)	Statewide 29 (SPR - Arizona)
Statewide 30 (SPR - Nevada)	

**CL Administrative Modification #16**

This action changes the funding and description for NDOT project number CL20110024, *I 15 from Spring Mountain Road to west of the Spaghetti Bowl at Rancho Blvd (Project Neon)* to include “Private Public Partnership” and add \$3 million in National Highway System funding.

STIP funding source pages revised in assoc. with this action:

Statewide 1 (NHS)	Statewide 2 (STP Statewide)
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**Washoe County RTC**

(NO ADMINISTRATIVE MODIFICATIONS MADE)

**Carson Area MPO**

(NO ADMINISTRATIVE MODIFICATIONS MADE)

**Statewide/Rural**

(NO ADMINISTRATIVE MODIFICATIONS MADE)



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## MEMORANDUM

January 25, 2013

**TO:** Department of Transportation Board of Directors  
**FROM:** Rudy Malfabon, Director  
**SUBJECT:** February 11, 2013 Transportation Board of Directors Meeting  
**Item #7:** Approval of the Strategic Highway Safety Plan Annual Report – For possible action

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### **Summary:**

Nevada's Strategic Highway Plan partners have developed and published the first annual report employing uniform performance measures across the five Critical Emphasis Areas. New collaborative techniques such as this are vital in identifying successful strategies necessary to keep Nevada on track to meet our objective of reducing traffic fatalities and serious injuries in half by 2030 and our goal of zero fatalities.

### **Background:**

Nevada was an early adopter of a collaborative strategic plan to reduce fatalities and serious injuries. The initial document, adopted in 2006, was updated in 2010 and approved by this Board in April of 2011. As a part of the updated plan, the Technical Working Group and Critical Emphasis Area Team members agreed to develop performance measures across all five emphasis areas to the strategy level. This is above and beyond the original SHSP concept as it was agreed to by all that these uniform measures across all five Critical Emphasis Areas are vital to assess progress, identify issues, and quantify the benefits of the employed strategies.

The updated SHSP objectives were set as a five-year rolling average of fatalities and serious injuries, using 2008 (average of 2004 to 2008) as the baseline year. Between 2008 and 2011, actual traffic fatalities and serious injuries reduced by 24.1 and 21.6 percent respectively and are lower than the targeted five-year average targeted by the plan. However, transportation safety faces daily challenges nationally, regionally, and in Nevada. 2012 saw an increase in fatalities across the nation after several years of remarkable progress and unfortunately Nevada was no exception in experiencing that increase. Clark County experienced the most significant increase in traffic fatalities comparing 2011 to 2012.

### **Analysis:**

Meeting our short and long term objectives and achieving our ultimate goal of bringing everyone home safely every time will become even more challenging in the years ahead. Nevada must continue our current successful strategies as well as find new approaches, new resources, and new partners.

**List of Attachments:**

Strategic Highway Safety Plan Annual Report

**Recommendation for Board Action:**

Informational item only

**Prepared by:**

Chuck Reider, NDOT Chief Safety Engineer

# The Nevada Strategic Highway Safety Plan

## Annual Report

Nevada Department of Transportation  
and Nevada Department of Public Safety  
January 28, 2013

**zero**<sup>®</sup>  
**Fatalities**  
*Drive Safe Nevada*

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# Statewide Safety

## Background

The Nevada Strategic Highway Safety Plan was first adopted in 2006 and updated in 2011 to address key Critical Emphasis Areas (CEA) where there were a relatively high number of fatalities and serious injuries. These areas are:

- Impaired Driving
- Occupant Protection
- Pedestrians
- Intersections
- Lane Departure Crashes

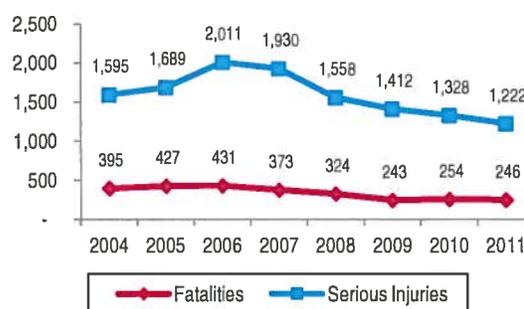
Nevada adopted a Zero Fatalities goal in 2010, consistent with the national Toward Zero Deaths concepts supported by the Federal Highway Administration (FHWA), the National Highway Traffic Safety Administration (NHTSA), American Association of State Highway and Transportation Officials (AASHTO), and the Governors Highway Safety Association (GHSA). As part of reaching this target, each of the five CEA teams adopted interim goals in 2011 to reduce the number of fatalities and serious injuries associated with their respective CEA. These goals were based on a baseline five-year average set for the five-year period ending in 2008, the latest year for which both fatality and serious injury information data was available at the publication of the 2011 SHSP update. An injury is reported by a police officer as 'serious' if the crash victim is incapacitated. The goal for each CEA is to achieve a twenty percent reduction in the five-year average number of fatalities and serious injuries by 2015.

In 2012, the CEA teams adopted a series of performance measures to track the impact of strategies adopted by each CEA, all of which tie to the number of fatalities and serious injuries. This report shows these performance measures and supporting data through 2011, the latest year for which data was available. It should be noted that some strategies within a CEA share the same performance measure; therefore, to reduce redundancy graphs for such shared measures are only shown once.

## State Traffic Safety Facts

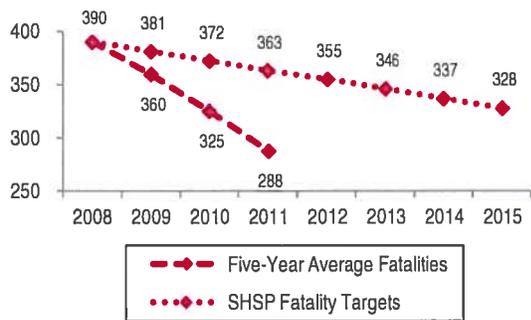
The Nevada SHSP objectives were set as five-year average number of fatalities and serious injuries with 2008 (average of 2004 to 2008) as the baseline year. Between 2008 and 2011, actual traffic fatalities and serious injuries reduced by 24.1 and 21.6 percent respectively (Figure 1). The five-year rolling average number of fatalities and serious injuries is lower than the targeted five-year average (Figures 2 and 3).

Figure 1: Statewide Fatalities and Serious Injuries



Source: Nevada DOT, 2012

**Figure 2: Statewide Average Fatalities and SHSP Fatality Targets**



Source: Nevada DOT, 2012

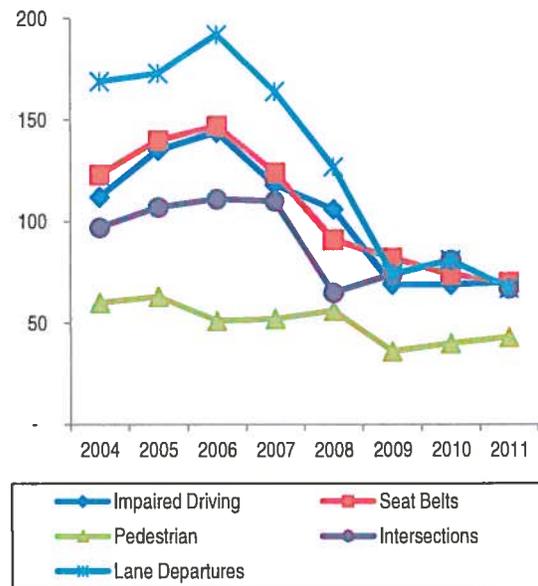
**Figure 3: Statewide Average Serious Injuries and SHSP Serious Injury Targets**



Source: Nevada DOT, 2012

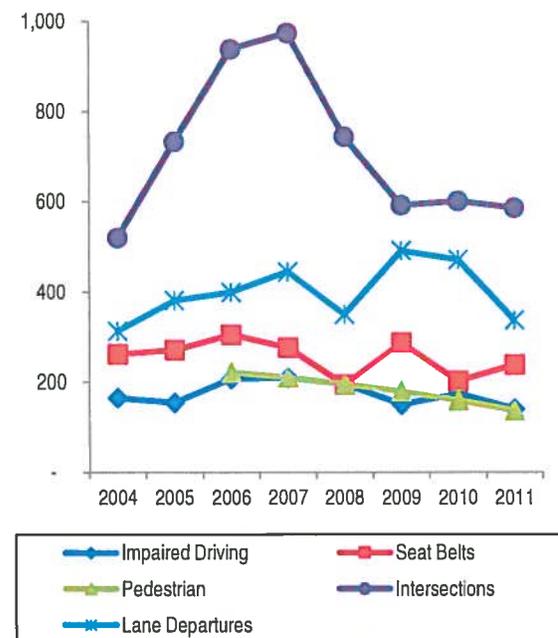
The overall number of fatalities and serious injuries has declined over the years (Figures 4 and 5). Lane departure fatalities decreased substantially over the last eight years. Impaired driving crashes were the second largest killer in 2008. Enforcement and media campaigns around major holidays and events have reduced impaired driving related deaths in recent years. Unrestrained fatalities have declined, but the improvement in unrestrained serious injury numbers has not been significant during the same period. Pedestrian fatalities and serious injuries have reduced considerably since 2008. Intersection related crashes consistently have the highest number of serious injuries, followed closely by lane departures.

**Figure 4: Annual Fatalities Across the Five Critical Emphasis Areas**



Source: Impaired Driving: DPS-Office of Traffic Safety, 2012; Other Emphasis Areas, Nevada DOT, 2012.

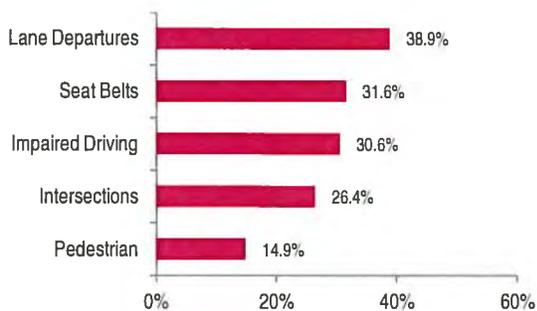
**Figure 5: Annual Serious Injuries Across the Five Critical Emphasis Areas**



Source: Nevada DOT, 2012. Pedestrian data prior to 2006 not available.

As shown in Figures 6 and 7, lane departure crashes account for nearly 39 percent of the fatalities while intersection crashes contribute to roughly 45 percent of the serious injuries. Impaired driving accounts for 31 percent of the fatalities and less than 11 percent of the serious injuries – highlighting that an impaired driving crash is more likely to be fatal. Non use of seat belts is the second largest killer with nearly 32 percent of the fatalities being attributed to unrestrained vehicle occupants.

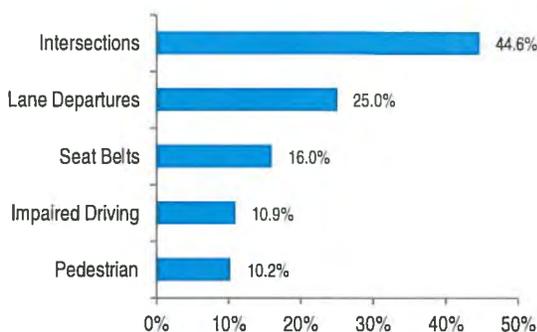
**Figure 6: Percentage of Fatalities by the Five Critical Emphasis Areas (2004-2011)**



Source: Impaired Driving: DPS-Office of Traffic Safety, 2012; Other Emphasis Areas, Nevada DOT, 2012

Note: The percentages do not add up to 100 as more than one factor may be present in a crash.

**Figure 7: Percentage of Serious Injuries by the Five Critical Emphasis Areas (2004-2011)**



Source: Nevada DOT, 2012

Note: The percentages do not add up to 100 as more than one factor may be present in a crash.

## Technical Working Group (TWG) and Nevada Executive Committee on Traffic Safety (NECTS) Activities

The TWG and NECTS oversight groups continued to meet on a scheduled basis and provided input and commentary for the activities of the SHSP, particularly the CEA teams. The TWG met in-person on a quarterly basis at simultaneous sites in Northern and Southern Nevada. The NECTS met semi-annually first in Northern Nevada in February, and then in Southern Nevada in September, the latter in conjunction with the Safe Communities Partnership Awards in Las Vegas. More information on the TWG and NECTS is available at [zerofatalitiesnv.com/safety\\_plan.php](http://zerofatalitiesnv.com/safety_plan.php)

## Nevada Safety Summit

The Nevada Safety Summit was held on November 7-8, 2012 at Texas Station in North Las Vegas. Over 200 attendees participated in a variety of meeting sessions that focused not only on the activities of the CEA teams but also on a variety of complementary traffic safety topics. A number of new partners were recruited at this event, with the anticipation that these individuals will participate in upcoming SHSP activities. Additional information on the Nevada Safety Summit is available at [zerofatalitiesnv.com/summit](http://zerofatalitiesnv.com/summit).

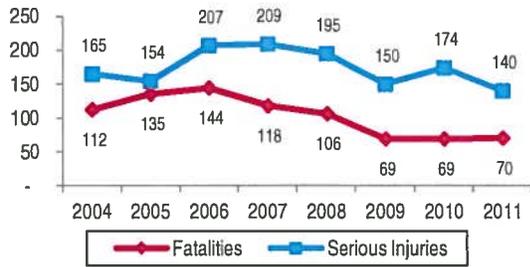
The following provides a detailed summary of the performance of each CEA, or critical emphasis area.

# Impaired Driving

## Safety Progress

Between 2008 and 2011, impaired driving fatality numbers have dropped by 33.9 percent while serious injuries have decreased by 28.2 percent (Figure 8). The five-year average number of fatalities is lower than the targeted frequency (Figure 9). The five year average number of impaired driving serious injury crashes is higher than the target (Figure 10). The impaired driving fatality information is provided by the DPS-Office of Traffic Safety in alignment with data reporting standards prescribed by the National Highway Traffic Safety Administration’s Fatality Analysis Reporting System (FARS). Impaired driving serious injury information is provided by Nevada DOT and is based on the reported suspicion of alcohol use by a driver involved in a particular crash.

**Figure 8: Impaired Driving Fatalities and Serious Injuries**



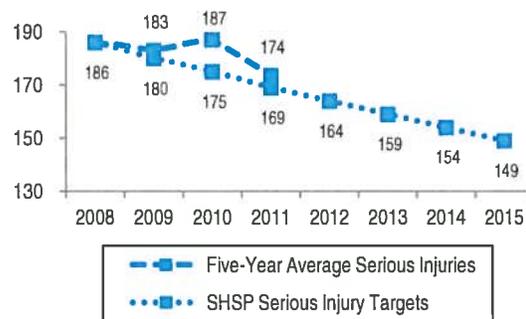
Source: Fatalities: DPS-Office of Traffic Safety, 2012; Serious Injuries: Nevada DOT, 2012.

**Figure 9: Impaired Driving Average Fatalities and SHSP Fatality Targets**



Source: DPS-Office of Traffic Safety, 2012

**Figure 10: Impaired Driving Average Serious Injuries and SHSP Serious Injury Targets**



Source: Nevada DOT, 2012

## Impaired Driving Strategies

1. Increase the number of high-visibility Driving Under the Influence (DUI) programs.

Table 1 shows the performance measure for this strategy, which is the five-year average trend in the number of fatalities and serious injuries, or the same measure as that for the overall emphasis area. As indicated previously, fatalities are trending downward while serious injuries numbers have shown fluctuation.

**Table 1: Five-Year Average Fatalities and Serious Injuries from Crashes Involving Impaired Drivers**

	Five-Year Avg Fatalities	Five-Year Avg Serious Injuries
2007-2011	86	174
2006-2010	101	187
2005-2009	114	183
2004-2008	123	186

Source: Fatalities: DPS-Office of Traffic Safety, 2012; Serious Injuries: Nevada DOT, 2012.

Partners of the Impaired Driving CEA team, including several law enforcement agencies, conducted a number of high-visibility enforcement activities (HVE) including DUI check points, DUI saturation patrols, and special enforcement targeting DUI violations. Law enforcement agencies participate in the Nevada Office of Traffic Safety's *Joining Forces* Program (OTS) that funds officer overtime and support staff contributions to HVE DUI events throughout the state. State and local law enforcement agencies work in tandem for a unified approach towards addressing impaired driving. CEA team partners will continue partnerships with community and non-profit organizations that support impaired driving educational and enforcement programs.

The Nevada Highway Patrol (NHP) began the Driving Responsibly Includes Vehicle Education (D.R.I.V.E.) program in 2012. This teen education program has an impaired driving component and is offered in all counties in Northern Nevada. This program will be expanded statewide in 2013.

The CEA team plans to develop a consistent statewide tracking/reporting system specifically for repeat DUI offenders.

**2. Enhance programs on impaired driving for young drivers (Age: 16-20 years).**

Table 2 shows the performance measure for this strategy which is the number of fatalities and serious injuries from crashes involving at least one impaired driver between the ages 16 to 20. Reductions in fatalities and serious injuries from such crashes have been achieved over the past several years.

**Table 2: Fatalities and Serious Injuries from Crashes Involving Impaired Drivers Ages 16-20**

	Fatalities	Serious Injuries
2011	8	21
2010	6	19
2009	8	17
2008	12	38
2007	20	66
2006	13	47
2005	14	39
2004	11	49

Source: Fatalities: DPS-Office of Traffic Safety, 2012; Serious Injuries: Nevada DOT, 2012.

A number of activities were conducted in 2012 to address DUI by young drivers.

- Impaired Driving Awareness trainings with DUI Simulators and Fatal Vision Goggles at community events and in high schools (shared throughout Nye, Lincoln, and Rural Clark Counties) and also throughout northern Nevada.
- Awareness Presentations throughout all counties
- Server/Seller Trainings
- Collaboration with law enforcement on Compliance Checks
- Collaboration with law enforcement on DUI Check Points
- Information dissemination throughout the state

### 3. Reduce the number of repeat DUI offenders.

Table 3 shows the performance measure for this strategy which is the number of new admissions to three Felony DUI courts in Nevada. The objective of this measure is to track repeat DUI offenders. All of those admitted to these felony courts are repeat offenders (third offence within 7 years). Note: Offenders involved in a crash that resulted in a serious injury or fatality are not eligible for DUI court programs. Data specific to repeat offenders are not readily available, therefore, Felony DUI court admission statistics are used.

**Table 3: New Admissions to Felony DUI Courts**

	Carson City	Clark County	Washoe County
2012	20	110	54
2011	17	120	78
2010	17	153	83
2009	7	176	67

Source: Nevada Administrative Office of the Courts, 2012

A one-year survey (2012) was conducted at Victim Impact Panels in Northern Nevada to determine baseline numbers for repeat DUI offenders. This survey will not be conducted in 2013, but will be conducted again in 2014 to determine if SHSP efforts have helped reduce recidivism.

The survey results show a disproportionate number of repeat offenders in the Under 25 and 25-34 age categories. Therefore, the CEA team would like to research most effective laws and strategies to impact these age groups.

The team will monitor DUI legislation during 2013 Legislative Session, supporting efforts to strengthen DUI laws and opposing efforts to weaken those laws. The team will also provide supporting

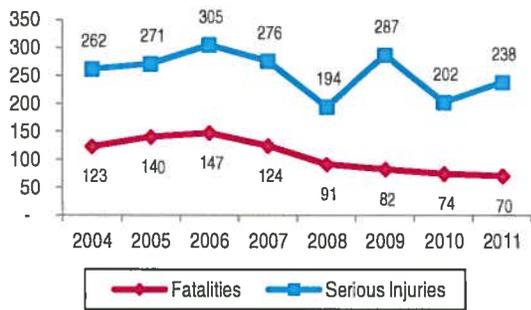
information in discussions for a stronger ignition interlock law and mandatory evaluation for all DUI offenders if such legislation is introduced.

# Seat Belts

## Safety Progress

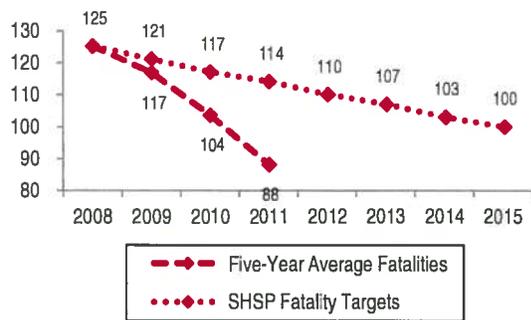
Between 2008 and 2011, unbelted seat belt fatality numbers have dropped by 23.1 percent while serious injuries have increased by 22.7 percent (Figure 11). The five year average number of unbelted fatalities is lower than the state target (Figure 12). The five year average number of unbelted serious injuries is higher than the state target (Figure 13).

Figure 11: Seat Belts Fatalities and Serious Injuries



Source: Nevada DOT, 2012

Figure 12: Seat Belts Average Fatalities and SHSP Fatality Targets



Source: Nevada DOT, 2012

Figure 13: Seat Belts Average Serious Injuries and SHSP Serious Injury Targets



Source: Nevada DOT, 2012

## Seat Belt Strategies

1. Enhance data collection and analysis to identify gaps and improve seat belt usage in Nevada.

This strategy does not have a performance measure as the activities associated with this strategy are process in nature.

In 2012 the University of Nevada- School of Medicine’s Center for Traffic Safety Research (CTSR) linked crash data with trauma data for the state. This information allows risk behaviors to be associated with those who choose to drive or ride unbelted. The CTSR data also shows the medical costs involved with patients who crash and were unbelted.

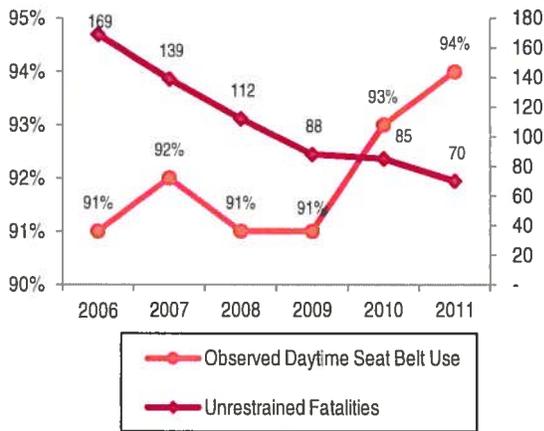
The information learned from this project will be used to educate the public in 2013 as well as state decision makers.

Information will also be shared with the Strategic Communications Alliance (SCA) to help develop a public service announcement about wearing a seat belt and having your child properly restrained.

**2. Enhance seat belt enforcement and media campaign(s).**

The performance measure for this strategy is observed daytime seat belt use (Figure 14). Seat belt usage has been on an upward trend since 2008 and is complemented by a decrease in the number of unrestrained fatalities.

**Figure 14: Observed Daytime Seat Belt Use and Unrestrained Fatalities**



Source: DPS-Office of Traffic Safety, 2012. Nevada DOT, 2012

During 2012, several events were held to promote seat belt awareness, the biggest being the May ‘Click it or Ticket’ events. In southern Nevada, UNLV’s Safe Communities Partnership sponsored a door decorating contest that had participation from multiple businesses. This brought non-traditional messaging to people all over the community from shopping malls to restaurants to county buildings.

In December “Santa” teamed up with Las Vegas Metropolitan police for a mandatory child safety seat checkpoint. Families in high risk areas were given free seats and corresponding education. This partnership will continue in 2013.

**3. Enhance public education to population groups w/lower than average restraint use.**

The performance measure associated with this strategy is observed daytime seat belt use by those user groups with the lowest use of restraints. Pick-up truck drivers and Latino populations exhibit lower seat belt use than other groups. Table 4 shows restraint use by pick-up truck drivers for both pre- and post-mobilization of annual enforcement campaigns. High visibility enforcement efforts have shown to be effective in increasing usage, but restraint use prior to the annual HVE campaigns has fluctuated from year to year and does not indicate a trend.

**Table 4: Observed Daytime Seat Belt Use - Pickup Truck Occupants**

	Pre-Mobilization	Post-Mobilization
2012	83.5%	91.6%
2011	87.8%	90.6%
2010	87.2%	91.5%
2009	84.5%	83.8%
2008	85.0%	83.0%

Source: University of Nevada Las Vegas, 2013

High profile public education events were held during the annual Teen Driver Safety Week in October, with seat belts education being the focus of the week. Pledge banners were brought to high schools across the Las Vegas region where students pledged to always wear their seat belts.

Seat belt fatalities have shown a downward trend which is consistent with the decrease in overall fatalities. However, the percentage of those dying unbelted in motor vehicle crashes has remained close to the 50 percent mark. Funding permitting, the state will develop messaging to all road users about the benefits of using seat belts, making sure the messages are reaching high-risk communities.

**4. Provide traffic safety related education to visiting motorists.**

The performance measure associated with this strategy is the number of unbelted driver fatalities and serious injuries broken down by in-state and out-of-state licenses. Table 5 shows a decreasing number of fatalities and serious injuries involving drivers from both in and out of state; this is a direct correlation to the efforts and effectiveness of seat belt awareness and enforcement campaigns.

**Table 5: Unbelted Drivers Fatalities and Serious Injuries by In-State and Out-of-State Licenses**

	In-State	Out-of-State
2011	78	19
2010	99	17
2009	98	18
2008	156	23
2007	201	34

Source: Nevada DOT, 2012

The Drive Fly publication that is given out at every car rental agency and Nevada airports has agreed to do advertising for the SHSP in 2013. This partnership began in 2012 with the initial message focusing on pedestrian safety.

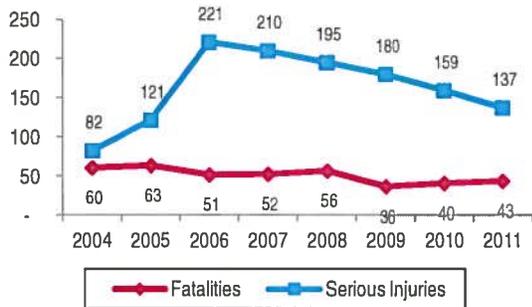
In 2013 the Senate Transportation Committee will introduce the Primary Seat Belt Bill again, one of the top proven strategies for increasing seat belt usage in the state.

# Pedestrian

## Safety Progress

Between 2008 and 2011, pedestrian fatality numbers dropped by 23.2 percent and serious injuries decreased by 29.7 percent (Figure 15). The five year average number of pedestrian fatality and serious injuries both ended up lower than their targets (Figures 16 and 17).

Figure 15: Pedestrian Fatalities and Serious Injuries



Source: Nevada DOT, 2012

Figure 16: Pedestrian Average Fatalities and SHSP Fatality Targets



Source: Nevada DOT, 2012

Figure 17: Pedestrian Average Serious Injuries and SHSP Serious Injury Targets



Source: Nevada DOT, 2012

## Pedestrian Strategies

1. Enforce pedestrian laws at high crash locations; pursue judicial follow through.

The performance measure for all four pedestrian strategies is the five year average number of fatalities and serious injuries. As shown in Figures 16 and 17 and again in Table 6, statewide there is a downward trend in these numbers.

Table 6 serves as the performance measure for each of the Pedestrian CEA team strategies. Some highlights of the pedestrian safety activities follow.

Table 6: Five-Year Average Fatalities and Serious Injuries - Pedestrians

	Five-Year Avg Fatalities	Five-Year Avg Serious Injuries
2007-2011	45	176
2006-2010	47	193
2005-2009	52	202
2004-2008	56	209

Source: Nevada DOT, 2012

Approximately \$348,000 (FY 2012) was secured from a Nevada *Joining Forces* grant to augment enforcement related to pedestrian safety and speed.

Judge Bill Kephart and District Judge Kathleen Delaney were briefed on potential changes in the law to improve pedestrian safety..

Regional high visibility enforcement campaigns were conducted throughout the year, which included an on-going program of Police Officers dressed in seasonal themed costumes in crosswalks in high crash locations in Las Vegas (Thanksgiving turkey, Santa, Leprechaun, etc.).

Support and coverage from media partners has been significantly helpful in getting out the safety message, e.g. ABC Channel 13's (Las Vegas) "Be Smart, Be Safe, Be Seen" campaign for crosswalk safety.

A Bill Draft Request for Nevada's 2013 Legislative Session was prepared that includes six recommended changes to the Nevada Revised Statutes (NRS) to benefit pedestrian safety:

- to require drivers to "stop for" rather than "yield to" pedestrians within crosswalks
- to more clearly define when drivers have to stop for pedestrians within crosswalks
- to clarify that "Walk" and "Don't Walk" signals also include symbolized versions of walk and don't walk
- to give the option of an additional penalty in the form of an educational class for drivers failing to stop for pedestrians within

crosswalks or overtaking a stopped vehicle at a crosswalk

- to clarify when and where pedestrians can cross the road
- to enhance the penalties for offenses committed in a school zone or school crossing zone (currently just speeding violations are enhanced)

The BDR was submitted to the LCB in September and will be considered in the 2013 Legislative Session. The BDR is sponsored by Senator Mark Manendo, Chairman of the Senate Committee on Transportation and also a member of the pedestrian CEA team.

## **2. Provide pedestrian safety education for both pedestrians and motorists.**

A series of pedestrian safety messages were created for bus shelters in the Las Vegas area, including:

- "Pedestrians – Not Equipped with Airbags"
- "Pedestrian Safety Starts with You"
- "Pedestrian Safety is a Two-Way Street"

Additionally, posters inside buses included winning entries from the 2011 teen STARS program (Supporting Teens and Roadway Safety). One of these is a picture of an alien in a crosswalk with the tag line of "intelligent beings use the crosswalk"; another targeted distracted walking with "tune into your surroundings".

Bus shelter campaigns were completed in both Spanish and English in high risk communities.

School related safety campaigns / publicity materials have included:

- Nevada Moves Day
- Safe Routes to School, including walking audits
- Look Out Kids About
- Safe Kids Washoe County and Clark County programs
- SAVE Your Own Life (Students Against Violence Everywhere)
- Stop, Look, Listen program by North Las Vegas PD

**3. Support generation of high crash location (HCL) data and improve safety through guideline/policies and targeted projects.**

Over the year a number of GIS maps were prepared which identified pedestrian crash data in the urban areas of Clark County and Washoe County (pedestrian safety is an urban problem in Nevada). These maps revealed concentrations of crashes involving pedestrians, particularly in downtown areas. Further analysis was conducted by age, who was at fault (pedestrian or driver), and crash data overlaid with school and bus stop locations. The map with bus stops revealed that *there is little correlation between pedestrian crashes and bus stops or schools.*

Roadway and pedestrian-focused Road Safety Audits (RSA) continued across the state throughout 2012. Twelve pedestrian RSAs are planned between 2011 and 2013.

Pedestrian friendly design standards took a big step forward in 2012 with the completion of a "Complete Streets" policy

and design manual for Clark County and similar documents in Washoe County.

**4. Support the implementation of Pedestrian Safety Action Plans (PSAP) statewide.**

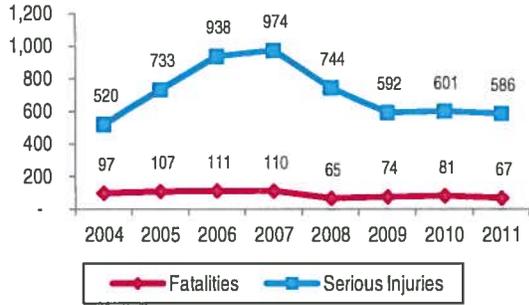
Pilot Pedestrian safety projects – Pedestrian "Charrettes" are provisionally proposed in early 2013. Improvements for pedestrian safety continue to be carried out by RTC Washoe under the Pedestrian Safety Action Plan in Washoe County, including Kietzke Lane.

# Intersections

## Safety Progress

Between 2008 and 2011, intersection fatality numbers increased by 3.1 percent while serious injuries reduced by 21.2 percent (Figure 18). The five-year average number of intersection fatalities and serious injuries is lower than targeted (Figures 19 and 20).

Figure 18: Intersections Fatalities and Serious Injuries



Source: Nevada DOT, 2012

Figure 19: Intersections Average Fatalities and SHSP Fatality Targets



Source: Nevada DOT, 2012

Figure 20: Intersections Average Serious Injuries and SHSP Serious Injury Targets



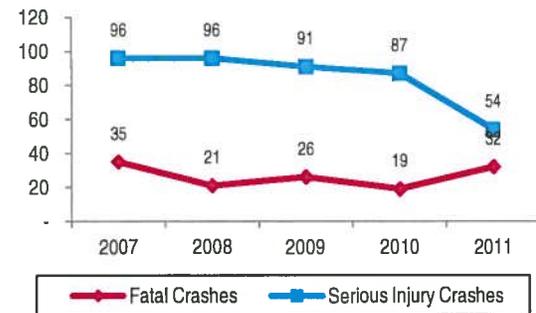
Source: Nevada DOT, 2012

## Intersection Strategies

1. Analyze high-crash intersections statewide and plan / program / implement improvements.

Figure 21 shows the total annual number of fatal and serious injury crashes at the fifty intersections statewide with the highest number of deaths and serious injuries. Figure 21 serves as the performance measure for each of the intersection strategies.

Figure 21: Annual Fatal and Serious Injury Crashes at 50 Highest Crash Locations Statewide



Source: Nevada DOT, 2012.

High Crash Locations have been identified across urban and rural areas of the state, and forwarded to the relevant agencies for action utilizing the FHWA-supported

countermeasures toolbox to mitigate solutions. In 2013 the intersections team plans to investigate application of the Highway Safety Manual's (HSM) safety index to help provide a first step for comprehensive network screening.

## **2. Implement geometric intersection improvements.**

Standard right-turn slip lane and off-set left turn policy is established in the AASHTO Green Book. Northern Nevada agencies have also recognized guidelines through RTC of Washoe County Policies and Procedures Manual. Similar documentation is under development for southern Nevada.

NDOT crosswalk design standards have been adopted by both the north and south metropolitan planning organizations (MPOs, or RTCs). Additional elements have started to be rolled out across the state, such as placement of a yield bar at uncontrolled crosswalks, and additional and properly placed lighting at crosswalks.

Standards for placement of bus stops in shared-use right turn lanes and installation of raised medians at major intersections have been established in southern Nevada, and are under investigation in northern Nevada.

While RTC Washoe has implemented a roundabout-first policy when developing new or existing intersection control policies, RTC Southern Nevada has continued to explore the feasibility of implementing such a policy. In the meantime, some general roundabout design guidance has been included in the RTC Southern Nevada Complete Streets Design Manual.

## **3. Increase driver awareness of intersections and conflicting traffic/pedestrians.**

Guidance to provide intersection/road name ahead signs was already established and implemented in northern Nevada. This guidance has been implemented only at targeted intersections in southern Nevada.

Work is being conducted on a statewide plan to create clear policy on the use of Left Turn on Green Arrow Only, Left Turn Yield on Flashing Yellow Arrow, Yield to Pedestrians, and other such signs. Progress will be continued into 2013.

Standards and guidance for improved visibility and sight lines at intersections have continued to be established at the regional level.

No additional signage (to that already in the MUTCD) for pedestrian and bicycle facilities was considered advantageous by the intersections CEA team, although this does not preclude future recommendations for supplementary signage from the pedestrian CEA team.

## **4. Improve the operating characteristics of signalized intersections to reduce conflicts.**

Good progress has been made during 2012 with improvements to the operation of signalized intersections, including adopting signal timing guidelines, further developing protective / permissive left-turn phasing policy, and on-going implementation of flashing yellow arrows throughout the state.

**5. Follow principles of access management at intersections.**

An access management study was completed and adopted in southern Nevada. Incorporating the study recommendations into county and city standards and codes is ongoing in northern Nevada.

**6. Conduct Intersection Enforcement.**

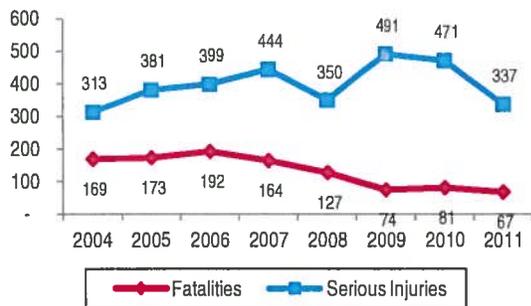
The CEA team adopted this strategy to research the causes of red light running crashes in Nevada and to address public concerns about the use of automated enforcement. Activities associated with this strategy conducted to date have supported the Zero Fatalities campaign “Stop on Red” with the objective of educating drivers on the severity of red light running.

# Lane Departures

## Safety Progress

Between 2008 and 2011, lane departure fatalities have decreased by 47.2 percent and serious injuries have decreased by 3.7 percent (Figure 22). The five-year average number of lane departure fatalities is lower than targeted (Figure 23); the five-year average number of lane departure serious injuries is higher than targeted five-year average (Figure 24).

Figure 22: Lane Departures Fatalities and Serious Injuries



Source: Nevada DOT, 2012

Figure 23: Lane Departures Average Fatalities and SHSP Fatality Targets



Source: Nevada DOT, 2012

Figure 24: Lane Departures Average Serious Injuries and SHSP Serious Injury Targets



Source: Nevada DOT, 2012

## Lane Departure Strategies

1. Create education/awareness programs for how to maintain vehicles on the roadway lanes.

All three lane departure strategies share the performance measure of tracking the five-year average trend in fatalities and serious injuries. Table 7 shows these five-year averages with fatalities showing a decreasing trend while serious injuries exhibit an increase.

Table 7: Five-Year Average Fatalities and Serious Injuries - Lane Departures

	Five-Year Avg Fatalities	Five-Year Avg Serious Injuries
2007-2011	103	419
2006-2010	128	431
2005-2009	146	413
2004-2008	165	377

Source: Nevada DOT, 2012

A primary focus in 2013 includes joint efforts between NHP and NDOT on the Zero Tolerance Zone campaign to address awareness and enforcement of traffic

violations on I-15 in Primm. Considerations for this strategy in 2013 include:

- Implement a national distracted driving campaign/branding
- Provide increased education on the causes and severity of lane departures
- Provide education on what Lane Departures are and their causes: distracted driving, texting, speeding
- Create parent awareness
- Recruit young driver leaders / partners
- Partner with NHP for school presentations and events

The above tactics resulted from meetings and discussions in 2012 and will be discussed at future CEA Team meetings. In 2012, the team developed a data request to provide actual projects that implemented the safety actions for these strategies. The team has received partial data, and will report updated information as its available.

## **2. Keep vehicles in their lanes through engineering improvements.**

A primary focus in 2013 includes a focus on urban strategies. Considerations for 2013 include:

- Provide accurate data
- Consistency in design standards
- Design improvements appropriate for urban environments
- Install urban rumbles (sound vs. safety benefits)

- Evaluate raised pavement markers (maintenance)
- Study human factors (visual/sign placement and lettering)
- Install traffic calming (urban)

In addition to the urban focus, NDOT Safety Engineering is in the process of providing evaluation data on the following safety engineering initiatives:

- Rumble strip installation
- Safety at highway curves improved through surface friction treatments, reconstruction, and signage
- Recommendations from Roadway Safety Audits (RSAs) already completed
- Safety edge implementations
- Incident Management Manual training
- Slope flattening and roadside object removal efforts
- Median cable barrier installation projects
- Animal-vehicle engineering/project solutions

The CEA team will continue to track the implementation of the above tactics. Data continues to be updated and the team will report updated information as provided.

## **3. Decrease crash severity in the event of a roadway departure.**

While the previous strategy focuses on keeping vehicles in the travel lane, this strategy focuses on reducing the severity of injuries in the event of a lane departure

crash. NDOT Engineering is considering the following engineering initiatives to reduce crash severity:

- Slope flattening and roadside object removal efforts
- Median cable barrier installation projects
- Animal-vehicle engineering/project solutions

In 2012, the team developed a data request to provide actual projects that implemented these safety initiatives.

# Strategic Communications Alliance

## Activity Summary

The Strategic Communications Alliance (SCA) was formed in 2008 to assist with all SHSP marketing and communication activities. The mission of Nevada's SCA is to develop and implement a coordinated traffic safety marketing and communications program for the SHSP partners to maximize impact and to leverage limited resources. Traffic safety communications experts from a variety of public- and private-sector agencies and organizations comprise the SCA.

2012 was the year where the SCA revisited its purpose and conducted a "repurposing" exercise. The M3 (Media, Marketing, Messaging) group was created, which is a small focus team that can make quick decisions on campaign ideas and approve artwork. The M3 group meets regularly to coordinate agency outreach and awareness messages.

The following activities occurred throughout 2012:

- Coordinated with intersections, pedestrians, and lane departure CEA teams to make sure the SCA (either the full group or the sub-group) has representation on the CEA teams to ensure consistent messaging and branding.
- Provided collateral materials to partner agencies and organizations.
- Researched, supported and attended several outreach events.

- Delivered SHSP materials and Safe Community posters to Zappos safety personnel for their internal 'employee safety' use.
- Recruited new members and participation from Las Vegas Metropolitan Police Department and NHP.
- Coordinated SCA meetings.
- Supported NDOT and partner agency media awareness.
- Worked to solicit event/activity information for the SHSP newsletter
- Initiated an anonymous voting system (Survey Monkey) for new SCA chair and vice chair positions. This software – which is free – could be quite useful for other SHSP endeavors.
- Coordinated developing a new lane departures slogan ("stay in your lane") – obtained input from full SCA and the M3 subgroup. The final recommendation was to adopt "Focus on the Road."

The overall SCA group and M3 group will continue to work together for awareness and outreach opportunities with partner agencies. A focus in 2013 could include an effort to make the SCA more integrated with the Zero Fatalities campaign.

# Data Team

## Activity Summary

The SHSP Data Team is responsible for ensuring CEA teams have adequate data to perform analyses pertaining to their CEA. If a team needs data to evaluate the effectiveness of strategies, the Data Team is consulted to determine the best possible data for use in such evaluation. The Data Team also identifies any potential data issues and reports them to the TWG, NECTS, and the Nevada Traffic Records Coordinating Committee (TRCC).

The major activity in 2012 for the Data Team was the development of performance measurement data for use in this report. Data Team members worked closely with each CEA team to determine appropriate performance measures based on the availability and reliability of data provided by multiple sources.

The Data Team also provided the necessary data to produce the latest version of the Nevada SHSP Fact Sheets, (a one-page fact sheet per CEA).



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Carson City, Nevada 89712  
Phone: (775) 888-7440  
Fax: (775) 888-7201

## MEMORANDUM

Date: January 28, 2013

**TO:** Department of Transportation Board of Directors  
**FROM:** Rudy Malfabon, Director  
**SUBJECT:** February 11, 2013 Transportation Board of Directors Meeting  
**Item # 8:** Briefing on the Freeway Service Patrol Program – Informational Item Only

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### **Summary:**

The Freeway Service Patrol (FSP) is a program implemented by the Nevada Department of Transportation (NDOT) to reduce traffic congestion and improve highway safety by having specially marked and equipped vehicles patrol the most congested segments of our freeways to provide incident management and motorist assistance.

Freeway Service Patrol programs are utilized nationwide to alleviate roadway congestion by providing quicker clearance of incidents including stopped motorists and minor obstructions. Service patrols often handle less complex incidents independently or participate with other public safety organizations to rapidly and safely address more complex traffic incidents.

Benefits realized by implementing a Freeway Service Patrol program include:

- Congestion reduction
- Improved traffic flow and quicker return of full freeway capacity as a result of reduced incident duration and better traffic control
- Improved travel time reliability
- Reduced fuel costs and vehicle emissions caused by traffic delay
- Improved motorist and incident responder safety
- Reduced secondary crashes
- Ability of service patrol operators to provide real-time updates on traffic conditions that enable NDOT to provide more accurate traveler information about freeway conditions.

### **Background:**

The NDOT Freeway Service Patrol program was first implemented in the Las Vegas region in February of 1998 and in the Reno/Sparks region in November of 2002. Since implementing these programs we have seen marked improvement in the detection and clearance of incidents and stranded motorists from the roadway. This quick response reduces congestion and decreases distraction to other drivers and secondary accidents. The travelling public, Nevada Highway Patrol and other first responders have expressed a great appreciation for the value of this service.

## **Analysis:**

NDOT Traffic Operations has performed a benefit-cost analysis of assists performed by the Freeway Service Patrol program in the 2012 fiscal year. Through this analysis, the calculated benefit-cost ratio, based projected reductions in vehicle-hours of delay and cost data developed by the University of Maryland, Department of Civil and Environmental Engineering, ranged from 1.17/1 to 18.55/1 depending on clearance time variables. This analysis is intentionally conservative and does not include many other savings, including cost savings to the freight industry; and savings realized through the reduction of injuries and fatalities.

NDOT continues to analyze the program to ensure the most effective use of the Freeway Service Patrol for the traveling public. We have specified patrol routes and hours based upon traffic volumes and crash data to best reach our primary goal of congestion relief in the areas and during the times the travelling public is most highly impacted.

We will be implementing two pilot projects within the Freeway Service Patrol program this year to evaluate alternatives to our current program. First, in the Reno/Sparks area we will execute an in-house program utilizing existing staff and equipment from the NDOT Equipment Division. This pilot project will allow us to compare an in-house program to an out-sourced one; evaluate the impacts of diverting NDOT staff and equipment on other NDOT programs, as well as any differences in program cost.

The second pilot project adds two Incident Response Vehicles (IRV) in the Las Vegas area. IRV vehicles are better equipped and IRV drivers are better trained to respond to larger incidents needing more traffic control and responder assistance. Through this project we can better evolve the program with the best combination of vehicle and driver types to provide quicker roadway clearance resulting in the most efficient and effective roadway congestion management program.

## **List of Attachments:**

- Program Synopsis
- 2012 NDOT FSP Statistics & Costs
- NDOT Benefit Cost Analysis
- Las Vegas FSP Routes and Operating Times Maps (effective April 1, 2013)
- Reno FSP Routes and Operating Times Maps (effective April 1, 2013)
- Amendment and RFP timelines & In-House Pilot Program
- Maryland Benefit Cost Analysis

## **Recommendation for Board Action:**

Informational item only.

## **Prepared by:**

Lisa Schettler, NDOT Traffic Operations



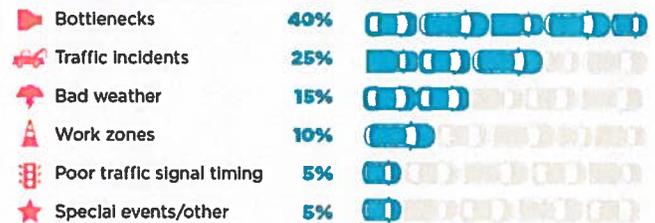
# Freeway Service Patrol

The Freeway Service Patrol program was implemented by the Nevada Department of Transportation (NDOT) to reduce traffic congestion and improve highway safety by having specially marked and equipped vehicles patrol the more congested sections of our urban freeways to provide incident management and motorist assistance. In this way, service patrols play an important role by quickly and safely removing minor obstructions before they create a more serious impact. Service patrols handle less complex incidents independently but also assist other public safety organizations—including law enforcement, fire, emergency medical services, and towing and recovery professionals—to rapidly and safely address more complex traffic incidents. The Freeway Service Patrol plays a significant role in NDOT's regional intelligent transportation systems by quickly removing incidents that adversely affect traffic flows.

Nationally, highway incidents cause about 25 percent of the total congestion on roads. During peak congestion periods, lane blocking incidents affect traffic flow disproportionately to the number of lanes blocked. For example, one blocked lane on a three-lane freeway will reduce traffic flow by 50 percent; two blocked lanes will reduce it by 80 percent. Incident-related congestion not only affects the economy, wastes fuel, and contributes to excess amounts of green-house gases, but also puts motorists and those that respond to the incident at risk of secondary incidents and injury.

Freeway Service Patrol efforts to minimize impacts of minor incidents during periods of greatest freeway congestion supports NDOT goals as well as the mission of the regional traffic management centers to optimize roadway safety and efficiency. These efforts enhance the level of customer service provided to our current users and extend the service life of our current roadway capacity and infrastructure.

## CAUSES OF ROAD CONGESTION



The Freeway Service Patrol Program is a Project that can improve traffic flow and congestion at a lower cost than construction projects. Like many ITS technologies, service patrols are considered a much more cost effective method to do that than highway construction, especially in metropolitan areas where land for highway expansion is either unavailable or prohibitively expensive. Using such methods as assigning a dollar value to drivers' time and to the exhaust emissions of vehicles stuck in traffic, studies through the early and mid 1990s estimated the benefit-cost ratio for some freeway service patrols may be as high as 36.2:1.

The need for cost effective solutions to congestion and incident management is clearly identified in the 2011 Texas Transportation Institute (TTI) Urban Mobility Report. In terms of delay and excess fuel consumed during 2010, Las Vegas ranked 31<sup>st</sup> out of the 101 urban areas studied in the report. The total annual delay in 2010 for Las Vegas motorists was 27,386,000 person-hours or 28 hours per peak auto commuter. The report estimates that in 2010, congestion in Las Vegas cost \$530,000,000 and truck congestion cost \$83,000,000. The annual cost per peak auto commuter was \$532.

NDOT has undertaken a more detailed freeway service patrol monitoring system to quantify system costs and efficiencies to better manage service routes and hours while ensuring a safe and efficient freeway system for the travelling public.

## THE BOTTOM LINE: CONGESTION COSTS MONEY

Traffic jams don't just make you late, they cost you money. According to the Texas Transportation Institute, each hour stuck in traffic costs about \$21 in wasted time and fuel. **Here's a look at the real cost of traffic congestion:**

### COUNTRY-WIDE COST OF CONGESTION

**1.9 billion gallons** of fuel were wasted due to road congestion - more than five days' worth of the total daily fuel consumption in the United States.



The average urban commuter is stuck in traffic for **34 hours** every year.

That's longer than it would take to drive from Bangor, Maine, to Key West, Florida.



The average yearly cost to each driver is **\$713** - more than a week's wages for the average American.

### TRAVEL TIP

Peak travel time and rush hour mean the same thing: try to stay off of major highways or consider taking public transportation from 7:00-10:00 a.m. and 4:00-7:00 p.m. during the week to avoid **60 percent** of road congestion.

**Nevada Freeway Service Patrol  
Las Vegas and Reno  
FY 2012 State Statistics**

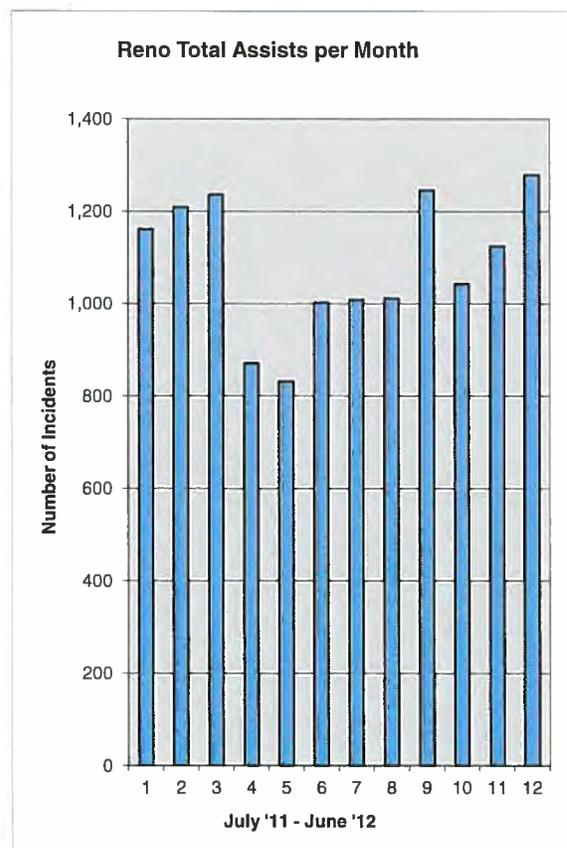
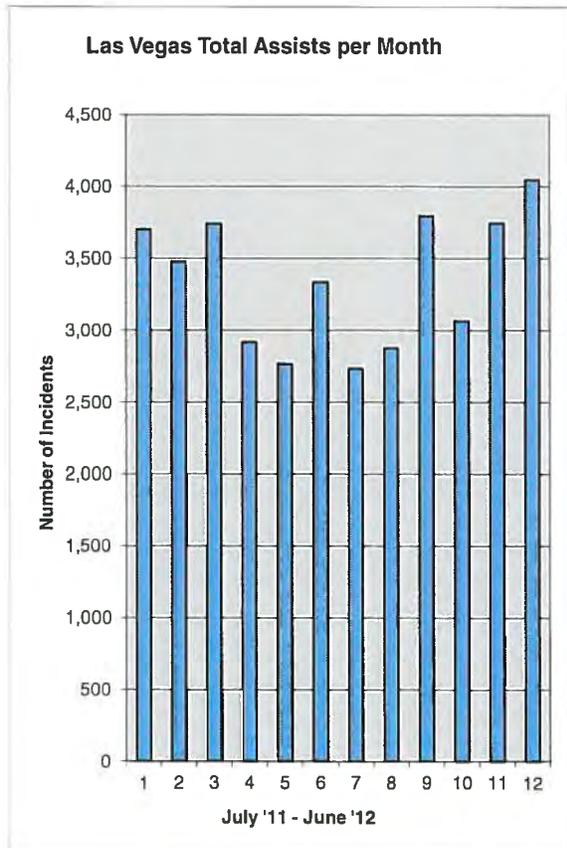
Type of Assist	Las Vegas	Reno
	I-15/US-95/I-515/I-215	I-80/US-395
1. Abandoned Vehicle	4,597	1,995
2. Debris in Roadway	8,494	1,217
3. Lost Motorist Re-directed	271	144
4. Pedestrian in Roadway	166	104
5. Stopped Motor Vehicle-OK	7,595	3,812
6. Disabled Motor Vehicle	16,527	3,671
7. Motor Vehicle Accident	1,954	615
8. Medical Emergencies	18	10
9. HazMat Incidents	23	0
10. Brush Fires	2	3
11. SMV- Scene Safety	54	1,348
12. Animal Rescue	21	19
13. Lock Out	47	7
14. Unsecure Load	389	78
15. Other Types of Incidents	39	0
Total	40,197	13,023
Patrol Miles Traveled	497,621	283,359
Program Costs	\$1,750,750	\$771,865

**LAS VEGAS  
ASSISTS PER MONTH - ALL ROUTES**

Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Jan '12	Feb '12	Mar '12	Apr '12	May '12	Jun '12	Total
3,702	3,477	3,742	2,917	2,765	3,334	2,733	2,876	3,794	3,065	3,744	4,048	40,197

**RENO  
ASSISTS PER MONTH - ALL ROUTES**

Jul '11	Aug '11	Sep '11	Oct '11	Nov '11	Dec '11	Jan '12	Feb '12	Mar '12	Apr '12	May '12	Jun '12	Total
1,161	1,209	1,236	871	832	1,002	1,009	1,012	1,245	1,043	1,124	1,279	13,023



## Nevada Freeway Service Patrol (FSP) Benefit-Cost Analysis

FY 2012 Nevada Freeway Service Patrol Activities				
	Shoulder Assists	Debris in Roadway	Motor Vehicle Accident	Total Assists
<b>Reno/Sparks area</b>	11,191	1,217	615	13,023
	<b>Cost of Reno/Sparks FSP Program FY 2012:</b>			<b>\$771,865</b>
<b>Las Vegas area</b>	29,749	8,494	1,954	40,197
	<b>Cost of Las Vegas FSP Program FY 2012:</b>			<b>\$1,750,750</b>

Percentage of available freeway capacity based upon the Highway Capacity Manual, Special Report 209, Transportation Research Board				
Number of lanes	Shoulder (disabled vehicle)	Shoulder (collision)	1 lane blocked	2 lanes blocked
2	0.95	0.81	0.35	0.00
3	0.99	0.83	0.49	0.17
4	0.99	0.85	0.58	0.25
5	0.99	0.87	0.65	0.40

Savings in travel delay (vehicle-hours)*							
		5 minutes reduction		15 minutes reduction		25 minutes reduction	
		Assists	Total** Vehicle-Hours	Total** Vehicle-Hours	Total** Vehicle-Hours		
<b>Reno/Sparks Area</b>	Shoulder (disabled vehicle)	11,191	5,036	13,877	24,620		
	Blocked Lane(s)	1,832	45,104	155,372	304,973		
<b>Las Vegas Area</b>	Shoulder (disabled vehicle)	29,749	13,387	36,889	65,448		
	Blocked Lane(s)	10,448	257,230	886,095	1,739,279		

\*Assuming debris in roadway and motor vehicle accidents would result in at least one lane blocked.

\*\* Projected reductions in total vehicle-hours of delay are based on values derived by the Department of Civil and Environmental Engineering, University of Maryland, as reported in "Benefit-Cost Analysis of Freeway Service Patrol Programs: Methodology and Case Study", January 2009. Projected reductions in delay for Reno and Las Vegas are derived by multiplying the number of assists recorded in FY 2012 by weighted average delay reductions in the report.

Benefit						
		\$/Unit***	5 minutes reduction	15 minutes reduction	25 minutes reduction	
<b>Reno/Sparks Area</b>	Cost per vehicle-hours of delay	\$18	\$902,520	\$3,046,482	\$5,932,674	
	Benefit-Cost Ratio		1.17	3.95	7.69	
<b>Las Vegas Area</b>	Cost per vehicle-hours of delay	\$18	\$4,871,106	\$16,613,712	\$32,485,086	
	Benefit-Cost Ratio		2.78	9.49	18.55	

\*\*\*Benefit Unit Cost estimates are based on data used in the "Benefit-Cost Analysis of Freeway Service Patrol Programs: Methodology and Case Study" report by the Department of Civil and Environmental Engineering, University of Maryland, January 2009

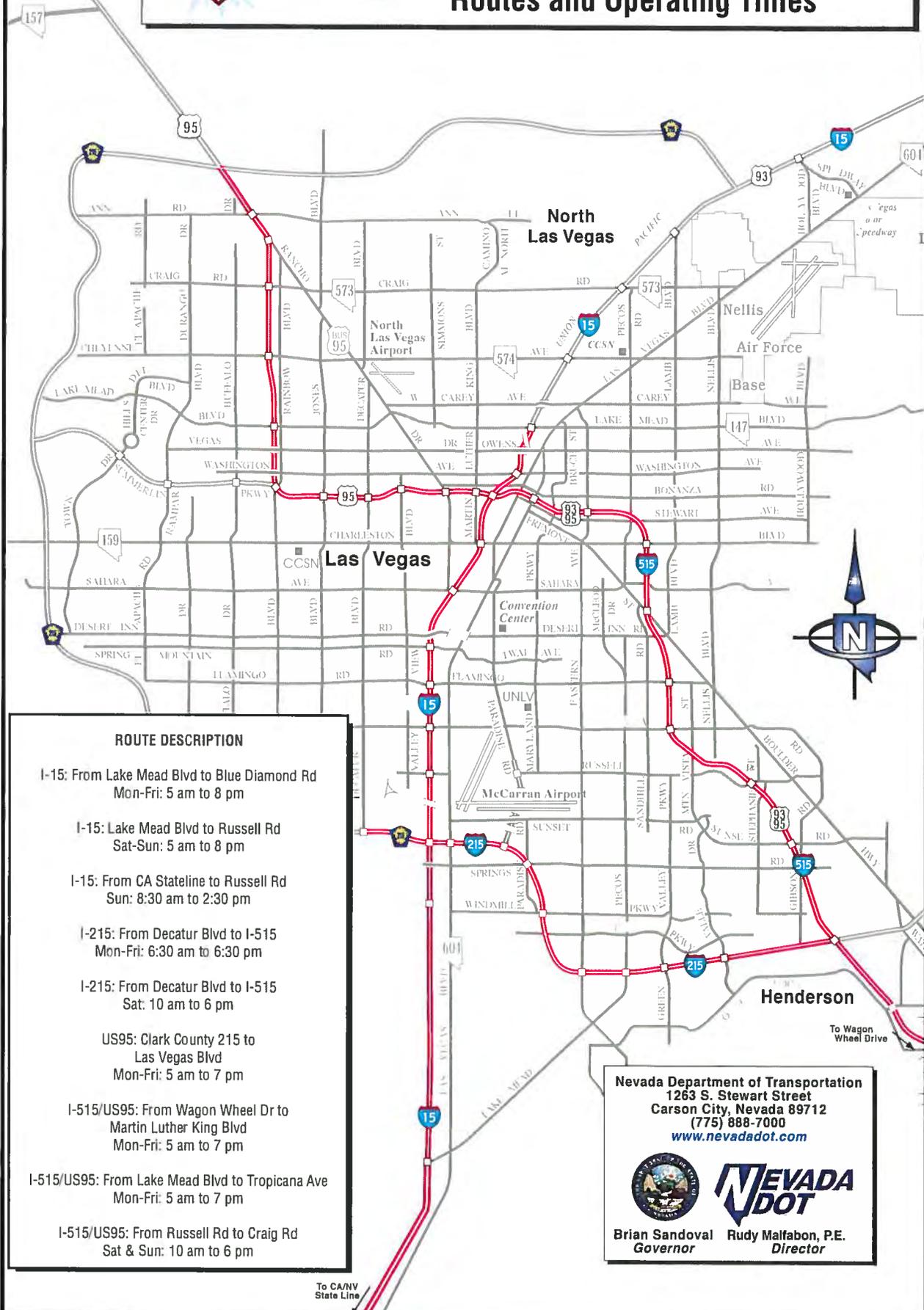
Additional savings accrued but not included in the above Benefit-Cost estimates include:

- Savings in reduced delay to the freight industry/commerce
- Value of time saved by law enforcement
- Savings in Reduction of Incidents Involving Injuries or Fatalities



**FREWAY  
SERVICE  
PATROL**

# Las Vegas Freeway Service Patrol Routes and Operating Times



### ROUTE DESCRIPTION

I-15: From Lake Mead Blvd to Blue Diamond Rd  
Mon-Fri: 5 am to 8 pm

I-15: Lake Mead Blvd to Russell Rd  
Sat-Sun: 5 am to 8 pm

I-15: From CA Stateline to Russell Rd  
Sun: 8:30 am to 2:30 pm

I-215: From Decatur Blvd to I-515  
Mon-Fri: 6:30 am to 6:30 pm

I-215: From Decatur Blvd to I-515  
Sat: 10 am to 6 pm

US95: Clark County 215 to  
Las Vegas Blvd  
Mon-Fri: 5 am to 7 pm

I-515/US95: From Wagon Wheel Dr to  
Martin Luther King Blvd  
Mon-Fri: 5 am to 7 pm

I-515/US95: From Lake Mead Blvd to Tropicana Ave  
Mon-Fri: 5 am to 7 pm

I-515/US95: From Russell Rd to Craig Rd  
Sat & Sun: 10 am to 6 pm

Nevada Department of Transportation  
1263 S. Stewart Street  
Carson City, Nevada 89712  
(775) 888-7000  
[www.nevadadot.com](http://www.nevadadot.com)



**NEVADA  
DOT**

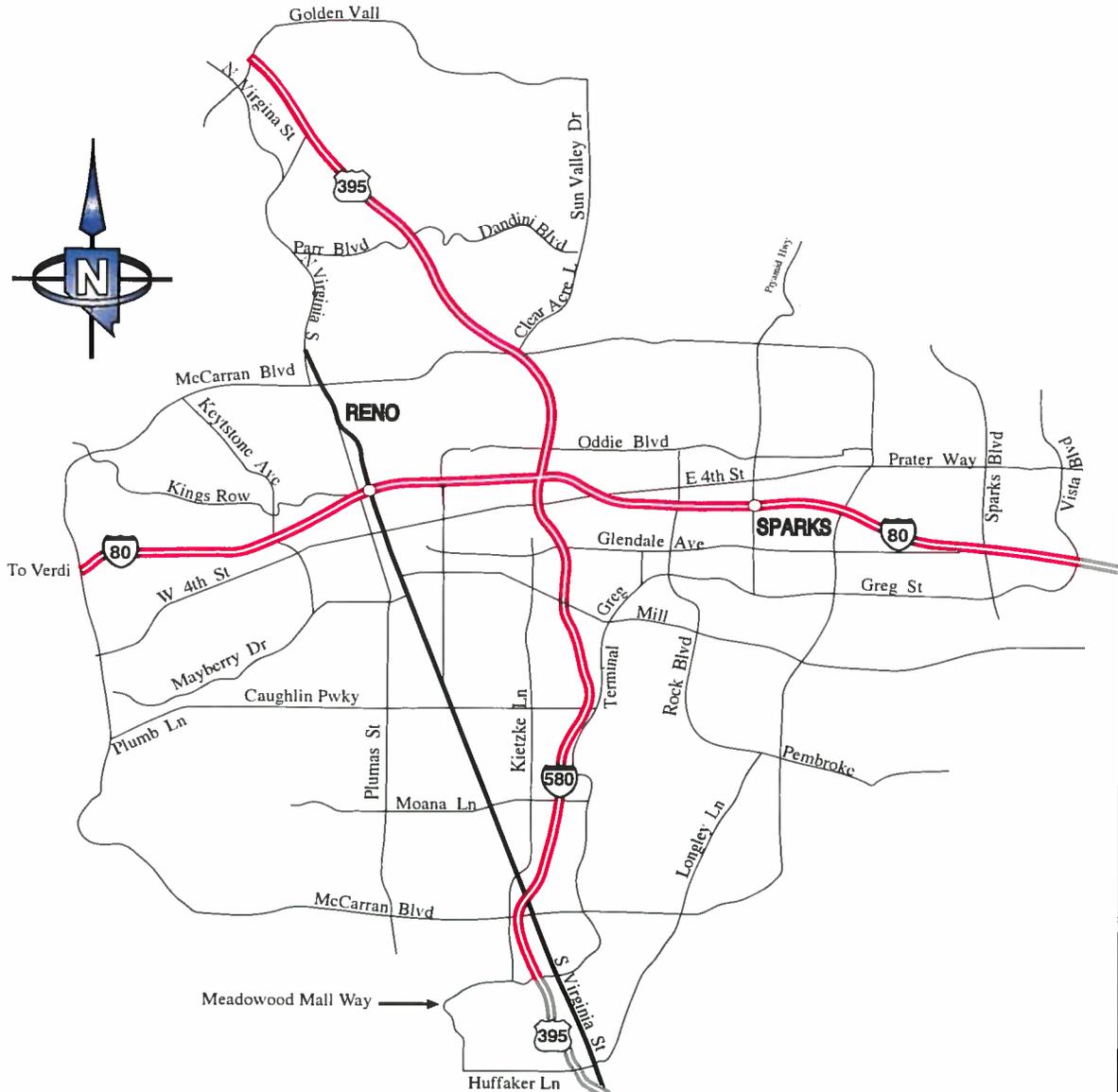
Brian Sandoval Governor Rudy Malfabon, P.E. Director

To CA/NV  
State Line



**FREEWAY  
SERVICE  
PATROL**

# Reno Freeway Service Patrol Routes and Operating Times



## ROUTE DESCRIPTION

**I-580/US395:** From I-80/I-580 Spaghetti Bowl to Meadowood Mall Way  
Mon-Fri: 6:00 am to 6:00 pm

**I-80/I-580:** Focusing on the I-80/I-580 Spaghetti Bowl with turnaround points at W. McCarran Blvd, Golden Valley Rd, and Vista Blvd  
Mon-Fri: 6:00 am to 9:00 am and 1:00 pm to 6:00 pm

Nevada Department of Transportation  
1263 S. Stewart Street  
Carson City, Nevada 89712  
(775) 888-7000  
[www.nevadadot.com](http://www.nevadadot.com)



**Brian Sandoval**  
Governor

**Rudy Malfabon, P.E.**  
Director

# NDOT Freeway Service Patrol

## Request for Proposals (RFP) timeline for the for the Las Vegas area

<b>Task</b>	<b>Date/Time</b>
Request for Proposal (RFP) Issued	01/18/2013
Dates Advertised	01/18/2013 and 01/25/2013
Proposer Questions Submittal Due Date	01/31/2013
NDOT Response to Proposer Questions	02/05/2013
RFP Due Date	03/01/2013
Anticipated Notice of Intent	03/25/2013
Recommendation to Board of Transportation	04/22/2013
Anticipated Notice of Award	05/13/2013

## Request for Proposals (RFP) timeline for the for the Reno/Sparks area\*

<b>Task</b>	<b>Date/Time</b>
Request for Proposal (RFP) Issued	01/25/2013
Dates Advertised	01/25/2013 and 02/01/2013
Proposer Questions Submittal Due Date	02/12/2013
NDOT Response to Proposer Questions	02/15/2013
RFP Due Date	03/08/2013
Anticipated Notice of Intent	03/27/2013
Recommendation to Board of Transportation	04/22/2013
Anticipated Notice of Award	05/13/2013

\*The timeline for the Reno/Sparks area RFP may change contingent upon implementation and evaluation of the pilot project described below

### The Reno/Sparks Freeway Service Patrol Pilot Project

The in-house freeway service patrol pilot project will utilize mechanics and vehicles currently assigned to the NDOT Equipment Division on in the Reno/Sparks area. These mechanics will receive additional training in areas such as first aid and traffic control. The pilot project will begin April 1, 2013 following the routes and operating times designated in the Reno/Sparks area map included in this packet. After the pilot project has been in effect for three months or a period of time necessary to perform a valid evaluation of the in-house program, NDOT will analyze the impacts to the FSP program and to other programs to which the personnel and equipment would normally be assigned. NDOT will then either continue the in-house program or proceed with the Reno/Sparks RFP to obtain the services of a private vendor to continue the program.

# BENEFIT-COST ANALYSIS OF FREEWAY SERVICE PATROL PROGRAMS: METHODOLOGY AND CASE STUDY

Chihsheng Chou  
Elise Miller-Hooks

*Department of Civil and Environmental Engineering  
University of Maryland*

Sergeant/Station Commander Ira Promisel

*New York State Police  
Hudson Valley Transportation Management Center*

Forthcoming in *Advances in Transportation Studies*

Accepted January 2009

## **Abstract**

In the United States, it is estimated that nearly 60% of non-recurrent freeway congestion is caused by incidents. This non-recurrent congestion negatively impacts safety and mobility, and results in unnecessary use of fuel and the emission of dangerous pollutants. Incident management programs, such as Freeway Service Patrol (FSP) programs, are employed nationwide to mitigate the impact of incidents. FSP programs are subject to public scrutiny and potential cancellation. Thus, numerous states seek to prove that the benefits of their FSP programs outweigh their costs. In this paper, a simulation-based methodology is employed to estimate the benefits of such a FSP program, the Highway Emergency Local Patrol (H.E.L.P.) program, operating within New York State. The average reduction in incident duration due to the execution of the H.E.L.P. program was estimated through a statistical comparison of incident durations resulting from response by troopers or H.E.L.P. vehicles. Hundreds of incidents that arose along a roadway segment were replicated and benefits in terms of reduced travel delay, fuel consumption, emissions, and secondary incidents were estimated. The monetary equivalent of these savings was computed to obtain an estimate of the benefit-to-cost (B/C) ratio. A set of B/C ratios are provided for a range of average incident duration savings. Sufficient detail is given to permit comparable FSP programs operating on roadways with similar geometric characteristics to that considered in the study to complete such estimates for their own programs.

Key Words: Freeway operations; Incident management; Benefit-to-cost ratio

## 1. INTRODUCTION AND BACKGROUND

In the United States, it is estimated that nearly 60% of non-recurrent freeway congestion is caused by incidents (1). This non-recurrent congestion negatively impacts safety and mobility. It induces enormous delay for travelers and results in secondary incidents, which cause approximately 18% of all freeway deaths according to Brach (2). Moreover, traffic congestion results in the unnecessary use of fuel and the emission of dangerous pollutants. To mitigate the impact of incidents along freeways, Freeway Service Patrol (FSP) programs have been introduced nationwide. FSP programs supply continuously roving vehicles that traverse given beats. The drivers of these vehicles respond to incidents involving disabled vehicles, collisions, and debris to which they are dispatched or that they detect as they traverse their beats. Once arriving at an incident scene, the FSP vehicle driver can provide free services, such as changing a tire, supplying a small amount of gasoline, jump starting a battery, pushing a vehicle out of the main lanes and off the freeway, or providing minor mechanical assistance. In the case of an accident requiring police or other emergency personnel presence, the FSP vehicle driver can call for help and can assist in redirecting traffic around the incident. Whether assisting with disabled vehicles or accidents, the goal of the FSP program is to mitigate the impact of the incident on upstream traffic. FSPs also act as probe vehicles, providing real-time information on traffic conditions. These programs are supported through state and federal taxes and, therefore, are subject to public scrutiny and potential cancellation with local or state budget cuts. Thus, numerous states seek to prove that the benefits of their FSP programs outweigh their costs.

Ideally, to evaluate the benefits of a FSP program, a “before-and-after” study would be conducted. However, in most locations, the necessary data to establish a “before” benchmark is not available. Thus, most studies of these programs are completed through comparisons between responses to incidents involving or not involving (i.e. with and without) FSP vehicles. Examples include, among others, evaluations conducted in Minnesota (2004), Florida (2005), Maryland (2006), Georgia (2007) and Northern Virginia (2008).

Deterministic queueing models were employed to study travel delay savings due to the Traffic Incident Management (TIM) program in Georgia (3). The estimated savings in travel delay provided input for analytical models developed to estimate corresponding savings in emissions, fuel consumption and secondary incidents. This queueing modeling approach to FSP program evaluation requires data pertaining to traffic volumes prior to, during, and after each traffic incident for travel delay estimation. The Freeway Service Patrols Evaluation (FSPE) package used a macroscopic approach to evaluate the benefits of the Road Ranger and Northern Virginia Safety Service Patrol (NOVA SSP) programs in Florida (4) and Virginia (5) in terms of savings in travel delay, fuel consumption and pollution.

Where required traffic volume data are unavailable or detailed analysis is needed, microscopic simulation-based methods may be preferred. Such methods can predict performance while modeling real-world variability in problem parameters. If real-time traffic data had been collected just prior to and throughout the recovery period of each incident in the study period, actual travel delay can be estimated. Since such real-time data are not typically available, simulation is often used to approximate actual conditions. For example, regression models for estimating travel delay and fuel consumption were created from simulated runs (employing the CORridor SIMulator (CORSIM) simulation platform) of a chosen set of 120 of 1,997 incidents stored in a data archive to study the

Coordinated Highways Action Response Team (CHART) program in Maryland (6). The authors provide few details of the simulation technique or the selected 120 incidents. Savings in emissions were estimated based on travel delay savings. The emissions rates as a function of travel delay were provided by the Maryland Department of Transportation (7).

Hundreds of simulation runs of representative incidents with varying incident duration (0 to 40 minutes) and lane blockage characteristics were completed using the Paramics simulation platform to analyze Minnesota's Freeway Incident Response Safety Team (FIRST) program (8). Total delay and volume computed from the simulation runs were plotted against each other to establish how one varies with the other. This plot was used to estimate delays resulting from actual incidents in an archive of incident data and resulting savings in delay due to the FIRST program. Reduction in environmental pollution and secondary incidents resulting from this program were estimated based on rates of pollution and secondary incidents as a function of travel delay and total incidents, respectively, provided in the literature.

Haghani et al. (9) proposed a similar simulation-based methodology using the CORSIM simulation platform to estimate savings in travel delay, fuel consumption, pollution emissions and secondary incidents. They conducted a sensitivity analysis of performance measures and key parameter settings, such as incident duration, traffic volume, car-following sensitivity factors, and rubbernecking effects, and developed regression models to predict the benefit-to-cost ratio as a function of volume-capacity ratio, rubbernecking effect, and potential reduction in total incident duration. A key finding of their work is that a traffic flow rate of at least 1,500 vehicles per lane per hour provides a significant indicator for the benefits of the FSP program to outweigh its costs.

A simulation-based methodology that builds on the general technique developed in (9), as well as other simulation-based works (6,8), to estimate the benefits of a FSP program is employed herein. This methodology is used to assess a FSP program, the Highway Emergency Local Patrol (H.E.L.P.) program, operating within New York State. The H.E.L.P. program runs service patrol vehicles along a portion of the I-95 Corridor in the Lower Hudson Valley region of New York. It operates eight hours per day (during weekday morning and evening peak periods). Segments of four roadways, I-287, I-684, the Taconic State Parkway and the Sprain Brook Parkway, were considered within the analysis. Incidents arising along these roadway segments during a six-month period (January 1, 2006 through June 30, 2006) were studied. The reduction in incident duration due to the execution of the H.E.L.P. program was estimated through a statistical comparison of incident durations resulting from response by troopers or H.E.L.P. vehicles. Hundreds of incidents that arose along a segment of I-287 were replicated and benefits in terms of reduced travel delay, fuel consumption, emissions, and secondary incidents were estimated. The monetary equivalent of these savings was computed to obtain an estimate of the benefit-to-cost (B/C) ratio. A set of B/C ratios are provided for a range of average incident duration savings that might result from a comparable FSP program operating on a roadway with similar geometric characteristics to that considered in the study. Haghani et al. (9) conducted a related, but significantly less comprehensive, study of this H.E.L.P. program. Their findings provided an initial starting point for this work.

The primary contributions of this work include: (1) important findings from statistical analyses of nearly 10,000 incidents arising along four roadway segments over a six-month period in a major metropolitan area within the United States, including

estimated savings in incident duration due to the responsible FSP program; (2) details associated with the proper handling of key parameters of the simulation model; and (3) benefit-to-cost estimates by potential average incident duration savings for the studied roadway with sufficient detail to permit other programs operating along roadways with similar geometry to complete similar estimates for their own programs. Description of the procedure employed herein is limited to the specific details that are unique to this study and facets of the approach required to provide comprehensive depiction of the steps of this work.

## **2. INCIDENT DATA ANALYSIS AND INCIDENT DURATION SAVINGS**

FSP programs exist in New York State. Figure 1 shows the service regions and constituent beat formations for the Hudson Valley area. This study considers portions of Beats 8-2, 8-3, and 8-5. Incident data pertaining to freeway segments along which the H.E.L.P. program operates are stored and maintained in three different databases: HTECAD (HTE's Computer-Aided Dispatch (CAD)), ATMS (the Traffic Management Center's Transcommander software from Northrup Grumman), and TWAY (Thruway's Tiburon CAD). Consequently, the data reporting procedures and information recorded under each incident varies as a function of which database it is entered in. Incidents reported in more than one database were identified, incident attributes were combined (since different information was stored in each database), and the duplicate data were removed. The technique of matching the data across databases required buffers in both time and space, because a single incident may be recorded at a slightly different location or time as a function of the database to which it was entered and device used in entering the data. After extensive experimentation, buffers of 30 minutes and 0.3 miles were employed in creating a single, integrated database. Table 1 summarizes the frequency of incidents along segments of Taconic State Parkway, Sprain Brook Parkway, I-684 and I-287 after removing 2,968 duplicated incident records. During the study period, 9,765 incidents involving disabled vehicles and collisions arose along the study roadway segments, of which 5,919 (61% of all incidents) arose during H.E.L.P. hours of operation and 4,732 were assisted by H.E.L.P. vehicle drivers.

While the H.E.L.P. vehicle drivers sometimes assisted with incidents that arose outside normal hours of operation, only those events arising during the H.E.L.P. hours of operation (i.e. during the rush hours) were considered in performance analysis of the H.E.L.P. program. The potential savings from the H.E.L.P. program were estimated by comparing incidents between categories of "H.E.L.P. only," "Police only," and "Both," results of which are shown in Table 2.

Figure 1: H.E.L.P. Program Beat 8 Operation Area

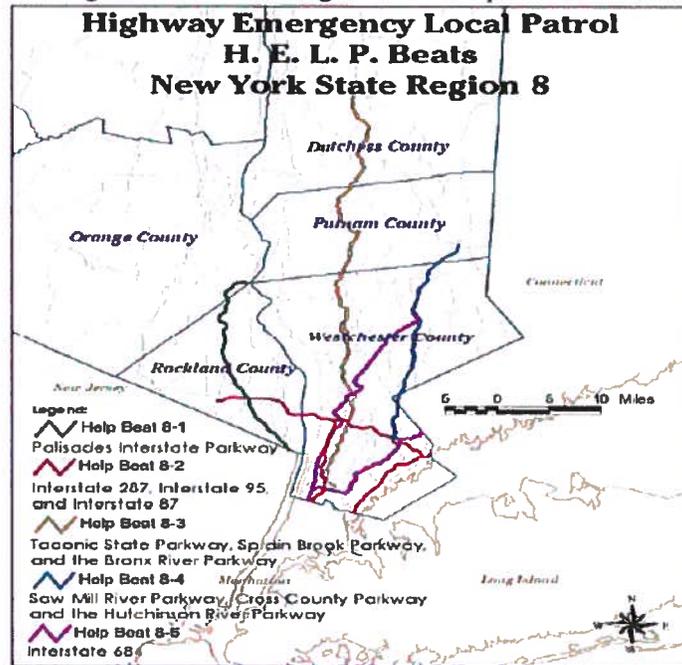


Table 1: Incident frequency

	H.E.L.P. only	Police only	Both	Total
Taconic State Parkway (34 miles in each direction)	1,311	2,057	123	3,491
Sprain Brook Parkway (14 miles in each direction)	1,445	1,097	121	2,663
I-684 (29 miles in each direction)	881	1,242	158	2,281
I-287 (10 miles in each direction)	642	637	51	1,330
<b>Total</b>	<b>4,279</b>	<b>5,033</b>	<b>453</b>	<b>9,765</b>

\* "Police only" calls received response only from state troopers. "H.E.L.P. only" calls received assistance only from H.E.L.P. vehicle drivers. "Both" calls received assistance from both H.E.L.P. vehicle drivers and troopers.

Table 2: Incident duration comparison for responding groups

	H.E.L.P. only			Police only			Both		
	Total Freq.	Avg. duration	%	Total Freq.	Avg. duration	%	Total Freq.	Avg. duration	%
MV accident	251	32.72	20%	654	53.47	53%	322	53.5	26%
Disabled vehicles	3,855	16.55	82%	748	35.12	16%	89	37.57	2%
<b>Total</b>	<b>4,106</b>	<b>17.53</b>	<b>69%</b>	<b>1,402</b>	<b>43.68</b>	<b>24%</b>	<b>411</b>	<b>50.05</b>	<b>7%</b>

One of the main roles of the H.E.L.P. program is to assist in incidents involving disabled vehicles. It was noted that on average more than 82% of these incidents arising during the H.E.L.P. hours of operation were handled by H.E.L.P. vehicle drivers alone. The remaining such incidents were handled by state or local troopers or both H.E.L.P. vehicle drivers and troopers. The program also assisted more than 46% of the incidents involving collision. In a comparison of average times to assist in incidents across the studied roadway segments between cases handled by either only H.E.L.P. vehicle drivers or only troopers, average savings of approximately 20 minutes in incident duration for incidents involving a collision and 19 minutes for incidents involving a disabled vehicle were found when the incidents were handled by the H.E.L.P. vehicle drivers. These average values ranged from 7 to 45 minutes for incidents involving a collision and 11 to 33 minutes for incidents involving disabled vehicles over the four roadway segments. While significant, it must be noted that the incidents handled by H.E.L.P. vehicle drivers require less assistance duration than typical incidents handled by troopers alone.

### **3. SIMULATION-BASED METHODOLOGY FOR TRAVEL DELAY AND FUEL CONSUMPTION ESTIMATION**

The CORSIM simulation platform is a discrete-time and stochastic based microscopic simulation platform designed specifically to model traffic operations. It estimates travel delay through travel time comparisons of traffic operating at free flow speeds as compared with speeds resulting from vehicle interactions that result from congestion. It also estimates fuel consumption by tracking the performance of individual simulated vehicle speed and acceleration rates with a standard fuel consumption rate table developed by Oak Ridge National Laboratory (10). As is the case with most simulation tools, behavior that cannot be predicted with certainty is replicated from random variates employed to model stochasticity in the behavior. Multiple replications must be conducted. Five replications were used herein, consistent with recommendations in (9). As the CORSIM simulation model is run and traffic conditions are replicated, a set of traffic measures, including incident properties and associated factors (incident onset and duration, location, capacity reduction and lanes impacted as a consequence of the rubberneck effect, warning sign location (e.g. a flare), and lane closure status) are recorded.

To analyze the impact of an incident on travel delay and fuel consumption in this simulation platform, four stages are considered, as portrayed in Figure 2. In the first stage, prior to the incident, traffic flow is assumed to be stable. At the onset of the incident (stage 2), shoulder and/or freeway lanes may become blocked and capacity along these lanes is nearly instantaneously impacted. In stage 3, it is assumed that a warning sign is set up for warning the upstream traffic (or that the upstream traffic can discern that an incident has arisen a short distance prior to coming into contact with the incident). Drivers passing by the incident scene may reduce their speed to observe the incident, creating the so-called rubbernecking phenomenon. Upon clearance of the incident, normal traffic flow conditions are re-established. Details of specific components of this four-stage incident modeling approach to evaluate the benefits of the H.E.L.P. program are presented in the following subsections.

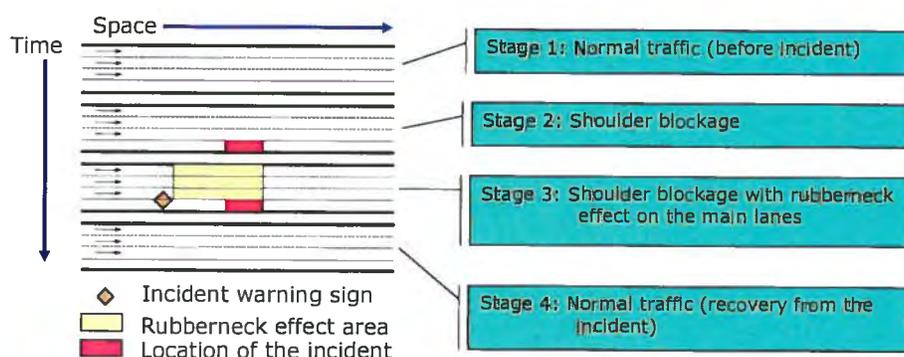


Figure 2: Procedures for modeling an incident

### 3.1 Experimental Design

To estimate savings in travel delay and fuel consumption that resulted from the program's impact on incident duration, a set of simulation runs were designed for the incidents that received services from the H.E.L.P. program. Incident durations reported in the data archives are significantly impacted by the existence of the H.E.L.P. program. The impact on traffic under similar circumstances assuming that such a program did not exist, where incident durations would be longer, must be compared to the impact under existing conditions. Thus, actual incident durations replicated directly from the incident data represent the "base case," where it is assumed that the H.E.L.P. program existed. To estimate the savings that were achieved as a consequence of this program, another set of replications were run where incident durations were lengthened by between 5 and 25 minutes (in 5-minute increments). These replications are meant to model circumstances assuming that such a program were nonexistent. Thus, for example, an incident with 10-minute duration that arose during the study period would be modeled with 10-minute duration in the base case, but with 15-, 20-, 25-, 30-, and 35-minute durations in additional runs. Such additional time is based on average savings expected from such a program. The addition of 5 minutes, thus, is employed to estimate the additional travel delay and fuel consumption that would have been incurred had a FSP program with average incident duration savings of 5 minutes not been in place. Thus, the difference in performance measurements between the base case and each extended case provides the savings in such performance metrics that are estimated to have resulted from the FSP program. For each incident, traffic is modeled from a period of time just prior to the incident through at least 30 minutes (longer for longer incident durations) past the time of incident resolution.

693 incidents arising in a 10-mile (in each direction), three-lane study segment with right-side shoulder of I-287 for the study period that received assistance from the H.E.L.P. program were simulated within the CORSIM platform using the incident properties and estimates of likely prevailing traffic conditions. The simulation time for each run was set as a function of the incident duration. The incidents with duration less than 90 minutes were simulated for two hours, while the incidents with duration of more than 90 minutes (only nine such incidents arose during the study period) were simulated for three hours. The excess time beyond the incident duration was required to ensure that prevailing traffic conditions could be reestablished before concluding the run. Each incident scenario was replicated five times using different random seeds and average performance metrics over these runs were obtained. This ensures that if circumstances

that are randomly chosen in a given replication are significantly different from ordinary that they contribute to, but do not dominate, the final measurements. A total of 20,790 replications were designed, requiring more than 41,580 simulation hours.

### 3.2 Critical Simulation Settings

When a freeway incident occurs, roadway capacity is reduced and non-recurrent delay is induced. The level of change in these quantities depends on incident properties. Estimated capacity reduction for given lane blockage status is shown in Table 3a (*11*).

Table 3a: Percentage of available freeway capacity

Number of lanes	Shoulder (disabled vehicle)	Shoulder (collision)	1 lane blocked	2 lanes blocked	3 lanes blocked
2	0.95	0.81	0.35	0.00	N/A
3	0.99	0.83	0.49	0.17	0.00
4	0.99	0.85	0.58	0.25	0.13
5	0.99	0.87	0.65	0.40	0.20
6	0.99	0.89	0.71	0.50	0.25
7	0.99	0.91	0.75	0.57	0.36
8	0.99	0.93	0.78	0.63	0.41

Table 3b: Computed rubberneck effect value for different lane blockage scenarios

	Lane blockage scenario on a 3-lanes freeway segment				
	Shoulder blocked (disabled vehicle)	Shoulder blocked (collision)	1 lane blocked	2 lanes blocked	3 lanes blocked
Residual capacity	99%	83%	49%	17%	N/A
Capacity reduction	1%	17%	51%	83%	N/A
REP(%)	1	17	26	49	N/A
Computed reduction	1%	17%	50.67%	83%	N/A

To achieve the desired capacity reduction, a rubberneck effect parameter (REP) within the CORSIM simulation model can be set. This parameter affects the acceptable gap between leading and lagging vehicles. Within the CORSIM software manual (*12*), a technique is supplied for setting the rubberneck effect parameter to achieve varying levels of capacity reduction for given roadway geometries. Within this technique, the contribution of each lane to overall capacity reduction is computed as a function of a chosen rubberneck effect parameter value. The capacity reduction is directly proportional to the remaining capacity of each lane, which is determined through the rubberneck effect parameter setting. For example, consider a three-lane freeway segment with a 25% rubberneck factor for two lanes and the remaining lane completely blocked. By the approach suggested in (*12*), reduced capacity (*RC*) by 50% would be estimated,

$$RC = (100\%) \times \frac{1}{3} + (25\%) \times \frac{1}{3} + (25\%) \times \frac{1}{3} = 50\%.$$

This technique of setting the rubberneck effect parameter to achieve a known level of capacity reduction as determined through the Highway Capacity Manual was employed within this work. From Table 3a and the rubberneck effect parameter setting technique, appropriate rubberneck effect parameter values were estimated for incidents with varying numbers of lanes blocked for a three-lane freeway segment. The results are given in Table 3b.

To illustrate how Table 3b can be employed in the setting of the rubberneck effect

parameter for the three-lane study segment, assume that one lane has been blocked by an incident. The rubberneck effect parameter should be set to 26% to yield a 51% reduction in capacity. Note that different parameter settings are given for incidents involving disabled vehicles as opposed to a collision for the case that only the shoulder is blocked.

Once an incident occurs, it is assumed that a warning sign, flares, arrowboards or other methods of signage are set up to warn the upstream traffic of the incident. Since guidelines suggest that the optimal location for a warning sign is 500 feet behind the incident along a highway (13), a distance of 500 feet was set in this study. Note that this provides the driver with approximately five seconds between passing the warning sign and passing the incident scene assuming a speed of 65 miles per hour. In the CORSIM model, the rubberneck effect parameter is applied to the stretch of roadway between the warning sign and the incident scene. For additional details concerning these and other related parameters and techniques employed within the CORSIM model, see (12).

The impact of any particular incident will depend on prevailing traffic conditions at the time of the incident. It is, therefore, desirable to have knowledge of such prevailing conditions when studying savings in incident impact resulting from the existence of the H.E.L.P. program. Since the necessary traffic volume data did not become available in the study area until after the study period, traffic volume data for the study roadway segment was employed for the same period, but in the following year. Specifically, reports from six detectors (three in each direction) along I-287 were made available through Transcom. Average weekday and weekend hourly traffic volumes by month were computed from the available data. The average weekday hourly volume data by month for 2007 was employed in the simulation runs. For a given incident, the average hourly volumes determined at the nearest detector for the time period in which the incident impacted traffic was employed.

#### 4. ESTIMATING THE BENEFITS OF THE H.E.L.P. PROGRAM

Once the rubberneck effect parameters were set, traffic volumes were estimated, and the set of simulation runs were designed for estimating incurred travel delay and fuel consumption, the 693 incidents could be replicated. Note that the impact on traffic in the opposite direction was not considered. Five runs of each of the 693 incidents were conducted and the results were aggregated into 12 categories as a function of traffic volume (between 0 and 2,000 vehicles per lane per hour in increments of 500 vehicles per lane per hour) and lane closure (shoulder, one-lane blocked or two-lanes blocked). For each group, the total savings in terms of performance measures of travel delay and fuel consumption were computed. Savings were estimated based on the difference between the performance measure as measured on the base case and each incident duration extended case:

$$\sum_{i \in J} (pm_i^{e,k} - pm_i^b)_j \quad (1),$$

where

- $i$  : Incident  $i$ ;
- $j$  : One of 12 categories classified by volume and lane blockage properties,  $j = (1, \dots, 12)$ ;
- $k$  : One of five incident duration extension cases,  $k = (5, 10, 15, 20, 25)$ ;

- $pm_i^{e,k}$  : Average performance measure of incident  $i$  with  $k$ -minute incident duration extension; and  
 $pm_i^b$  : Average performance measure of incident  $i$  with actual incident duration as in the base case.

In the following subsections, estimated savings in travel delay, fuel consumption, emission pollution and secondary incidents are given.

#### 4.1 Travel Delay

Table 4a shows the results of total savings in travel delay (in vehicle-hours) for each of the 12 categories. These savings are computed by first averaging over the set of five runs under each incident and then taking the sum of differences between these averages for the base and extended case pairs. For example, there were 31 H.E.L.P. incidents under the category of one lane-blocked and volume level of 1,000 to 1,500 vehicles per lane per hour. For this category, the total savings in travel delay was computed to be 1026.4 vehicle-hours assuming that the H.E.L.P. program saved 5 minutes in average incident duration (i.e. as compared with the five-minute extended case). Thus, an average of 33.1 vehicle-hours savings in travel delay per incident was estimated, inferring that the H.E.L.P. program would save approximately 33 vehicle-hours in travel delay under similar prevailing traffic conditions for the given 5-minute incident duration savings. Savings in travel delay are most notable at higher traffic volumes and where one or more travel lanes are blocked, as one would expect.

#### 4.2 Fuel Consumption

Table 4b provides results of the simulation runs in terms of savings in fuel consumption (in gallons). The same categories and computational approach (equation 1) as employed in estimating savings in total and average travel delay are employed. For example, assume a five-minute incident duration reduction is estimated for the H.E.L.P. program. Then, the 31 incidents categorized under one lane-blocked and volume level between 1,000 and 1,500 vehicles per lane per hour contributed to a total savings of 128.5 gallons of fuel consumed, or an average savings in fuel consumption for each incident of 4.2 gallons. The greater the traffic volume, incident duration and savings due to the program, the great the savings in fuel consumption.

#### 4.3 Pollution Causing Emissions

Emissions are estimated with the use of empirically derived equations that can be used to quantify levels of certain pollutants as a function of travel delay. Once savings in travel delay are estimated, rough estimates of savings in pollution causing emissions, specifically in hydrocarbons (HC), carbon monoxide (CO) and nitrogen oxide (NO), can be estimated using the following factors: 13.073, 146.831, and 6.261 grams per hour delay, respectively ( $Z$ ). A similar emission estimation approach was employed in (3). By using these rates multiplied by the total delay savings found in Table 4b, the savings in terms of emissions for different incident duration extension cases can be estimated as shown in Tables 4c through 4e.

#### 4.4 Secondary Incidents

A critical element in estimating the benefits of FSP programs is the savings in secondary incidents. It is difficult, though, to estimate savings in secondary incidents, because such savings can only be concluded from incidents that did not occur, which cannot be documented. Several studies for estimating savings in secondary incidents assume a linear function of the number of secondary incidents and the total savings in incident duration (3,7). However, total delay may be more pertinent than incident duration, because it reflects not only the temporal properties of the incident impact area, but also the spatial properties. Thus, to estimate such savings in secondary incidents that would result from the H.E.L.P. program, equation (2) is proposed. This equation assumes that the number of secondary incidents is linearly correlated with total delay resulting from the primary incidents.

$$N^{e,k} = \frac{N^b \times TD^{e,k}}{TD^b} \quad (2),$$

where

- $N^b$  : Number of secondary incidents found in the database;
- $N^{e,k}$  : Number of secondary incidents for  $k$ -minute incident duration extension case,  $k = (5, 10, 15, 20, 25)$ ;
- $TD^b$  : Total delay for the base case (no extension for incident duration); and
- $TD^{e,k}$  : Total delay for  $k$ -minute incident duration extension cases,  $k = (5, 10, 15, 20, 25)$ .

To classify secondary incidents from the archived database, this study employed a Simulation-Based Secondary Incident Filtering (SBSIF) method proposed by Chou and Miller-Hooks (14). The SBSIF technique explicitly considers the dynamics related to temporal and spatial properties of traffic in estimating the incident impact area of a given incident. Any second incident falling within the impact area is identified as a secondary incident. This geometry-based method was applied to the I-287 incident database and 27 secondary incidents were identified to have resulted from the 693 incidents that received assistance from the H.E.L.P. program.

Chou and Miller-Hooks (14) compared results of existing secondary incident static filtering and SBSIF methods with visual inspection and found that a significantly greater rate of misclassification existed for the static methods as compared with the SBSIF method. In fact, the static methods erroneously identified nearly double the number of incidents (i.e. up to nearly 96%) as secondary as identified by visual inspection. By contrast, the SBSIF method erroneously identified only 12.5% additional incidents as secondary.

The simulation-based methodology described previously was employed to estimate total delay based on the base case and extension cases,  $TD^b$  and  $TD^{e,k}$ , respectively. That is, the 693 incidents served by H.E.L.P. vehicle drivers that arose along the study roadway segment during the study period were replicated to obtain an estimate of total delay due to the incidents. The estimated numbers of secondary incidents under varying incident duration extension cases are shown in Table 5.

Table 5: Number of secondary incidents under varying incident duration extension cases

Incident duration extension case	Base case	5 minutes	10 minutes	15 minutes	20 minutes	25 minutes
Total delay (vehicle-hours)	36,374	38,932	41,803	45,007	48,557	53,178
Number of secondary incidents	27	29	31	33	36	39

Table 5 indicates a savings in secondary incidents of between 2 (29 as compared with 27) and 12 (39 as compared with 27) incidents as a result of the H.E.L.P. program assuming between 5- and 25-minute reductions in incident duration, respectively. Note that these estimates are likely to be conservative, because the actual duration of these 693 incidents would have been greater had the H.E.L.P. program not been in place and a greater number of secondary incidents would be expected than were actualized.

## 5. ESTIMATING THE B/C RATIO FOR THE H.E.L.P. PROGRAM

A widely employed method for assessing the benefits of FSP programs around the country involves the estimation of equivalent monetary savings from savings in travel delay, emission pollution, fuel consumption and secondary incidents (see FIRST and TIM Evaluations, 8 and 3, respectively, for example). In this section, such a methodology is used in conjunction with operating cost estimates in assessing the B/C ratio of the H.E.L.P. program.

### 5.1 Benefits

Let  $B_{pm}^k$  denote the total benefit in terms of a given performance measure,  $pm$ , for  $pm \in \{\text{travel delay; fuel consumption; HC, CO, and NO emissions; secondary incidents}\}$ , assuming a  $k$ -minute incident duration reduction for  $pm \in \{\text{travel delay; fuel consumption; HC, CO, and NO emissions}\}$ , or a  $k$ -minute incident duration extension for  $pm \in \{\text{secondary incidents}\}$ . Extending equation (1) for estimating the savings in performance measure  $pm \in \{\text{travel delay; fuel consumption; HC, CO and NO emissions}\}$  for each of 12 categories ( $j \in \{1, 2, \dots, 12\}$ ) of traffic level and lane blockage scenarios,  $B_{pm}^k$  can be computed as given in equation (3).

$$B_{pm}^k = \sum_j \sum_{i \in j} (pm_i^{e,k} - pm_i^b) \quad (3).$$

Savings in the number of secondary incidents were estimated in equation (2) by taking the difference in the number of secondary incidents identified in the data archives (i.e. the base case), denoted  $N^b$ , and the number estimated given the additional travel delay that would be incurred in the  $k$ -minute incident duration extension cases,  $N^{e,k}$ .  $B_{pm}^k$  for  $pm \in \{\text{secondary incidents}\}$  can be expressed as in equation 4.

$$B_{pm}^k = N^{e,k} - N^b \quad (4).$$

Let  $P_{pm}$  be the monetary equivalent for each unit of savings in performance measure  $pm \in \{\text{travel delay; fuel consumption; HC, CO and NO emissions; secondary incidents}\}$ . The total savings,  $TB^k$ , in all performance measure categories (travel delay,

fuel consumption, emissions and secondary incidents) from the program given  $k$ -minute incident reductions or extensions as appropriate can be estimated by equation 5.

$$TB^k = \sum_{\forall pm} (P_{pm} \times B_{pm}^k) \quad (5).$$

Results in terms of total benefits,  $TB^k$ , for the I-287 study segment and given study period are provided in Table 6. The monetary equivalent rates (i.e.  $P_{pm}$ ) assumed in this study are given in the table. These values were selected to be consistent with similar rates used in the literature. The monetary savings of \$1,706 per secondary incident avoided is reported in (9), which was determined by converting a 1994 estimate from the National Highway Safety Administration to 2006 dollars. Similarly, value of time estimates from Latoski (15) were converted for use in estimating the monetary equivalent of one-hour of travel delay savings per person (i.e. \$15/hour) as per (9). Monetary equivalents for savings in emissions predicted here were obtained from (7). Similar rates were employed in evaluating the TIM program (3). Note that these rates are based on 2006 values and are quite conservative.

The results indicate that, assuming an average reduction in incident duration of 20 minutes (i.e.  $k = 20$ ), the H.E.L.P. program led to an equivalent savings of \$215,000, or an annual savings of \$430,000, for the 10-mile study segment and six-month study period. These savings were driven by estimated annual savings of:

- (a) 24,000 vehicle-hours in travel delay;
- (b) 2,900 gallons of fuel consumed;
- (c) 0.32 ton of hydrocarbon (HC);
- (d) 3.6 tons of carbon monoxide (CO);
- (e) 0.2 ton of nitrogen oxide (NO); and
- (f) 18 secondary incidents.

## 5.2 Costs

The total cost,  $TC$ , is a function of the number of roving FSP trucks along the study segment, hourly operating cost per truck, number of working hours, and number of workdays in the study period, as expressed by equation (6).

$$TC = c \times n \times hr \times day \quad (6),$$

where

- $TC$  : Total cost for operating the FSP program in dollars,
- $c$  : Cost per truck-hour,
- $n$  : Number of roving trucks,
- $hr$  : Number of working hours in each day, and
- $day$  : Number of workdays in the study period.

Cost estimates of \$40 and \$50/truck-hour were provided by H.E.L.P. program personnel. Two roving trucks operated within the study roadway segment with an eight-hour workday. These trucks operated during 126 workdays within the study period. Thus, by equation (6), the operational costs, including the costs of fleet maintenance and personnel, along the study roadway segment during the study period were estimated at \$80,640 and \$100,800 for \$40 and \$50/truck-hour, respectively.

### 5.3 The B/C Ratio

Results of benefit and cost estimates can be combined to assess the B/C ratio for the H.E.L.P. program for the study area and study period for each  $k$ -minute incident reduction or extension case. These results, given in Table 6, indicate that, even using exceptionally conservative monetary equivalent rates, the program operates with a B/C ratio of 2.68 assuming a cost of \$40/truck-hour for operating the H.E.L.P. program or a 2.14 B/C ratio assuming a cost of \$50/truck-hour for a  $k$ -value equal to 20 minutes. Thus, the H.E.L.P. program is cost effective and provides a sizable return on the public's investment.

To determine the point at which the program breaks even, where the cost of operation is equivalent to the savings achieved by the program, the B/C ratios for each  $k$ -minute incident reduction or extension case are plotted against the average estimated incident duration savings in Figure 3. This plot shows that breakeven points were reached at eight and 11 minutes for \$40 and \$50/truck-hour operating cost rates, respectively. That is, if the cost of operating a H.E.L.P. vehicle is assumed to be \$40/truck-hour, the program must save, on average, more than eight minutes in incident duration for the benefits to outweigh the costs. Note that the average savings in incident duration estimated for the H.E.L.P. program (approximately 20 minutes) far exceeds this breakeven point even for the assumed higher operational rate of \$50/truck-hour.

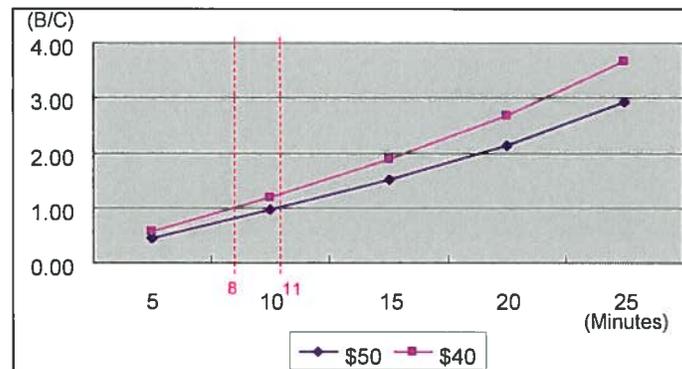


Figure 3: B/C versus incident duration reduction by cost

## 6. CONCLUSIONS

In this paper, key findings in terms of incident reduction savings due to the implementation of a FSP program of extensive statistical analyses of nearly 10,000 incidents arising in the Hudson Valley region of New York State, a suburb of New York City, are given. A simulation-based methodology, including details for setting key simulation parameters, for assessing the impact of these savings on savings in travel delay, fuel consumption, emissions and secondary incidents is presented. Using this methodology, the H.E.L.P. program's B/C ratio was estimated and tables including sufficient detail to permit other FPS programs operating along roadways with similar geometry to complete similar estimates for their own programs are provided. Estimates employing the provided tables require only the number of incidents under varying categories of incident properties and information on prevailing traffic conditions.

The B/C ratio for the H.E.L.P. program and associated tables with greater utility were developed from data associated with only a three-lane, 10-mile stretch of I-287.

The study described herein can be repeated for roadway segments with varying roadway geometries to provide more accurate benefit estimates for programs operating on roadways with different roadway configurations.

The rates employed in estimating the monetary equivalent of savings in the various performance measures are very conservative, particularly for the location in which the H.E.L.P. program operates. No details of traffic composition or passenger occupancy were available for this study. Thus, traffic was assumed to consist entirely of passenger cars with only one passenger per vehicle. The New York Metropolitan Transportation Council (16) reported an average occupancy of 1.29 passengers per passenger car in Manhattan for 2006. An average occupancy of approximately 1.15 passengers per passenger car has been computed by authors of this paper for a stretch of a suburban freeway in the Washington, D.C. metropolitan region. Commercial vehicles may make up a substantial portion of traffic in a region such as studied herein. The data from the Washington, D.C. metropolitan region indicates that during the morning peak period, commercial vehicles make up between three and six percent of traffic. Smalkoski et al. (17) report an average rate of approximately \$49 per commercial vehicle-hour delay based on data for Minnesota. Thus, the assumed rate of \$15 per vehicle-hour delay is quite low and a much higher rate would be required to account for truck and commercial vehicle traffic.

A cost of \$1,706 estimated per secondary incident is also seemingly very low. The National Highway Traffic Safety Administration (NHTSA) (18), Parry (19) and Hanley (20) report that the average cost of a traffic incident involving only property damage was \$2,532 nationally in 2000, \$3,447 in 2004 (for Washington, D.C.) and \$6,500 in 2005 (for Wisconsin, Connecticut and several other states), respectively. The NHTSA reports average costs of nearly \$1.1 million for incidents involving persons in critical condition and nearly \$1 million where a fatality is involved (based on 2000 data). A slightly higher figure is estimated in (20) for several states across the U.S. Even greater costs may be incurred where commercial vehicles are involved, particularly if significant damage to the civil infrastructure results.

This paper shows that the H.E.L.P. program operates with better than two-to-one benefit-to-cost ratio (2.68 and 2.14 for \$40 and \$50/truck-hour operating cost rates, respectively) under these very conservative assumptions. With an average occupancy of 1.15 (instead of 1) passengers per vehicle, traffic composition with 5% commercial vehicles (instead of zero) with a rate of \$49 per commercial vehicle-hour delay, and a cost of \$6,500 (instead of \$1,706) per avoided secondary incident, all else unchanged, the benefit-to-cost ratio would be 4.2 and 3.4 for \$40 and \$50/truck-hour operating cost rates, respectively. With only one fatal incident avoided at a savings of \$1,000,000, this ratio would increase to between 16.5 and 13.2.

Additional savings incurred by drivers, including costs of towing, changing of tires or minor repairs, as well as savings to the local community in terms of reduced fatality rates, and thus, reduced lawsuits, roadway closures and the use of forensic teams, for example, might also be included in the B/C ratio estimates. Additional savings may also be realized that were not considered in this study. For example, drivers of disabled vehicles or vehicles involved in a collision may not need to pay for towing and savings may be incurred by local police agencies, where the H.E.L.P. vehicles are able to respond to incidents in place of troopers. Additionally, the troopers can spend their time on more urgent business for which they were trained. Such factors require additional study. The appropriate factors and rates to use in freeway service patrol benefit analyses is the

subject of future research by the authors.

A rather extensive set of simulation runs were conducted in this study in quantifying the benefits of the H.E.L.P. program and the ultimate B/C ratio with accompanying general-use tables. This approach required enormous simulation run time. While the approach applied within this study can be directly extended for use in studying any roadway for which the necessary data is available, a less computationally burdensome technique can be created for generating an adequate number of random incidents instead of replicating all of the historical incidents. Such a technique is the focus of continued work by the authors and would not only require significantly reduced effort, but would also permit study of much larger roadway segments or networks.

*Acknowledgments:* This work was supported by the I-95 Corridor Coalition. This support is gratefully acknowledged, but implies no endorsement of the findings. We are also grateful to Captain Henry Devries of the Hudson Valley Transportation Management Center for his valuable insight.

### References:

1. Lindley, J.A., 1987. Urban Freeway Congestion: Quantification of the Problem and Effectiveness of Potential Solution. *ITE Journal* 57(1), pp. 27-32.
2. Brach, A., 2008. Multi-Disciplinary Incident Response Training Project. Transportation Research Board of the National Academies, I-95 Corridor Coalition 2008 Annual Meeting, Orlando, Florida, May 2008.
3. Guin, A., Porter, C., Smith B. and Holmes, C., 2007. Benefits Analysis for an Incident Management Program Integrated with Intelligent Transportation Systems Operations: A Case Study. *Transportation Research Board Annual Meeting CR-ROM*.
4. Hagen, L., Zhou, H. and Singh, H., 2005. Road Ranger Benefit Cost Analysis. Florida Department of Transportation.
5. Dougald, L.E. and Demetsky, M.J., 2008. Assessing the Return on Investment of Freeway Service Patrol Program. *Transportation Research Board Annual Meeting CR-ROM*.
6. Chang, G.L. and Shrestha, D., 2000. Performance Evaluation of CHART -An Incident Management Program-in 1997. Maryland Department of Transportation.
7. Chang, G. L. and Rochon, S., 2006. Performance Evaluation of CHART – the Real Time Incident Management System in Year 2006. Maryland Department of Transportation.
8. MNDOT, 2004. Minnesota Department of Transportation - FIRST Program Evaluation. Minnesota Department of Transportation.
9. Haghani, A., Iliescu, D., Hamedi, M. and Yang, S., 2006. Methodology for Quantifying the Cost Effectiveness of Freeway Service Patrol Programs: A Case Study. University of Maryland.
10. Davis, S. C., 1999. Transportation Energy Data book: Edition 19. Office of Transportation Technologies, U.S. Department of Energy.
11. Highway Capacity Manual, Special Report 209. Transportation Research Board, National Research Council, Washington, D.C., 2000.
12. CORSIM User's Manual, Version 1.04, ITT Systems and Sciences Corporation, March 1998.
13. Guidelines for Emergency Traffic Control. University of Kentucky, 2006.

14. Chou, C.S. and Miller-Hooks, E., 2008. A Simulation-Based Secondary Incident Filtering Method. Submitted for *the ASCE Journal of Transportation Engineering*.
15. Latoski S.P., Pal R. and Sinha, K.C., 1999. Cost-Effectiveness Evaluation of Hoosier Helper Freeway Service Patrol. *Journal of Transportation Engineering*.
16. Hrabowska M. and Chandra T., 2008. Vehicle Classification and Occupancy in the CBD in Manhattan, 2006 Survey Results. New York Metropolitan Transportation Council (NYMTC).
17. Smalkoski B. and Levinson D., 2005. Value of Time for Commercial Vehicle Operators in Minnesota. *Journal of the Transportation Research Forum*, 44(1), pp. 89-102.
18. Blincoe L., Seay A., Zaloshnja E., Miller T., Romano E., Luchter S. and Spicer R., 2002. The Economic Impact of Motor Vehicle Crashes, 2000. NHTSA Technical Report.
19. Parry I., 2004. Comparing Alternative Policies to Reduce Traffic Accidents. *Journal of Urban Economics*, 54(2), pp. 346-368.
20. Hanley P., 2005. State Departments of Transportation's Use of Crash Costs in Safety Analysis. *Transportation Research Board Annual Meeting CR-ROM*.

Table 4a: Savings in travel delay (vehicle-hours)

Travel Delay (vehicle hours)			5 minutes reduction		10 minutes reduction		15 minutes reduction		20 minutes reduction		25 minutes reduction	
	Volume	Freq.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.
Shoulder	< 500	37	1.06	0.03	0.64	0.02	1.13	0.03	0.87	0.02	0.63	0.02
	500-1000	312	23.54	0.08	24.00	0.08	25.11	0.08	26.98	0.09	30.97	0.10
	1000-1500	221	63.23	0.29	78.20	0.35	87.84	0.40	97.11	0.44	121.89	0.55
	>1500	30	180.29	6.01	391.28	13.04	631.53	21.05	889.75	29.66	1,168.63	38.95
One Lane	< 500	7	0.18	0.03	0.61	0.09	0.55	0.08	0.69	0.10	0.41	0.06
	500-1000	45	12.30	0.27	22.74	0.51	36.08	0.80	50.90	1.13	66.60	1.48
	1000-1500	31	1,026.35	33.11	2,254.95	72.74	3,684.56	118.86	5,330.75	171.96	7,459.18	240.62
	>1500	4	557.75	139.44	1,194.70	298.68	1,854.17	463.54	2,558.43	639.61	3,496.60	874.15
Two Lanes	< 500	0	0	-	0	-	0	-	0	-	0	-
	500-1000	5	508.54	101.71	1,048.93	209.79	1,650.09	330.02	2,293.78	458.76	3,252.08	650.42
	1000-1500	1	184.69	184.69	412.76	412.76	661.48	661.48	933.22	933.22	1,207.25	1,207.25
	>1500	0	0	-	0	-	0	-	0	-	0	-
<b>Total</b>		<b>693</b>	<b>2,557.93</b>		<b>5,428.81</b>		<b>8,632.54</b>		<b>12,182.48</b>		<b>16,804.24</b>	

Table 4b: Savings in fuel consumption (gallons)

Fuel Consumption (gallons)			5 minutes reduction		10 minutes reduction		15 minutes reduction		20 minutes reduction		25 minutes reduction	
	Volume	Freq.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.
Shoulder	< 500	37	2.35	0.06	4.79	0.13	4.66	0.12	4.19	0.11	2.24	0.06
	500-1000	312	38.49	0.12	39.00	0.12	51.34	0.16	51.18	0.16	58.66	0.19
	1000-1500	221	57.99	0.26	66.93	0.30	74.33	0.34	88.96	0.40	106.35	0.48
	>1500	30	36.86	1.23	73.02	2.43	119.64	3.99	161.24	5.37	209.22	6.97
One Lane	< 500	7	0.20	0.03	0.45	0.06	0.37	0.05	0.26	0.04	0.59	0.08
	500-1000	45	8.51	0.19	14.54	0.32	21.69	0.48	27.75	0.62	35.85	0.80
	1000-1500	31	128.51	4.15	271.42	8.76	435.60	14.05	627.21	20.23	780.57	25.18
	>1500	4	69.14	17.28	144.97	36.24	199.78	49.95	244.12	61.03	292.14	73.04
Two Lanes	< 500	0	0	-	0	-	0	-	0	-	0	-
	500-1000	5	37.51	7.50	74.74	14.95	119.25	23.85	161.31	32.26	171.39	34.28
	1000-1500	1	19.28	19.28	42.65	42.65	63.83	63.83	84.83	84.83	103.74	103.74
	>1500	0	0	-	0	-	0	-	0	-	0	-
<b>Total</b>		<b>693</b>	<b>398.84</b>		<b>732.51</b>		<b>1,090.49</b>		<b>1,451.05</b>		<b>1,760.75</b>	

Table 4c: Savings in HC (grams)

Emission - HC (grams)			5 minutes reduction		10 minutes reduction		15 minutes reduction		20 minutes reduction		25 minutes reduction	
	Volume	Freq.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.
Shoulder	< 500	37	13.81	0.36	8.31	0.22	14.72	0.39	11.35	0.30	8.24	0.22
	500-1000	312	307.76	0.99	313.75	1.01	328.24	1.05	352.66	1.13	404.82	1.30
	1000-1500	221	826.55	3.74	1,022.33	4.63	1,148.33	5.20	1,269.47	5.74	1,593.44	7.21
	>1500	30	2,356.88	78.56	5,115.18	170.51	8,256.02	275.20	11,631.65	387.72	15,277.50	509.25
One Lane	< 500	7	2.33	0.33	7.92	1.13	7.24	1.03	9.05	1.29	5.41	0.77
	500-1000	45	160.77	3.57	297.28	6.61	471.67	10.48	665.36	14.79	870.69	19.35
	1000-1500	31	13,417.47	432.82	29,478.96	950.93	48,168.31	1,553.82	69,688.92	2,248.03	97,513.86	3,145.61
	>1500	4	7,291.47	1,822.87	15,618.37	3,904.59	24,239.62	6,059.90	33,446.38	8,361.60	45,711.03	11,427.76
Two Lanes	< 500	0	0	-	0	-	0	-	0	-	0	-
	500-1000	5	6,648.14	1,329.63	13,712.61	2,742.52	21,571.57	4,314.31	29,986.64	5,997.33	42,514.44	8,502.89
	1000-1500	1	2,414.48	2,414.48	5,396.06	5,396.06	8,647.55	8,647.55	12,199.93	12,199.93	15,782.43	15,782.43
	>1500	0	0	-	0	-	0	-	0	-	0	-
Total			33,439.66		70,970.77		112,853.27		159,261.41		219,681.86	

Table 4d: Savings in CO (grams)

Emission - CO (grams)			5 minutes reduction		10 minutes reduction		15 minutes reduction		20 minutes reduction		25 minutes reduction	
	Volume	Freq.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.
Shoulder	< 500	37	155.05	4.08	93.38	2.46	165.33	4.35	127.45	3.35	92.50	2.43
	500-1000	312	3,456.70	11.08	3,523.94	11.29	3,686.63	11.82	3,960.91	12.70	4,546.77	14.57
	1000-1500	221	9,283.54	42.01	11,482.48	51.96	12,897.64	58.36	14,258.17	64.52	17,896.94	80.98
	>1500	30	26,471.57	882.39	57,451.74	1,915.06	92,728.48	3,090.95	130,642.29	4,354.74	171,591.11	5,719.70
One Lane	< 500	7	26.14	3.73	88.98	12.71	81.34	11.62	101.61	14.52	60.79	8.68
	500-1000	45	1,805.73	40.13	3,338.94	74.20	5,297.66	117.73	7,473.11	166.07	9,779.24	217.32
	1000-1500	31	150,700.00	4,861.29	331,096.56	10,680.53	541,008.22	17,451.88	782,719.65	25,249.02	1,095,238.86	35,330.29
	>1500	4	81,894.99	20,473.75	175,419.58	43,854.90	272,250.22	68,062.56	375,657.13	93,914.28	513,408.98	128,352.25
Two Lanes	< 500	0	0	-	0	-	0	-	0	-	0	-
	500-1000	5	74,669.44	14,933.89	154,014.85	30,802.97	242,283.78	48,456.76	336,798.60	67,359.72	477,506.16	95,501.23
	1000-1500	1	27,118.51	27,118.51	60,606.55	60,606.55	97,126.06	97,126.06	137,025.04	137,025.04	177,262.31	177,262.31
	>1500	0	0	-	0	-	0	-	0	-	0	-
Total			375,581.67		797,117.00		1,267,525.36		1,788,763.96		2,467,383.66	

Table 4e: Savings in NO (grams)

Emission - NO (grams)			5 minutes reduction		10 minutes reduction		15 minutes reduction		20 minutes reduction		25 minutes reduction	
	Volume	Freq.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.
Shoulder	< 500	37	6.61	0.17	3.98	0.10	7.05	0.19	5.43	0.14	3.94	0.10
	500-1000	312	147.40	0.47	150.26	0.48	157.20	0.50	168.90	0.54	193.88	0.62
	1000-1500	221	395.86	1.79	489.62	2.22	549.97	2.49	607.98	2.75	763.14	3.45
	>1500	30	1,128.77	37.63	2,449.79	81.66	3,954.02	131.80	5,570.70	185.69	7,316.79	243.89
One Lane	< 500	7	1.11	0.16	3.79	0.54	3.47	0.50	4.33	0.62	2.59	0.37
	500-1000	45	77.00	1.71	142.38	3.16	225.90	5.02	318.66	7.08	417.00	9.27
	1000-1500	31	6,425.98	207.29	14,118.24	455.43	23,069.06	744.16	33,375.84	1,076.64	46,701.93	1,506.51
	>1500	4	3,492.07	873.02	7,480.04	1,870.01	11,608.98	2,902.25	16,018.34	4,004.59	21,892.20	5,473.05
Two Lanes	< 500	0	0	-	0	-	0	-	0	-	0	-
	500-1000	5	3,183.97	636.79	6,567.33	1,313.47	10,331.19	2,066.24	14,361.38	2,872.28	20,361.27	4,072.25
	1000-1500	1	1,156.36	1,156.36	2,584.32	2,584.32	4,141.54	4,141.54	5,842.87	5,842.87	7,558.62	7,558.62
	>1500	0	0	-	0	-	0	-	0	-	0	-
<b>Total</b>			<b>16,015.13</b>		<b>33,989.75</b>		<b>54,048.38</b>		<b>76,274.43</b>		<b>105,211.36</b>	

Table 6: Benefit and cost estimation of the H.E.L.P. program for six-month operation along I-287

<b>BENEFIT</b>											
Duration reduction		5 minutes		10 minutes		15 minutes		20 minutes		25 minutes	
Saving	$P_{pm}$ (\$/unit)	$B_{pm}^5$ (Savings in original units)	$TB^5$ (Total savings in dollars)	$B_{pm}^{10}$ (Savings in original units)	$TB^{10}$ (Total savings in dollars)	$B_{pm}^{15}$ (Savings in original units)	$TB^{15}$ (Total savings in dollars)	$B_{pm}^{20}$ (Savings in original units)	$TB^{20}$ (Total savings in dollars)	$B_{pm}^{25}$ (Savings in original units)	$TB^{25}$ (Total savings in dollars)
Delay (vehicle-hours)	15	2,558	38,369	5,429	81,432	8,633	129,488	12,182	182,737	16,804	252,064
Fuel consumption (gallons)	3	399	1,197	733	2,198	1,090	3,271	1,451	4,353	1,761	5,282
HC (tons)	6,700	0.03	224	0.07	476	0.11	756	0.16	1,067	0.22	1,472
CO (tons)	6,300	0.38	2,389	0.80	5,070	1.27	8,061	1.79	11,377	2.47	15,693
NO (tons)	12,875	0.02	206	0.03	438	0.05	696	0.08	982	0.11	1,355
Secondary incidents	1,706	2	3,412	4	6,824	6	10,236	9	15,354	12	20,472
Total saving			45,796		96,436		152,509		215,870		296,337
<b>COST</b>											
	Total Cost $TC = c \times n \times hr \times day$		$n$ Number of roving trucks	$hr$ work hours a day	$day$ work days	$c$ cost per truck hour					
COST(1)	100,800		2	8	126	50					
COST(2)	80,640		2	8	126	40					
<b>B/C RATIOS</b>											
Incident reduction case	5 minutes	10 minutes	15 minutes	20 minutes	25 minutes						
B/C ratio (with COST(1))	0.45	0.96	1.51	2.14	2.94						
B/C ratio (with COST(2))	0.57	1.20	1.89	2.68	3.67						



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## MEMORANDUM

January 24, 2013

**TO:** Department of Transportation Board of Directors  
**FROM:** Rudy Malfabon, Director  
**SUBJECT:** February 14, 2013 Transportation Board of Directors Meeting  
**Item # 9:** 2012 State of Nevada Transportation Facts and Figures Book –  
Informational item only

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### **Summary:**

The Nevada Department of Transportation (NDOT) has produced the State of Nevada Transportation Facts and Figures book on a biennial basis since before 1990. This book of transportation information and statistics has proven to be a valuable resource to answer the many frequently asked questions about NDOT and the Nevada transportation network entrusted to this agency during the Legislative sessions and in general. In 2010, NDOT began producing the book on an annual basis due to the demand for this information. Annual editions currently produced represent the best available data for the fiscal year ending June 30<sup>th</sup> as of that date. The major components of the report include,

### ABOUT NDOT

- NDOT Director's Message
- Department Mission, Vision, and Goals
- Transportation Board Member Photos
- NDOT Administration Photos
- Executive Summary
- Key Contact Information – Headquarters and Districts

### HOW ARE WE DOING?

- Awards and Recognition, NDOT Accomplishments
- Highway Safety Statistics
- Performance Management Plan and Performance Measures
- Maintenance Costs and Activities
- Maintenance Customer Satisfaction Survey
- Innovative Financing and Public Private Partnerships
- Operational Improvements
- Safety Improvements
- Landscape and Aesthetics

### HIGHWAY SYSTEM, CONDITION AND USE

- Roadway System Mileage
- System Definitions
- NDOT-Maintained Pavement Condition
- Vehicle Miles of Travel, Truck Miles of Travel
- Bridges

## TRANSPORTATION FINANCING

Description of financing and revenue sources

Figures, charts, and tables showing revenue sources and revenues generated

Figures, charts, and tables showing expenditures and distributions

Passenger Car Operating Costs

Gas Tax – rates and history

Special Fuel Tax – rates and history

Vehicle Registration – rates

Governmental Services Tax, Driver's License fees, and Title fees

## GENERAL STATISTICS

NDOT Personnel

Nevada Population

Transit

Bicycles and Pedestrians

Freight

Railroads

Nevada Aviation

The new federal transportation bill – MAP 21, is not reflected in this edition since it was not yet signed into law in the time represented in this information (July 1, 2011 thru June 30<sup>th</sup>, 2012).

The 2012 State of Nevada Transportation Facts and Figures book is a cooperative effort by every division of NDOT to bring together this extensive compilation of Nevada transportation information in one document.

### **List of Attachments:**

2012 State of Nevada Transportation Facts and Figures book –  
**To be delivered under separate cover.**

### **Prepared by:**

Dale Lindsey, Performance Analyst



1263 South Stewart Street  
Carson City, Nevada 89712  
Phone: (775) 888-7440  
Fax: (775) 888-7201

## MEMORANDUM

January 25, 2013

**TO:** Department of Transportation Board of Directors  
**FROM:** Rudy Malfabon, Director  
**SUBJECT:** February 11, 2013 Transportation Board of Directors Meeting  
**Item #10:** Briefing on the Status of Boulder City Bypass Phase 1 –  
Informational Item Only

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### **Summary:**

The Nevada Department of Transportation is moving forward with the delivery of the first phase of the Boulder City Bypass. Phase 1 of the Boulder City Bypass has been approved by the Federal Highway Administration (FHWA) for construction and has been divided into multiple "packages" for feasible delivery during the extremely challenging economic climate. Environmental and Right-of-Way certifications have been issued and delivery of each package is currently underway. Several factors have led to the delays in the delivery of Phase 1, however, the Department is working through the issues for successful delivery.

### **Background:**

The Boulder City Bypass has been a high-priority project for the Department for several years. The Final Environmental Impact Statement (FEIS) was approved on March 21, 2005 and the Record of Decision (ROD) was issued by the FHWA on December 5, 2005 giving the Department full approval to move forward with the design and construction of the project. The Boulder City Bypass Project consists of a continuous four-lane, controlled-access, divided freeway and highway passing south of the developed area of Boulder City. In order to implement the project as effectively and efficiently as possible, NDOT has split the project into two phases. Phase 1 is the western portion of the project beginning at the Foothills Road grade separation and ending at US 95, approximately 1.2 miles south of the existing US 93/US 95 Interchange (Figure 1). The development of Phase 1 is broken into 5 packages. Package 1 is the right of way acquisitions for US 93/US 95 freeway improvements. Parcel acquisitions are currently underway for property needed for phase 1 of the Boulder City Bypass Project, along with coordination of utilities. Package 2A is the installation of tortoise fencing and plant salvaging throughout the entire Phase 1 perimeter. Package 2B is the construction of the west frontage road and the utility relocations. Package 3 will construct a realigned portion of US 93/US 95 mainline to the intersection with the west frontage road and the new interchange at Railroad Pass. Package 4 will complete the US 93/US 95 Interchange at Railroad Pass, and construct the new US 95 connection, bypassing the existing US 93/US 95 interchange. Package 5 is the Railroad/Mainline bridge structure and this may be constructed with Package 3, subject to available funds.

**Analysis:**

The Department's mission of providing a better transportation system for Nevada through unified and dedicated efforts will be implemented by the delivery of the long-awaited Boulder City Bypass. The commencement of Phase 1 marks the beginning of another major project delivered by the Department in order to provide a safer corridor for the traveling public in and out of the Las Vegas area. NDOT is committed to delivering the project but is proposing to extend the schedule of the Phase 1 project to better accommodate the cash flow, utility relocation, and ROW acquisition challenges. The Department is using a federal earmark to fund the initial packages included in Phase 1.

Eventually, Phase 2 will extend the new alignment of US 93 over the existing US 95 and sweep below Boulder City, run northerly through the Eldorado Mountains and connect to the recently completed Hoover Dam Bypass Project crossing the Colorado River into neighboring Arizona. Both phases of the Boulder City Bypass are designed to meet Interstate standards as the U.S. Congress has identified this entire corridor as the future Interstate 11 (I-11) in the surface transportation authorization act know as MAP-21. Currently, Phase 2 of the Bypass is being studied as a future toll road to be delivered by the Regional Transportation Commission (RTC) of Southern Nevada. The tolling study is being performed under Senate Bill 506 that was passed by Legislature in the 2011 session. The RTC will provide analyses and reports on the Phase 2 proposed toll road to the State Legislature during the 2013 session.

**List of Attachments:**

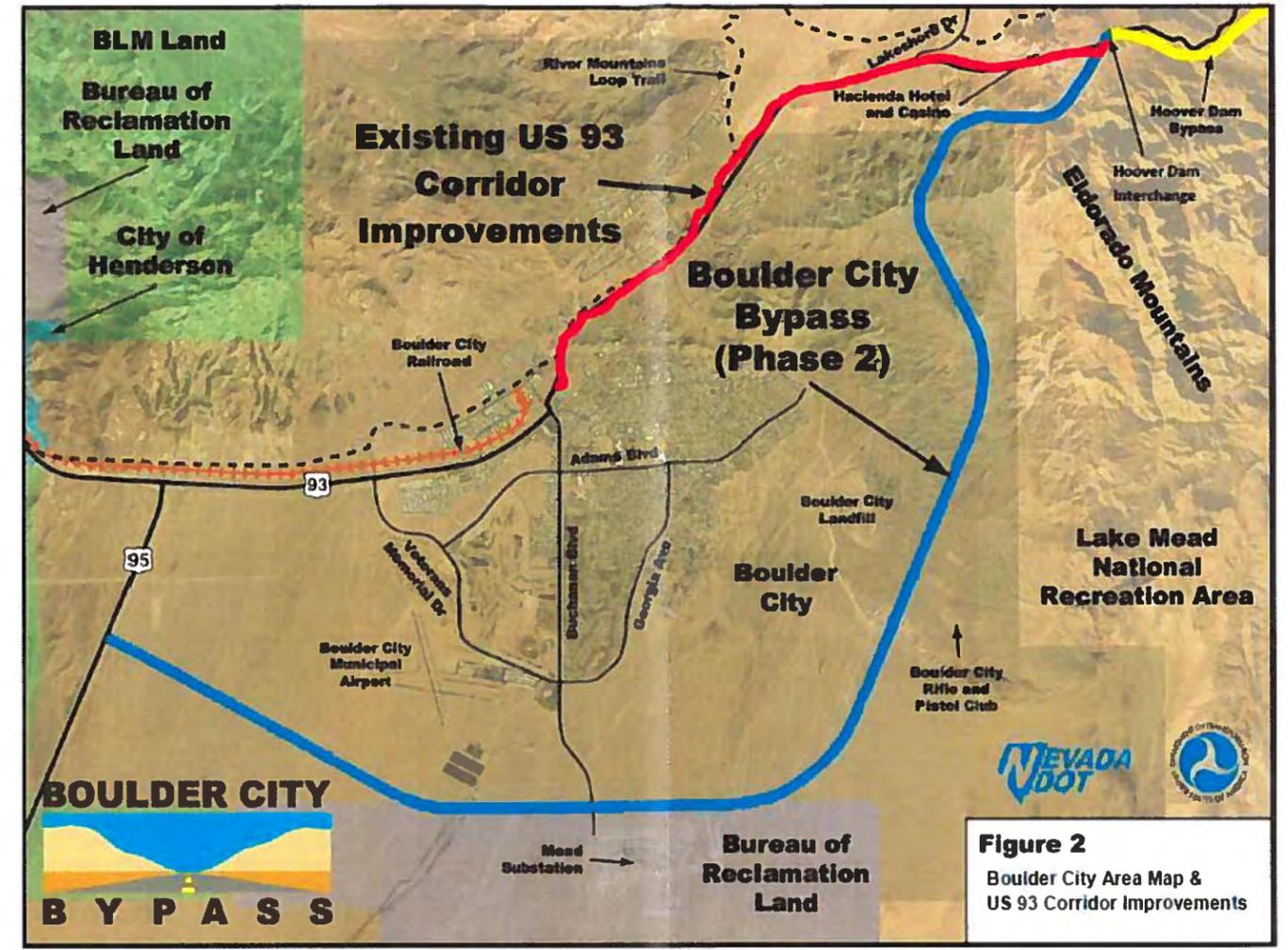
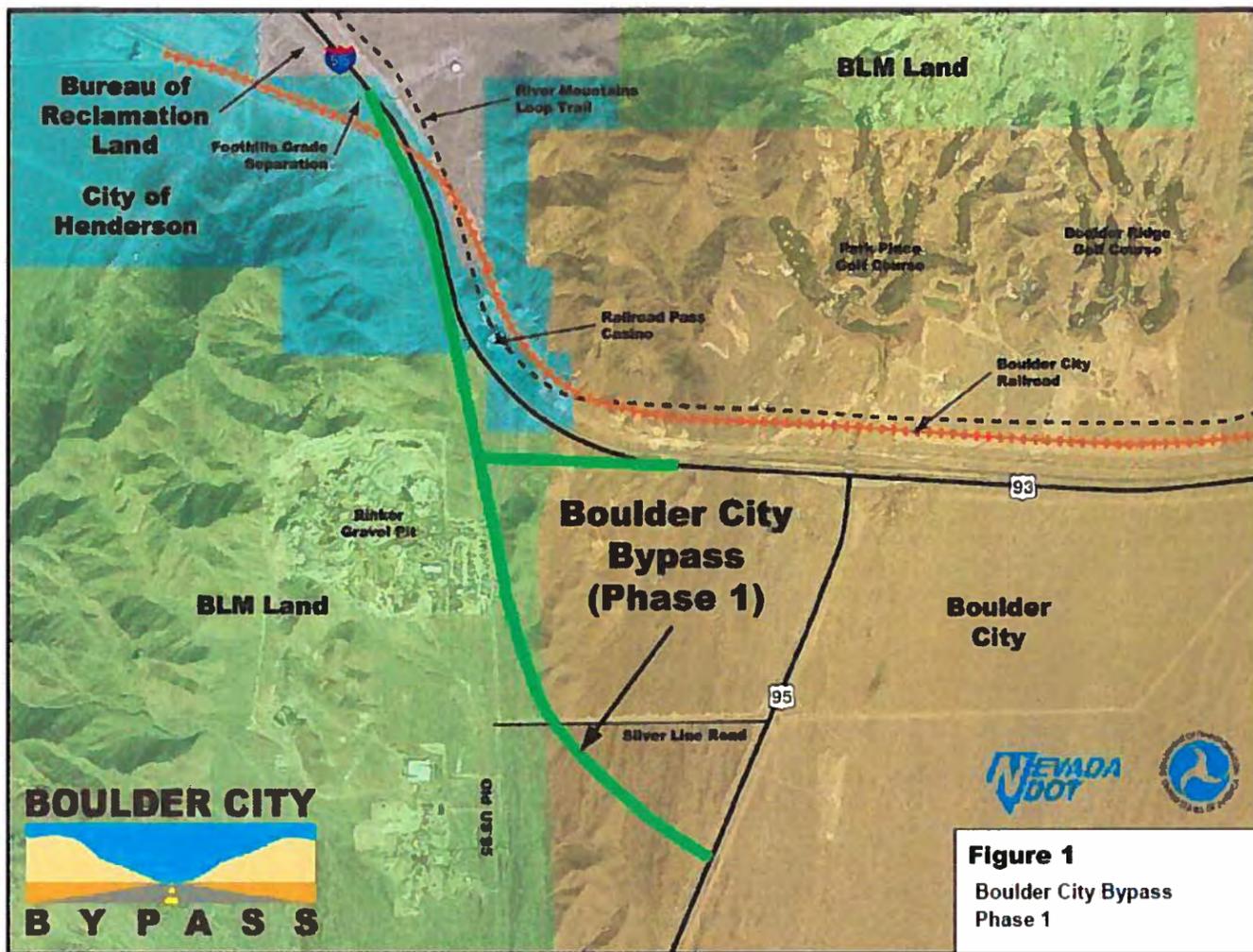
Boulder City Bypass Overview and Phase 1

**Recommendation for Board Action:**

Informational item only.

**Prepared by:**

Tony Lorenzi, P.E.  
Senior Project Manager



**PHASE 1**





1263 South Stewart Street  
Carson City, Nevada 89712  
Phone: (775) 888-7440  
Fax: (775) 888-7201

## MEMORANDUM

January 25, 2013

**TO:** Department of Transportation Board of Directors  
**FROM:** Rudy Malfabon, Director  
**SUBJECT:** February 11, 2013 Transportation Board of Directors Meeting  
**Item #11:** Old Business

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### **Summary:**

This item is to provide follow up and ongoing information brought up at previous Board Meetings.

### **Analysis:**

- a. Report on Lease to Hold Agreements – *Informational item only.*  
Please see Attachment A.
- b. Report of Outside Counsel Costs on Open Matters – *Informational item only.*  
Please see Attachment B.
- c. Monthly Litigation Report – *Informational item only.*  
Please see Attachment C.
- d. 2012 Annual Fatality Report – *Informational item only.*  
Please see Attachment D.
- e. Briefing on Project NEON – *Informational item only.*

### **List of Attachments:**

- a. Report on Lease to Hold Agreements – *Informational item only.*
- b. Report of Outside Counsel Costs on Open Matters – *Informational item only.*
- c. Monthly Litigation Report – *Informational item only.*
- d. 2012 Annual Fatality Report – *Informational item only.*
- e. Briefing on Project NEON – *Informational item only.*

### **Recommendation for Board Action:**

Informational item only.

### **Prepared by:**

Rudy Malfabon, Director



## MEMORANDUM

Right-of-Way Division

January 25, 2013

To: Rudy Malfabon, P.E., Director

From: Paul A. Saucedo, Chief Right-of-Way Agent

A handwritten signature in blue ink, appearing to be "P. Saucedo", is written over the name of the sender.

Subject: Transportation Board Inquiry – Leasing Properties to Hold Vacant

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A question was raised at the November 6<sup>TH</sup> 2012, Transportation Board meeting regarding how many properties we are currently leasing to “Hold Vacant” during the acquisition process. We have entered into two leases, both of these properties are being acquired for the NEON project.

Prior to a discussion of the two leases I wanted to explain why we agree to lease properties during the negotiations process. Entering into a lease to “Hold Vacant” is one tool that has been established by federal code to help to maintain good working relationships with property owners. It also prevents the relocation of subsequent tenants and limits damage claims against the Department for lost income, thus avoiding inverse condemnation actions. It is not uncommon that tenants will vacate a property before we can conclude our negotiations with a property owner. Therefore, as a means to lessen the financial burden due to lost rental income, entering into a lease to “Hold Vacant” is one tool to help foster goodwill with the property owner and keep negotiations moving forward.

The term “Hold Vacant” is a little misleading as we will use the property, if we can. Typically our project schedules are such that demolition activities can follow fairly close behind the acquisition process. Therefore it is not always feasible for us to use the property or to lease it to another party. In the case of Project NEON we have contacted the local District Office and informed them that we have vacant properties that could be used and are available for use by NDOT staff.

In regards to how many properties we have leased to “Hold Vacant”, we currently have two. The first lease was entered into in June of 2012, Agreement number P222-12-030, with the Charleston Antique Mall. The property consists of a 15,808 square foot building, which is needed for the construction of phase I of project NEON. When negotiations began, the property was occupied with over 40 vendors. During negotiations, the tenants were presented with their relocation benefits per federal and state law. The tenants then found a replacement site and vacated the approximately 15,808 square foot building. In order to maintain good relations with the property owner and to avoid having to relocate any potential subsequent tenants, the above lease agreement was executed. The monthly rent was \$12,500.00 (same rate that the tenants were paying), the term was month to month term expiring November 2012 (when the Department obtained a court ordered occupancy). The total rent paid was \$87,500.00, running from May through November 2012, for a total of 7 months.

**To: Rudy Malfabon, P.E., Director  
January 25, 2012**

The second Lease was entered into in August of 2012, Agreement number P379-12-030, with Lusch, Zetocka and Obregon. This property consisted of two buildings with a total square footage of 8,172 square feet. The owner was making repairs and upgrades to the property, but was unable to find a tenant. The property owner believed that the fact that his property had been identified as being needed for the project, led to his inability to attract potential tenants. Since the property had been vacant for an extended period of time, the owner wanted the Department to pay for those months that the property had not been rented. In order to avoid having an inverse condemnation action filed on the Department, and to try and keep a good working relationship with the property owner, we agreed to pay a monthly rent starting in December of 2011. The December date was chosen as this should have been the start of our negotiations with this owner.

An appraisal was conducted by Mr. Timothy R. Morse, MAI on this property with a value date of March 28, 2011, establishing a market rent of \$1.00 per square foot for a total of \$8,172.00 per month. The total rent paid through January is \$122,580.00. The lease agreement will expire when we reach settlement or the right of occupancy is secured through the condemnation process. We are currently analyzing a counter offer from Lusch, Zetocka and Obregon that was received in late November but we remain far apart. We are working with the Attorney General's office to determine how best to proceed as the Department has been engaged in negotiations for an extended period of time and are continuing to work very hard to reach an agreement with the property owner.

pas/jm

OPEN NDOT - OUTSIDE COUNSEL CONTRACTS AS OF January 15, 2013							
Vendor	Case/Project Name	Contract Period	Contract and Amendment Date	Contract and Amendment Amount	Total Contract Authority	Contract Authority Remaining	
Watt, Tieder, Hoffar & Fitzgerald	Construction Claims of Fisher Sand & Gravel Contract #3292 (I-580 Mt. Rose Hwy to Bowers Extension) NDOT Agmt No. P267-07-004	02/01/07 - 02/01/13	2/1/2007	\$ 15,000.00			
			Amendment #1	7/1/2008	\$ 35,000.00		
			Amendment #2	11/24/2008	\$ 100,000.00		
			Amendment #3	3/23/2009	\$ 200,000.00		
			Amendment #4	11/20/2009	\$ 50,000.00		
			Amendment #5	7/8/2011	Extension of Time	\$ 400,000.00	\$ 13,700.01
Nossaman, LLP	Pioneer Program Legal and Financial Planning NDOT Agmt No. 282-09-002	9/23/09 - 7/1/13	9/23/2009	\$ 125,000.00			
			Amendment #1	2/23/2010	\$ 80,000.00		
			Amendment #2	10/6/2010	\$ 30,000.00		
			Amendment #3	10/26/2010	\$ 30,000.00		
			Amendment #4	8/31/2011	\$ 365,000.00	\$ 630,000.00	\$ 229,746.89
Chapman Law Firm	NDOT vs. Ad America 8th JD - 4 Eminent Domain Cases Project Neon - Las Vegas NDOT Agmt No. P301-11-004	6/14/2011 - 8/31/13	6/14/2011	\$ 281,675.00			
			Amendment #1	8/30/2012	Expansion of Scope	\$ 281,675.00	\$ 115,938.10
Snell & Wilmer, LLP	Peek Construction vs. NDOT 1st JD 120C 00030 1B Contract # 3407 (Weils Wildlife Crossing) NDOT Agmt No. P082-12-004	3/1/2012 - 6/30/14	3/1/2012	\$ 150,000.00			
						\$ 150,000.00	\$ 49,021.28
Snell & Wilmer, LLP	Peek Construction vs. NDOT 1st JD 120C 00032 1B Contract # 3377 (Kingsbury Grade) NDOT Agmt No. P083-12-004	3/1/2012 - 6/30/14	3/1/2012	\$ 150,000.00			
						\$ 150,000.00	\$ 2,250.56
Snell & Wilmer, LLP	Construction Claims Williams Brother, Inc. Contract # 3392 (Various in Las Vegas) NDOT Agmt No. P084-12-004	3/1/2012 - 6/30/14	3/1/2012	\$ 30,000.00			
						\$ 30,000.00	\$ 28,125.50
Chapman Law Firm	NDOT vs. Blue Diamond R.V. and Storage 8th JD A610962 RE: Work Order 20359000 NDOT Agmt No. P155-12-004	4/24/2012 - 4/24/14	4/24/2012	\$ 107,425.00			
			Amendment #1	8/30/2012	\$ 88,250.00	\$ 195,675.00	\$ 23,210.51
Chapman Law Firm	NDOT vs. Vegas Group, LLC 8th JD A-12-661241-C Project Neon - Las Vegas NDOT Agmt No. P156-12-004	4/24/12 - 4/24/14	4/24/2012	\$ 541,800.00			
						\$ 541,800.00	\$ 441,303.37

OPEN NDOT - OUTSIDE COUNSEL CONTRACTS AS OF January 15, 2013						
Vendor	Case/Project Name	Contract Period	Contract and Amendment Date	Contract and Amendment Amount	Total Contract Authority	Contract Authority Remaining
** Chapman Law Firm	<i>NDOT vs. Carrie Sanders</i> 8th JD - A-12-664693-C Project Neon - Las Vegas NDOT Aamt No. P192-12-004	6/12/12 - 6/12/14	6/12/2012	\$ 541,800.00	\$ 541,800.00	\$ 519,800.59
** Chapman Law Firm	<i>NDOT vs. Gendall</i> 8th JD - A-12-666487-C Project Neon - Las Vegas NDOT Agmt No. P325-12-004	6/12/12 - 6/12/14	6/12/2012	\$ 541,800.00	\$ 541,800.00	\$ 524,000.18
** Chapman Law Firm	<i>NDOT vs. Roberts 1981 Decedents Trust</i> 8th JD - 12-665880-C Project Neon - Las Vegas NDOT Agmt No. P452-12-004	10/23/12 - 10/12/14	10/23/2012	\$ 475,725.00	\$ 475,725.00	\$ 454,376.78
Chapman Law Firm	<i>NDOT vs. Catello Family Trust</i> 8th JD - A-12-671920-C Project Neon - Las Vegas NDOT Agmt No. P476-12-004	11/16/12 - 11/30/15	11/30/2014	\$ 449,575.00	\$ 449,575.00	\$ 447,736.25
Chapman Law Firm	<i>NDOT vs. MLK-ALTA</i> 8th JD - A-12-658642-C Project Neon - Las Vegas NDOT Agmt No. P508-12-004	1/14/13 - 1/14/15	January	\$ 455,525.00	\$ 455,525.00	\$ 455,525.00
Chapman Law Firm	<i>NDOT vs. Highland Partnership 1980</i> 8th JD - Project Neon - Las Vegas NDOT Agmt No. P507-12-004	1/14/13 - 1/14/15	January	\$ 449,575.00	\$ 449,575.00	\$ 449,575.00
Chapman Law Firm	<i>NDOT vs. Highland 2000-I, LLC</i> 8th JD - A-12-671915-C Project Neon - Las Vegas NDOT Agmt No. P501-12-004	1/14/13 - 1/14/15	January	\$ 449,575.00	\$ 449,575.00	\$ 449,575.00
Chapman Law Firm	<i>NDOT vs. Laura FitzSimmons</i> Condemnation Litigation Consultation NDOT Agmt No. P510-12-004	12/16/12 - 12/30/14	12/30/2014	\$ 300,000.00	\$ 300,000.00	\$ 300,000.00
* BH Consulting Agreement	<i>Management assistance, policy recommendations, negotiation support and advice regarding NEXTEL and Re-channeling of NDOT's 800 Mhz frequencies.</i>	6/30/12 - 6/30/16	6/30/2012	\$ 77,750.00	\$ 77,750.00	\$ 77,750.00

\* Pass Through - Federally mandated 800 MHz rebanding project fully reimbursed by Sprint Nextel.

Monthly Litigation Report to the Nevada Department of Transportation - January 16, 2013		
Case Name	Jurisdiction and Case Number	Nature of Case
<b>Condemnations / Inverse Condemnations</b>		
AD America, Inc. vs. NDOT (Cactus - Inverse)	8th JD A-10-631520	Inverse condemnation, Plaintiff seeks just compensation (Project NEON)
AD America, Inc. vs. NDOT (NEON - Inverse)	8th JD A-640157	Eminent domain action to condemn parcels for Project NEON
AD America, Inc. vs. NDOT (SouthPoint - Inverse)	8th JD A-653502-C	Inverse condemnation, Plaintiff seeks just compensation (I-15) Cactus
Blue Diamond RV & Storage vs. NDOT	8th JD A610962	Inverse condemnation, Plaintiff seeks just compensation, Blue Diamond Road, LV
MLK-ALTA vs. NDOT	8th JD A-11-649541-C	Inverse condemnation, Plaintiff seeks just compensation
NDOT vs. 2.5 Acres @ Dean Martin, LLC	8th JD A-12-666425-C	Per Resolution 434, NDOT Board authorized acquisition by condemnation
NDOT vs. AD America, Inc. (Cactus - Direct)	8th JD A-12-666482-C	Per Resolution 434, NDOT Board authorized acquisition by condemnation (I-15) Cactus
NDOT vs. Catello Family Trust, Carmine V.	8th JD A-12-671920-C	Eminent domain action to condemn parcels for Project NEON
NDOT vs. Falcon Capital	2nd JD CV06-01306	Eminent domain action to condemn parcels for conduction of I-580
NDOT vs. Fitzhouse/Westcare	8th JD	Eminent domain action to condemn parcels for Project NEON
NDOT vs. Gendall Trust, Alexander and Lilly, et al.	8th JD A-666487-C	Eminent domain action to condemn parcels for Project NEON
NDOT vs. Highland Partnership 1980, LLC	8th JD	Eminent domain action to condemn parcels for Project NEON
NDOT vs. Highland 2000-I, LLC, et al.	8th JD A-12-671915-C	Eminent domain action to condemn parcels for Project NEON
NDOT vs. I-15 and Cactus, LLC	8th JD A-12-664403-C	Per Resolution 433, NDOT Board authorized acquisition by condemnation
NDOT vs. Jenkins, Carrie, aka Carrie Sanders	8th JD A-12-664693-C	Eminent domain action regarding US-95/I-515 Interchange
NDOT vs. Jericho Heights, LLC	8th JD A-665909-C	Eminent domain action for realignment and reconstruction of portion of US-93
NDOT vs. K & L Dirt Company, LLC	8th JD A-12-666050-C	Eminent domain action for realignment and reconstruction of portion of US-93
NDOT vs. KP & TP, LLC, Roohani, Khusrow, et al.	8th JD A-12-664405-C	Eminent domain action regarding the I-15 and Warm Springs interchange
NDOT vs. MLK-ALTA	8th JD A-12-658642-C	Per Resolution 427, NDOT Board authorized acquisition for I-15 reconstruction
NDOT vs. Railroad Pass Investment Group	8th JD A-12-665330-C	Eminent domain action for realignment and reconstruction of portion of US-93
NDOT vs. Union Pacific Railroad Co.	7th JD CV0833009	Eminent domain action for reconstruction of SR 317
NDOT vs. Vegas Group, LLC	8th JD A-12-661241-C	Eminent domain action to widen and reconstruct I-15
NDOT vs. Woodcock, Jack, et al.	8th JD A-12-664399-C	Eminent domain action regarding the I-15 and Warm Springs interchange
NDOT vs. Wykoff Newberg Corporation	8th JD A-12-656578-C	Eminent domain action re I-15 Freeway from Blue Diamond to Tropicana Ave.
NV Energy vs. Highland A.V.A and NDOT	8th JD A-12-672328-C	Eminent domain action regarding Project NEON - just compensation
NV Energy vs. Westcare Works and NDOT	8th JD A-12-672335-C	Eminent domain action regarding Project NEON - just compensation
P8 Arden, LLC vs. NDOT	8th JD 591048 C	Inverse condemnation, Plaintiff seeks just compensation
Robarts 1981 Decedents Trust vs. NDOT	8th JD A-12-665880-C	Inverse Condemnation regarding Project NEON - just compensation
Rural Telephone Company vs. Dorsey Ln, NDOT	4th JD CV-C-12-517	Public utility seeks permanent easement

**Monthly Litigation Report to the Nevada Department of Transportation - January 16, 2013**

<b>Case Name</b>	<b>Jurisdiction and Case Number</b>	<b>Nature of Case</b>
<b><u>Torts</u></b>		
Armstrong, Connie; Estate of Armstrong vs. State	3rd JD 35277	Plaintiff alleges negligence and wrongful death
Allstate Insurance Co. vs. Las Vegas Paving;NDOT	LVJC 12CO27437	Plaintiff alleges property damage and negligence
Austin, Renee vs. State, NDOT	2nd JD CV11-03584	Plaintiff alleges negligence causing personal injury
Calkins, Allan Bruce vs. Baptista, et al. v. NDOT	8th JD A574277	Plaintiff alleges negligence action for personal injury (3rd party complaint)
Chadwick, Estate of Lonnie Joe vs. NDOT	8th JD P-22090, PC-1	Estate alleges transfer of property without court order
Ewasko, Damon and Suzanne vs. State, NDOT	2nd JD CV11-02130	Plaintiff alleges negligence in design of roadway truck ramp
Garza, Gilbert, et al. vs. NDOT	1st JD 12 TRT 00054 IB	Plaintiff alleges negligence causing wrongful death
Harper, Kenneth J. vs. NDOT	8th JD A538914	Plaintiff alleges negligence causing personal injury and wrongful death
Road and Highway Builders vs. Granite; NDOT	1st JD 13OC 00004	Plaintiff alleges wrongful contract award
Marshall, Charles v. State, NDOT	8th JD A-12-662932-C	Plaintiff alleges NDOT responsible for personal injury
NDOT vs. Tamietti, Bill and Vicki	1st JD CV19994	NDOT seeks injunctive relief to prevent closing NDOT's access to VC maintance station
State Farm Fire and Casualty Co., et al. vs. NDOT	RJC 2012 077030	Plaintiff alleges negligence in failure to maintain roadway
Tefft, Timothy and Shirley v. State, NDOT	8th JD A-09-604-575-C	Plaintiff's allege breached duty in construction of median in Las Vegas
<b><u>Contract Disputes</u></b>		
Granite Construction Company	1st JD 12OC 00350 1B	Plaintiff alleges NDOT improperly required resubmittal of bids for contract
Peek Construction vs. State, NDOT	1st JD 12OC 00030 1B	Plaintiff alleges NDOT responsible for delays on Contract 3377, SR 207
Peek Construction vs. State, NDOT	1st JD 12OC 00032 1B	Plaintiff alleges NDOT responsible for delays on Contract 3407, US-93
Pacific Coast Steel vs. State, NDOT	2nd JD CV12 02093	Plaintiff alleges delays and incomplete design on I-580 Galena Bridge
<b><u>Personnel Matters</u></b>		
Akinola, Ayodele v. State, NDOT	USDC 3:11-cv-00681	Plaintiff alleges 14th Amendment violation - discrimination
Cooper, Jennifer v. State, NDOT	9th USCA 11-17957	Plaintiff alleges decrimination and retaliation, appealing trial verdict
Lau, Stan v. State, NDOT	NSC 59580	Plaintiff is appealing termination

1/4/2013

TO: PUBLIC SAFETY, DIRECTOR NDOT, HIGHWAY SAFETY COORDINATOR,  
NDOT TRAFFIC ENGINEERING, FHWA, LVMPD, RENO PD.

FROM: THE OFFICE OF TRAFFIC SAFETY, FATAL ANALYSIS REPORTING SYSTEM (FARS)

SUBJECT: FATAL CRASHES AND FATALITIES BY COUNTY, PERSON TYPE, DAY, MONTH, YEAR AND PERCENT CHANGE.

	CURRENT		SAME DATE LAST YEAR			# CHANGE		
	Yesterday	Crashes	Fatals	Yesterday	Crashes	Fatals	Crashes	Fatals
12/31/2012		2	3	12/31/2011	1	1	1	2
MONTH		20	21	MONTH	16	19	4	2
YEAR		234	258	YEAR	223	246	11	12

CRASH AND FATAL COMPARISON BETWEEN 2010 AND 2011, AS OF CURRENT DATE.

COUNTY	2011 Crashes	2012 Crashes	% CHANGE	2011 Fatalities	2012 Fatalities	% Change	2011 Alcohol Crashes	2012 Alcohol Crashes	% Change	2011 Alcohol Fatalities	2012 Alcohol Fatalities	% Change
CARSON	2	1	-50.0%	3	1	-66.7%			0.0%			0.0%
CHURCHILL	8	4	-50.0%	13	4	-69.2%	3		-100.0%	3		-100.0%
CLARK	112	152	35.7%	117	170	45.3%	41	27	-34.1%	44	30	-31.8%
DOUGLAS	12	5	-58.3%	12	7	-41.7%	4	2	-50.0%	4	4	0.0%
ELKO	14	10	-28.6%	18	11	-38.9%	4	2	-50.0%	4	2	-50.0%
ESMERALDA	3	2	-33.3%	5	2	-60.0%			0.0%			0.0%
EUREKA	2	1	-50.0%	2	1	-50.0%			0.0%			0.0%
HUMBOLDT	3	5	200.0%	3	5	200.0%	1	1	0.0%	1	1	0.0%
LANDER	4	4	0.0%	4	4	0.0%		1	100.0%		1	100.0%
LINCOLN	3	2	-33.3%	3	2	-33.3%			0.0%			0.0%
LYON	11	4	-63.6%	16	7	-56.3%	4		-100.0%	5		-100.0%
MINERAL	1	2	100.0%	1	2	100.0%			0.0%			0.0%
NYE	15	8	-46.7%	15	8	-46.7%	3		-100.0%	3		-100.0%
PERSHING	2	1	0.0%	2	1	-50.0%	1	1	0.0%	1	1	0.0%
STOREY			0.0%			0.0%			0.0%			0.0%
WASHOE	29	31	6.9%	30	31	3.3%	10	3	-70.0%	10	3	-70.0%
WHITE PINE	2	2	0.0%	2	2	0.0%			0.0%			0.0%
YTD	223	234	4.9%	246	258	4.9%	71	37	-47.9%	75	42	-44.0%
TOTAL 11	223	-----	4.93%	246	-----	4.88%	71	-----	-47.89%	75	-----	-44.00%

2011 AND 2012 ALCOHOL CRASHES AND FATALITIES ARE BASED ON PRELIMINARY DATA.

COMPARISON OF FATALITIES BY PERSON TYPE BETWEEN 2011 AND 2012, AS OF CURRENT DATE.

COUNTY	2011 Vehicle Occupants	2012 Vehicle Occupants	% Change	2011 Peds	2012 Peds	% Change	2011 Motor- Cyclist	2012 Motor- Cyclist	% Change	2011 Bike	2012 Bike	% Change	2011 Other	2012 Other
CARSON	2		-100.0%			0.0%	1	1	0.0%			0.0%		
CHURCHILL	12	4	-66.7%			0.0%			0.0%	1		-100.0%		
CLARK	62	99	59.7%	30	42	40.0%	24	24	0.0%	1	2	100.0%	1	3
DOUGLAS	8	5	-37.5%	1	1	100.0%	2	1	-50.0%	1		-100.0%		
ELKO	13	11	-15.4%	2		-100.0%	2	1	-50.0%			0.0%	1	
ESMERALDA	5	3	-40.0%			0.0%			0.0%			0.0%		
EUREKA	2	1	-50.0%			0.0%			0.0%			0.0%		
HUMBOLDT	3	3	0.0%		1	100.0%		1	100.0%			0.0%		
LANDER	2	3	50.0%			0.0%	2	1	-50.0%			0.0%		
LINCOLN	2	2	0.0%			0.0%	1		-100.0%			0.0%		
LYON	13	6	-53.8%	1		-100.0%		1	100.0%			0.0%	1	
MINERAL	1	2	100.0%			0.0%			0.0%			0.0%		
NYE	13	5	-61.5%		2	100.0%	3		-100.0%		1	100.0%		
PERSHING	2	1	-50.0%			0.0%			0.0%			0.0%		
STOREY			0.0%			0.0%			0.0%			0.0%		
WASHOE	11	13	18.2%	11	11	0.0%	6	6	0.0%	1		-100.0%		1
WHITE PINE	1		-100.0%	1	1	0.0%		1	100.0%			0.0%		
YTD	152	158	3.9%	46	58	26.1%	41	37	-9.8%	4	3	-25.0%	3	4
TOTAL 11	152	-----	3.95%	46	-----	26.09%	41	-----	-9.76%	4	-----	-25.00%	3	-----

Total 2011 246