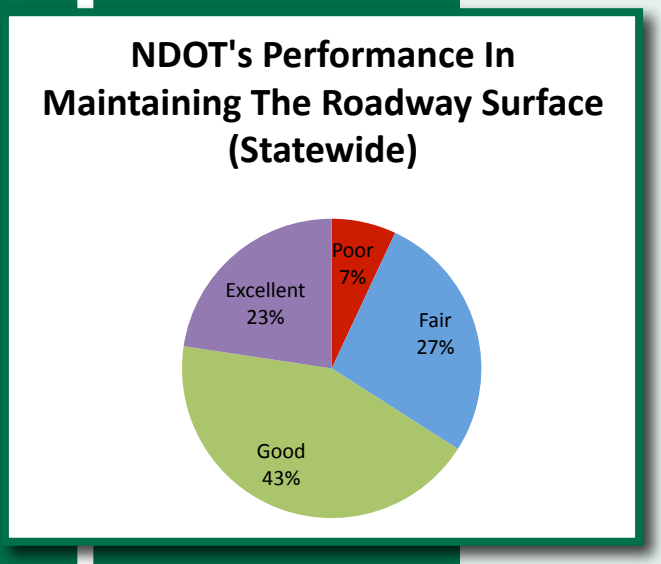
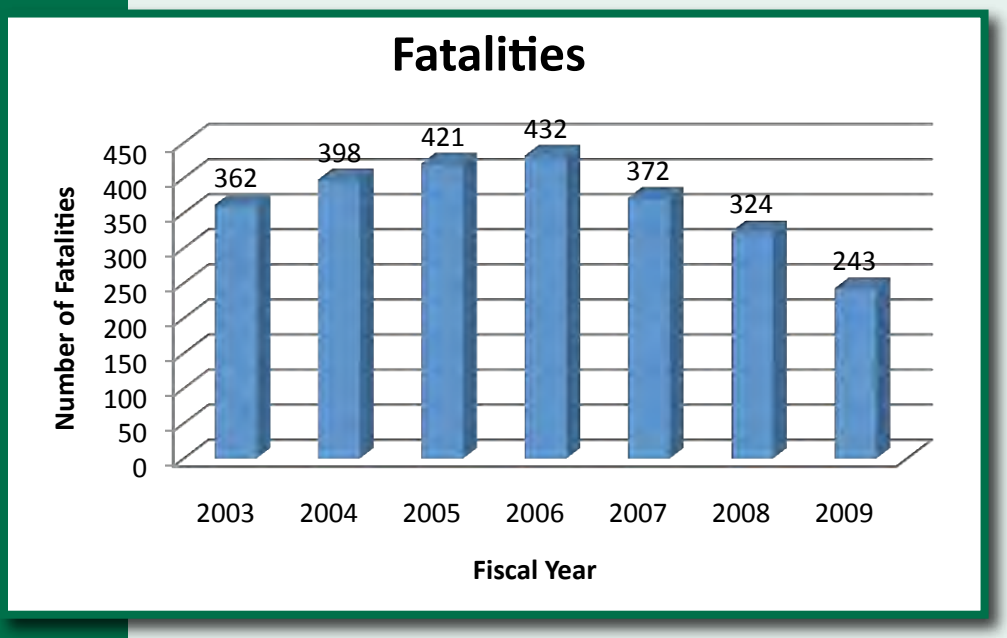
NEVADA DEPARTMENT OF TRANSPORTATION




# 2010 PERFORMANCE MANAGEMENT REPORT




September 2010

Susan Martinovich, P.E.
*Director*

Jim Gibbons
*Governor*

# 2010 PERFORMANCE MANAGEMENT REPORT


Prepared by the
Performance Analysis Division
NEVADA DEPARTMENT OF TRANSPORTATION
1263 SOUTH STEWART STREET
CARSON CITY, NV 89712
www.nevadadot.com

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## State of Nevada Transportation Board Members

| | |
|---|---|
| Jim Gibbons | Governor |
| Brian Krolicki | Lt. Governor |
| Catherine Cortez Masto | Attorney General |
| Kim Wallin | Controller |
| Frank Martin | District 1 |
| Paul Morabito | District 2 |
| Tom Fransway | District 3 |

## NDOT Administration

| | |
|---|---|
| Susan Martinovich | Director |
| Scott Rawlins | Deputy Director Chief Engineer |
| Rudy Malfabon | Deputy Director Southern Nevada |
| Kent Cooper | Assistant Director Engineering |
| Rick Nelson | Assistant Director Operations |
| Tracy Larkin-Thomason | Assistant Director Planning |
| Robert Chisel | Assistant Director Administration |

## NDOT Staff Involved

Alauddin Kahn –Chief Performance Analysis Engineer
Amir Soltani – Chief of Project Management
Jeff Hale – Assistant Chief of Project Management
Woody Brown – Employee Development Manager
Kimberley King –Human Resources Manager
Marcia Manley – Safety and Loss Control Manager
Christi Thompson – Chief of Administrative Services
Dennis Baughman – Chief of the Communications Office
Randy Travis – Chief Traffic Information System
Jeff Schapiro – Chief Construction Engineer
Reid Kaiser – Chief Materials Engineer
Mike Stair – Equipment Superintendent
Bill Hoffman – Chief Maintenance and Operations Engineer
Fred Droes – Chief Traffic/Safety Engineer
Mark Elicegui – Chief Bridge Engineer
Paul Saucedo – Chief Of Right-Of-Way

# DEPARTMENT MISSION, VISION, AND GOALS

## MISSION

Providing a better transportation system for Nevada through our unified and dedicated efforts

## VISION

The Department is the nation's leader in delivering transportation solutions, improving Nevada's quality of life.

## MISSION, VISION, and GOALS

## STRATEGIC PLAN GOALS

Optimize safety

Be in touch with & responsive to customers

Innovate

Be the employer of choice

Deliver timely & beneficial projects & programs

Effectively preserve & manage our assets

Efficiently operate the transportation system

## CORE VALUES

Integrity – Doing the right thing

Honesty – Being truthful in our actions and our words

Respect – Treating others with dignity

Commitment – Putting the needs of the Department first

Accountability – Being responsible for our actions

# INTRODUCTION

NDOT's Performance Management is a collaborative process in which all the major divisions of the department are involved in monitoring their annual and ultimate performance targets resulting in a customer-oriented, balanced, effective, efficient, transparent and performance-based decision making process. It is a dynamic process and improvements are incorporated into the performance management process as needed. NDOT's performance management plays a vital role in the performance-based decision making process. It 1) ensures investment accountability and transparency, 2) tracks and monitors system performance, 3) helps identify and implement efficient and cost effective performance-based programs, 4) links projects to the vision, mission, and goals and objectives of the department, 5) helps align performance targets with customer expectations, and 6) helps in delivering high quality projects.

The Nevada 2007 Legislative Assembly Bill 595 requires the Department of Transportation to develop a performance management plan for measuring its performance, which must include performance measures approved by the Board of Directors of the Department of Transportation. The specific requirements of the Assembly Bill 595 listed below. This Performance Management Report encompasses all requirements of AB 595.

1. **Section 47.2 – Annual Report on Performance Measures and General Project Information**

Prior to December 31 of each year, the Director of Transportation shall prepare a report as follows:

- Goals and objectives of the department and current status of meeting those goals
- Scheduling, scope, cost and progress of any current or proposed highway project
- Funding sources, amount and expenditures of the department
- The rationale used to establish priorities
- Transportation Board and Legislative Directives
- Recommended Plan Amendments

2. **Section 47.3 – Annual Report on Cost-Benefit Analysis for capacity projects that cost at least $25 million (NRS 408.3195).**

The annual report will include the criteria used in the cost-benefit analysis. The resulting benefit/cost ratios will be reported to the Board. Additionally, a written description of the analysis for any project must be submitted to the Board before the Board approves funds for project construction.

3. **Section 55.3 – Annual Report on projects funded through the Las Vegas Convention and Visitors Authority funding.**

The report will include funding, descriptions, status, timelines, and information on the completed projects, if any (NRS 244A.638).

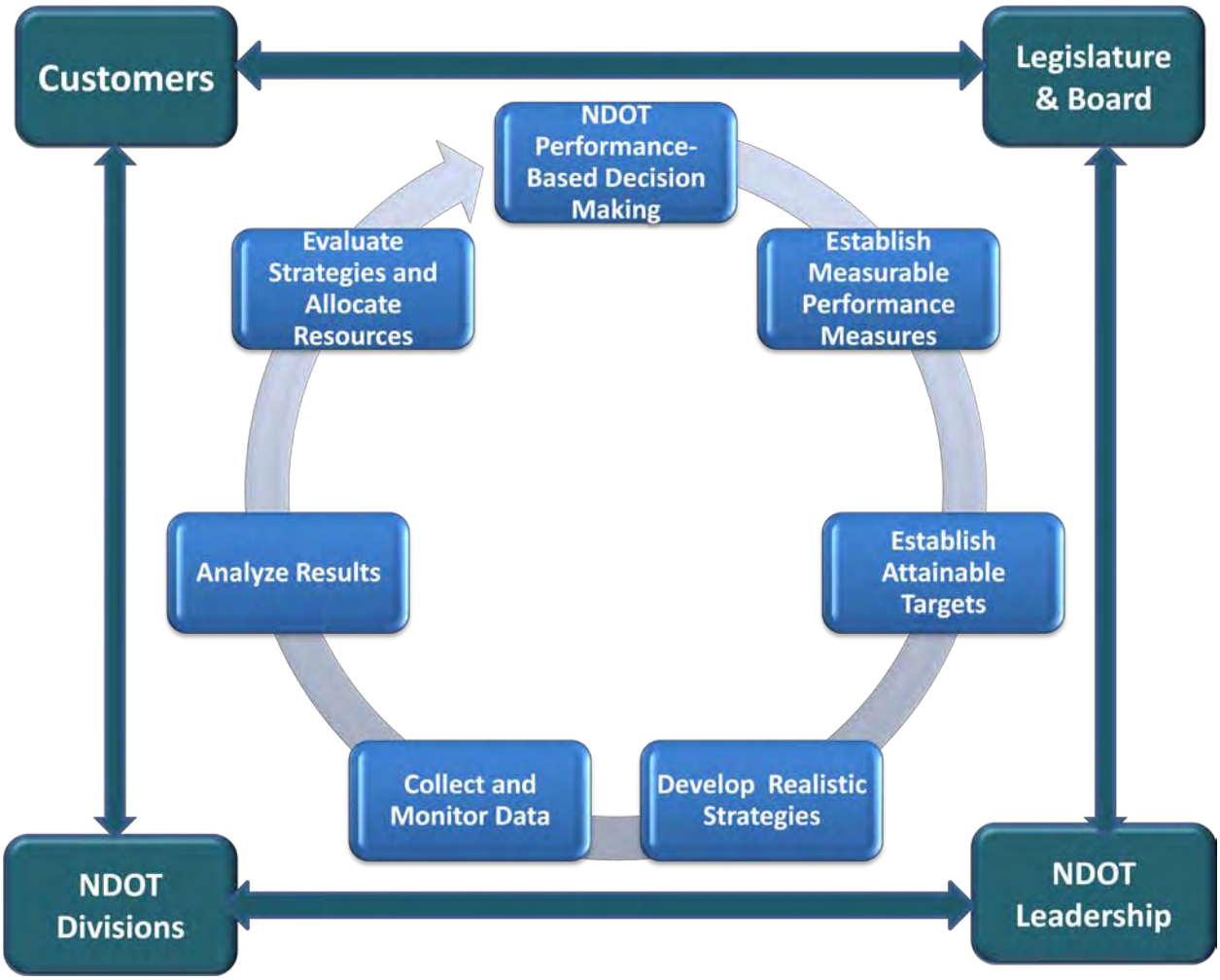
4. **Section 55.5 – Quarterly Report on General Project information for the Blue Ribbon Task Force projects and any proposed super and mega (major) highway projects:**

The report will include funding, descriptions, status, timelines, and information on the completed projects, if any.

# PERFORMANCE MANAGEMENT DASHBOARD
# (Executive Summaries)

# NDOT STRATEGIC PERFORMANCE MANAGEMENT PROCESS

NDOTs Strategic Performance Management process is guided by comprehensive input from 1) our customers in the form of surveys and direct two-way communications, 2) the State Legislature and decision makers, 3) leadership, commitment, and support from NDOT top management, and 4) collaborative team support from the major divisions and program areas of NDOT. The process is part of the performance-based decision making process that includes identifying realistic and specific performance measures, establishing measurable and attainable targets, developing comprehensive and effective strategies to help achieve the targets, quarterly data collection and monitoring, and evaluating strategies to help allocate our resources most effectively and efficiently. The following graph shows the performance management process,



# NDOT PERFORMANCE MANAGEMENT

## EXECUTIVE SUMMARY

NDOT's Performance Management is a collaborative process in which all the major divisions of the department are involved in monitoring their annual and ultimate performance targets resulting in a customer-oriented, balanced, effective, efficient, transparent and performance-based decision making process. It is a dynamic process and improvements are incorporated into the performance management process as needed. NDOT's performance management plays a vital role in the performance-based decision making process. It 1) ensures investment accountability and transparency, 2) tracks and monitors system performance, 3) helps identify and implement efficient and cost effective performance-based programs, 4) links projects to the vision, mission, and goals and objectives of the department, 5) helps align performance targets with customer expectations, and 6) helps in delivering high quality projects.

NDOT has established 15 performance measures to track, monitor, and report performance of the major divisions and program areas. NDOT's performance management system focuses on the critical aspects of a cohesive, integrated, and performance-driven approach. NDOT's senior management is actively involved in the performance management process and supports the performance management process by conducting quarterly performance management updates to help guide the various program areas in meeting their targets. NDOT's performance management system empowers staff to take ownership of the program, holds staff responsible for their division's performance, helps diagnose and address problems faced by the divisions in meeting their targets, and effectively communicates its performance-based decision making process to the public and the legislature.

In Fiscal year 2010, NDOT continued to monitor its performance-based management process. The performance management dashboard, and the detailed data trends sections of this report provides further information regarding NDOT's performance management in Fiscal Year 2010.

# PERFORMANCE MEASURES

1.Reduce Work Place Accidents

2.Provide Employee Training

3.Improve Employee Satisfaction

4.Streamline Agreement Process

5.Improve Customer and Public Outreach

6.Reduce and Maintain Traffic Congestion

7.Streamline Project Delivery- Bidding to Construction

8.Maintain State Highway Pavement

9.Maintain Department Fleet

10.Maintain Department Facilities

11. Continuity of Operations

12.Reduce Fatal Crashes

13.Project Delivery- NEPA to Bid Opening

14.Maintain State Bridges

15.Streamline Permitting Process

# PERFORMANCE DASHBOARD

The following Performance Management Dashboard provides an executive summary of each of the 15 performance measures and shows the status of the performance measure in Fiscal Year 2010. Detailed information regarding each performance measure is provided in the "Performance Management Detailed Data Trends" section of this report.

## 1. Reduce Work Place Accidents

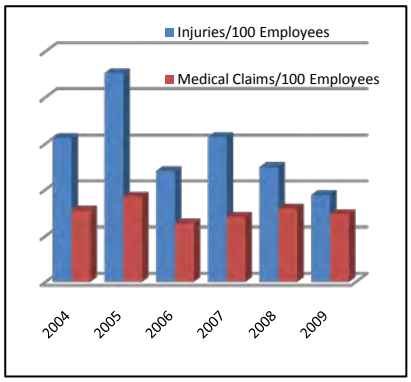
**Executive Summary**: This Performance Measure has two parts to measure both the rate of work place injuries/illnesses and the severity of employee workplace injuries/illnesses. Comparing Calendar Year 2009 to Calendar Year 2008, NDOT reduced work place accidents by 32.3% and medical claims were reduced by 8.2%. The total number of work place injuries reduced was 53.

For detailed information about performance measure 1, please refer to page 18.

**Performance Measure**
1) Injuries/Illnesses per 100 employees
2) Injuries/Illnesses requiring medical attention per 100 employees

Target
1) 10% Annual Reduction
2) 10% Annual Reduction

Current Status:
1) 32.3% Reduction
2) 8.2 % Reduction




## 2. Provide Employee Training

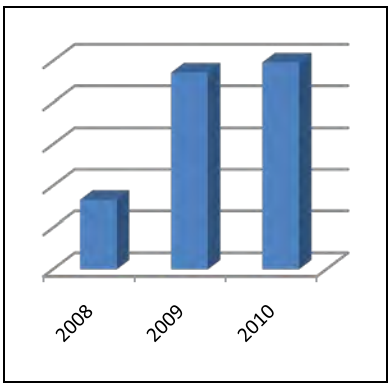
**Executive Summary**: During FY 2010, NDOT provided 2,481 training sessions for employees with required training. Additionally, many employees participated in voluntary training courses.

For detailed information about performance measure 2, please refer to page 21.

**Performance Measure:**
Percentage of Required Employee Training Provided

Target
15% Annual Required Training

Current Status:
More than 15% of Required Training Provided

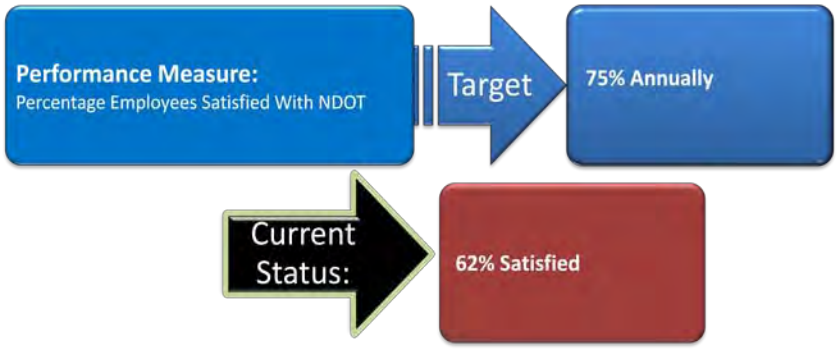


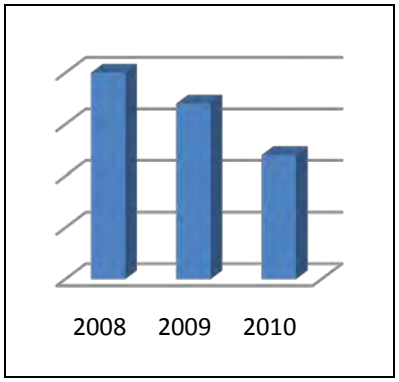
# 3. Improve Employee Satisfaction

**Executive Summary**: Percentage of Employees Satisfied with the NDOT work environment.

The percentage of employees surveyed who are extremely or somewhat satisfied with NDOT is currently 62%.

For detailed information about performance measure 3, please refer to page 24.



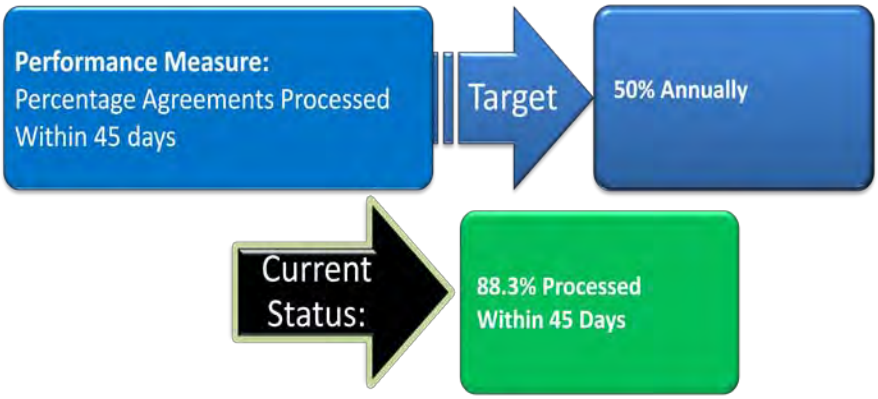



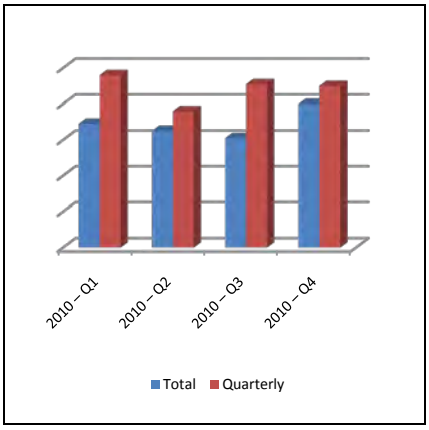

# 4. Streamline Agreement Process

**Executive Summary**: During FY 2010, NDOT processed 88.3% of all agreements within 45 days.

The total number of agreements processed was 294.

For detailed information about performance measure 4, please refer to page 29.

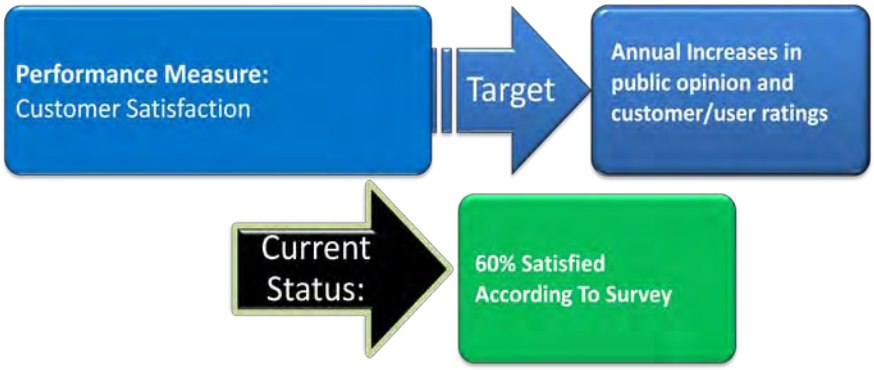


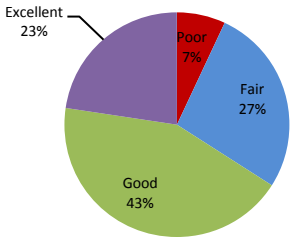



# 5. Improve Customer and Public Outreach

**Executive Summary**: Data collection for a customer satisfaction survey took place between October 2008 and August 2009. The results were analyzed and reported at the end of October 2009. About 60% of the respondents said they were very or somewhat satisfied with NDOT's overall efforts to keep residents informed about transportation-related issues in Nevada.

For detailed information about performance measure 5, please refer to page 30.



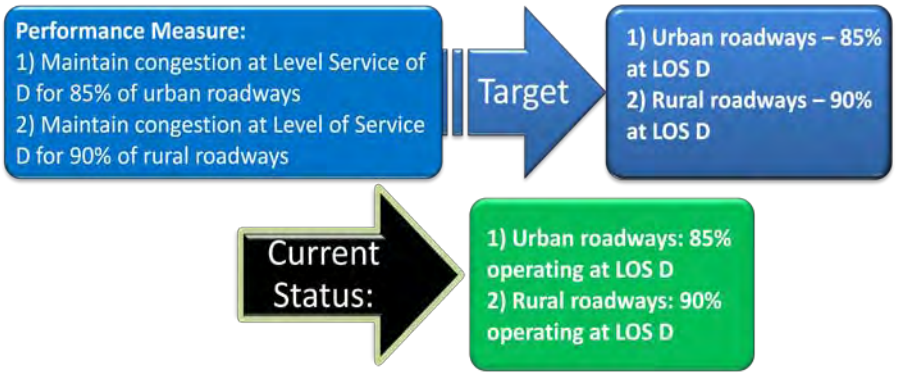

# 6. Reduce and Maintain Congestion Levels on the State Maintained Roadway System

**Executive Summary:** During FY 2010, NDOT developed its first system-wide Congestion Monitoring and Tracking System that is used in determining the congestion on the state maintained roadways in the core urban and rural areas. This established the base conditions for the Level of Service monitoring system.

System wide congestion will be visually displayed using Geographic Information System.

For detailed information about performance measure 6, please refer to page 33.

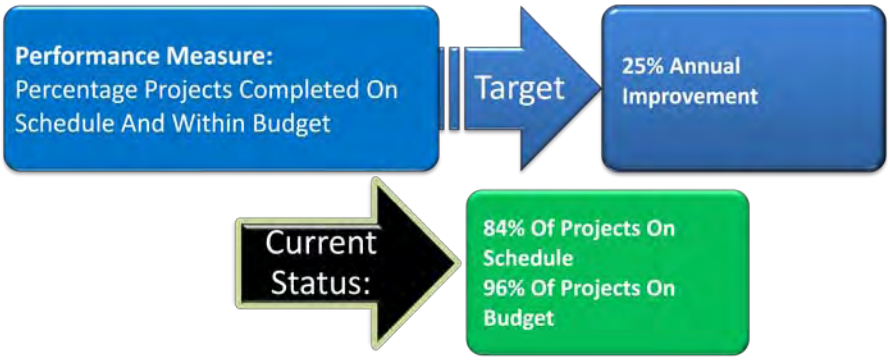
**Definition of Level of Service D** – Roadways operating at up to 8 miles per hour less than the Free Flow Speed or Posted Speed Limit, and the traffic carrying capacity of the roadway is less than 0.9.

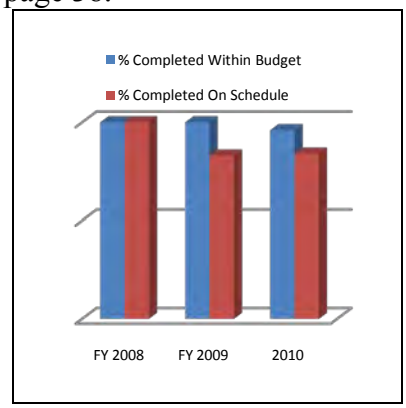


# 7. Streamline Project Delivery – Bid opening to construction completion

**Executive Summary**: During FY 2010, NDOT managed to keep 84% of its projects on schedule and 96% of the projects within budget on average. The total number of projects tracked was approximately 150. Projects tracked now includes all open projects instead of just those completed in the previous quarter as shown in FY 2008.

For detailed information about performance measure 7, please refer to page 38.

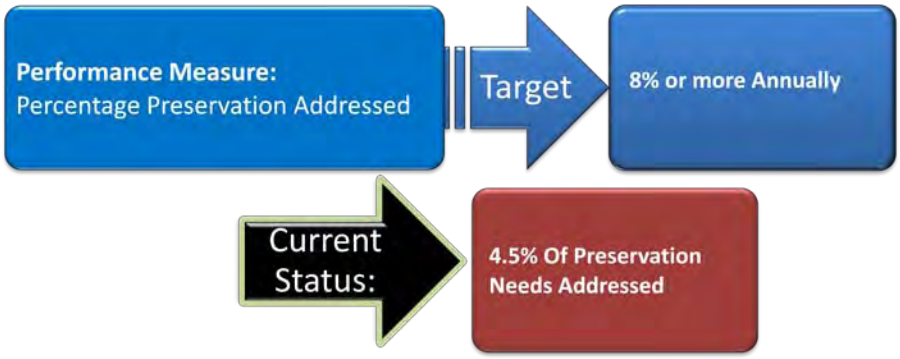


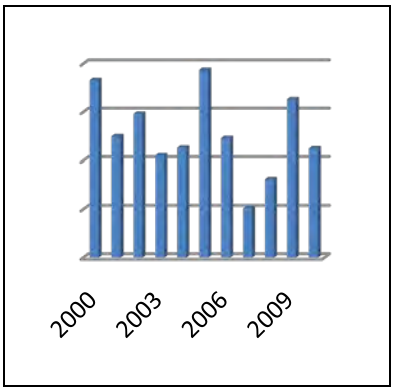




# 8. Maintain State Highway Pavement

**Executive Summary**: During FY 2010, NDOT was able to address 4.5% of the preservation needs in an attempt to maintain a fair or better pavement condition rating while the total preservation needs were 30% of the system. The assumption is that 8% of the system must be addressed annually to maintain the status quo with regard to the overall condition of Nevada's highway network.

For detailed information about performance measure 8, please refer to page 40.



# 9. Maintain NDOT Fleet

**Executive Summary**: During FY 2010, the percentage of the NDOT mobile equipment fleet requiring replacement increased by 9.83% over the prior year. The percentage of the fleet in compliance with preventive maintenance requirements to ensure that the expected life of our vehicles is not compromised increased by 2.54% over the prior year

For detailed information about performance measure 9, please refer page 42.

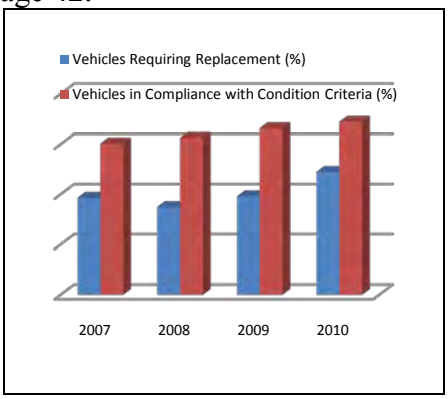
**Performance Measure:**
1) Percentage Mobile Equipment In Need Of Replacement
2) Percentage Fleet In Compliance With Condition Criteria

Target

1) 1% Annual Decrease
2) 1% Annual Increase

Current Status:

1) 9.83% Decrease
2) 2.54% Increase




# 10. Maintain NDOT Facilities

**Executive Summary**: During FY 2010, NDOT prepared plans for projects which will bring the department closer to compliance at 86% with all the regulatory building and safety codes. Three projects will address safety, energy, and code compliance issues.

For detailed information about performance measure 10, please refer to page 44.

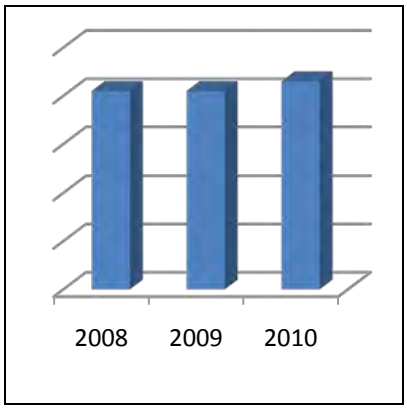
**Performance Measure:**
Percentage Building Facilities Up To Code

Target

3% Annual Increase

Current Status:

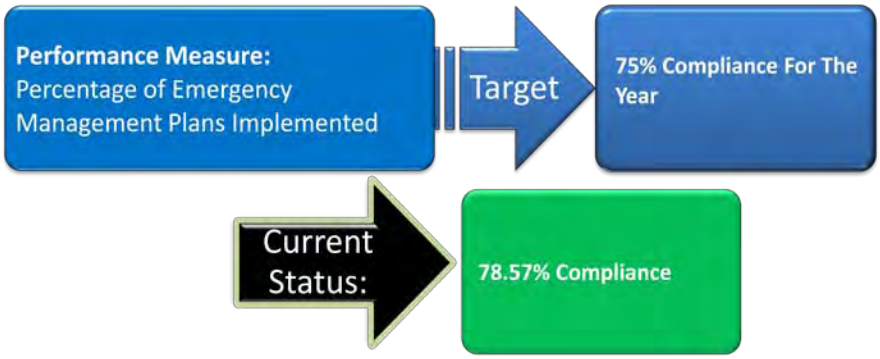
4% Increase
Over Prior Year

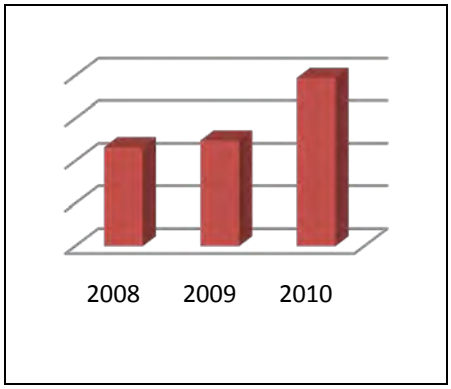


# 11. Emergency Management, Security, and Continuity of Operations

**Executive Summary**: During FY 2010, we focused on exercising and updating our Emergency Operations and Security Plans. With seven distinct emergency plans, we have determined it is beneficial to the Department to combine several plans. This will make it easier for Department personnel to locate, use and understand the plans. Our performance measures require us to train, exercise and update our Emergency Operations and Security Plans on a two year cycle. We are at a 78.57% compliance level, which exceeds our goal for the year of 75% compliance. The overall goal is for 100% compliance by the end of fiscal year 2011.

For detailed information about performance measure 11, please refer to page 46.

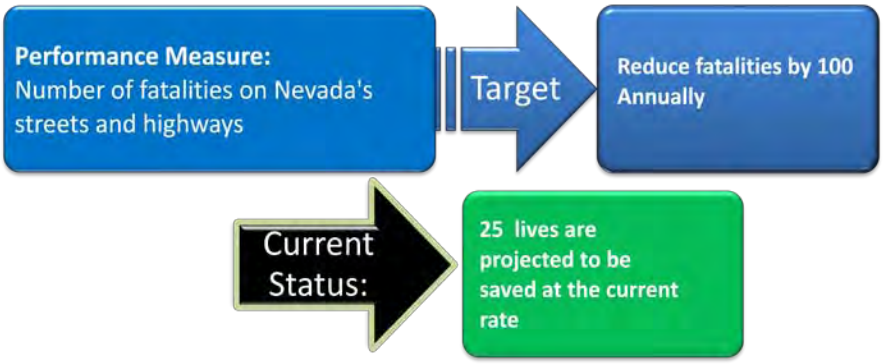


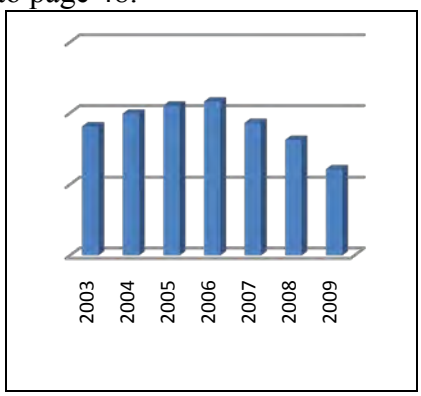




# 12. Reduce Fatal Accidents

**Executive Summary**: During FY 2010, NDOT continued to work with our partners to implement the strategies of the Strategic Highway Safety Plan. There were 109 fatalities in Nevada by the end of the 2nd quarter of Calendar Year 2010.

For detailed information about performance measure 12, please refer to page 48.

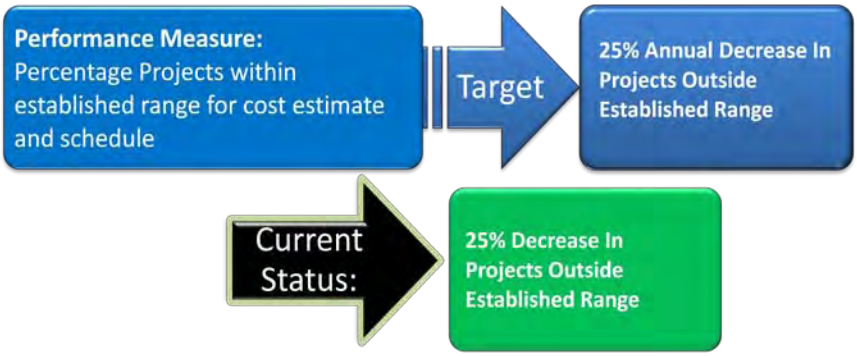


# 13. Streamline Project Delivery - NEPA Approval to Bid Opening

**Executive Summary**: During FY 2010, NDOT completed 80 % percent of all projects within an established range for cost estimate and schedule after the environmental process. The total number of projects within the established range was 80%.

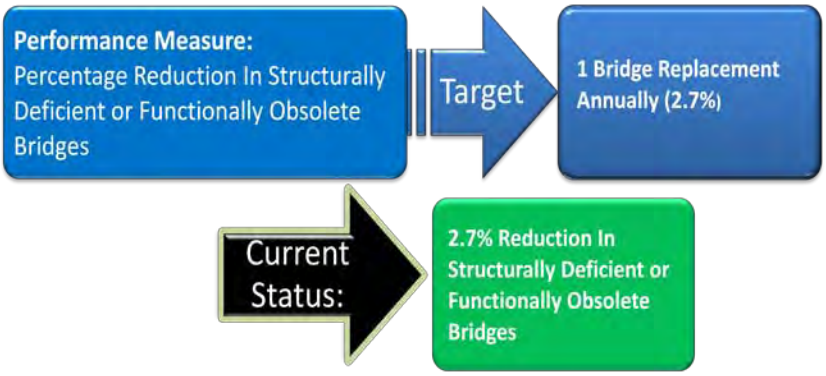
For detailed information about performance measure 13, please refer to page 51.

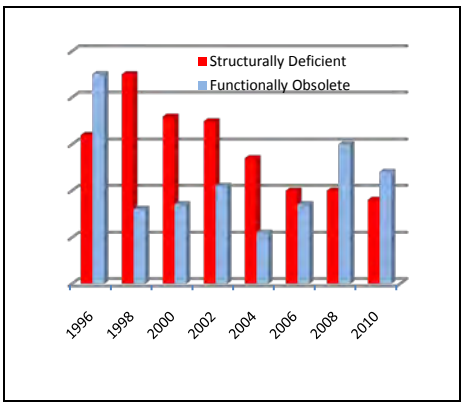



# 14. Maintain State Bridges

**Executive Summary**: During FY 2010, NDOT will replace 1 bridge which is structurally deficient or functionally obsolete. The total number of bridges replaced in the structurally deficient or functionally obsolete category was 1.

For detailed information about performance measure 14, please refer to page 52.

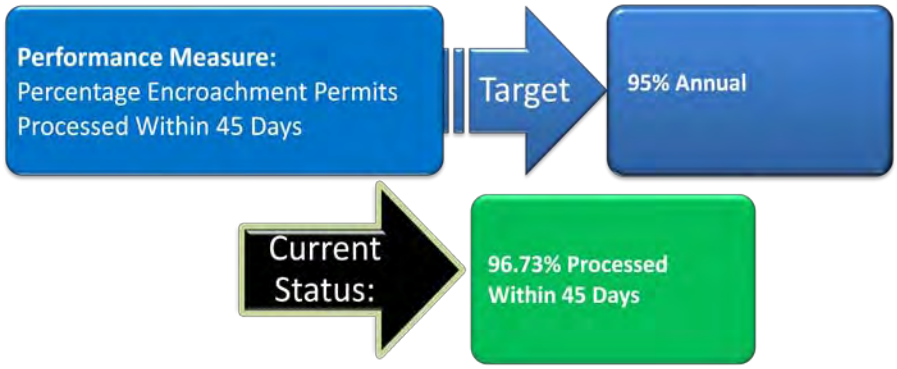


# 15. Streamline Permitting Process

**Executive Summary**: During FY 2010, NDOT Right-Of-Way Division processed 96.73% of encroachment permits within 45 days. The new Transportation Policy (TP) 10-1-3 ENCROACHMENT PROCESSING TIME SCHEDULE was signed by the Director and implemented.

For detailed information about performance measure 15, please refer to page 54.



# DETAILED PERFORMANCE MANAGEMENT DATA

# 1. REDUCE WORK PLACE ACCIDENTS

**Performance Measure:**

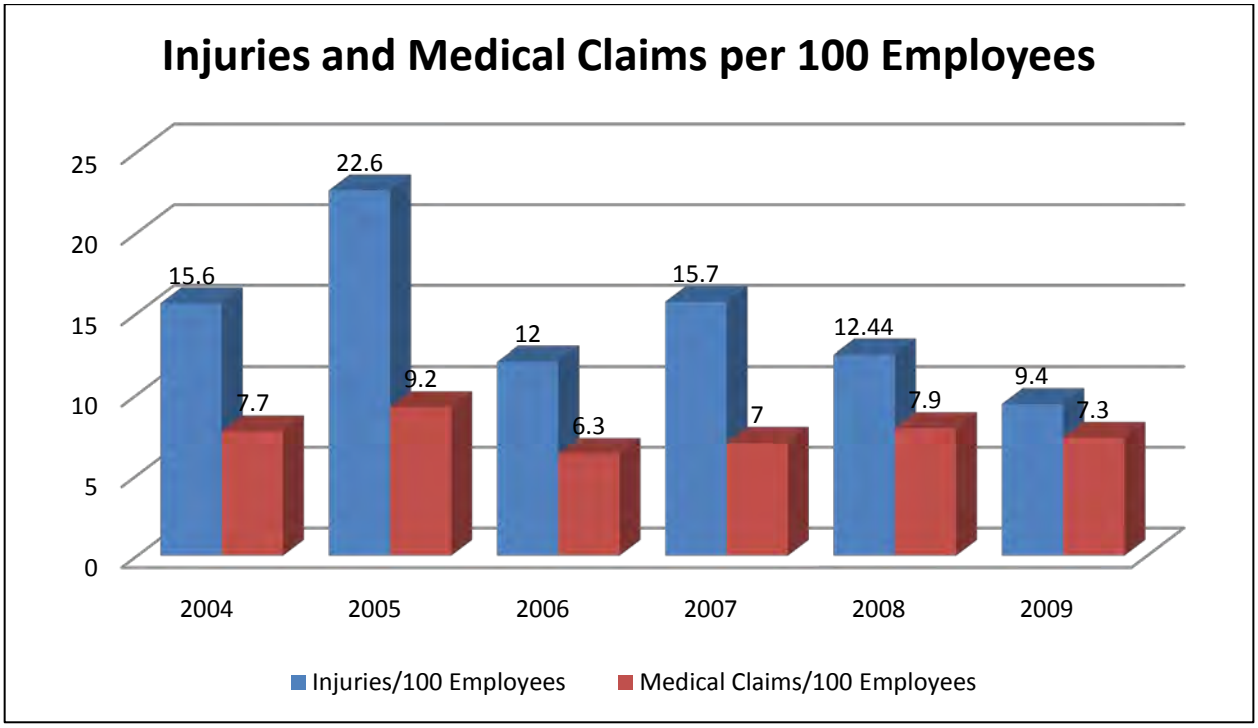
1. The rate of work place injuries and illnesses per 100 employees.
2. The rate of medical claims per 100 employees for work place injuries and illnesses requiring medical attention.

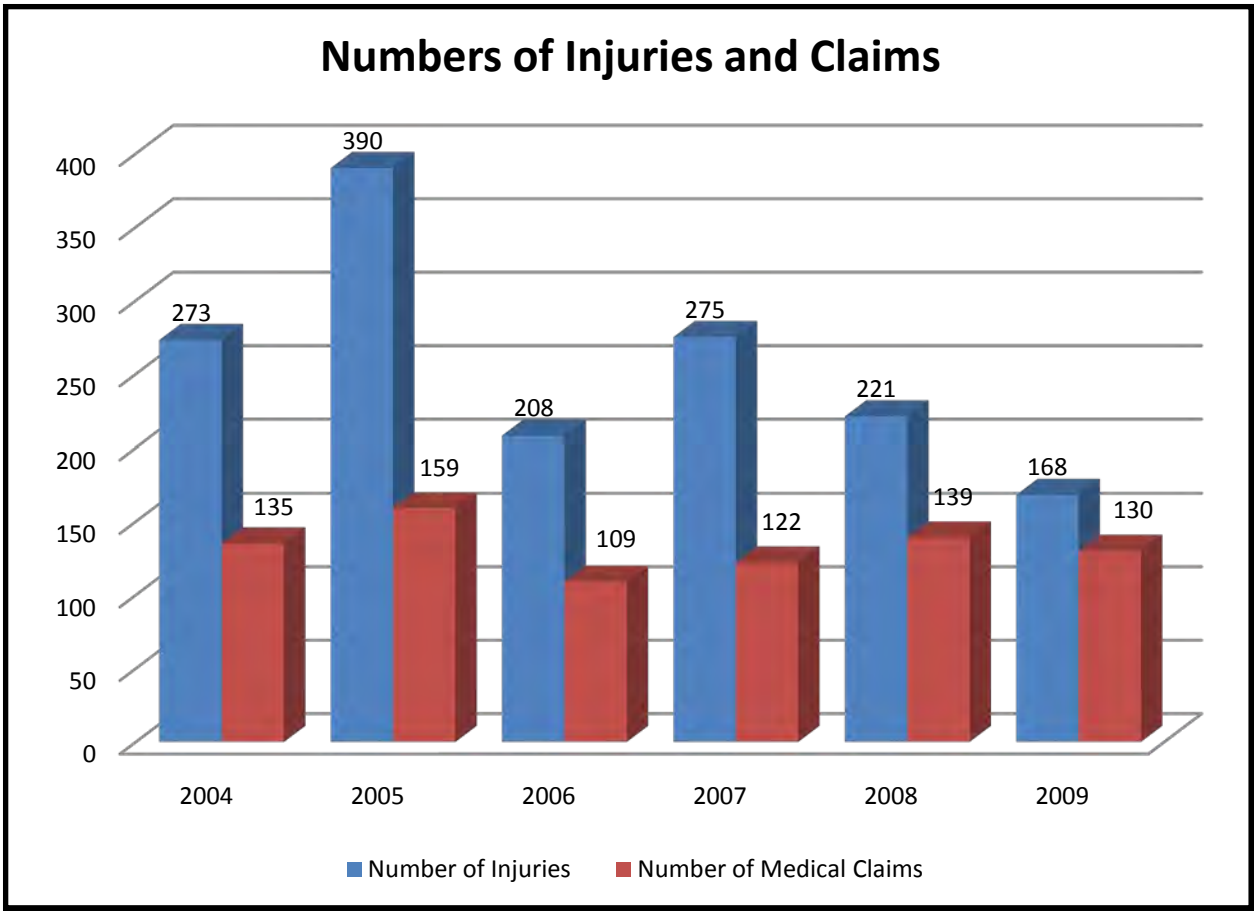
The rate of injuries is reported as the number of work place injuries and illnesses per 100 employees and number of injuries and illnesses requiring medical attention per 100 employees as documented through annual OSHA 300 Log Reporting data. Data is based on calendar year per federal reporting requirements.

**Annual Target:** 10 % Reduction **Ultimate Target:** Zero

**Measurement and Supporting Data:**

| Calendar Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 YTD 6 months |
|---|---|---|---|---|---|---|---|
| Number of Injuries | 273 | 390 | 208 | 275 | 221 | 168 | 100 |
| Injuries/100 Employees | 15.6 | 22.6 | 12 | 15.7 | 12.44 | 9.4 | 5.62 |
| Number of Medical Claims | 135 | 159 | 109 | 122 | 139 | 130 | 59 |
| Medical Claims/100 Employees | 7.7 | 9.2 | 6.3 | 7 | 7.9 | 7.3 | 7.6 |






For CY2010, the injury rate indicator was on target with total injuries continuing to decrease; however, the medical rate indicator remains slightly below target. This is an indication that the severity of injuries NDOT workers sustain is high. The number of days away from work due to injuries requiring medical attention continues to decline. In comparison, the number of days requiring modified or light duty continues to be high. Further analysis would be required to determine possible causes. The majority of injuries sustained in 2010 have been due to employees caught between objects or struck by vehicles and/or objects which are two of the top four causes of injuries per federal OSHA.

**Strategies for Improvement for FY2010:**

**Short range to next reporting:**

1)Identify means to increase outreach efforts; 2) Improving current databases; 3) Analyze injury data more fully 4) Continue cooperative efforts with the Training Section to implement a Learning Management System (LMS).

**Long range:**

Implement means to reach staff with increased safety messages. 2) Increase ratio of staff in the Safety and Loss Control Section to total number of NDOT employees. 3) To evaluate the benefit of an Employee Safety Survey in order to assess the agency's culture or attitude as it pertains to safety.

**Were the targets met?**

Yes.

# 2. PROVIDE EMPLOYEE TRAINING

**Performance Measure:**

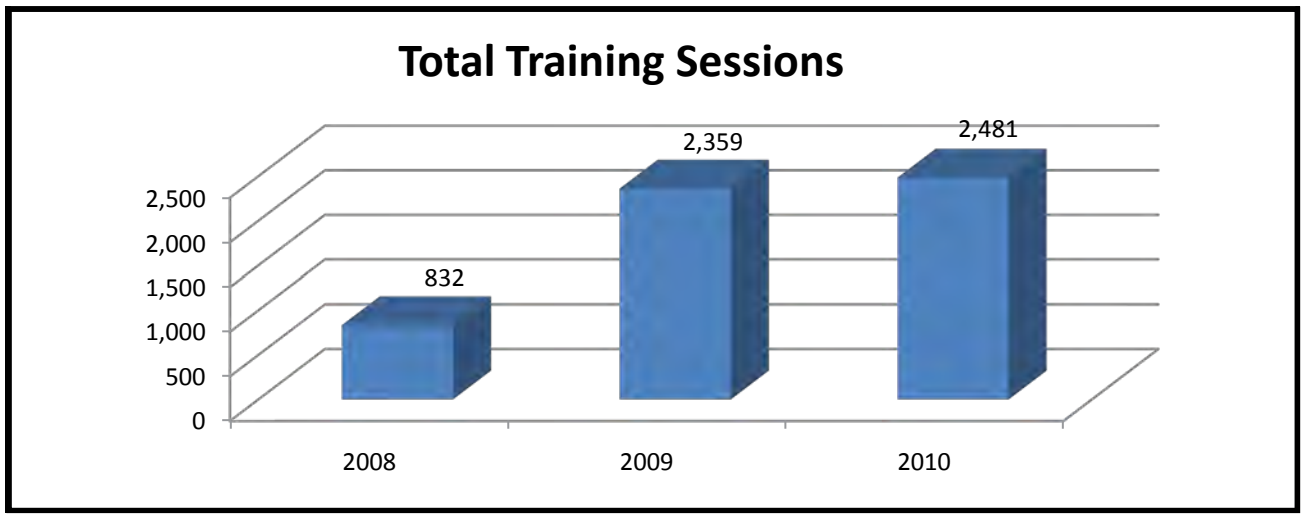
Percentage of employees trained in accordance with prescribed training plans and State statute requirements.

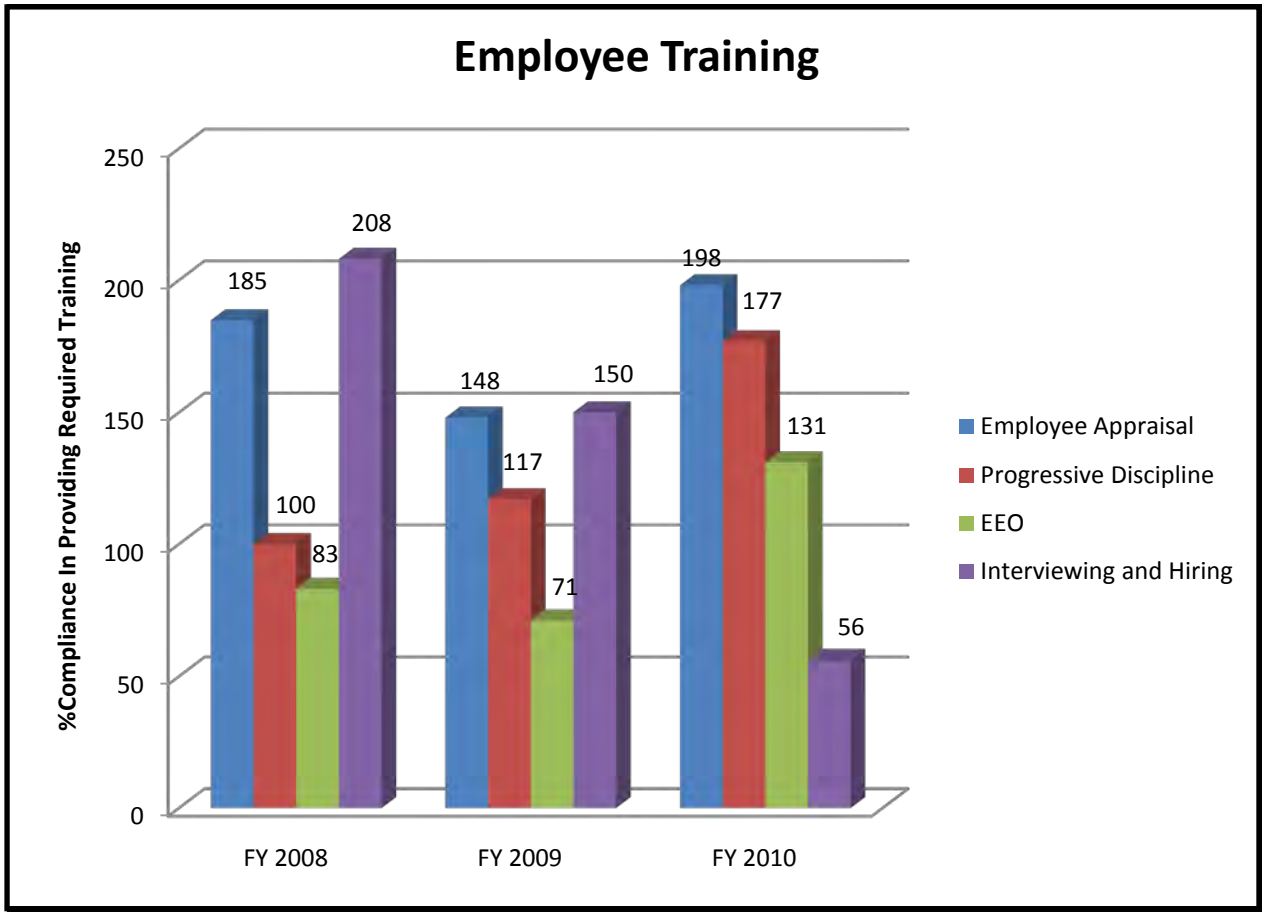
**Annual Target:** 15 %

**Ultimate Target:** 100%

**Measurement and Supporting Data:**

| Required Trainings | Attendees | Annual Requirement | Number of Employees Trained | | |
|---|---|---|---|---|---|
| | | | FY 2008 | FY 2009 | FY 2010 |
| Employee Appraisal | Supervisors and Managers | 48 | 89 | 71 | 120 |
| Progressive Discipline | Supervisors and Managers | 48 | 48 | 56 | 115 |
| EEO | Supervisors and Managers | 48 | 40 | 34 | 63 |
| Interviewing and Hiring | Supervisors and Managers | 48 | 100 | 72 | 56 |
| Grievance Procedures | Supervisors and Managers | 48 | 83 | 79 | 91 |
| Alcohol Drug Program | Supervisors and Managers | 48 | 29 | 3 | 50 |
| Sexual harassment Prevention | All Employees | 877 | 228 | 1877 | 1877 |
| 40 Hrs of Training per Supervisor | Supervisors and Managers | 163 | 215 | 167 | 180 |
| Total Training Sessions | | 1,308 | 832 | 2,359 | 2,481 |






**Strategies for Improvement:**

**Short range to next reporting:**

Training was successful at implementing the GeoLearning Learning Management System database by May, 2010 to Training Coordinator and Supervisor staff. Continued phased rollout is in process and will be completed for all NDOT employees by August. By enabling an online course library of over 3,500 titles for all our employees within 60 days, our strategic goal of providing more training outreach will materialize for online content.

Instructor Led Training has been the primary method of delivering competency training to our employees. In surveys, we know that ILT is the most desired training delivery method by our students. But with NDOT employees spread over 110,500 square miles in Nevada; we realize that we must employ more technology tools to reach our employees more frequently with our existing trainer resources. Training has utilized Blended Learning and Video Conferencing so far this FY, and in the near future we will add the technology of Web conferencing. All three delivery methods engage the audiences with a live, personable, NDOT trainer.

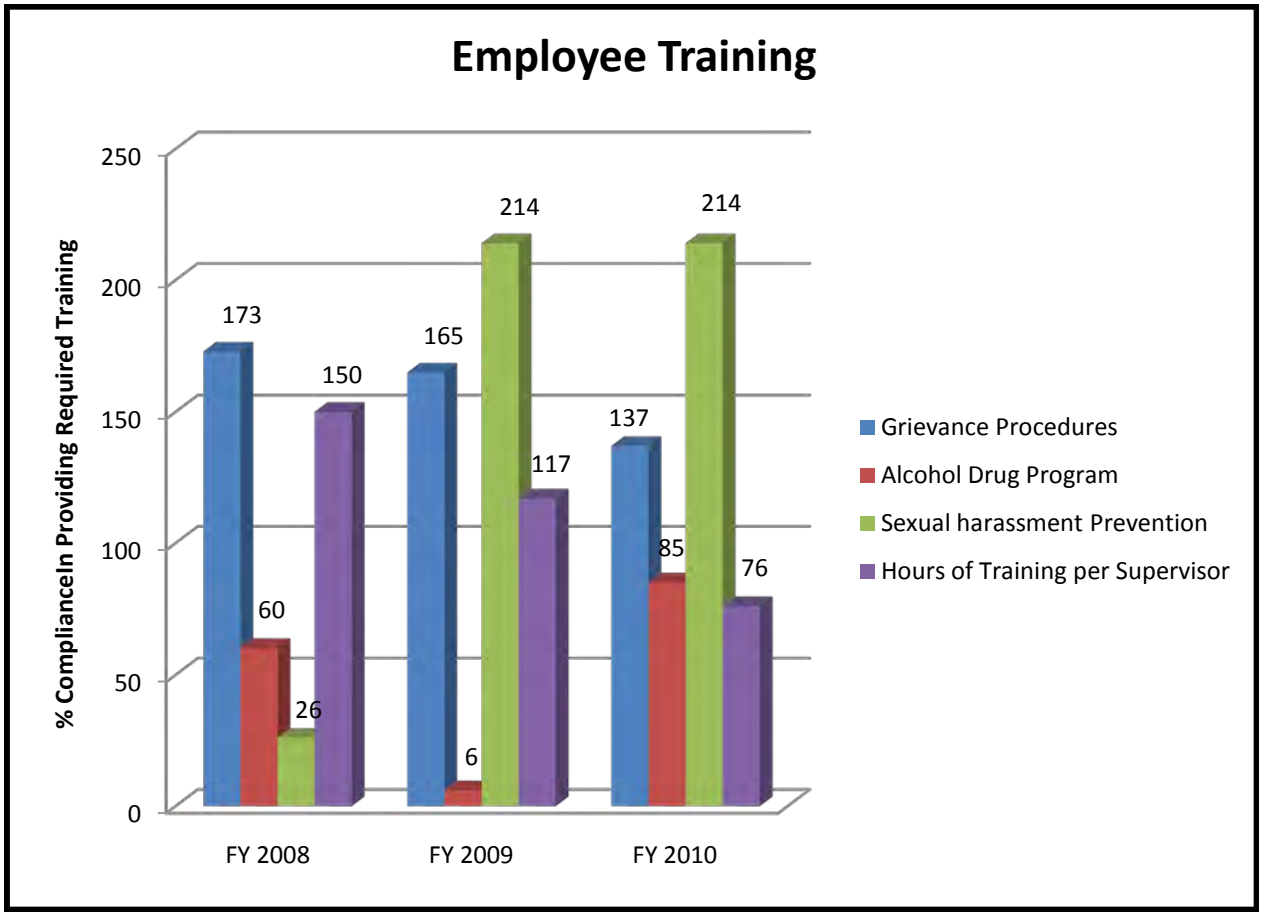
The GeoLearning LMS tracks each employee, their training needs and progress to desired goals. The LMS also generates reports that enable compliance with our Performance Measure.

We plan to continue with our promotional campaign to encourage NDOT employees to achieve the requisite level of compliance with state mandated training courses.

**Long range:**

Develop Training Officer Competency to perform training needs analysis reports for all NDOT divisions and sections. These reports are the precursor to the next step:

Facilitate division training matrix update biennially commencing in fall, 2010 to include safety training topics, and timeframe / conditions under which refresher training would be required. The scope of the project to bring all training matrices for every NDOT job role to be complete and accurate is significant. We expect it will take six months to complete.




**Were the targets met?**

Yes, the Ultimate Target of 100% was effectively met, as was the Annual Target of 15%.

# 3. IMPROVE EMPLOYEE SATISFACTION

**Performance Measure:**

Percentage rating obtained from employees' satisfaction surveys.

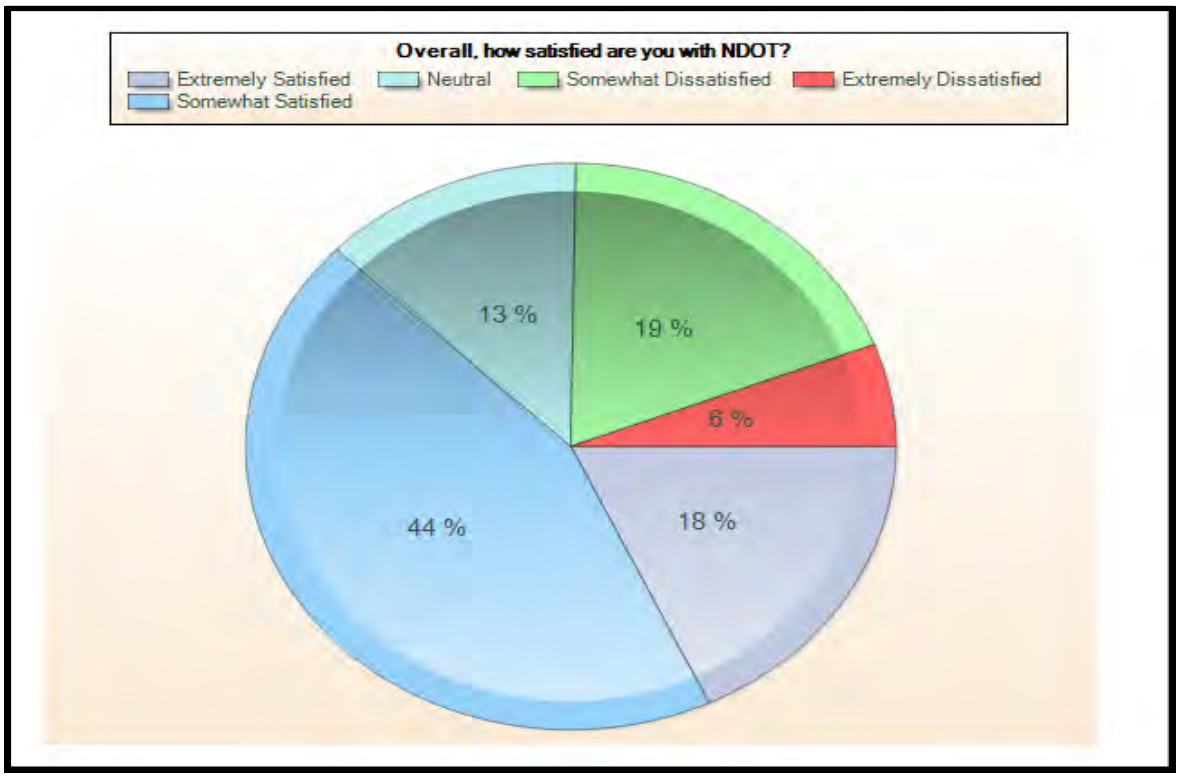
**Annual Target:** Overall rating 75% **Ultimate Target:** Overall rating of 80%.

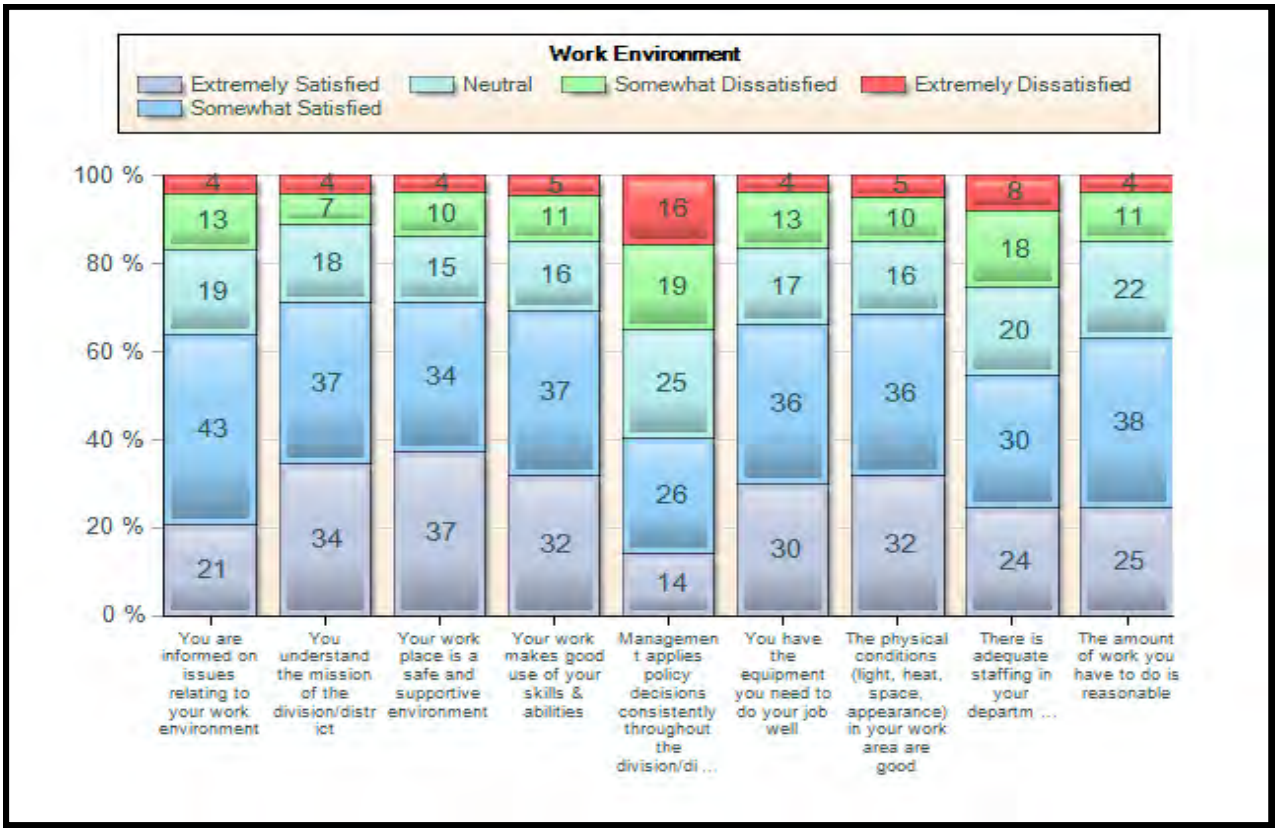
**Strategy Plan Support:**

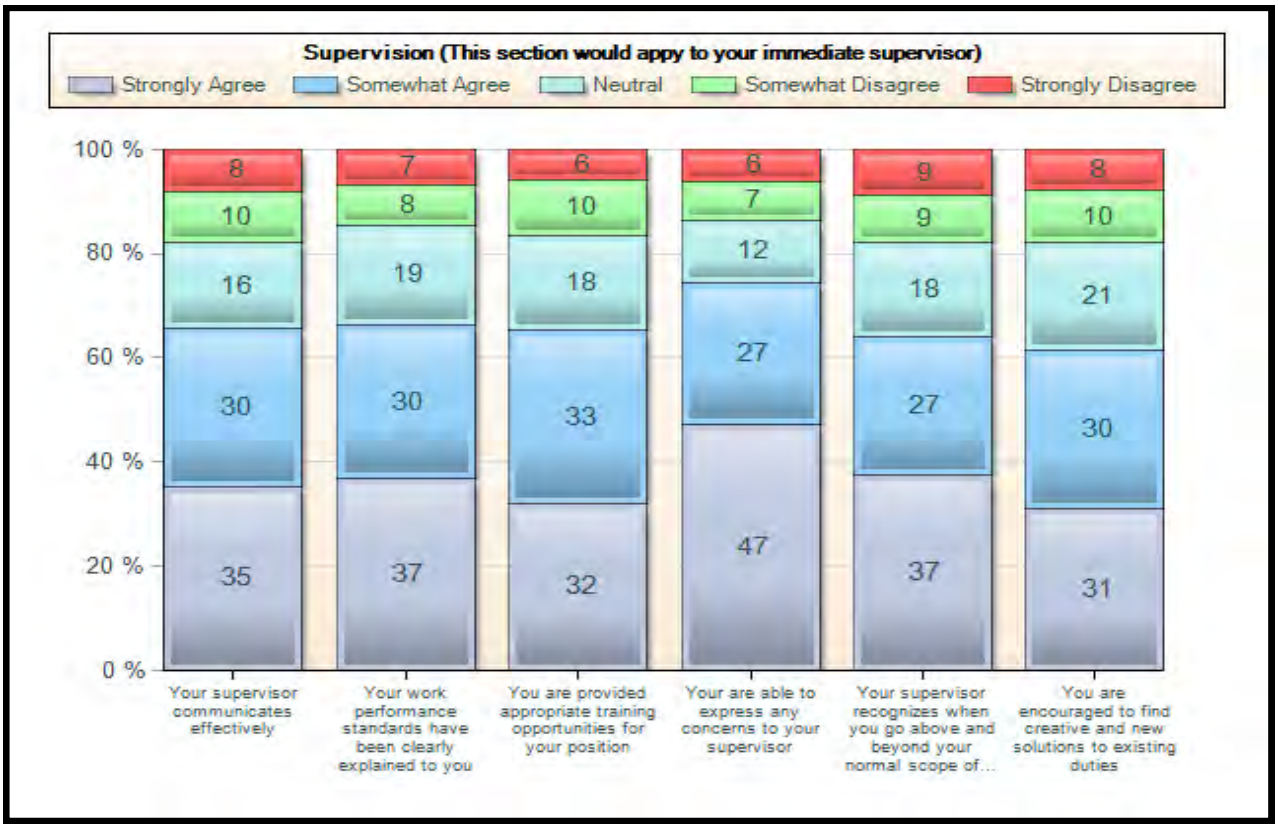
Positive employee morale is critical to the success of the workplace. It is the backbone of a skilled and dedicated workforce and essential in attracting and retaining a quality staff. A satisfied workforce will excel at their duties. This benefits the Department and our customers. This performance measure works towards meeting the Nevada Department of Transportation's Strategic Plan goals to: optimize safety, be in touch with and responsive to our customers, innovate, be the employer of choice, deliver timely and beneficial projects and programs, effectively preserve and manage our assets, and efficiently operate the transportation system.

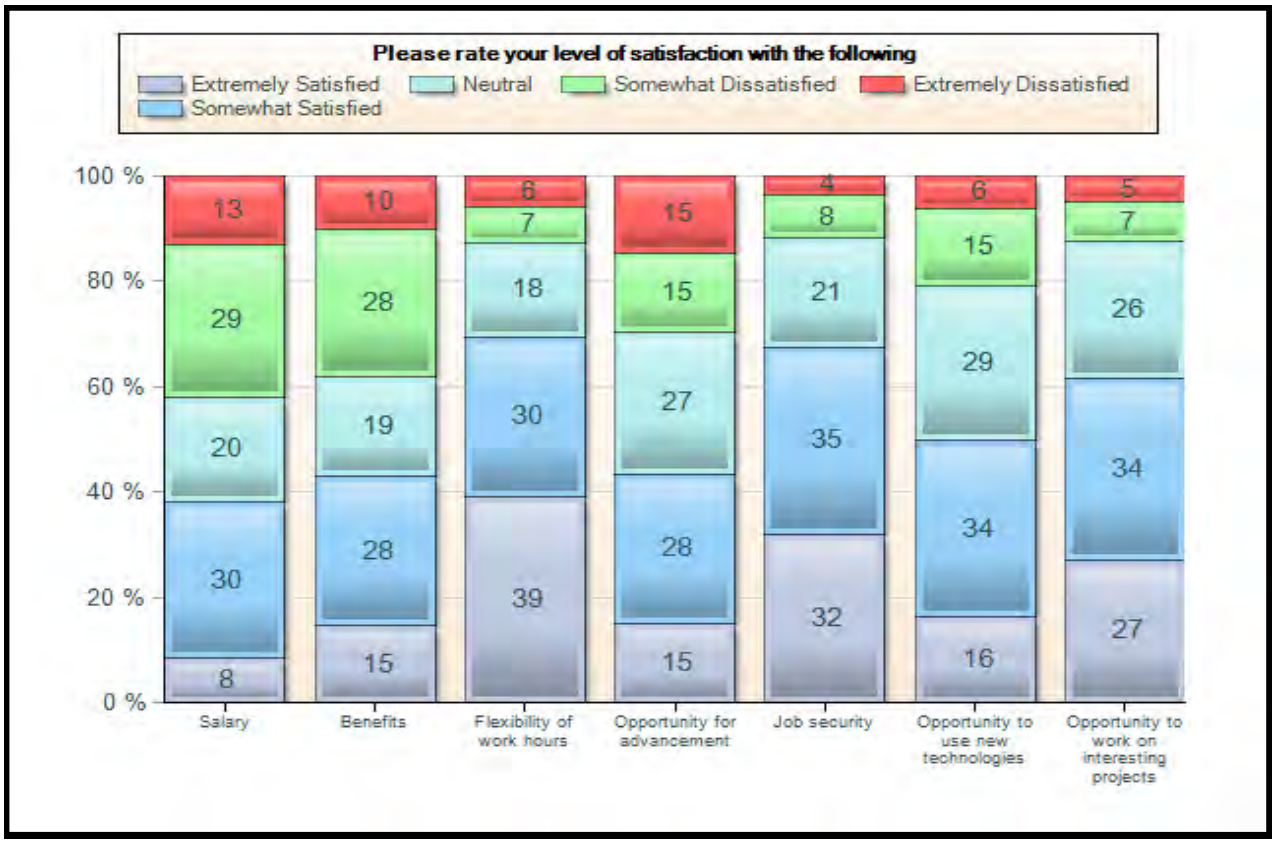
**Measurement and Supporting Data:**

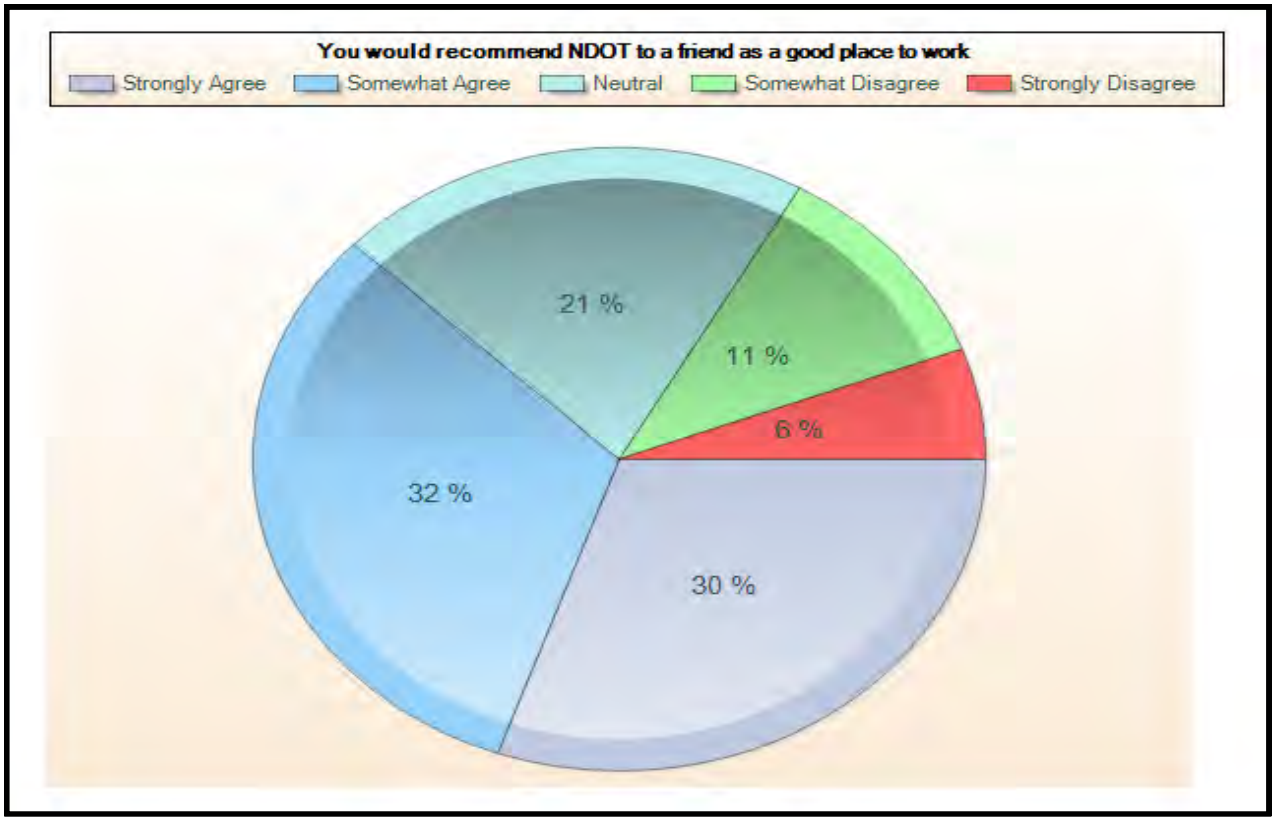
| Percentage of employees who are extremely or somewhat satisfied with NDOT | |
|---|---|
| FY 2008 | 70% |
| FY 2009 | 67% |
| FY 2010 | 62% |




Work Environment
Extremely Satisfied
Somewhat Satisfied
Neutral
Somewhat Dissatisfied
Extremely Dissatisfied
100 %
80 %
60 %
40 %
20 %
0 %
You are informed on issues relating to your work environment
You understand the mission of the division/district
Your work place is a safe and supportive environment
Your work makes good use of your skills & abilities
Management applies policy decisions consistently throughout the division/di ...
You have the equipment you need to do your job well
The physical conditions (light, heat, space, appearance) in your work area are good
There is adequate staffing in your departm ...
The amount of work you have to do is reasonable


Supervision (This section would appy to your immediate supervisor)
Strongly Agree
Somewhat Agree
Neutral
Somewhat Disagree
Strongly Disagree
100 %
80 %
60 %
40 %
20 %
0 %
Your supervisor communicates effectively
Your work performance standards have been clearly explained to you
You are provided appropriate training opportunities for your position
Your are able to express any concerns to your supervisor
Your supervisor recognizes when you go above and beyond your normal scope of...
You are encouraged to find creative and new solutions to existing duties


Please rate your level of satisfaction with the following
Extremely Satisfied
Neutral
Somewhat Dissatisfied
Extremely Dissatisfied
Somewhat Satisfied
100 %
80 %
60 %
40 %
20 %
0 %
Salary
Benefits
Flexibility of work hours
Opportunity for advancement
Job security
Opportunity to use new technologies
Opportunity to work on interesting projects


You would recommend NDOT to a friend as a good place to work
Strongly Agree
Somewhat Agree
Neutral
Somewhat Disagree
Strongly Disagree
21 %
11 %
6 %
32 %
30 %

**Was the annual target met?**

No. Sixty-two percent (62%) of employees are extremely or somewhat satisfied with the Nevada Department of Transportation as an employer as compared to sixty-seven (67%) last year and seventy percent (70%) the previous year.

The 2008 Performance Measure Survey was launched on July 14, 2008 and closed on August 15, 2008; 764 employees responded to the 2008 survey. The 2009 Performance Measure Survey was launched on July 13, 2009, and closed on August 2, 2009; 616 employees responded to the 2009 survey. The 2010 Performance Measure Survey was launched on May 18, 2010 and closed on June 25, 2010; 905 employees responded to the 2010 survey. Employee participation in the survey did increase this fiscal year.

**What 'Strategies for Improvement' were successful?**

The Nevada Department of Transportation implemented strategies to improve communication by management from the top down to keep our employees informed and to update our Transportation Policies and create new work manuals. These strategies appeared to have positive results. Employees who strongly or somewhat agree that management communicates the missions/goals of the Nevada Department of Transportation have decreased one percent (1%) this year, maintaining an increase of two percent (2%) from the baseline year. Employees who strongly agreed or somewhat agreed that management applies policy decisions consistently throughout the Nevada Department of Transportation has increased another one percent (1%) from last year with an overall eight percent (8%).

The survey also indicates that the Nevada Department of Transportation has improved from the base year on employee's believing their work place is a safe and supportive environment by two percent (2%), believing the physical conditions (light, heat, space, appearance) in their work area are good by three percent (3%), and believing they are informed on issues relating to their work environment by four percent (4%).

**What 'Strategies for Improvement' were not successful? Why?**

The overall target was to increase employee satisfaction from sixty-seven percent (67%) to seventy-five percent (75%) A review of the comments for those employees who are somewhat dissatisfied or extremely dissatisfied indicates that twenty-seven (27%) commented on furloughs, pay and or benefits. This was an increase from the eighteen percent (18%) of respondents who commented on furloughs, pay, and or benefits in the 2009 survey. Since furloughs were not required until July of 2009 and the full impact was not felt until later, this could account for the increased level of reporting dissatisfaction. Employees who would recommend the Nevada Department of Transportation to a friend as a good place to work decreased from seventy-five percent (75%) in 2008 to forty-two percent (42%) in 2010.

The current economic environment and overall decrease in State pay and benefits have a direct impact on the satisfaction of the Nevada Department of Transportation employees. Many employees indicated that they are upset that the Nevada Department of Transportation employees are required to take furloughs when these furloughs do not benefit the General Fund. In fact, there is no savings since the money is spent on contractors and contractor employees instead of Nevada Department of Transportation employees. The Director's Office has explained that the Governor considers all State Employees as part of the same team and is the reason that we are taking furloughs. Employees have indicated to management that the Nevada economy would be

better served by paying State employees for those jobs, which would result in the money being spent in the Nevada economy. Employees are also concerned about the rising costs of health care accompanied by reduced benefits. These concerns are affecting employee and work place morale.

**What new 'Strategies for Improvement' will be initiated in FY2010?**

**Short range to next reporting:**

1. Continue communications from management to employees including the Director's Report and Division Head Staff Meetings.
2. Continue to update Transportation Policies and new work manuals.
2. Implement a Nevada Department of Transportation Ethics Policy.
3. Encourage and require supervisory training in compliance with regulations that include communication, management styles, and coaching. This strategy directly correlates with Performance Measure #2.
4. Continue lunchtime training sessions to assist employees with real life issues such as financial planning, stress management, and other topics to assist them during this time of economic downturn. Make these sessions available by web for employees not able to attend in person.

**Long range:**

Continue conducting and analyzing annual satisfaction surveys and make appropriate recommendations the Director's Office to improve employee satisfaction.

**Does this performance measure effectively measure what is desired?**

This performance measure works towards meeting the Nevada Department of Transportation's Strategic Plan goals to: optimize safety, be in touch with and responsive to our customers, innovate, be the employer of choice, deliver timely and beneficial projects and programs, effectively preserve and manage our assets, and efficiently operate the transportation system.

# 4. STREAMLINE AGREEMENT EXECUTION PROCESS

**Performance Measure:**

Percentage of Agreements executed within 45 days from when division submits agreement to the date when it is fully executed.

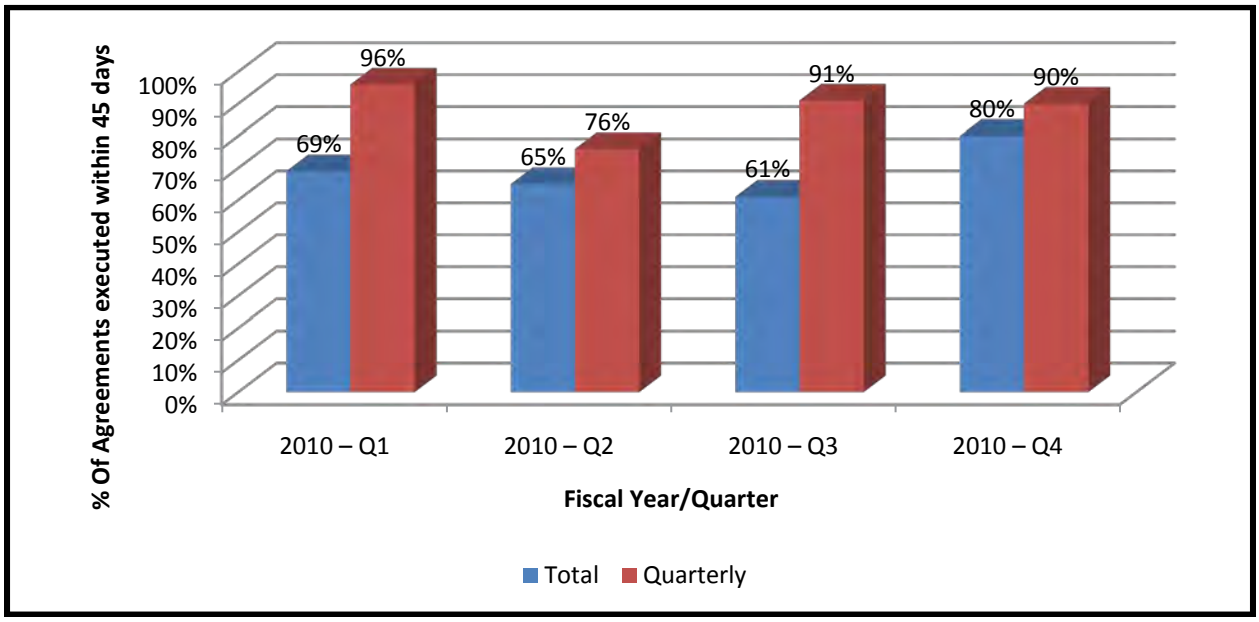
**Annual Target:** 50%

**Ultimate Target:** 95%.

For the Fiscal Year 2010 the average days from submission to execution within the year was 43 days. A broad analysis of most agreements for both consultants and government entities revealed that the agreements spent an average of 22 days in NDOT hands and 19 days with the other entity.

**Measurement and Supporting Data:**

| | Number of agreements executed | Percentage within 45 days | Number submitted and executed | Percentage within 45 days |
|---|---|---|---|---|
| 1st Qtr FY 2010 | 110 | 69 | 56 | 96 |
| 2nd Qtr FY 2010 | 155 | 65 | 109 | 76 |
| 3rd Qtr FY 2010 | 151 | 61 | 77 | 91 |
| 4th Qtr FY 2010 | 86 | 80 | 52 | 90 |
| Total | 502 | | 294 | |




**Was the annual target met?**
Yes.

# 5. IMPROVE CUSTOMER SATISFACTION

**Performance Measure:**

Numerical ratings obtained from public opinion and customer/user surveys.

**Annual Target:** Annual increases in public opinion and customer/user ratings.

**Ultimate Target:** Increases in public opinion and customer/user ratings.

**Overview of performance measure:**

Public opinion and user (customer), as well as elected officials, surveys will assess public information and outreach activities, customer processes, and how well the Department is performing in the eyes of our customers. This is important so we know that we are doing the right things to be transparent, accountable, and efficient. This performance measure works toward meeting the Department of Transportation Strategic Plan goals to be in touch with and responsive to our customers.

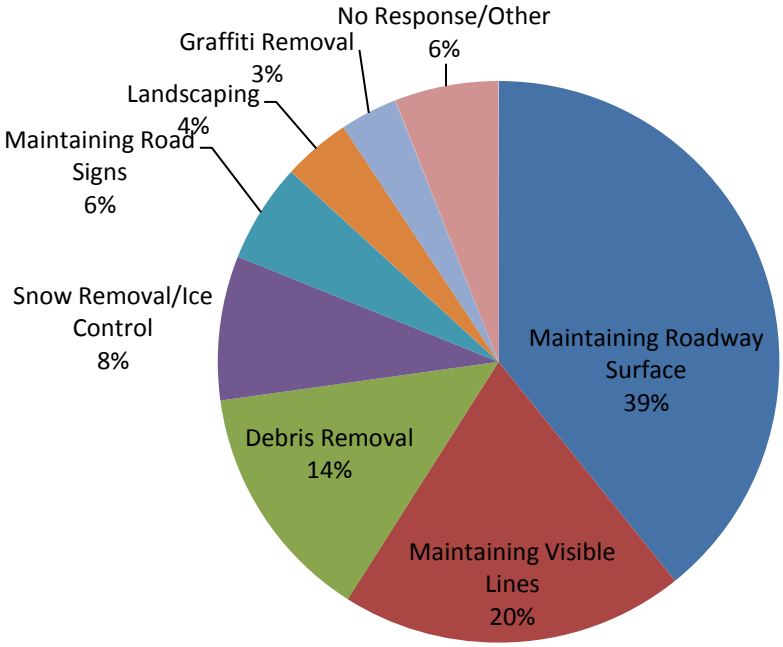
**Measurement and Supporting Data:**

This is a new, annual measure, based on a customer satisfaction survey conducted by the University of Nevada, Reno, in conjunction with a Maintenance and Operations Division survey of Nevada residents. Data collection (phone interviews) took place between October 2008 and August 2009, and the report was issued at the end of October 2009. Nevada household residents were randomly selected to participate in the survey and were screened to determine their eligibility to participate. All respondents were over the age of 18 and must have *driven* a motor vehicle in the past month. The results are deemed accurate to the 95% confidence level, which means that 95% of the time, the scores will fall within the range indicated. This is typical of most public opinion surveys. In all, there were 1,013 respondents. Of the respondents, 73.2% were from District 1, where 73% of Nevada adults reside, 23.7% were from District 2, where 24% of Nevada adults reside, and 3.1% were from District 3, where about 3% of Nevada adults reside. In all, 51% of the respondents were male and 49% female.

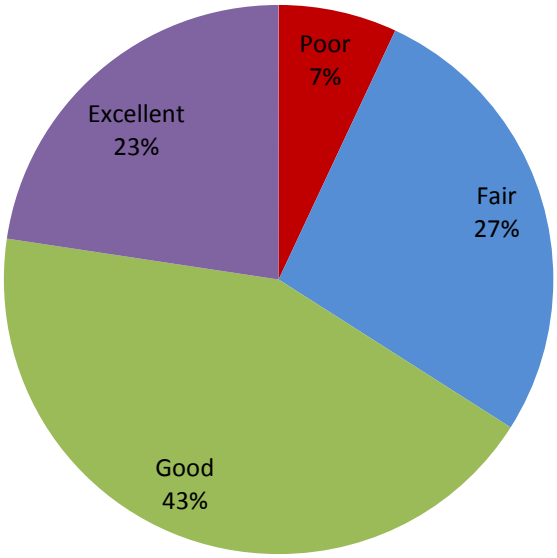
**Summary of the results of the survey dealing with customer service use and satisfaction:**

The following graphs start with a pie chart showing the customer priority of the activities performed by the Nevada Department of Transportation. The subsequent pie charts show how the public rated NDOT's performance on the top three priorities as seen by the public which are our customers. The data for the pie charts showing NDOT's performance came from a 2009 Customer Satisfaction Survey done by The Center For Research and Analysis at the University of Nevada, Reno.

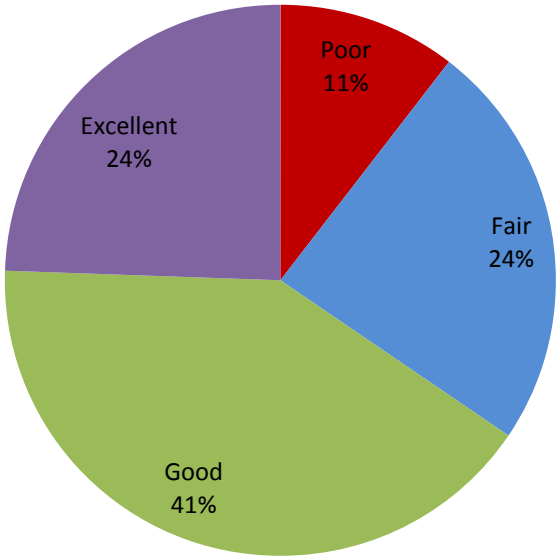
## Customer Priority Of NDOT Maintenance Activities (Statewide)



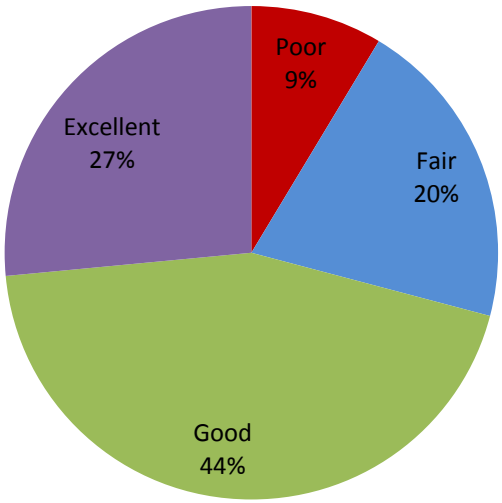

## NDOT's Performance In Maintaining The Roadway Surface (Statewide)



## NDOT's Performance In Maintaining Visible Lines On The Roadway (Statewide)




## NDOT's Performance In Removing Debris From The Roadway (Statewide)



# 6. Reduce and Maintain Congestion Levels on the State Maintained Roadway System

**Performance Measure:**

Urban roadways – Maintain congestion at Level of Service D for 85% of State urban roadways

Rural roadways – Maintain congestion at Level of Service D for 90% of State rural roadways

**Definition of Level of Service D** – Roadways operating at up to 8 miles per hour less than the Free Flow Speed or Posted Speed Limit, and the traffic carrying capacity of the roadway is less than 0.9.

**Ultimate Target:** Reduce congestion by 1% per year to reach the ultimate target of 90% of State urban roadways at Level of Service D, and 95% of State rural roadways at Level of Service D

**Division(s) Responsible:**

Traffic Information System – Chief Traffic Information System

Performance Analysis – Chief Performance Analysis Engineer

Support Divisions:

Roadway Systems, Location, Maintenance and Operations

**Strategy Plan Support:**

This performance measure is one of the most important performance indicators of the NDOT maintained roadway system. It integrates the outcome of our overall investments into one measure that is a direct result of the collaborative efforts of the various divisions of NDOT. It will help reduce congestion and will help identify bottleneck locations on the NDOT maintained roadway system, which will be prioritized for improvements depending upon the funding and resources availability. It works towards meeting the Department of Transportation Strategic Plan to efficiently operate the transportation system by reducing the level of congestion and increasing safety.

This Congestion Monitoring System will be an evolving process and will be updated regularly as more data is integrated into it from the RTC's Freeways and Arterials System of Transportation, and the Washoe County's future Traffic Management Center, Synchro models, and other sources as needed.

**Summary:**

During FY 2010, NDOT developed its first system-wide Level of Service Monitoring and Tracking system that is used in determining the congestion on the state maintained roadways in urban and rural areas. This established the base conditions for the Level of Service monitoring system.

System wide congestion will be visually displayed using Geographic Information System.

**Supporting Documentation:**

Highway Capacity Manual, AASHTO, Daily Traffic Volume Data, Peak Hourly Volume Data, Truck Percentages, Service Flow tables, Commuter and Non-Commuter Traffic, Roadway Terrain

and Grades, Directional Factors, Hourly Factors, Functional Class, Number of Lanes, Free Flow Speed data, Peak Hour Factors, and Peak Service Flow Rates

**Were the targets met?**

System wide baseline performance measure has been determined that will be used to determine meeting the established targets.

**Does this performance measure effectively measure what is desired?**

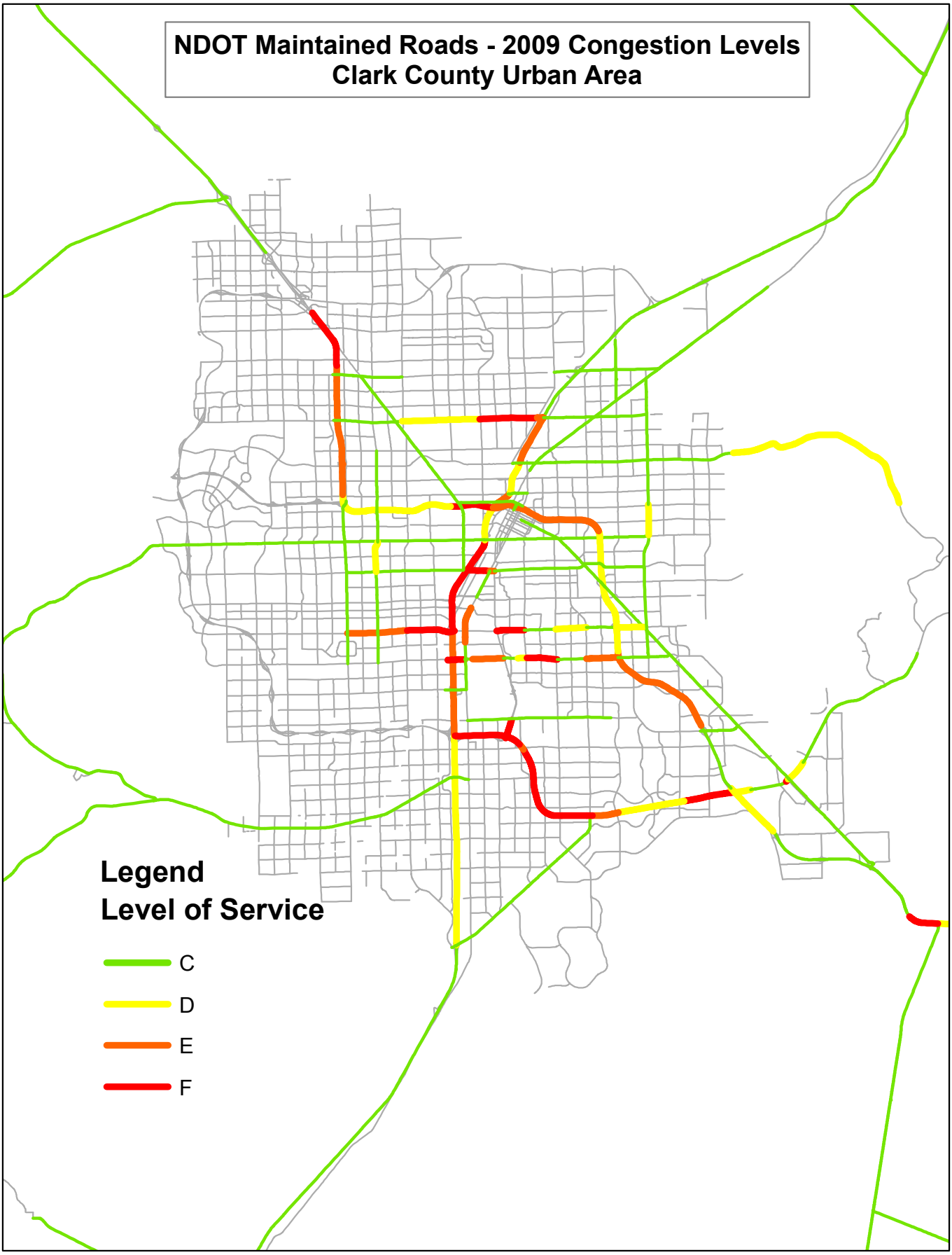
Yes.

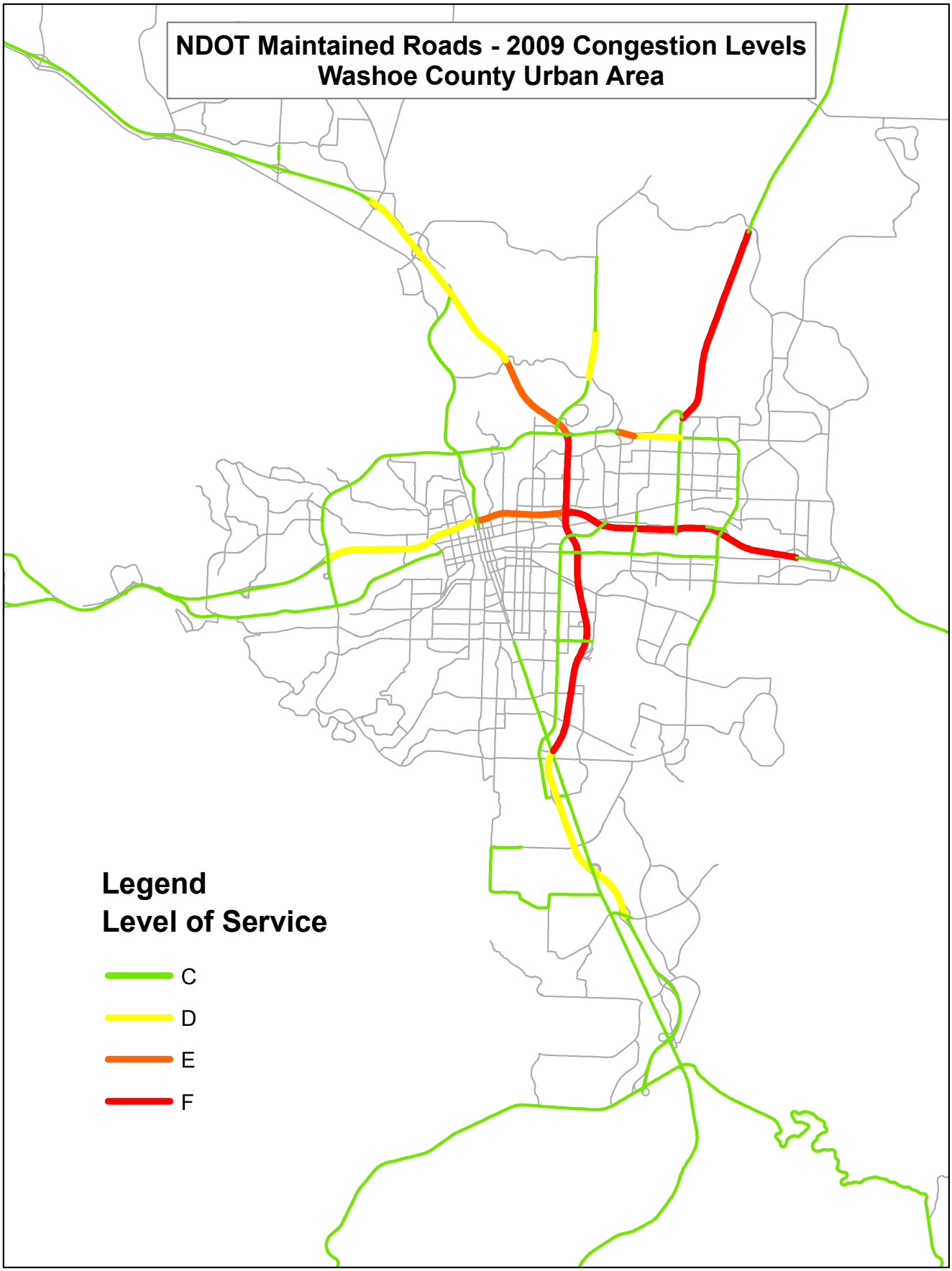
**Is there a better performance measure that should be considered?**

This performance measure can be supplemented by other indicators such as travel time reliability and vehicle hours of delay saved in the core urban areas when more data becomes available.

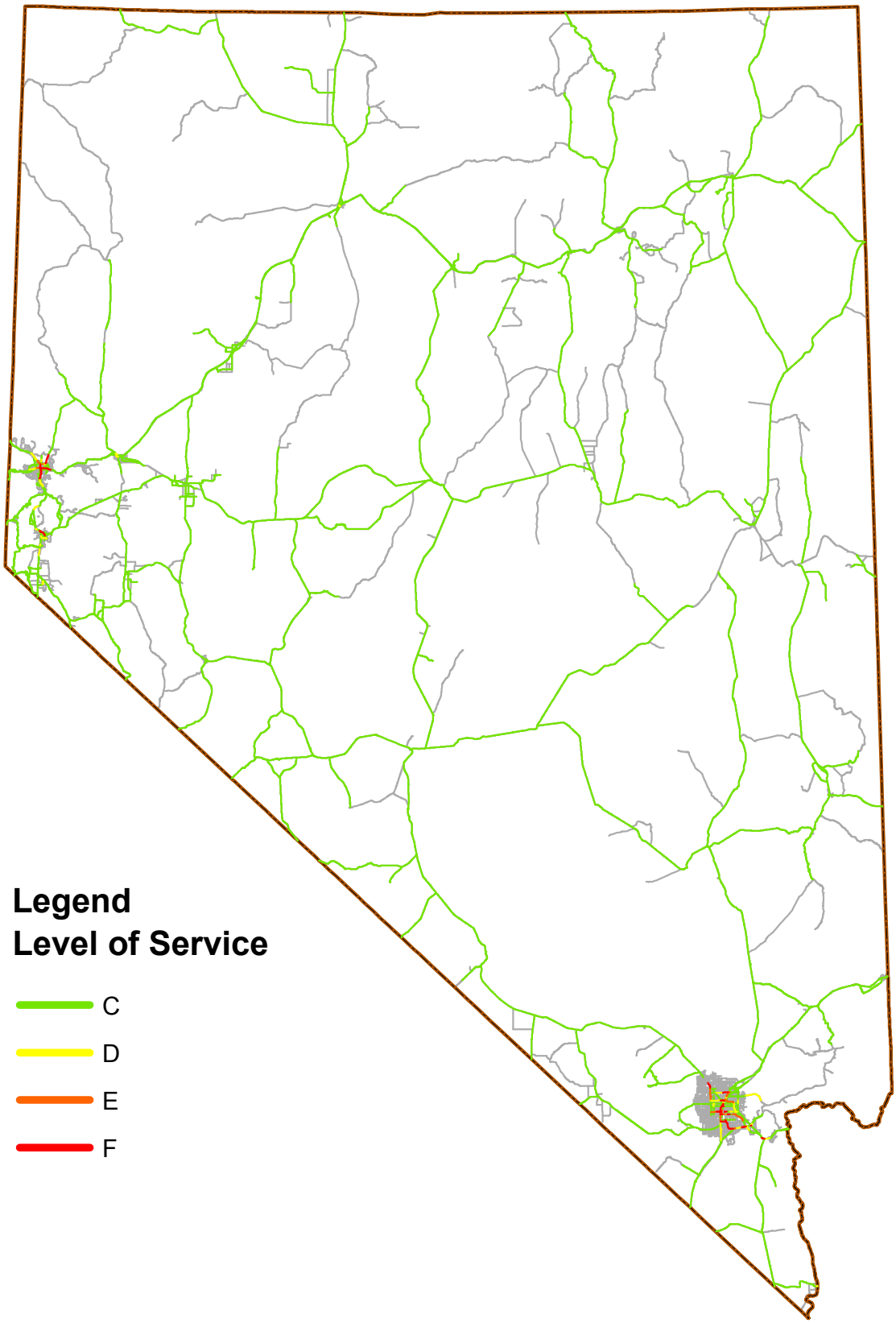
**Will meeting the next yearly target have a fiscal impact?**

Yes. Improving congestion by 1% by year will require investments into the roadway system. The fiscal impact of such improvements will be determined accordingly.


NDOT Maintained Roads - 2009 Congestion Levels
Clark County Urban Area
Legend
Level of Service
C
D
E
F


NDOT Maintained Roads - 2009 Congestion Levels
Washoe County Urban Area
Legend
Level of Service
C
D
E
F

## Statewide NDOT Maintained Roads - 2009 Congestion Levels



# 7. STREAMLINE PROJECT DELIVERY: SCHEDULE AND ESTIMATE FROM BID OPENING TO CONSTRUCTION COMPLETION

**Performance Measure:**

Percentage of projects within established range of cost estimate and schedule to completion

**Annual Target:** 25% Improvement **Ultimate Target:** 100%

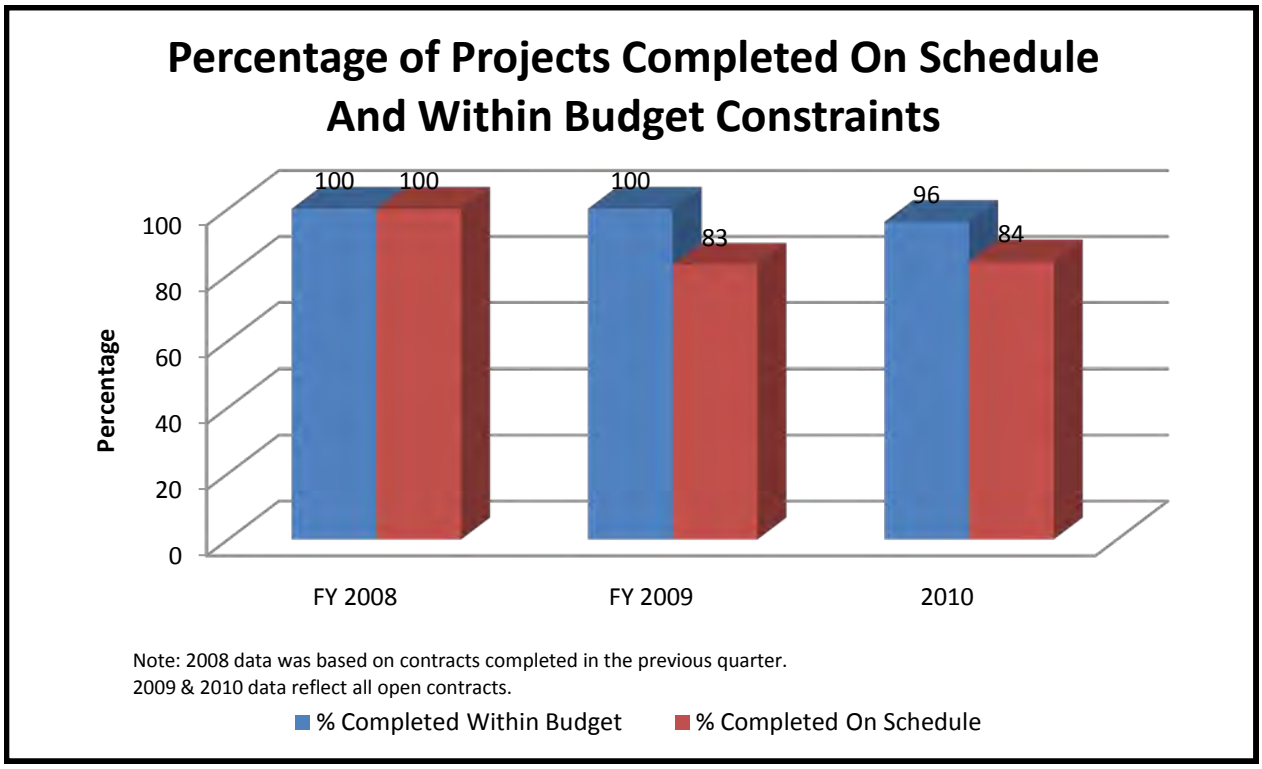
**Summary:**

FY 2009 ended with overall average 100% reported complete within budget and average 83% reported complete within schedule. FY 2010 reporting as follows:

| | Percentage Projects Within Budget | Percentage Projects On Schedule |
|---|---|---|
| FY 2008 | 100 | 100 |
| FY 2009 | 100 | 83 |
| FY 2010 | 96 | 84 |

Note: Number of projects evaluated changed to all open Contracts.

**Measurement and Supporting Data:**



**Strategies for Improvement: As applicable**

**Short range to next reporting:**

1) Improve the quality of design to reduce problems during construction.
2) Minimize change orders which extent the project duration.
3) Provide better coordination with parties involved in concurrent work.
4) Provide realistic project schedules
5) Work with Project Management Division on Project Management Plans for construction phases.

**Long range:**

1) Continue and enhance training of personnel.
2) Develop detailed written procedure on performance measure
3) Define Construction Budget
4) Define procedure to develop Projected Completion Date
5) Define what constitutes being behind schedule as work progresses.
6) Involve Construction Crews in Performance Measure
7) Develop better methods for tracking Contract expenses
8) Develop more realistic Contract estimated budget ranges
9) Develop more sophisticated methods for project scheduling

**Were the targets met?**

Yes with exceptions. Legislative Control Bureau (LCB) Auditors will report that Construction Division is not measuring budget performance accurately because we do not take into account payments made between construction completion and Contract closeout. We do not disagree. This issue was actually reported by the Construction Division in the FY 2009 annual Performance Measures Plan dated September 30, 2009. LCB Auditors have also verbally noted in FY 2009 about 50% exceeded budget limits. Construction Division is reviewing the data to verify this. Reporting for schedule performance for the end of FY 2009 indicates a decrease in performance but that is only because of number of projects evaluated. Only the projects scheduled for completion in that quarter were evaluated. That is not a true measure of performance. We began reporting on all active projects (20-30) quarterly in FY 2010. Fourth Quarter FY 2010 we began reporting on all open Contracts or Projects (74 this quarter). This should provide a better measure for budget performance but not necessarily for schedule performance. The number of projects evaluated may need to be tailored to the performance measure (All active projects for schedule performance; All open Contracts for budget performance).

It should be noted that the Construction Division does not plan any significant changes to performance measure reporting until after reviewing LCB Auditors final report.

# 8. MAINTAIN STATE ROADWAYS

**Performance Measure:**

Percentage of state maintained pavements needing annual preservation in order to maintain the pavement International Roughness Index (IRI) rating of good or fair condition.

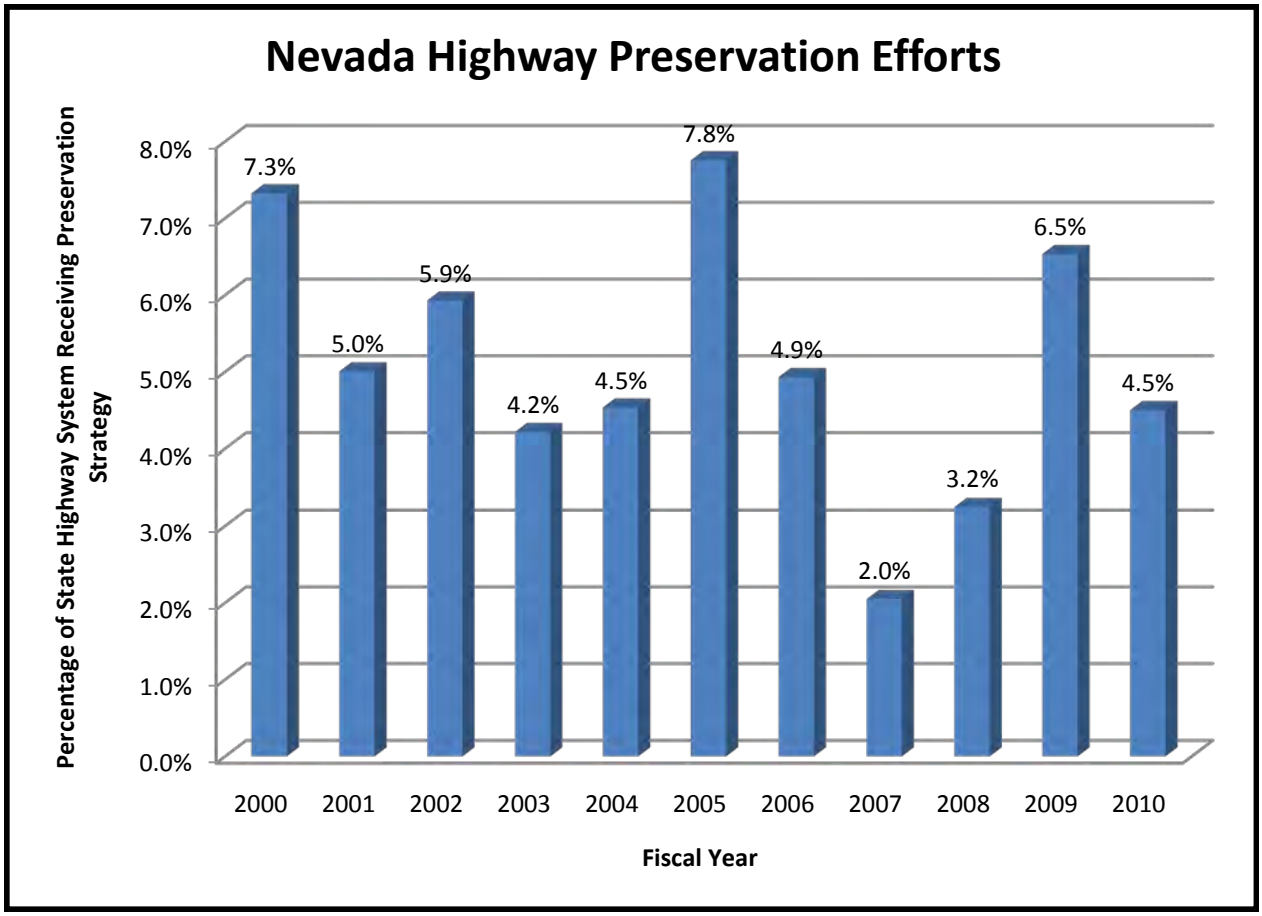
**Annual Target:** 8% **Ultimate Target:** 100%

**Division(s) Responsible:** Chief Materials Engineer

**Summary:**

Annually we need to either overlay or reconstruct 8% (425 centerline miles) of our roads. This past fiscal year NDOT achieved 4.5% (240 centerline miles). This number includes Maintenance Cold Recycle Projects completed by our Maintenance Division.

**Measurement and Supporting Data:**



**Strategies for Improvement:**

**Short range to next reporting:**

1) Support Project Management/Roadway Design as they prepare for the 2010 and 2011 construction season.
2) Prepare the 3R report for 2011 and 2012.
3) Implement our new Pavement Selection Policy on all projects. This will include a requirement that our Roadbed Design section will perform a Life Cycle Cost Analysis on surface type (asphalt vs concrete).

**Long range:**

1) Continue to maintain our non-Interstate principal arterials, minor arterials, and other moderate volume roads at a modest to high level of serviceability by applying timely overlays and reconstructing inferior segments.
2) To further develop economical and sound methods to improve our low-volume roads and maintain them at a limited, but acceptable, level of serviceability.

**Were the targets met?**

No, current funding levels do not allow for meeting the target. The ARRA funds allocated to overlays did improve when compared to the previous year.

**What 'Strategies for Improvement' were successful?**

The additional ARRA funds improved on the percentage when comparing 2010 vs. 2009/08. Also, there is good coordination in our planning efforts with the Districts and Maintenance and Operations so that funds are not wasted on surface treatments that may be removed in the following years by a maintenance overlay.

**What 'Strategies for Improvement' were not successful? Why?**

Reconstructing inferior segments of the Interstate system is very costly.

**What new 'Strategies for Improvement' will be initiated in FY2011?**

**Short range to next reporting:**

Contractors continue to work on NDOT Construction projects.

**Long range strategy:**

Materials Division is always looking for new strategies or technology that will help us meet our goal, but none have been generated in the last quarter. The Materials Division has written a document that will explain NDOT's current Pavement Preservation Program that will allow others in and outside the Department to have a better understanding of our program.

# 9. MAINTAIN NDOT FLEET

**Performance Measures:**

There are two performance measures for the maintenance of the Department's fleet of mobile equipment:

1) Percentage of fleet requiring replacement – this measure is the percentage of the fleet that have reached the age or mileage that requires replacement.
2) Percentage of fleet in compliance with condition criteria – this measure is the percentage of the fleet that is maintained as per Department preventive maintenance requirements so that the expected life span of our vehicles is not compromised. As the fleet is maintained on the mileage and/or hourly requirements, compliance has been met.

**Annual Target:**

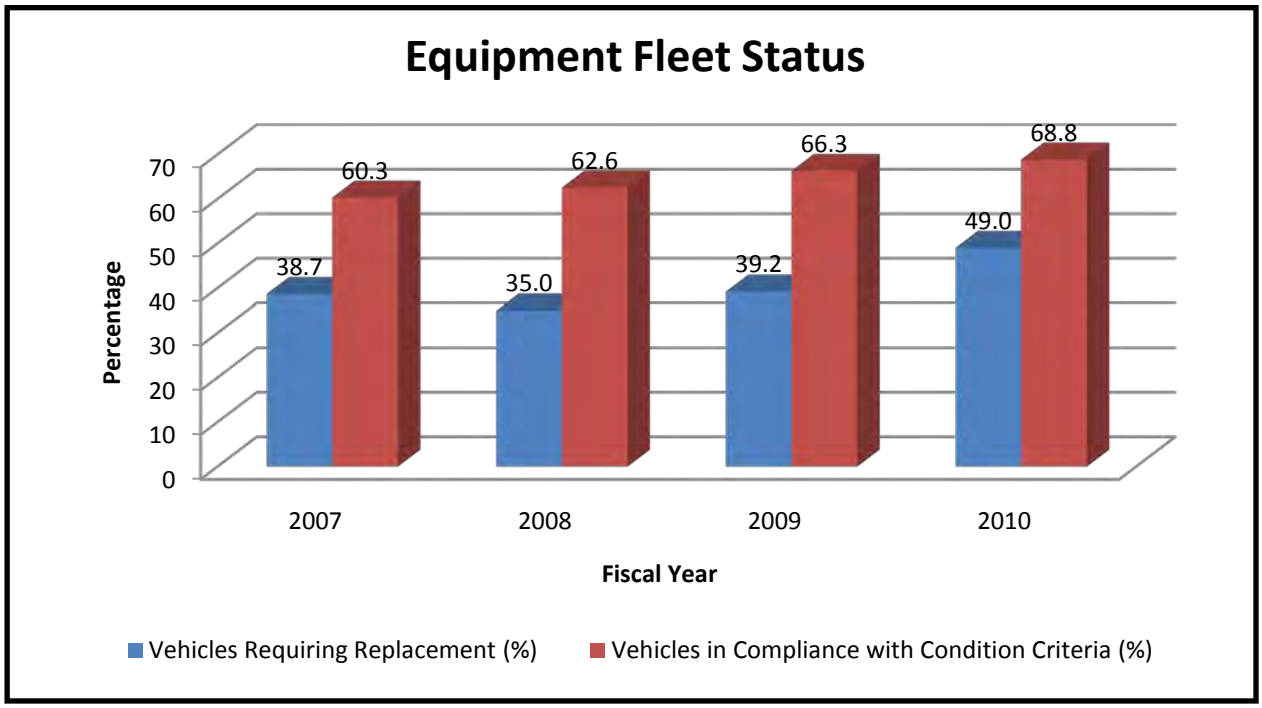
1) Declining Rate of 1% per year
2) Increasing rate of 1% per year.

**Ultimate Target:**

1) 10%
2) 95% rate of compliance for mileage/hourly requirements

**Measurement and Supporting Data:**

| | Replacement Criteria Measured Annually | Condition Criteria Measured Annually | Change | |
|---|---|---|---|---|
| FY 2007 | 38.65 % | 60.30 % | | |
| FY 2008 | 34.96% | 62.55 % | -3.69% | +2.25 % |
| FY 2009 | 39.18 % | 66.30 % | +4.22 % | +3.75 % |
| FY 2010 | 49.01% | 68.84 % | +9.83 % | +2.54 % |




Note: The FY 2010 budget adversely affected the fleet replacement program.

**Strategies for Improvement:**

**Short range to next reporting:**

1) a. Revise replacement criteria by increasing usage criteria in selected class codes

   b. Removing age criteria in other specified class codes.

   c. Implement policy controls for equipment replacement.

2) a. Analyze quarterly Preventive Maintenance (PM) due and accomplished on core fleet.

   b. Develop enforceable policy for non-compliance of PM standards.

**Long range:**

1) a. Reduce fleet size by usage assessments.

   b. Minimize retention of replaced vehicles.

2) a. Perform annual fleet condition audit.

   b. Develop Predictive Maintenance Program.

**Was the annual target met?**

No on 1). Yes on 2).

**What 'Strategies for Improvement' were not successful? Why?**

Strategies to reduce replacement deficit were detrimentally effected from a loss of funds.

**Does this performance measure effectively measure what is desired?**

Yes.

# 10. MAINTAIN NDOT FACILITIES

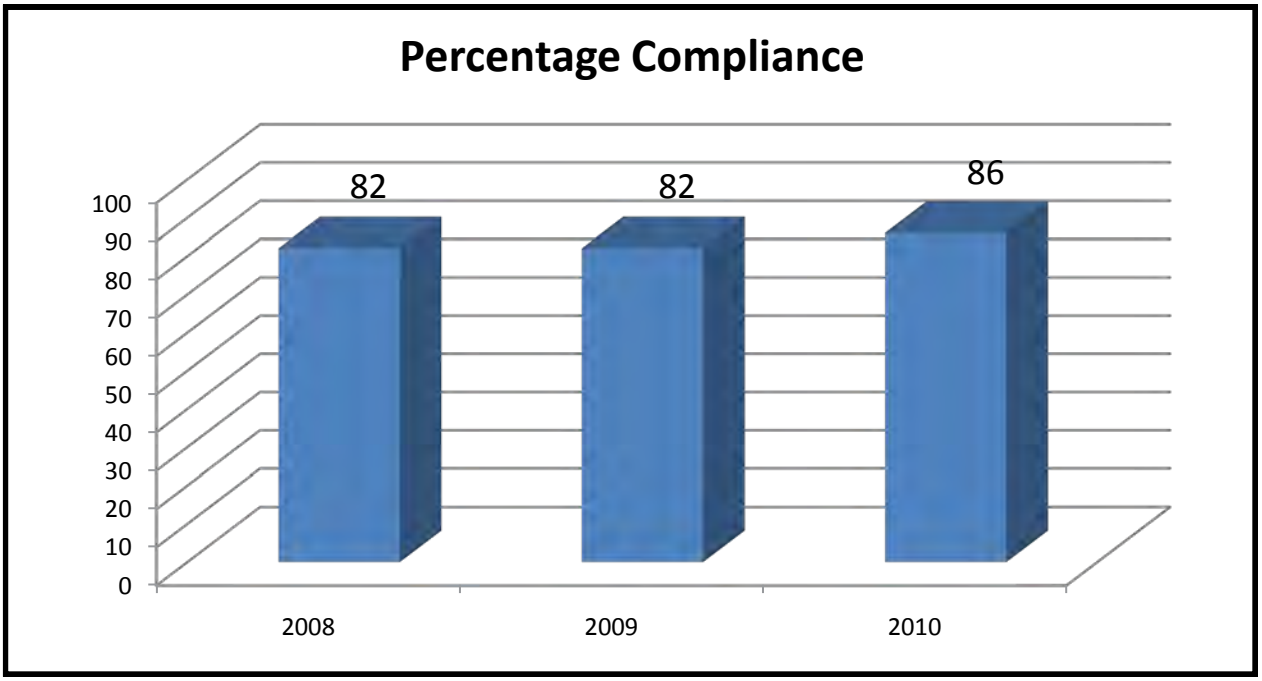
**Performance Measure:**

Percentage of building facilities that comply with regulatory building and safety codes.

**Annual Target:** Increase by 3% **Ultimate Target:** 100%

**Measurement and Supporting Data:**

| | |
|---|---|
| FY 2007 | 82 % |
| FY 2008 | 82 % |
| FY 2009 | 82% |
| FY 2010 | 86% |




**Strategies for Improvement:**

**Short range to next reporting:**

Currently, 86% of our facilities are compliant with regulatory building and safety codes. This is an improvement of 2% above the 2010 - 3rd quarter reporting period. The Carson City HQ Laboratory Building now has fire sprinklers installed throughout all portions of the building.

Two more projects (Emigrant Pass Residence Improvements and Wadsworth ADA Improvements) will address safety, energy and ADA code compliance and are starting construction in the short term and when finished will increase the current value to 86%. These projects should put us ahead of our short range goal of 84%. Our short-range strategies are to continue our efforts in prioritizing our condition assessment data and scheduling deferred maintenance work. We have begun assessing and prioritizing ADA deficiencies in Highway Rest Areas, as well as, other NDOT Facilities. Design work for these projects commenced in FY 09 and will continue into FY 2011 and 2012. We have developed and designed several projects from our initial assessment and scoping reports, some of which should advertise in the 2011 FY.

**Long range:**

Defined work plan with prioritized projects, tied to Architecture's budget, will be used as a roadmap for successful accomplishment of goals and objectives.

Our long range plan is to develop a "true" Performance Management System for our NDOT Facilities by developing Outcome Based Measures that focus on Building Maintenance and Preservation and clearly convey a "Value" and prioritized system of project delivery. This will require condition assessments, documentation, and database management systems and processes if we want to properly focus our efforts on an efficient Facilities Management Program.

**Was the annual target met?**

No – 3% improvement was the target for each year. However, other projects are starting that will continue to improve our measure, if not for this FY year, for the next.

What new 'Strategies for Improvement' will be initiated in FY2010?

# 11. Emergency Management, Security and Continuity of Operations

**Performance Measure:**

Percent of emergency plans that have been completed, training and education have been provided to appropriate personnel, the plans have been tested and exercised and the plan has been updated to accommodate changes in departmental processes, federal guidelines, etc. Training and updates should be completed on a biennial basis. Plans include:

Continuity of Operations Plan

State Level Emergency Operations Plan

District Level Emergency Operations Plan

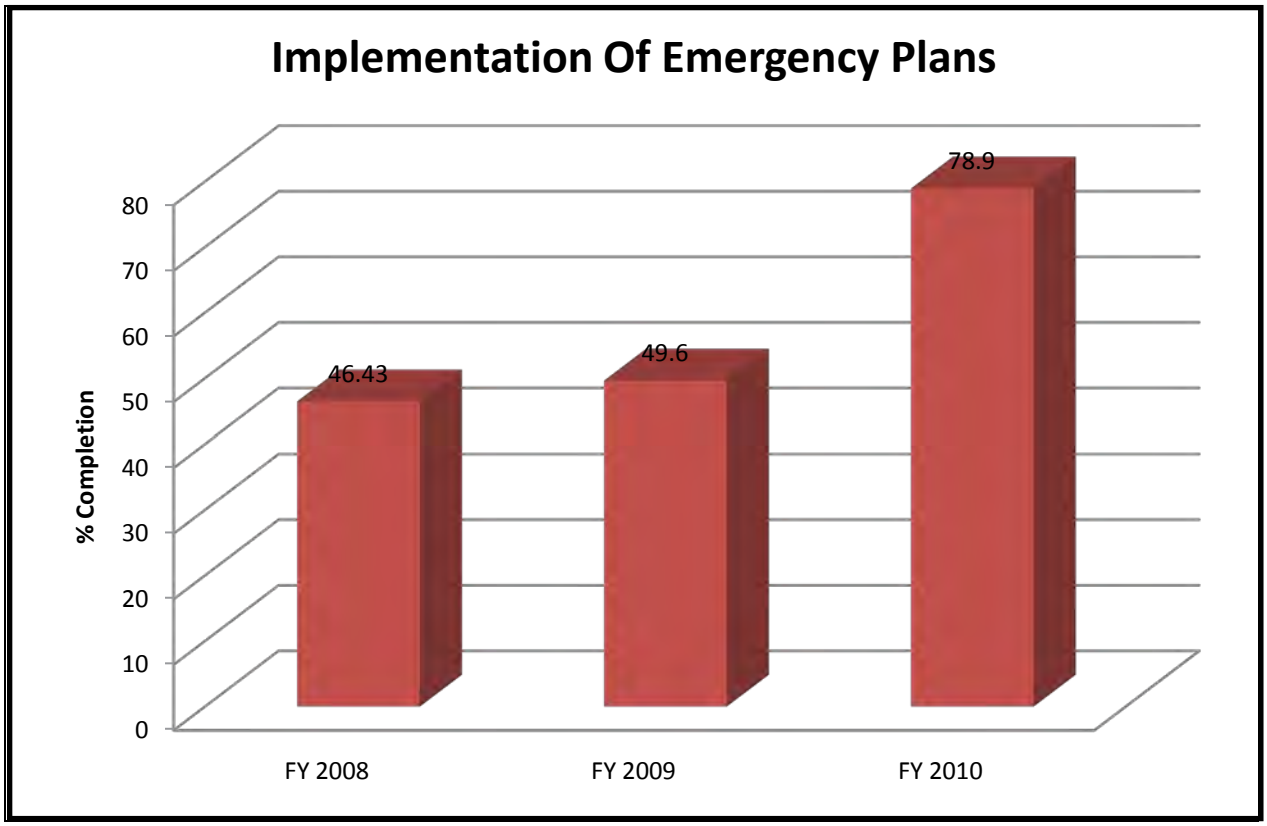
Southern Nevada Evacuation Plan

Infrastructure Security Plan

Mobile Fleet Security Plan

Department Buildings and Facilities Access Management Plan

**Annual Target:** 75% **Ultimate Target:** 100%



**Summary:**

During this year we focused on exercising and updating our Emergency Operations and Security Plans. With seven distinct emergency plans, we have determined it is beneficial to the Department to combine several plans. This will make it easier for Department personnel to locate, use and understand the plans. We combined the Infrastructure Security and Mobile Fleet Security Plans and have begun to combine the NDOT State Level Emergency Operations Plan with the NDOT District Level Emergency Operations Plan.

Our performance measures require us to train, exercise and update our Emergency Operations and Security Plans on a two year cycle. We are at a 78.57% compliance level, which exceeds our goal for the year of 75% compliance. The overall goal is for 100% compliance by the end of fiscal year 2011.

**Training:**

During this year we provided training to both headquarters and District personnel on the State Level Emergency Operations Plan. Training was provided headquarters personnel who are assigned to specific units within the NDOT EOC structure regarding their roles in the NDOT EOC. Training was provided to District 1 on the overall structure and function of the NDOT EOC.

Various NDOT division and district staff attended training provided by other agencies, such as the Division of Emergency Management and FEMA.

**Exercises:**

The Maintenance and Operations Division, Security/Emergency Management Section conducts two emergency exercises each year. Exercises conducted by NDOT within the last fiscal year were held in July 2009 (Operations Eagle Eye), March 2010 (Operations Solid Shield), and June 2010 (District 1 Workshop). These exercises were used to evaluate the NDOT State Level Emergency Operations Plan and the District Level Emergency Operations Plan. Each exercise resulted in the creation of an After Action Report/Improvement Plan which was used to update the exercised plan.

NDOT personnel also attended several exercises conducted by other agencies to coordinate NDOT response. For example, NDOT personnel attended a tabletop exercise conducted by the Division of Emergency Management for cross border coordination with California held at Lake Tahoe on June 28, 2010.

**Were the targets met?**

Yes.

# 12. REDUCE FATAL CRASHES

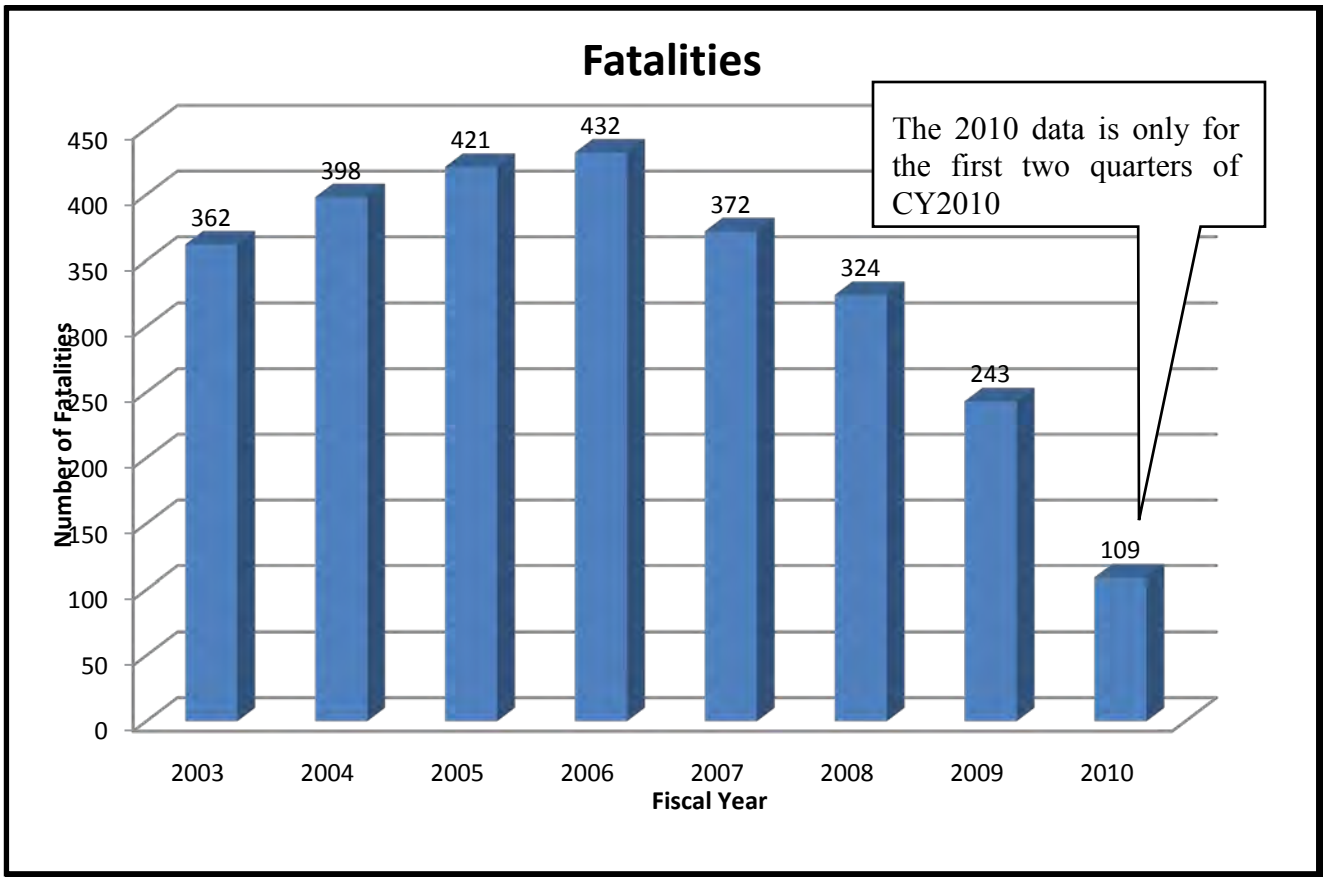
**Performance Measure:**

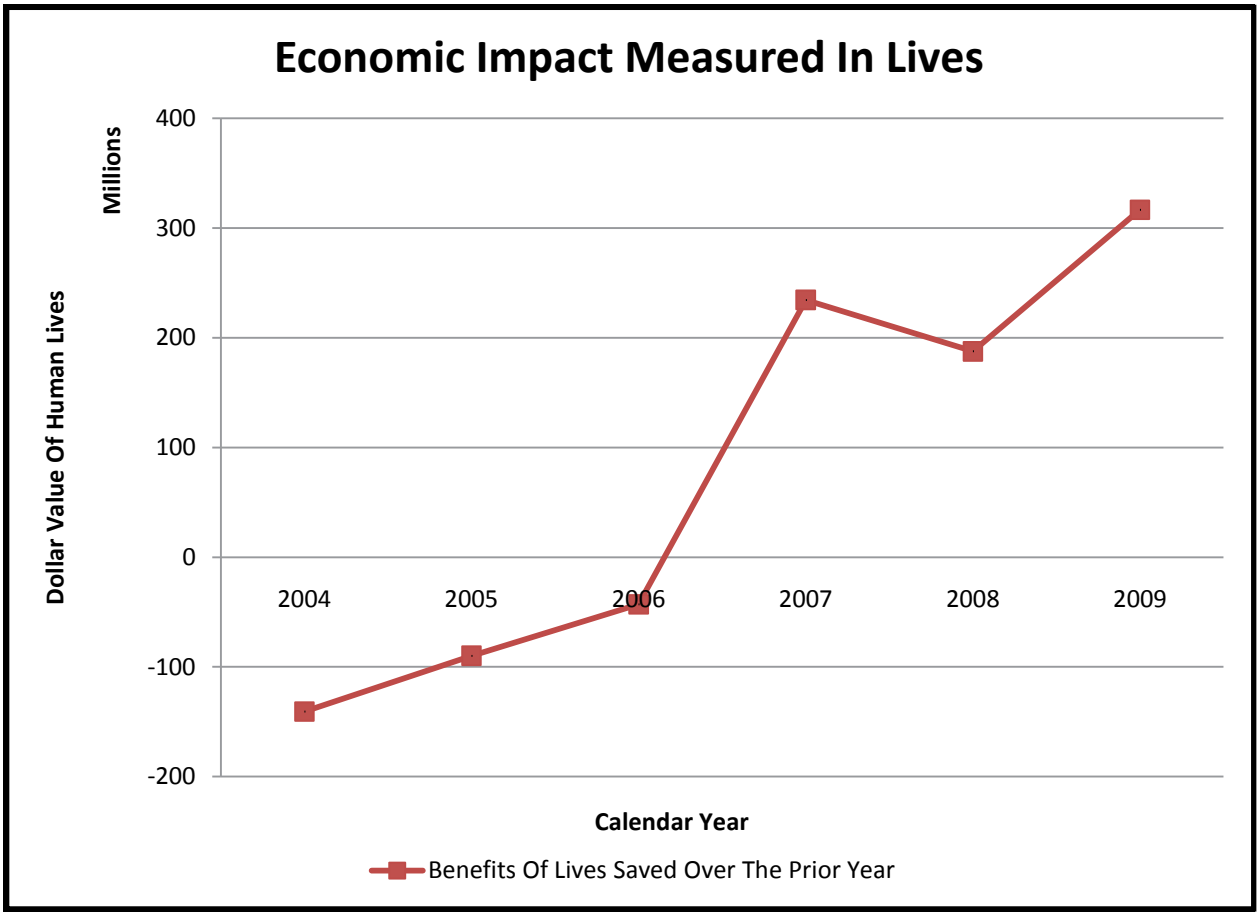
Number of fatalities on Nevada's streets and highways.

**Annual Target:** Reduce fatalities by 100 **Ultimate Target:** Zero

**Measurement and Supporting Data:**

| | Number of Fatalities | Benefit Of Lives Saved Over The Prior Year |
|---|---|---|
| 2003 | 362 | |
| 2004 | 398 | |
| 2005 | 421 | |
| 2006 | 432 | |
| 2007 | 372 | $300 Million |
| 2008 | 324 | $240 Million |
| 2009 | 243 | $405 Million |
| 2010 YTD | 109 | $300 Million Estimated |






Based on USDOT guidance memorandum "Treatment of Value of Life and Injuries in Preparing Economic Evaluations" with numbers adjusted by GDP to a 2009 value of $3.9 million per fatal accident avoided.

**Strategies for Improvement:**

**Short range to next reporting:**

1) Market and implement the State's Strategic Highway Safety Plan
2) Continue to implement cost effective improvements to keep vehicles in their lane
3) Increase pedestrian safety by constructing crosswalk refuge islands and upgrading signals
4) Follow the principles of access management
5) Implement geometric intersection improvements
6) Cooperate with and support the Office of Traffic Safety's efforts with public education programs for TV/radio 'spots' to increase safer behavior by the public.
7) Analyze crash data to locate site with a high number of run-off-road crashes and install shoulder and centerline rumble strips

**Long range:**

1) Spend NDOT's safety funds on a wide variety of engineering strategies.
2) Team with and share funding with non-traditional partners to increases the effectiveness of NDOT's safety funds

3) Continue to develop and expand the Traffic Incident Management program in order to efficiently manage traffic crashes.

**Was the annual target met?**

No.

**What 'Strategies for Improvement' were successful?**

The current reduction is most likely a result of the coordinated work by all of our partners in implementing the strategies of the Strategic Highway Safety Plan. NDOT has been targeting run-off-the-road crashes by installing center and shoulder rumble strips and placing median cable rail where appropriate. The Department has established a Traffic Incident Management program in cooperation with Southern Nevada RTC, Nevada Highway Patrol and emergency responders to efficiently manage traffic crashes in the Las Vegas area.

**What 'Strategies for Improvement' were not successful? Why?**

Strategies that have been implemented by NDOT and our safety partners appear to be effective in reducing the number of fatalities. The strategies identified in the Strategic Highway Safety Plan appear to be successful.

**What new 'Strategies for Improvement' will be initiated in FY2010?**

**Short range to next reporting:**

Given the short duration for implementation of our strategies the Safety Division does not contemplate revising our short term strategies. We will continue to implement strategies identified in the Strategic Highway Safety Plan and work closely with our safety partners to continue to reduce the frequency of fatal crashes.

**Long range:**

Review and update the Nevada Strategic Highway Safety plan.

**Does this performance measure effectively measure what is desired?**

No. This measure is an indicator of how the entire State is performing in regards to reducing traffic fatalities. The Department cannot achieve the goal without the cooperation and assistance of our partners in the areas of law enforcement, education, emergency medical response and other local agencies.

**Is there a better performance measure that should be considered?**

Yes. If the desire is to measure the NDOT performance, then a measure more closely aligned to our program that can be directly influenced by this Department should be considered.

**Will meeting the next yearly target have a fiscal impact? If so, explain.**

Yes. The Department will continue to spend funds for improving the safety of the State's transportation system. We will also continue working with our partners to take advantage of opportunities to reduce the severity and frequency of motor vehicle crashes throughout the State.

# 13. STREAMLINE PROJECT DELIVERY: SCHEDULE AND ESTIMATE AFTER NEPA APPROVAL TO BIDDING

**Performance Measure:**

Percentage of projects completed within the range of established estimate and schedule after the environmental process.

**Annual target:** Reduce number of projects falling outside of estimated schedule range by 25% starting in fiscal year 2009. Improve number of projects falling within the estimated budget range by 25% in FY 2009.

**Ultimate Target:** 100% of projects completed in the scheduled fiscal year and falling within the estimated budget range.

**Measurement and Supporting Data:**

Comment: Project Management Division: Changes to Performance Measure are being considered.

**Five projects under direct control of the PM division were targeted to be advertised in FY 2010:**

1) I-15 South Phase 1 (design build) - completed and awarded on time and within established budget
2) US 395 Northbound - Northbound was advertised within established baseline for schedule but project cost was lower than established baseline (low estimate) by ~20% due to current market conditions
3) US 395 CC freeway Package 1 - was advertised within established baseline for schedule but project cost was lower than established baseline (low estimate) by ~30% due to current market conditions
4) US 95 North West Package 1 - Advertisement for bids was delayed by 10 months due to design and project funding issues. Project cost was lower than established baseline (low estimate) by 22% due to current market conditions.
5) US 95 at Summerlin Parkway – Project was on-hold for two years due to lack of construction funding. Toward the end of 2009, in anticipation of new funding source, the project final design was accelerated. Due to a number of design issues, the project advertisement was delayed by 2-months. The current engineering estimate is at $30.6 million, approximately 24% lower than project's base low range.

**Was the annual target met?**

Yes.

# 14. MAINTAIN STATE BRIDGES

**Performance Measure:**

Percentage of Department owned bridges which are eligible for federal funding and are categorized as structurally deficient or functionally obsolete. Base figure is 37 of 1,704 bridges (*State Highway Preservation Report – 2007)*.

**Annual Target:** Reduce the number of Department owned structurally deficient or functionally obsolete bridges by 2.7% (1 bridge) biennially.

**Ultimate Target:** Zero.

**Measurement and Supporting Data:**

In the base year, FY 2007, there are 37 State owned bridges in Nevada that are structurally deficient or functionally obsolete and are eligible for federal funding. Additionally, there are 34 bridges needing repair/replacement owned by local agencies that are also eligible for federal funding. Please refer to the table below for additional data.

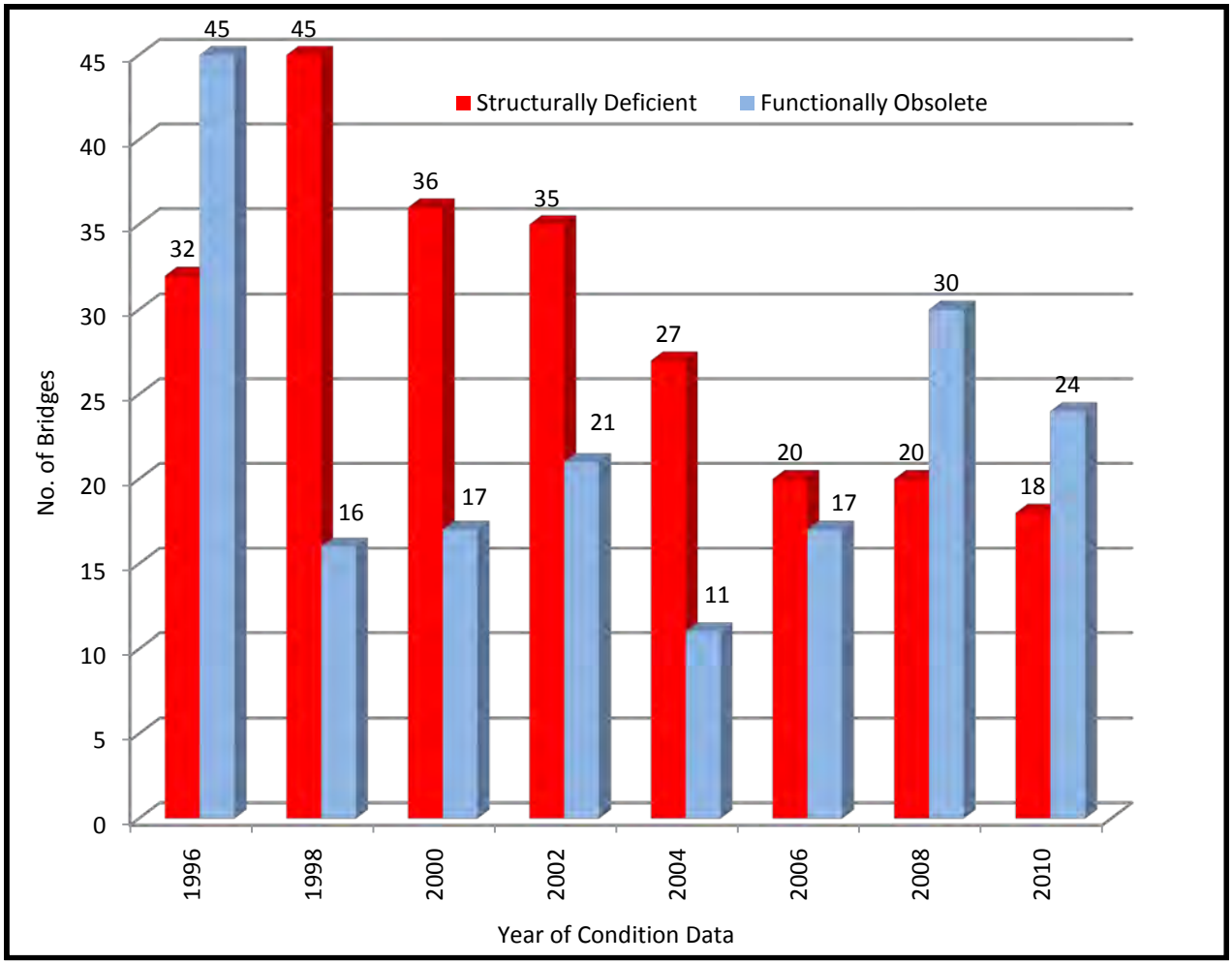
A table has been included in order to provide historical reporting. The data and table format will be evaluated and refined in future reports.

| Biennium | Structurally Deficient or Functionally Obsolete Bridges Replaced | Percentage Reduction |
|---|---|---|
| 2007 | 1 | 2.70% |
| 2008-2009 | 1 | 2.70% |
| 2010-2011 | 1 (Under Construction) | 2.70% |
| 2012-2013 | 4 (Planned) | 10.80% |

For the FY 2008 – 2009 Biennium, replacement of the Virgin River Bridge (B-89), 0.96 Miles South of Mesquite Boulevard on SR 170, Clark County was completed under contract #3360. For FY 2010 – 2011 Biennium, replacement of H-788 (FO) Warm Springs Grade Separation over I-15 in Las Vegas will be completed in Contract #3366DB. The target should be met or exceeded for the FY 12-13 biennium as replacement of 2 SD structures (B-395, G-324) is tentatively scheduled for advertisement in Fall 2011. In addition another locally owned SD structure, B-1942 may also be replaced, and structure G-29 (also SD) may be removed from service in a similar time frame.

**Structurally Deficient:** The inventory rating denotes the strength of the bridge compared to design-truck loading. Structures with low condition or inventory ratings are classified as "structurally deficient." The structurally deficient bridges are not necessarily about to fail. Rather, these bridges become a priority for corrective measures and may be posted to restrict vehicle weights.

**Functionally Obsolete:** The appraisal rating measures how well the bridge serves the public, or its functionality. Included in the appraisal rating are reviews of the deck geometry, under bridge clearance, waterway adequacy, and approach geometry. Within the appraisal rating, a substandard structure is termed "functionally obsolete." Like structurally deficient bridges, functionally obsolete bridges are able to serve the traveling public. However, functionally obsolete bridges are susceptible to more congestion, collisions, or flooding because of the restrictive clearances and geometrics. Although functionally obsolete bridges are generally not as great a concern as structurally deficient bridges, these bridges can also become a priority for corrective measures and may be posted for vehicle size restrictions.




* The increase in the number of Funtionally Obsolete bridges shown from 2004 to 2008 is due primarily to refined inspection methods for measuring lateral underclearance.

**Was the annual target met?**

The target is expected to be met.

# 15. STREAMLINE PERMITTING PROCESS

**Performance Measure:**

Percentage of permits issued or rejected within 45 days of receipt.

**Ultimate Target:** 95% **Annual Target:** 95%

**Measurement and Supporting Data:**

As stated above we did meet the targeted performance measure for this year of 95%, for this fiscal year by processing 96.69% of all permits statewide.

**Overview of Performance Measure:**

The Performance Measure identified for the R/W Division was to process 95% of encroachment permits within 45 days. For this fiscal year 2009-2010 we actually exceeded that amount with 96.73% of all accepted encroachment permits meeting the Transportation Policy requirements. The development of Transportation Policy (TP) 10-1-3 ENCROACHMENT PERMIT PROCESSING TIME SCHEDULE, which was signed by Director Martinovich on May 1, 2009, set a 45 working day process for all accepted encroachment permit applications.

**Were the targets met?**

As stated above we did meet the targeted performance measure for this year of 95%, for this fiscal year by processing 96.69% of all permits statewide. The year-end performance measure for each district is as follows: District 1 achieved 95.25%, District 2 achieved 97.46% and District 3 achieved 100%. Please note that under the Transportation policy some permits required revisions. When a revision is required an additional 15 days is allowed for processing. A total of 6 permits fell into this category.

**What 'Strategies for Improvement' were successful?**

The development of the Encroachment Permit TP and its 45 working day requirement allowed the Department to address several issues that have resulted in significant improvement to the time necessary to process encroachment permits. The pre-audit of all permits has been very helpful in resolving issues prior to submittal. This allows us to resolve issues outside of the processing of permits that could have caused us to reject permits in the past. The simultaneous review of permits by all affected divisions, rather than the sequential passing of one permit to affected divisions continues to be very successful in improving the processing time. Lastly, the number of permits submitted has significantly decreased. In fiscal year 2007/2008 a total of 673 permits were processed, in fiscal year 2008/2009 this amount decreased by 7.34% to 581 permits and in fiscal year 2009/2010 a further decrease of 9.1 % with only 484 permits being processed Over that past 3 fiscal years the number of permit processed has decreased a total of 16.34%. This is most likely due to the economic climate we are currently experiencing. It is anticipated that when the economy rebounds the number of permits will increase and our ability to process these permits to meet the performance measure will be challenged. Especially in light of the required furlough and cut back in overtime.

**What 'Strategies for Improvement' were not successful?**

It is anticipated that IRWIN will provide for improved flow through the review process. Because of personnel changes within the consultant ranks, IRWIN development, testing and implementation has been delayed. The Encroachment Permit Process is a key component of IRWIN. We anticipate that the permit portion of IRWIN will be fully functional in September 2010.

**Does this performance measure effectively measure what is desired?**

The goal was to have 95% of all accepted applications processed within 45 working days. Information Services has provided a tool for providing this information utilizing the data from the present Encroachment Permits Intranet System.

**Is there a better performance measure that should be considered?**

No, This performance measure is the most applicable and is effective.

**Will meeting the next yearly target have a fiscal impact? If so, explain.**

The annual target of processing at least 95% of all encroachment permits within 45 working days has been met. There is no anticipated direct fiscal impact for next year.

**Was the annual target met?**

Yes

# STATE HIGHWAY FUND ANNUAL REVENUE AND EXPENDITURE REPORT

# STATE HIGHWAY FUND ANNUAL REVENUE AND EXPENDITURE REPORT

Assembly Bill 595 in the 2007 Legislative Session included the requirement for the Department to report on the funding sources, amount and expenditures (Section 47.2). There is an annual report entitled "Highway Special Revenue Fund" Financial Schedules for State Fiscal Year ending June 30, 2009. The following three tables provide the required information:

1) Schedule of Revenues and Receipts – Budgetary Basis
2) Comparative Schedule of Expenditures and Disbursements – Budgetary Basic
3) Highway Fund Balance – Budgetary Basis

The first table reports that total revenues into the State Highway Fund were approximately $1 billion while the second table contains the total actual expenditures, which were approximately $1 billion.

The third table also indicates that the Highway fund balance increased from approximately $348.3 million in FY 2007 to $415.7 million FY 2008. The total Department of Transportation actual expenditures for FY 2008 were approximately $648.7 million, which is shown on the second table.

These two tables also include other detailed financial data about transportation-related revenues and expenditures.

# STATE HIGHWAY FUND REVENUE

State of Nevada
Highway Special Revenue Fund
Schedule Of Revenues And Receipts - Actual
For The Years Ended June 30, 2009 to June 30, 2008

| | 2009 Actual | 2008 Actual |
|---|---|---|
| State user taxes | | |
| Gasoline taxes | $ 189,933,728 | 197,567,470 |
| | | |
| Motor vehicle fees and taxes | | |
| Vehicle registration & bicycle safety fees | 100,117,312 | 103,945,384 |
| Motor carrier fees | 37,937,465 | 41,200,807 |
| Drivers license fees | 13,607,901 | 14,211,830 |
| Special fuel taxes | 79,545,171 | 96,373,710 |
| Total motor vehicle fees and taxes | 231,207,849 | 255,731,730 |
| | | |
| Total state revenue | 421,141,577 | 453,299,201 |
| | | |
| Federal Aid reimbursement | | |
| Bureau of Reclamation | | - |
| Department of Interior | | 34,941 |
| Federal Aviation Administration | 197,783 | 388,190 |
| Federal Emergency Management Administration | | - |
| Federal Highway Administration | 336,291,678 | 230,046,559 |
| Federal Rail Administration | 962,240 | - |
| Federal Transit Administration | 7,448,204 | 3,932,831 |
| US Forest Service | | - |
| Welfare | - | - |
| Total Federal Aid | 344,899,905 | 234,402,521 |
| | | |
| Miscellaneous receipts | | |
| Department of Motor Vehicles & Department of Public Safety authorized revenue | 75,652,409 | 80,999,516 |
| Appropriations from other funds | 10,759,491 | 23,214,556 |
| Proceeds from sale of bonds | 20,000,000 | 134,994,976 |
| Agreement income | 21,610,384 | 9,553,820 |
| Interest | 10,112,689 | 19,806,596 |
| Sale of surplus property | - | 11,308,212 |
| Other sales & reimbursements | 33,214,144 | 18,075,312 |
| Total miscellaneous receipts | 171,349,116 | 297,952,987 |

# STATE HIGHWAY FUND EXPENDITURES

STATE OF NEVADA
HIGHWAY SPECIAL REVENUE FUND
COMPARATIVE SCHEDULE OF EXPENDITURES AND DISBURSEMENTS - BUDGETARY BASIS
FOR THE FISCAL YEAR ENDING JUNE 30, 2009 AND 2008

| | FY 2009 | | | FY 2008 |
|---|---|---|---|---|
| | Budgeted | Actual Using Budgetary Basis | Variance Favorable (Unfavorable) | Actual Using Budgetary Basis |
| Department of Transportation | | | | |
| Labor | $137,951,891 | $134,676,580 | $3,275,311 | $123,280,159 |
| Travel | 2,459,451 | 2,264,208 | 195,243 | 2,063,750 |
| Operating | 69,913,730 | 64,134,834 | 5,778,896 | 64,722,751 |
| Equipment | 17,527,643 | 7,977,023 | 9,550,620 | 11,798,098 |
| Capital improvements | 443,135,514 | 378,577,597 | 64,557,917 | 337,699,550 |
| Bond expenditures | 191,001,665 | 170,375,935 | 20,625,730 | 94,643,385 |
| Other programs | 18,689,040 | 11,342,180 | 7,346,860 | 10,963,819 |
| Total operations | 880,678,934 | 769,348,357 | 111,330,577 | 645,171,512 |
| Cost of fuel sold to other agencies | 3,469,921 | 3,030,764 | 439,157 | 3,541,974 |
| Total Department of Transportation | 884,148,855 | 772,379,121 | 111,769,734 | 648,713,487 |
| Department of Motor Vehicles (see Note 2) | 130,904,899 | 107,963,717 | 22,941,182 | 95,583,404 |
| Department of Public Safety (see Note 2) | 90,158,727 | 81,106,489 | 9,052,238 | 78,222,471 |
| | 221,063,626 | 189,070,206 | 31,993,421 | 173,805,875 |
| Appropriations to other funds | | | | |
| Attorney General | 2,000,000 | 2,000,000 | - | - |
| Department of Administration | - | - | - | - |
| Transportation Services Authority | 2,540,949 | 2,539,729 | 1,220 | 2,348,711 |
| Public Works Board | 252,763 | 242,762 | - | 1,708,832 |
| Traffic Safety | 209,473 | 190,834 | 18,639 | 199,372 |
| Investigations | 317,276 | 317,276 | - | 312,709 |
| DMV Training Division | 1,017,461 | 926,544 | 90,917 | 869,718 |
| Risk Management | - | - | - | - |
| Legislative Counsel Bureau | 264,910 | -1,264,588 | 1,529,498 | 112,200 |
| Department of Information Technology | - | -3,199,298 | 3,199,298 | - |
| Total appropriations to other funds | 6,602,832 | 1,753,259 | 4,839,572 | 5,551,542 |
| Other disbursements | | | | |
| Transfer to bond fund | 90,000,000 | 88,995,881 | 1,004,119 | 84,337,795 |
| Total other disbursements | 90,000,000 | 88,995,881 | 1,004,119 | 84,337,795 |
| Total expenditures & disbursements - Budgetary basis | $1,201,815,313 | $1,052,198,467 | $149,606,846 | $912,408,698 |

# STATE HIGHWAY FUND BALANCE

NEVADA DEPARTMENT OF TRANSPORTATION
HIGHWAY FUND BALANCE (BUDGETARY BASIS)
FISCAL YEARS 2007 – 2009

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| Beginning Fund Balance: | | | |
| General Obligation Bonds | 119,091,562 | 150,650,074 | 191,001,665 |
| Other Highway Fund | 209,925,438 | 197,608,926 | 224,729,336 |
| Total Beginning Fund Balance: | 329,017,000 | 348,259,000 | 415,731,000 |
| Additions: | | | |
| Revenues | 931,203,530 | 850,659,733 | 917,390,599 |
| Bond Proceeds | 198,965,425 | 134,994,976 | 20,000,000 |
| Total Additions: | 1,130,168,955 | 985,654,709 | 937,390,599 |
| Deductions: | | | |
| Dept Of Trans. Non-Bond Expenditures | 658,978,868 | 553,976,123 | 601,781,084 |
| Dept Of Trans. Bond Expenditures | 167,406,913 | 94,643,385 | 170,375,935 |
| Exp. & Approp To Other Agencies | 270,796,646 | 263,789,188 | 280,041,449 |
| Total Deductions: | 1,097,182,427 | 912,408,696 | 1,052,198,468 |
| Adjusting Entries: | | | |
| Cafr Adjustments | (13,744,529) | (5,774,012) | (5,834,132) |
| Total Adjusting Entries: | (13,744,529) | (5,774,012) | (5,834,132) |
| Ending Fund Balance: | | | |
| General Obligation Bonds | 150,650,074 | 191,001,665 | 20,625,730 |
| Other Highway Fund | 197,608,926 | 224,729,336 | 274,463,270 |
| Total Ending Fund Balance: | 348,259,000 | 415,731,000 | 295,089,000 |

# MAJOR PROJECTS ANNUAL STATUS REPORT

# TYPICAL PROJECT DEVELOPMENT PROCESS

The Department's project development process typically consists of four major phases: planning, environmental clearance, final design and construction. These phases are described in more detail below. The development process is based on federal and state laws and regulations, engineering requirements, and a departmental review and approval process. This appendix provides an overview of the four phase process, identifies major milestones within the phases, and describes the information developed during each phase.

## PROJECT PLANNING PHASE

In this phase the project needs are analyzed and conceptual solutions are developed. Project descriptions, costs, and schedules are broadly defined. The planning phase typically addresses such issues as number of lanes, location and length of project, and general interchange and intersection spacing. The intent of this phase is to develop the most viable design alternatives, and to identify the best means to address risks and uncertainties in cost, scope and schedule.

## ENVIRONMENTAL CLEARANCE PHASE

For the environment clearance phase, major projects are subject to the National Environmental Policy Act (NEPA) to address potential social, environmental, economic and political issues. During this phase studies are conducted to define existing conditions, and identify likely impacts and mitigations so the preferred design alternative is selected from among the various alternatives. In this phase the project scope is more fully defined, right-of-way issues are generally identified, project costs and benefits are estimated, and risks are broadly defined. Finally, a preliminary project schedule is determined. At the conclusion of this phase, major projects are divided into smaller construction segments to address project's social, environmental, economic and political issues as well as funding availability and constructability.

## FINAL DESIGN PHASE

During this phase, the design of the selected alternative identified during the environmental clearance phase is finalized. In this phase the project scope is finalized, a detailed project design schedule and estimate is developed, and project benefits are fully determined. The right-of-way requirements are also determined and acquisition is initiated. Additionally, utilities relocation is initiated toward the end of the final design phase. At the end of this phase the project design and cost estimate are complete and the project is advertised for construction.

## CONSTRUCTION PHASE

During this phase projects are constructed based on the final design plans. Depending on the nature of the project, utilities relocation might occur during early stages of this phase. Due to the complexity of major projects, a detailed construction schedule, traffic control plans, and environmental mitigation strategies are developed in consultation with the selected contractor.

# PROJECT STATUS SHEET EXPLANATION

The information contained on the project status sheet is centered on the Department's project development process. This process typically consists of the four major phases: planning, environmental clearance, final design and construction. Additional details of these phases are contained in Appendix A, which details the project development process utilized by the Department of Transportation. The project status sheets contain several items of information as follows:

**Project Description:** Contains the preliminary project scope, which generally identifies features of the project i.e. length, structures, widening, and interchanges, and directs the project development process.

**Project Benefits:** Summarizes the primary favorable outcomes expected by delivering the project.

**Project Risks:** Indentifies the major risks that might impact project scope, cost, and schedule. Unforeseen environmental mitigation, right-of-way litigation, and inflation of construction materials or land values are only a few items that can adversely effect project development. Appendix B, Dealing with Project Risk, provides more details.

**Schedule:** Provides the time ranges for the four primary phases of project development: planning, environmental clearance, final design, and construction. Generally the schedule, by state fiscal years, reveals the time range for starting or completing a phase. It indicates the starting range early in the development process and completion range latter in the process. Appendix B, Dealing with Project Risks, provides more details concerning the time ranges.

**Project Costs:** Project cost ranges are provided by activity: 1) engineering activities that includes planning, environmental clearance and final design costs, 2) right-of-way acquisition, and 3) construction. Costs are adjusted for inflation to the anticipated mid-point of completing a phase. Appendix B, Dealing with Project Risks, provides more detail on the range of project cost estimates.

**What's changed since last update?** Contains summaries of the project scope, cost, and schedule changes, if any.

**Financial Fine Points:** Includes the total expended project costs and brief summary of financial issues.

**Status Bars at the Bottom of the Form:** Shows the percentage completion for the primary project development activities that are in progress: planning, environmental clearance, final design, right-of-way acquisition, and construction.

# MAJOR PROJECTS

**I-15 Projects**

1. I-15 Cactus Avenue Interchange
2. I-15 at F Street
3. I-15 at Hardy Way MP 118 in Mesquite
4. I-15 CC-215 Northern Beltway Interchange
5. I-15 NEON
6. I-15 North - Phase 1
7. I-15 North - Phase 2 Craig Rd to Speedway Blvd
8. I-15 North - Phase 3 Speedway Blvd to Apex
9. I-15 South - Bermuda Road Interchange
10. I-15 South - Las Vegas Blvd from St. Rose Parkway to Sunset Road
11. I-15 South - Pebble Road Overpass
12. I-15 South - Phase 1B Blue Diamond
13. I-15 South - Phase 2
14. I-15 South - Sloan Road Interchange
15. I-15 South - Starr Avenue Interchange
16. I-15 South - Stateline to Sloan
17. I-15 South - Phase 1A
18. I-15 Urban Resort Corridor Study
19. I-15 West Mesquite Interchange DB

**I-515/US-95/US 93 Projects**

20. I-515 Freeway Improvements
21. US 93 Boulder City Bypass Phase 1
22. US 93 Boulder City Bypass Phase 2
23. US 93 Hoover Dam

**US-95 Northwest Projects**

24. US 95 NW - Phase 1
25. US 95 NW- Phase 2
26. US 95 NW - Phase 3
27. US 95 NW - Phase 4 - Horse Interchange
28. US 95 NW - Phase 5

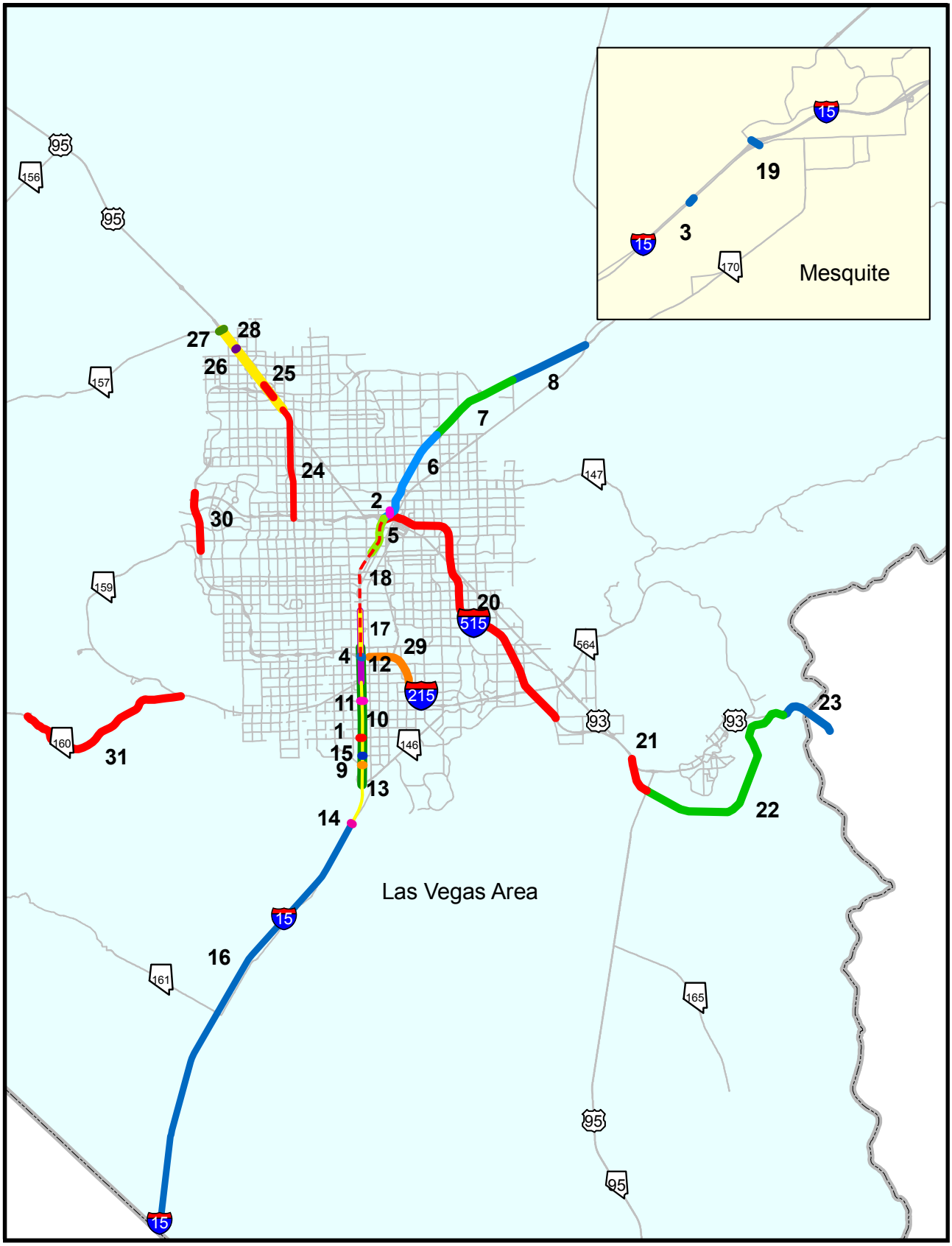
**Other Southern Nevada Projects**

29. I-215 Airport Connector Interchange Phase 1
30. I-215 Beltway - Charleston to Summerlin
31. SR 160 Pahrump Valley Road

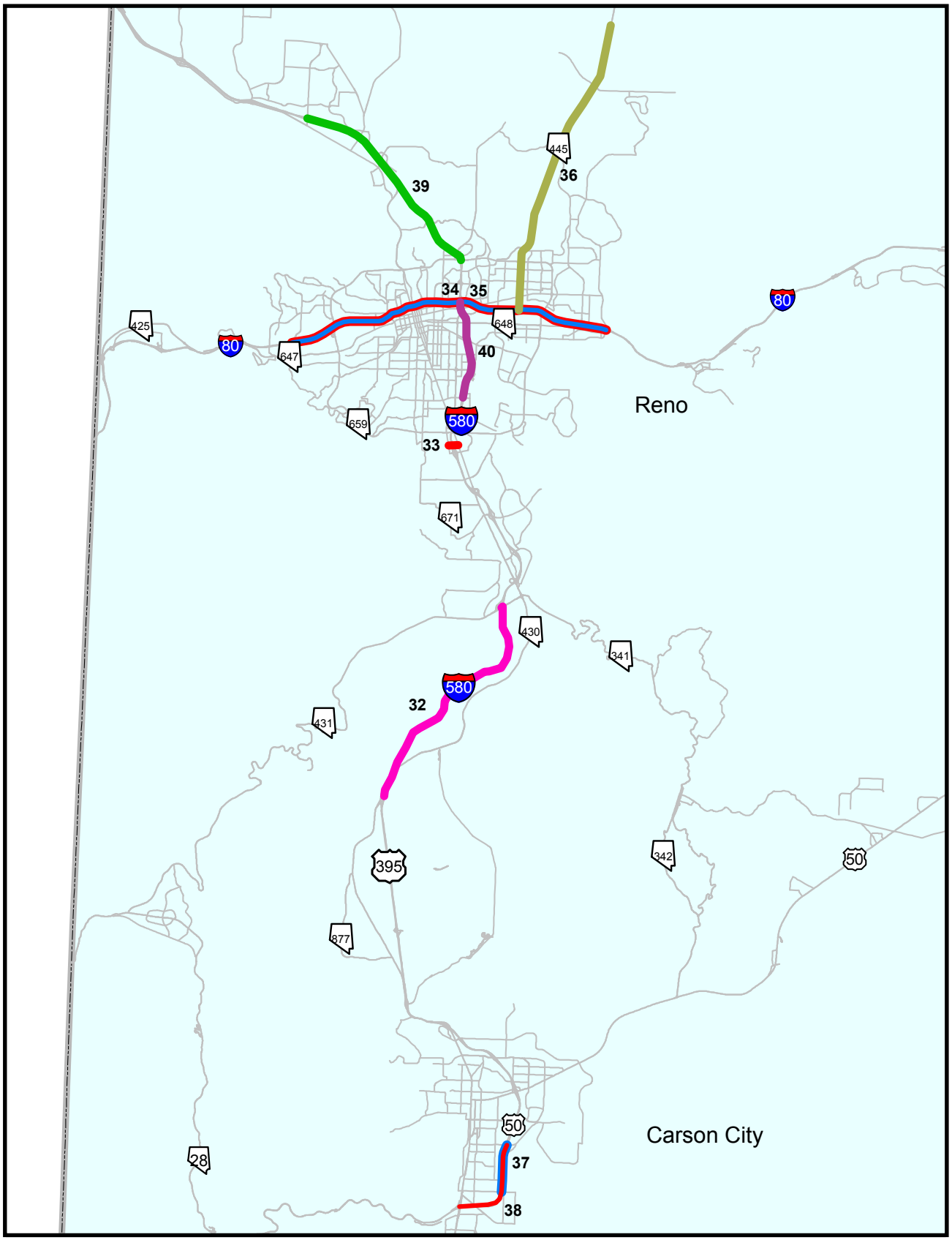
**Northern Nevada Projects**

32. I-580 Freeway Extension
33. I-580 Meadowood Mall Way
34. I-80 Robb Drive to Vista Boulevard Design Build
35. I-80 Robb to Vista
36. SR 445 Pyramid Highway Improvements
37. US 395 Carson City Freeway Phase 2B Pkg 1
38. US 395 Carson City Freeway Phase 2B
39. US 395 North - McCarran Blvd to Stead Blvd
40. US 395 Northbound - Moana Lane to I-80

# SOUTHERN NEVADA MAJOR PROJECTS



# NORTHERN NEVADA MAJOR PROJECTS



# MAJOR PROJECT SUMMARY SHEETS

## Cactus Avenue Interchange

**Project Sponsor: Clark County**

**Senior Project Manager: Eduardo P. Miranda, P.E.**

**(775)888-7321**

1

### Project Description:

- I-15 South Project from Sloan to Tropicana has been broken into nine (9) Project elements to address funding and constructability opportunities.
- This is one element of the I-15 South Project.
- Construct new interchanges at Cactus Avenue. Design by Clark County with NDOT oversight.

### Schedule:

**Planning:**
Complete
**Environmental:**
Complete
**Final Design:**
TBD
**Construction:**
TBD

### Project Cost Range:

(Environmental Phase Estimates)
**Engineering:**
$10 - $10.5 million
**Right-of-Way:**
$14 - $15 million
**Construction:**
$73 - $74 million
**Total Project Cost:**
$97 - $99.5 million

### Project Benefits:

- Reduce congested traffic on I-15.
- Connect regional traffic.
- Improve origin destination time of travel.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

### Project risks:

- Unit price and property escalation may affect project cost

### Financial Fine Points(Key Assumptions):

- Funding expended for Cactus Interchange: Included in I-15 South Corrridor
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% is to 2016 approximate midpoint of construction
- Funding Source: FY04 Appropriations Act. S.115 ($0.2M) Interstate Maintenance Discretionary ($0.9M), Q10 High Speed Lane Miles Program ($35.1M), SAFETEA-LU High Priority Projects ($6.8M) and STP Clark County ($35M).

**% Environmental Complete** 0 50 100

**% Design Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 15 at F Street and F Street from Bonanza Road to Washington Avenue

**City of Las Vegas and NDOT**

**Jenica Finnerty, P.E.**

**2**

**(775) 888-7592**

### Project Description:

- Re-open F Street under I-15 in accordance with Assembly Bill 304 adopted in the 2009 Nevada Legislative Session

### Schedule:

**Planning:**

2009-2010

**Environmental Clearance:**

2010-2011

**Final Design:**

TBD

**Construction:**

TBD

### Project Cost Range:

**Engineering:**

$5 - $10 million

**Right of Way:**

N/A

**Construction:**

$20 - $70 million

**Total Project Cost:**

$25 - $80 million

### Project Benefits:

- Meet stakeholder/public expectations
- Improve quality of life
- Provide pedestrian and bicycle access
- Support economic development
- Beautify neighborhood

### What's Changed Since Last Update?

- Scope - No change
- Schedule - Environmental Phase has started
- Cost - No change

### Project risks:

- Changes in site conditions
- Project completion will depend on availability of funding
- Unit price escalation may affect project cost
- Full funding not yet identified

### Financial Fine Points(Key Assumptions):

- Total funding Expended (NDOT): $0
- Funding source:
- $2.5 million for PE from CLV Redevelopment Agency
- $20 million for Construction from CLV County Special 5-cent ad valorem capital project tax (not available until after July 1, 2011)
- $2.5 million - $57.5 million unidentified

**Environmental complete** 0 — 50 — 100

**Updated:**
**June , 2010**

## I 15 @ Hardy Way (MP 118) in Mesquite

**Project Sponsor: City of Mesquite**

**Project Manager: Adam T. Searcy, P.E.**

**(775) 888-7597**

3

### Project Description:

- Construct New Interchange

### Schedule:

**Planning:**
Complete
**Environmental:**
Complete 3rd Quarter 2011
**Final Design:**
TBD
**Construction:**
TBD

### Project Cost Range:

(Environmental Phase)
**Preliminary Engineering:**
$1 - $2 Million
**Right of Way:**
N/A
**Construction:**
$20 - $30 Million

### Project Benefits:

- Provides freeway access for new industrial commercial center in Mesquite
- Relieves potential congestion on other Mesquite interchanges due to growth

### What's Changed Since Last Update?

- Scope: No Change
- Schedule: No Change
- Budget: No Change

### Project risks:

- Project not fully funded

### Financial Fine Points(Key Assumptions):

- Construcution Funding by City of Mesquite
- NDOT donating preliminary and construction engineering

**Environmental** 0 50 100

**Updated:**
**June , 2010**

# I 15 / CC 215 Northern Beltway Interchange

**Project Sponsor: Clark County**

**Project Manager: Cole Mortensen, P. E.**

**(775) 888-7742**

4

## Project Description:

- Construct new ramps to complete a system-to-system interchange configuration at the I-15 / CC-215 Las Vegas Beltway interchange.
- Improvements will be constructed within the existing I-15 and CC-215 Right-of-Way.
- This is the last of four phases of improvements to the I-15 North Corridor between US 95 and Apex Interchange (15 miles).

## Schedule:

**Planning:**

Complete

**Environmental Clearance:**

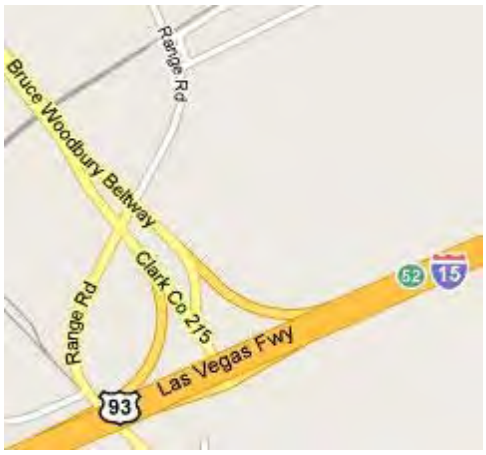
Complete

**Final Design:**

Start 2013 - 2015

**Construction:**

Start 2015 - 2017




## Project Cost Range:

**Engineering:**

$6 - $15 million

**Right-of-Way:**

$1 - $5 million

**Construction:**

$123 - $140 million

**Total Project Cost:**

$130 - $160 million

## Project Benefits:

- Increase capacity to accommodate projected local and interstate traffic to year 2030.
- Decrease congestion.
- Reduce travel times.
- Improve access to areas planned for development in North Las Vegas.
- Improve freeway operations with full freeway-to-freeway connectivity.
- Improve safety.

## What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

## Project risks:

- Uncertainty of future construction and labor costs.
- Potential funding shortfall.

## Financial Fine Points(Key Assumptions):

- Total funding expended: $26,670
- Total funding expended for I-15 North Environmental phase: $875,000
- Inflation escalation (4%) is to 2016 approximate midpoint of construction.
- Construction funding for this project has not yet been identified.

**% Design Complete** 0 50 100

**% Right-of-Way Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

# I 15 NEON

**Project Sponsor: NDOT**

**Senior Project Manager: Phil Slagel**

**(775) 888-7318**

5

## Project Description:

- Widening Improvements along I 15 from Spaghetti Bowl to south of Sahara that include HOV Lanes, Auxillary Lanes, and Baided Ramps
- HOV Direct Connector from US 95 to I-15
- Add/Drop lanes at Oakey/Wyoming
- Local Access Improvements to Las Vegas Downtown Redevelopment
- Connecting Industrial Road and Martin Luther King over I-15
- HOV Direct Access Ramps at Wall Street
- New access to Alta
- Collector distributor roads
- I-15/Charleston Interchange Reconstruction
- Project Length: 4.83 miles

## Schedule:

**Planning:**

Complete

**Environmental Clearance:**

3rd Quarter 2010

**Final Design:**

TBD

**Construction:**

TBD

## Project Cost Range:

**(Environmental phase estimates):**

**Engineering:**

$79 - $157 million

**Right-of-Way:**

$490 - $616 million

**Construction:**

$886 - $1.127 billion

**Total Project Cost:**

$1.455 - $1.9 billion

## Project Benefits:

- Will accommodate anticipated traffic increases
- Reduce congestion along local streets and I-15
- New access to Downtown Redevelopment
- Operational Improvements to I-15
- Extends HOV System

## What's Changed Since Last Update?

- Scope - No change
- Schedule - Environmental Clearance updated from 1st quarter to 3rd quarter 2010 in order to address Final Environment Impact Statement
- Cost - No change

## Project risks:

- Complex construction in a high volume dense urban area
- Complexity in maintaining traffic during construction
- Complex right-of-way issues may impact schedule and cost
- Funding uncertainty

## Financial Fine Points(Key Assumptions):

- Total funding Expended: $17,733,000
- Inflation escalation (4%) is to 2020 approximate midpoint of construction
- Additional Federal, State, Local and Regional Funding will be required

**% Environmental Complete** 0 50 100

**% Design Complete** 0 50 100

**Updated:**
**June , 2010**

## I 15 North - Phase 1

**I-15/US-95/I-515 Interchange to Craig Road**

**Design Build Project**

**Project Sponsor: NDOT**

**Project Manager: Jeff Hale, P. E.**

**6**

**(775) 888-7321**

### Project Description:

- This is the first phase of the I-15 north corridor improvements between US 95 and Apex Interchange
- Widen I-15 from six lanes to ten lanes from US-95 to Lake Mead Boulevard, including re-alignment of on and off ramps for the US-95, Washington and D Street Interchanges.
- Widenening of I-15 to eight lanes from Lake Mead Boulevard to Craig Road.
- Reconfigure the Lake Mead Boulevard Interchange.
- A new connection road linking D Street and F Street between I-15 and Bonanza Road.

### Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

Complete

**Construction:**

2nd quarter 2010

### Project Cost Range:

**(Construction phase estimates):**

**Engineering:**

$5.1 million

**Right-of-Way:**

$1.2 to $5.1 million

**Construction:**

$252 million

**Total Project Cost:**

$258 - $263 million

### Project Benefits:

- Increase capacity to accommodate projected local and interstate traffic to year 2030.
- Decrease congestion.
- Reduce travel times.
- Improve access to areas planned for development in North Las Vegas.
- Improve freeway operations with full Freeway-to-Freeway connectivity.
- Improve safety.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - No change
- Cost - No change

### Project risks:

- None

### Financial Fine Points(Key Assumptions):

- Total Expended: $249,250,000.00
- Funding Source Breakdown
- $24 million State General Funds, $156 million State Funds
- $9 million STP
- $22 million Minimum Guarantee
- $25 million Federal Earmark
- $11 million NHS, $7 million Public Lands Highway Discretionary

**% Design Complete** 0 50 100

**% Construction Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 15 North Phase 2 from Craig Road (SR 573) to Speedway Boulevard

**Project Sponsor: NDOT**

**Project Manager: Luis Garay, P.E.**

**7** **(702) 671-8858**

### Project Description:

- This is the second of four phases of improvements to the I-15 North Corridor between US 95 and Apex Interchange.
- Widen I-15 from 4 lanes to 6 lanes from Craig Road (SR 573) to Speedway Boulevard.
- Improvements will be constructed within the existing I-15 Right-of-Way.
- Project length: 4.8 miles.

### Schedule:

**Planning:**

Complete

**Environmental Phase:**

Complete

**Final Design:**

Start 2010 -2014

**Construction:**

Start 2013 - 2015

### Project Cost Range:

**Engineering:**

$5 - $15 million

**Right of Way:**

$1 - $2 million

**Construction:**

$99 - $123 million

**Total Project Cost:**

$105 - 140 million

### Project Benefits:

- Increase Capacity to Accommodate Projected Local and Interstate Traffic
- Decrease Congestion
- Reduce Travel Time
- Improve Freeway Operations
- Improve Safety

### What's Changed Since Last Update?

- Scope - Addition of 3R Project
- Schedule - No Change
- Cost - No Change

### Project risks:

- Uncertainty of Future Construction Materials and Labor Costs
- Funding uncertainty for Construction
- Widen bridges within UPRR and private Right of Way

### Financial Fine Points(Key Assumptions):

- Total funding expended for Phase 2: $119,000
- Total funding expended for the Environmental Phase: $875,000
- Inflation escalation (4%) is to 2015 approximate midpoint of construction
- Funding source for the project engineering is AB 595 (State).

**Design Complete** 0 — 50 — 100

**Updated:**
**July , 2010**

NEVADA DOT

# I 15 North - Phase 3 Speedway Boulevard to Apex Interchange

**Project Sponsors: NDOT**

**Project Manager: Luis Garay, P. E.**

8

**(702) 671-8858**

## Project Description:

- This is the third phase of improvements to the I-15 North Corridor between US 95 and Apex Interchange.
- Widen I-15 from four lanes to six lanes from Speedway Boulevard to the Apex Interchange.
- Project length: 4.6 miles

## Schedule:

**Planning:**

Complete

**Environmental Phase:**

Complete

**Final Design:**

Start 2012 - 2015

**Construction:**

Start 2015 - 2017

## Project Cost Range:

**Engineering:**

$10 - $12 million

**Right-of-Way:**

$3 - $3.6 million

**Construction:**

$98 - $117.6 million

**Total Project Cost:**

$118 - $141.6 million

## Project Benefits:

- Increase capacity to accommodate projected local and interstate traffic to year 2030
- Decrease congestion
- Reduce travel times
- Improve access to areas planned for development in North Las Vegas
- Improve freeway
- Improve safety

## What's Changed Since Last Update?

- Scope - Proposed interchange 1.8 miles north of Speedway removed from this project. Will be done as a stand alone project
- Schedule - No Change
- Cost - No Change

## Project risks:

- Uncertainty of future Right-of-Way and construction costs.
- Uncertainty of proposed Sheep Mountain Parkway terminus.

## Financial Fine Points(Key Assumptions):

- Total funding expended for phase 3: $0 (design phase not started)
- Total funding expended for I 15 North Environmental phase: $875,000
- Inflation excalation (4%) is to 2016 approximate midpoint of construction
- Funding source for this project has not yet been identified.

**Design complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 15 South - Bermuda Road Interchange

**Project Sponsor: City of Henderson**

**Senior Project Manager: Eduardo P. Miranda, P.E.**

**(775) 888-7321**

9

### Project Description:

- I-15 South Project from Sloan to Tropicana has been broken into nine (9) Project elements to address funding and constructability opportunities.
- This is one element of the I-15 South project.
- Construct new interchanges at Bermuda Road.

### Schedule:

**Planning:**
Complete
**Environmental:**
Complete
**Final Design:**
2026 - 2027
**Construction:**
TBD

### Project Cost Range:

(Environmental Phase Estimates)
**Engineering:**
$16 - $17.5 million
**Right-of-Way:**
$3.5 - $4 million
**Construction:**
$128.5 - $134.5 million
**Total Project Cost:**
$148 - $156 million

### Project Benefits:

- Interchanges on I-15 reduce congested traffic in main lines and other existing facilities.
- Connect Regional traffic.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

### Project risks:

- Unit price and property escalation may affect project cost.

### Financial Fine Points(Key Assumptions):

- Funding not available until 2026-2030 per current Financial Plan.
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% is to 2029 approximate midpoint of construction.
- Funding Source: Q10 Extended ($57.1M) and STP Clark County ($60M).

**% Environmental Complete** 0 50 100

**% Design Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

# I 15 South Las Vegas Boulevard from St. Rose Parkway to Sunset Road

**Project Sponsor: Clark County**

**Senior Project Manager: Eduardo P. Miranda, P.E.**

10

**(702) 671-8856**

## Project Description:

- I-15 South from Sloan to Tropicana has been broken into nine (9) Project elements to address funding and constructability opportunities.
- This is one element of the I-15 South Project.
- Widening of Las Vegas Boulevard (parallel to I-15) from St. Rose Parkway (SR 146) to Sunset Road from 2 to 3 lanes in each direction.
- Project Length: 7.2 miles
- This project will be constructed in two packages:
- Package 1: Las Vegas Boulevard from Silverado to Sunset
- Package 2: Las Vegas Boulevard from St. Rose to Silverado Ranch

## Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

Package 1- Advertise 1/28/10 , Package 2- 70%

**Construction:**

TBD

## Project Cost Range:

**(Environmental phase estimates):**

**Engineering:**

$4 - $4.5 million

**Right-of-Way:**

$0

**Construction:**

$31.5 - $33 million

**Total Project Cost:**

$35.5 - $37.5 million

## Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Reduce trip times
- Reduce vehicle emissions
- Reduce idling
- Improve driver comfort

## What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

## Project risks:

- Complexity in maintaining traffic staging, relocating utilities and reducing impacts to traveling public.

## Financial Fine Points(Key Assumptions):

- Total Funding Expended for I-15 South LV Blvd.: $0
- Total funding expended for I-15 South Environmental studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% is to 2011 approximate midpoint of construction.
- Funding Source: STP Clark County ($8.3M)

**% Environmental Complete** 0 50 100

**% Design Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 15 South - Pebble Road Overpass

**Project Sponsor: Clark County**

**Senior Project Manager: Eduardo P. Miranda, P.E.**

**(775) 888-7321**

11

### Project Description:

- I-15 South Project from Sloan to Tropicana has been broken into nine (9) Project elements to address funding and constructability opportunities.
- This is one element of the I-15 South Project.
- Construct overpass at Pebble Road and I-15

### Schedule:

**Planning:**
Complete 2009
**Environmental:**
Complete 2009
**Final Design:**
2021 - 2023
**Construction:**
TBD

### Project Cost Range:

(Environmental Phase Estimates)
**Engineering:**
$6.5 - $7 million
**Right-of-Way:**
$8 - $10 million
**Construction:**
$51.5 - $53 million
**Total Project Cost:**
$66 - $70 million

### Project Benefits:

- Interchanges on I-15 reduce congested traffic in main lines and other existing facilities.
- Connect regional traffic.
- Improve origin destination time of travel.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

### Project risks:

- Unit price and property escalation may affect project cost.

### Financial Fine Points(Key Assumptions):

- Funding not available until 2021-2025 per current Financial Plan.
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% is to 2029 approximate midpoint of construction.
- Funding Source: Private Developers ($30M)

**% Environmental Complete** 0 50 100

**% Design Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

# I 15 South - Phase 1B From Blue Diamond (SR 160) to Tropicana Ave

**Project Sponsor: NDOT**

**Senior Project Manager: Eduardo P. Miranda, P.E.**

12

**(702) 671-8856**

## Project Description:

- I-15 South Project from Tropicana to Sloan has been broken into nine (9) Project elements to address funding and constructability opportunities.
- This is one of the elements of the I-15 South Project.
- Construct one lane in each direction in the median area.
- Project length: 3.8 miles

## Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

TBD

**Construction:**

TBD

## Project Cost Range:

**(Environmental phase estimates):**

**Engineering:**

$2.5 - $3 million

**Right-of-Way:**

$0

**Construction:**

$19 - $20 million

**Total Project Cost:**

$21.5 - $23 million

## Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Reduce trip times
- Reduce vehicle emissions
- Reduce idling
- Improve driver comfort

## What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

## Project risks:

- Complexity in maintaining traffic staging, relocating utilities and reducing impacts to traveling public.

## Financial Fine Points(Key Assumptions):

- Total funding expended for Phase 1B: $0 (phase not started)
- Total funding expended for I-15 South Environmental studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% is to 2019 approximate midpoint of construction
- Funding source: Government Services Tax

**% Environmental Complete** 0 50 100

**% Design Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

# I 15 South - Phase 2

**Sloan Road to Blue Diamond (SR-160)**

**Project Sponsor: NDOT**

**Senior Project Manager: Eduardo P. Miranda, P.E.**

13

**(775) 888-7321**

## Project Description:

- I-15 South project from Sloan to Tropicana has been broken into nine (9) project phases to address funding and constructability opportunities.
- This is one element of I-15 South Project.
- Widen I-15 from Sloan Road to Blue Diamond Road from 6 to 10 lanes.
- Project Length: 8.2 miles

## Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

TBD

**Construction:**

TBD

## Project Cost Range:

(Environmental Phase Estimates)

**Engineering:**

$47.5 - $51 million

**Right-of-Way:**

$0

**Construction:**

$371 - $392.5 million

**Total Project Cost:**

$418.5 - $443.5 million

## Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Reduce trip times
- Reduce vehicle emissions
- Reduce idling
- Improve driver comfort

## What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

## Project risks:

- Complexity in maintaining traffic staging, relocating utilities and reducing impacts to traveling public.

## Financial Fine Points(Key Assumptions):

- Funding not available until 2016-2020 per current Financial Plan.
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% is to 2029 approximate midpoint of construction.
- Funding source: Government Services Tax ($80M) and AB 595 Bonded ($240M).

**Environmental Complete** 0 50 100

**Design Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 15 South - Sloan Road Interchange

**Project Sponsor: City of Henderson**

**Senior Project Manager: Eduardo P. Miranda, P.E.**

**(775) 888-7321**

14

### Project Description:

- I-15 South Project from Sloan to Tropicana has been broken into nine (9) project elements to address funding and constructability opportunities.
- This is one element of the I-15 South Project.
- Reconstruct interchange at Sloan Road.

### Schedule:

**Planning:**
Complete
**Environmental:**
Complete
**Final Design:**
TBD
**Construction:**
TBD

### Project Cost Range:

(Environmental Phase Estimates)
**Engineering:**
$19.5 - $21 million
**Right-of-Way:**
$35 - $40 million
**Construction:**
$156.5 - $162.5 million
**Total Project Cost:**
$211 - $223.5 million

### Project Benefits:

- Interchanges on I-15 reduce congested traffic in main lines and other existing facilities.
- Connect Regional traffic
- Improve origin destination time of travel.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

### Project risks:

- Unit price and property escalation may affect project cost.

### Financial Fine Points(Key Assumptions):

- Funding not available until 2026-2030 per current Financial Plan.
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% is to 2029 approximate midpoint of construction
- Funding source: Q10 Extended ($50.6M) and STP Clark County ($65M)

**Environmental Complete** 0 50 100

**Design Complete:** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 15 South - Starr Avenue Interchange

**Project Sponsor: City of Henderson**

**Project Manager: Robert Kvam, P.E.**

**775 888-7589**

15

### Project Description:

- I-15 South Project from Sloan to Tropicana has been broken into nine (9) Project elements to address funding and constructability opportunities.
- This is one element of I-15 South Project.
- Construct new interchange at Starr Avenue

### Schedule:

**Planning:**
Complete
**Environmental:**
Complete
**Final Design:**
2010-2013
**Construction:**
TBD

### Project Cost Range:

(Environmental Phase Estimates)
**Preliminary Engineering:**
$10 - $11 million
**Right-of-Way:**
$46 - $51 million
**Construction:**
$78 - $83 million
**Total Project Cost:**
$134 - $145 million

### Project Benefits:

- Improve access to I-15 with new interchange
- Connect east-west regional traffic from Las Vegas Blvd to Dean Martin Drive
- Improve origin destination time of travel.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

### Project risks:

- Land valuation of property
- Right of Way costs and procedures with condemnation
- Material and labor costs with escalation will affect project cost
- West Henderson development activity

### Financial Fine Points(Key Assumptions):

- Total funding expended for Starr Interchange: $0 (see next line)
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% for 2024 approximate midpoint of construction.
- Funding Source: Q10 Extended($40.0M), STP Clark County($48M), Interstate Maintenance Discretionary($0.5M) and SAFETEA-LU Priority Projects($6.8M).

**% Environmental Complete** 0 50 100

**% Design Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 15 South Stateline to Sloan

**Project Sponsor: NDOT**

**Project Manager: Ed Miranda, P. E.**

**(702) 671-8856**

16

### Project Description:

- Improve operation efficiency, capacity and safety

### Schedule:

**Planning:**
2010 - 2012
**Environmental:**
TBD
**Final Design:**
TBD
**Construction:**
TBD

### Project Cost Range:

**Engineering:**
$10 - $12 million
**Right-of-Way:**
TBD
**Construction:**
$100 - $120 million
**Total Project Cost:**
$110 - $132 million

### Project Benefits:

- Increase capacity to accommodate projected local and interstate traffic to year 2030.
- Decrease congestion.
- Reduce travel times.
- Widening to 8 lanes will increase capacity.
- Widen several bridges and a grade separation at UPRR.
- Improve on/off ramps at Primm and Sloan Interchanges.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

### Project risks:

- Uncertainty of future construction materials and labor costs.
- Complex construction in a high volume rural area may affect schedule and costs.
- Funding uncertainty.

### Financial Fine Points(Key Assumptions):

- Total funding expended: $0
- No funding has been identified for this project.

**Planning** 0 — 50 — 100

**Updated:**
**June , 2010**

NEVADA DOT

# I 15 SOUTH PHASE 1A

**From Blue Diamond Road to Tropicana Avenue**

**Project Sponsor: NDOT**

**Asst Chief Project Management: John Terry, P.E.**

17

**(775) 888-7321**

## Project Description:

- This is the 1st Phase of the I 15 South Project, from Silverado Ranch Road To Tropicana Avenue (3.86 miles).
- Add collector-distributor lanes from Blue Diamond Road to Tropicana Avenue.
- Braid collector-distributor roads to eliminate weaves between I 215 and Tropicana Avenue.
- Construct Sunset Road Bridge over I 15 and reconstruct Warm Springs Bridge over I 15.
- Delivery and Procurement by Design-Build method.

## Schedule:

**Planning:**
Complete

**Environmental:**
Complete 2009

**Final Design:**
2009 - 2010

**Construction:**
2009 - 2012

## Project Cost Range:

**Engineering:**
$11 - 12 million

**Right-of-Way:**
$0

**Total Estimated Project Cost:**
$290 - $294 million

## Project Benefits:

- Provide additional capacity on I 15
- Reduce operational conflicts between Blue Diamond Road, I 215, Harmon Avenue and Tropicana Avenue
- Improve east-west access across I 15
- Reduce collisions
- Improve transportation system performance

## What's Changed Since Last Update?

- Scope - No change
- Schedule: No Change
- Cost- No Change

## Project risks:

- Major Project Plan required
- New bridges over UPRR require close cooperation
- Tight Right of Way (ROW)
- Difficult schedule for Design-Build process

## Financial Fine Points(Key Assumptions):

- Total funding expended Environmental Study: $3.5 million
- Total funding expended Phase 1A: $40.9 million
- Project funding source: AB 595 (LVCVA via Bonding, Clark County and State)

**% Design Complete** 0 50 100

**% Construction Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

# I 15 Urban Resort Corridor Study

**Project Sponsor: NDOT**

**Project Manager: Cole Mortensen**

**(775) 888-7742**

18

## Project Description:

- The I-15 Urban Resort Corridor Study along I-15 from I-215 (Bruce Woodbury Beltway) to the south, to US 95 (Spaghetti Bowl) to the north.
- Enhance access and mobility within the resort corridor; develop a phased implementation strategy for future improvements to I-15 in the resort corridor area in addition to currently planned improvements.
- Prepare an early action plan for near-term improvements to enhance mobility and operations.

## Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Estimated start 2011 - 2012

**Final Design:**

TBD

**Construction:**

TBD

## Project Cost Range:

**Engineering:**

TBD

**Right-of-Way:**

TBD

**Construction:**

TBD

**Total Project Cost:**

TBD

## Project Benefits:

- Improve capacity, operations, safety, access and mobility.
- Meet stakeholders/public expectations.
- Improve quality of life.
- Support economic development.
- Reduce trip times.

## What's Changed Since Last Update?

- Scope - No Change
- Schedule - Planning complete
- Cost - No Change

## Project risks:

- Consensus building among the resort owners.
- Funding uncertainty.
- Economic development along the corridor could require design changes affecting scope, schedule and budget.

## Financial Fine Points(Key Assumptions):

- Total funding expended: $787,000

**Planning complete** 0 50 100

**Design complete** 0 50 100

**Updated:**
**June , 2010**

# I 15 West Mesquite Interchange Reconstruction Design-Build

**Project Sponsor: City of Mesquite**

**Project Manager: Adam T. Searcy, P.E.**

**(775) 888-7597**

19

## Project Description:

- Reconstruct exisitng interchange
- Widen Falcon Ridge Parkway to 6 lanes
- Extend Falcon Ridge Parkway to the south

## Schedule:

**Planning:**
Complete
**Environmental:**
Complete 2010
**Final Design:**
2010 - 2011
**Construction:**
2011-2012

## Project Cost Range:

(Environmental Phase)
**Engineering:**
$1 - $2 Million
**Right of Way:**
N/A
**Construction:**
$20 - $25 Million

## Project Benefits:

- Allows Falcon Ridge Parkway to be widened under I-15
- Improves interchange operations
- Improve safety

## What's Changed Since Last Update?

- Scope: No Change
- Schedule: No Change
- Budget: No Change

## Project risks:

- Funding is still not fully secured
- Right-of-way is being donated by the City of Mesquite

## Financial Fine Points(Key Assumptions):

- City and/or developer funding for Construction
- NDOT will dontate preliminary and construction engineering
- City is seeking funding from Southern Nevada RTC

**Environmental** 0 50 100

**Preliminary Design** 0 50 100

**Updated:**
**June , 2010**

# I 515 Freeway Improvements

**I 15 to Horizon Drive**

**Project Sponsor: NDOT**

**Senior Project Manager: Ed Miranda, P.E.**

20

**(702) 671-8856**

## Project Description:

- I 515 from I 15 to Horizon Drive - Improve operational efficiency, capacity and safety.
- Reconstruct the Downtown Las Vegas viaduct
- Construct new interchanges at "City Parkway", Pecos Road and Sahara Avenue.
- Construct Bonanza Road overcrossing of Las Vegas Boulevard.
- Realign Stewart Avenue and Sahara Avenue.
- Reconstruct and expand Pedestrian & Bicycle Facilities.

## Schedule:

**Planning:**

Complete

**Environmental Clearance:**

2011-2012

**Final Design:**

TBD

**Construction:**

TBD

## Project Cost Range:

**(Planning phase estimates):**

**Engineering:**

$ 79 million - $115 million

**Right-of-Way:**

$356 million - $448 million

**Construction:**

$1,046 million - $1,451 million

**Total Project Costs:**

$1,481 million - $2,014 million

## Project Benefits:

- Increase traffic volumes at acceptable operating speeds.
- Provides additional interchanges on I-515 to reduce traffic at congested interchanges.
- Reduces operational conflicts at ramps.
- Reduces collisions.
- Improves transportation system performance.

## What's Changed Since Last Update?

- Scope - No change
- Schedule - Environmental Study delayed to 2011-2012
- Cost - No Change

## Project risks:

- Environmental process under development - project scope, schedule and cost at a planning level
- Complex right-of-way/relocation and utilities issues

## Financial Fine Points(Key Assumptions):

- Total funding expended: $7,480,000
- Inflation escalation (4%) is to 2015 in CLV and 2026 for remainder of project
- Funding for projects: NHS - $4 million; Government Service Taxes $1.79 billion (I-15 to Charleston), and NDOT Bonded fund $1.39 billion.

**% Environmental Complete** 0 50 100

**Updated:**
**June , 2010**

## US 93 / US 95 - Boulder City Bypass Phase 1

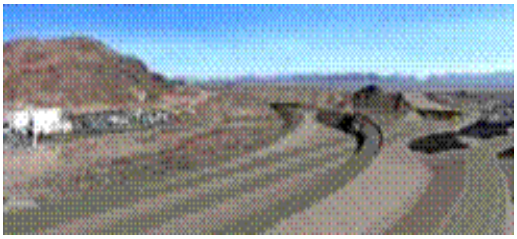
**Foothill Drive to US 95**

**Project Sponsor: NDOT**

**Senior Project Manager : Tony Lorenzi, P.E.**

21

**(775) 888-7317**



### Project Description:

- Realignment of US 93 / US 95 to create an access controlled facility from Foothill Drive to US 95.
- One new diamond interchange and one new half interchange along with one Frontage Road will be constructed.
- Direct Connector Ramps from the new facility to and from US 93 will be constructed.
- Direct Connector Ramps from US 95 to the new facility will be constructed.
- Existing access will be perpetuated.
- Project length: 3 miles.

### Schedule:

**Planning:**

Completed

**Environmental Clearance:**

Completed

**Final Design:**

2012 - 2013

**Construction:**

TBD

### Project Cost Range:

(Final Design Phase Estimates)

**Engineering:**

$5 - $8 million

**Right-of-Way:**

$40 - $50 million

**Construction:**

$128 - $156 million

**Total Project Cost:**

$173 - $214 million

### Project Benefits:

- Improves safety by eliminating a signal at US 93 and Railroad Pass Casino.
- Improves operations for Trucks from US 95 to US 93.
- Improves operations for peak trips from Boulder City to Las Vegas.
- Improves local circulation.
- Completes initial bypass phase.

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - Cost range changed based on new engineering estimate.

### Project risks:

- Concurrent utility relocations may affect schedule.
- Unit price and property escalation may affect project cost.
- Construction is not funded
- Resource conflict with other on-going projects.

### Financial Fine Points(Key Assumptions):

- Total funding Expended (Engineering & Right-of-Way): $3,330,785
- Total funding Expended for BC Bypass Environmental studies (all phases): $5,199,679
- Inflation escalation (4%) is to 2013 approximate midpoint of construction
- Additional Federal, State, Local, and Regional Funding will be required

**% Design Complete** 0 50 100

**% Row Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 515 / US 93 / US 95 - Boulder City Bypass Phase 2

**US 95 to Hoover Dam Bypass**

**Project Sponsor: NDOT**

**Senior Project Manager: Tony Lorenzi, P.E.**

22

**(775) 888-7317**

### Project Description:

- Provide extension of Phase I from US 95 to tie into the Hoover Dam Bypass at Nevada Interchange
- Provide limited access bypass to the south of Boulder City for US 93 traffic
- 4 lane divided highway facility
- Require several bridge structures over existing access roads and to provide wildlife access
- Project length: 12 miles

### Schedule:

**Planning:**

Completed

**Environmental Clearance:**

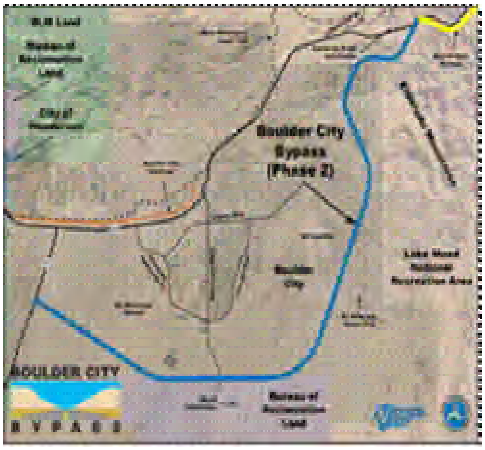
Completed

**Final Design:**

TBD

**Construction:**

TBD




### Project Cost Range:

**(Planning phase estimates):**

**Engineering:**

$15 - $30 mill.on

**Right-of-Way:**

$2 - $4 million

**Construction:**

$335 - $820 million

**Total Project Cost:**

$352 - $850 million

### Project Benefits:

- Reduce congestion of US 93 through Boulder City
- Provide additional safety to existing US 93 within Boulder City
- Decrease travel time from Las Vegas to Nevada/Arizona border

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No change

### Project risks:

- Project unfunded - may delay schedule and increase costs.
- Unit price escalation may affect project cost.
- Difficult design & construction issues in a mountainous terrain may affect cost & schedule.

### Financial Fine Points(Key Assumptions):

- Total funded Expended (Engineering & Right-of-Way): $3,071,433
- Total funding Expended for BC Bypass environmental studies (all phases): $5,199,679
- Inflation escalation (4%) is to 2027 approximate midpoint of construction.
- Additional Federal, State, Local and Regional Funding will be required.

**% Design Complete** 0 50 100

**% ROW Complete** 0 50 100

**Updated:**
**June , 2010**

## US 93 Hoover Dam

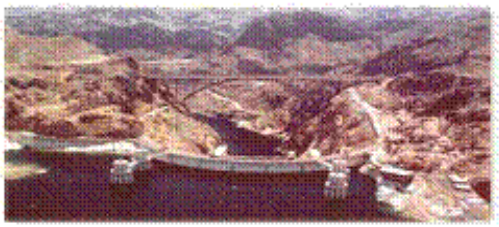
**Project Sponsor: FHWA / CFLHD**

**CFLHD Project Manager: F. Dave Zanetell, P. E.**

**NDOT Senior Project Manager: Tony Lorenzi**

**23**

**(775) 888-7321**



### Project Description:

- Realignment of US 93 to create a highway bypass around Hoover Dam tying into existing US 93.
- One new diamond interchange at AZ end of project and one new 3/4 diamond interchange at NV end will be constructed.
- Long-span bridge crossing the Colorado River approximately 1500 feet south of Hoover Dam.
- Pedestrian plaza and parking area constructed with access to the newly named Hoover Dam Access Road.
- Project Length: 2.38 miles.

### Schedule:

**Planning:**

Complete

**Environmental Clearance :**

Complete

**Final Design :**

Complete

**Construction :**

Complete 4th quarter 2010

### Project Cost Range:

**(Final design phase estimates):**

**Engineering:**

$23 - $24 million

**Right-of-Way:**

No Cost

**Construction:**

$215 - $216 million

**Total Project Cost:**

$240 million

### Project Benefits:

- Improves Safety by removing trucks and through-traffic from Dam with tourists.
- Improves Operations for Trucks on US 93, tourists on Hoover Dam.
- Improves Operations for trips from Phoenix to Las Vegas.
- Improves Hoover Dam facility, worker and visitor operations.
- Protects waters of the Colorado River.

### What's Changed Since Last Update?

- Scope - No changes
- Schedule - No change
- Cost - No change

### Project risks:

- Unit price escalation for final surfacing project (mitigated due to interim surfacing).
-

### Financial Fine Points(Key Assumptions):

- Total NDOT funding Expended: $46,000,000
- Project remains on original $240 M program
- Working with NPS and BOR to develop and complete pedestrian trail and parking facility. $2.1 M external secured for this through application to SNLPA
- Total NDOT Funds - $50,766,250

**Design Complete** 0 50 100

**% Construction Complete** 0 50 100

**Updated:**
**June , 2010**

## US 95 Northwest - Phase 1 Rainbow Boulevard (SR 595) to Ann Road

**Contract 3409**

**Project Sponsor: NDOT**

**Project Manager: Jenica Finnerty, PE**

24

**(775) 888-7321**

### Project Description:

- This is the first phase of the US 95 Northwest Project that extends from Washington Avenue to Kyle Canyon Road.
- Alleviate congestion within the corridor by increasing capacity.
- Provide new and improved freeway connections to improve regional connectivity, consistent with land use planning
- Project length: 6.02 miles

### Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

Complete

**Advertise:**

Complete

**Construction:**

Begin August 2010;

Complete 2012

### Project Cost Range:

**(Construction Phase Estimates):**

**Engineering:**

$3.5 million

**Right-of-Way:**

$0.1 million

**Construction:**

$73 - $77 million

**Total Project Cost:**

$76.6 - $80.6 million

### Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Meet stakeholder/public expectations
- Reduce trip times
- Reduce vehicle emissions
- Reduce idling
- Beautify corridor
- Improve driver comfort

### What's Changed Since Last Update?

- Scope - No change
- Schedule - Design completed; Construction start added
- Cost - Final engineering totals provided and contract bid amount lower than anticipated

### Project risks:

- Change in site conditions
- Contractor delays

### Financial Fine Points(Key Assumptions):

- Total funding Expended for Phase 1: $4 million
- Total funding Expended for US 95 Northwest Environmental Studies (all phases): $5 million
- Funding source:
- *$60 million AB 595
- *$42.5 million Federal
- *$2.3 million State

**% Construction Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## US 95 Northwest - Phase 2 Ann Road to Kyle Canyon Road (SR 157)

**Project Sponsor: NDOT**

**Project Manager: Cole Mortensen, P.E.**

**25**

**(775) 888-7321**

### Project Description:

- This is the second phase of the US 95 Northwest Project that extends from Washington Avenue to Kyle Canyon Road
- Alleviate congestion within the corridor by increasing capacity
- Provide new and improved freeway connections to improve regional connectivity, consistent with land use planning
- Project length: 5.55 miles

### Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

Start 2009-2012

**Construction:**

TBD

### Project Cost Range:

**(Environmental Phase Estimates):**

**Engineering:**

$5.5 - $6.5 million

**Right-of-Way:**

$12.5 - $14 million

**Construction:**

$169 - $194.5 million

**Total Project Cost:**

$187 - $215 million

### Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Meet stakeholder/public expectations
- Reduce trip times
- Reduce vehicle emissions
- Reduce idling
- Beautify corridor
- Improve driver comfort

### What's Changed Since Last Update?

- Scope - No change
- Schedule - Extended to account for Design revisions to accomodate local access.
- Cost - No change

### Project risks:

- Unit price escalation may affect project cost
- Complex design issues may impact schedule and scope
- Complex right-of-way and utilities issues may impact schedule and cost

### Financial Fine Points(Key Assumptions):

- Total funding Expended for Phase 2: $0 (Design phase not yet started)
- Total funding Expended for US 95 Northwest Environmental Studies (all phases): $5 million
- Inflation escalation (4%) to midpoint of construction in 2015
- Funding source:
- *$230 million AB 595 - full funding not available until 2026
- *$40 million State

**% Design Complete** 0 50 100

**% ROW Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## US 95 Northwest - Phase 3 Clark County 215 Interchange

**Project Sponsor: NDOT and Clark County**

**Senior Project Manager: Cole Mortensen, P. E.**

**(775) 888-7742**

**26**

### Project Description:

- This is the third phase of the US 95 Northwest project that extends from Washington Ave to Kyle Canyon Rd
- Alleviate congestion within the corridor by increasing capacity
- Provide new and improved freeway connections to improve regional connectivity, consistent with land use planning
- Construct new interchange at CC 215

### Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

2009 - 2011

**Construction:**

TBD

### Project Cost Range:

**(Final Design Phase Estimates):**

**Engineering:**

$13.6 - $14.3 million

**Right-of-Way:**

$0 - $0.4 Million

**Construction:**

$219 - $276 million

**Total Project Cost:**

$233 - $290 million

### Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Meet stakeholder/public expectations
- Reduce trip times
- Reduce vehicle emissions
- Reduce idling
- Beautify corridor
- Improve driver comfort

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No Change

### Project risks:

- Unit price escalation may affect project cost
- Complex design issues may impact schedule and scope
- Designing Ann Road on ramp/off ramp to function under projected traffic volumes.

### Financial Fine Points(Key Assumptions):

- Total funding Expended for Phase 3: $407,000
- Total funding Expended for US 95 Northwest Environmental Studies (all phases): $5 million
- Inflation escalation (4%) to midpoint of construction in 2012
- Funding source:
- *$14.7 million State
- *$216 million Local
- *$3 - $60 million unidentified

**% Design Complete** 0 50 100

**% ROW Complete** 0 50 100

**Updated:**
**July , 2010**

NEVADA DOT

## US 95 Northwest - Phase 4 Horse Interchange

**Project Sponsor: City of Las Vegas and NDOT**

**City Project Manager: Randy McConnell, P.E.**

**NDOT Project Manager: Bill Glaser, P.E.**

27

**(775) 888-7603**

### Project Description:

- This is the fourth phase of the US 95 Northwest Project that extends from WashingtonAve to Kyle Canyon Road.
- Construct a new interchange on US 95 at Horse Drive to increase capacity and improve safety in response to recent and planned development

### Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

Complete

**Construction:**

Complete 4th qtr. 2010

### Project Cost Range:

**(Final Design Phase Estimates):**

**Engineering:**

$ 3 million

**Right-of-Way:**

$13 million

**Construction:**

$40 - $50 million

**Total Project Cost:**

$56 - $66 million

### Project Benefits:

- Increase capacity
- Improve safety
- Meet stakeholder/public expectations
- Reduce trip times
- Improve driver comfort
- Improve access

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - Cost range reduced to reflect bid prices.

### Project risks:

- Complex construction in a dense urban residential area

### Financial Fine Points(Key Assumptions):

- Total funding Expended by City of Las Vegas for Phase 4: $43.6 million ($11.3 M ROW; $.3 M In-house engineering; $2.4 M Consultant Engineering; $29.6 M Construction) NDOT costs to date $19.1 Million
- Total funding Expended for US 95 Northwest environmental studies (all phases): $5 million
- $4.1 million Federal SAFTEA-LU funds
- $21 million RTC Clark County STP
- $48 million City of Las Vegas

**% Construction Complete** 0 50 100

**Updated:**
**July , 2010**

## US 95 Northwest - Phase 5 Kyle Canyon Road Interchange

**Project Sponsor: City of Las Vegas and NDOT**

**Senior Project Manager: Jenica K. Finnerty, P.E.**

**(775) 888-7321**

28

### Project Description:

- This is the fifth phase of the US 95 Northwest Project that extends from Washington Ave to Kyle Canyon Road.
- Alleviate congestion within the corridor by increasing capacity.
- Provide new and improved freeway connections to improve regional connectivity, consistent with land use planning.
- Construct new interchange at Kyle Canyon Road.

### Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

Start 2011 - 2013

**Construction:**

TBD

### Project Cost Range:

**Engineering:**

$2.5 - $3 million

**Right-of-Way:**

$1 - $1.5 million

**Construction:**

$32 - $36.5 million

**Total Project Cost:**

$35.5 - $41 million

### Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Meet stakeholder/public expectations
- Reduce trip times
- Reduce vehicle emissions
- Reduce idling
- Beautify corridor
- Improve driver comfort

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - Changed by CER 11/08

### Project risks:

- Unit price escalation may affect project cost
- Complex design issues may impact schedule and scope

### Financial Fine Points(Key Assumptions):

- Total funding Expended for Phase 5: $0 (Design phase not started)
- Total funding Expended for US 95 Northwest Environmental Studies (all phases): $5 M
- Inflation escalation (4%) to midpoint of Construction in 2027
- Funding source:
- *11 million Federal
- *$0.5 million State
- *$6.5 million Local
- *$18.5 million Private

**Design complete** 0 50 100

**ROW complete** 0 50 100

**Updated:**
**June , 2010**

## I 215 / Airport Connector Interchange Phase 1

**Las Vegas Boulevard to Windmill Lane**

**Project Sponsor: Clark County and NDOT**

**Project Manager: John Terry, P.E.**

**(702) 671-6601**

29

### Project Description:

- Project EA 73224. Phase 1 Broken Out from a Larger ($150 Million) Project
- I-215 Median Widening
- Construction of the East Bound I-215 Improvements between Warm Springs and Windmill Lane
- One-Inch Rubberized Asphalt Overlay

### Schedule:

**Planning:**
Complete

**Environmental Phase:**
Complete

**Final Design:**
Start 2010 -2014

**Construction:**
Start 2013 - 2015

### Project Cost Range:

**Engineering:**
$3.0 - $4.0 million (CCPW)

**Right of Way:**
$0.5 - $1.0 million

**Construction:**
$33.0 - $40 million

**Total Project Cost:**
$36.5 - 45.0 million

### Project Benefits:

- Increase Capacity to Accommodate Projected Local and Interstate Traffic
- Decrease Congestion
- Reduce Travel Time
- Improve Freeway Operations
- Improve Safety

### What's Changed Since Last Update?

- Scope: Phase 1 Broken Out from Larger (150 million) Project
- Schedule: Phase 2 dependent on funding
- Cost: No Change

### Project risks:

- Uncertainty of Future Construction Materials and Labor Costs
- Funding uncertainty for Construction

### Financial Fine Points(Key Assumptions):

- Fund source: 95% Federal & 5% State match
- Infation Escalation (4%) is to 2015 approximate midpoint of construction.

**Design** 0 — 50 — 100

**Updated:**
**July , 2010**

NEVADA DOT

# I 215 Beltway - Charleston Blvd to Summerlin Parkway

**Summerlin Parkway Interchange**

**Project Sponsor: Clark County Public Works**

**Project Manager: Roy Davis, P.E.**

**NDOT Project Manager: James Ragan, P.E.**

30

**(702) 671-8854**

## Project Description:

- Construct a portion of a system to system interchange at Summerlin Parkway.
- Construct approximately 1.4 miles of four lane access controlled freeway and widen 1.2 miles of freeway.
- Construct Interchange at Far Hills.
- Construct bridge structures at Summerlin Parkway Interchange.
- Construct drainage improvements including channel, box culverts and storm drain.
- Construct soundwalls in selected locations.

## Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

Complete

**Construction:**

Complete

## Project Cost Range:

**Engineering:**

$7 million

**Right-of-Way:**

$0

**Construction:**

$56,980,000

**Total Project Cost:**

$63,980,000

## Project Benefits:

- Provides through lane connections on the Beltway mainlines north and south of Summerlin Parkway Interchange.
- Reduces traffic congestion at the Beltway/Summerlin Parkway junction.
- Improves efficiency of traffic patterns for interchange movements.
- Improves on-system drainage by increasing efficiency of drainage system.
- Mitigates fraffic noise levels in warranted locations.

## What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change

## Project risks:

- None

## Financial Fine Points(Key Assumptions):

- Total funding expended: $56,978,099
- Bid Awarded April 15, 2008: $56,978,099
- Funding Source is Clark County

**% Design Complete** 0 50 100

**% Construction Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## SR 160, Pahrump Valley Road,

**from Red Rock Canyon Road (SR 159) to Mountain Springs**

**Project Sponsor: NDOT**

**Project Manager: Adam T. Searcy, P.E.**

31

**(702) 671.8864**

### Project Description:

- Widen SR 160 to increase capacity and improve safety in response to recent and planned development.
- Project length: 10.96 miles

### Schedule:

**Planning:**

2007 - 2008

**Environmental Clearance:**

2010 - 2012

**Final Design:**

2010 - 2013

**Construction:**

TBD

### Project Cost Range:

**Engineering:**

$2.5 - $3.5 million

**Right-of-Way:**

$2 - $3 million

**Construction:**

$63 - $91 million

**Total Project Cost:**

$66 - $96 million

### Project Benefits:

- Increase capacity.
- Improve safety.
- Meet stakeholder/public expectations.
- Reduce trip times.
- Improve driver comfort.

### What's Changed Since Last Update?

- Scope - No change
- Schedule - Delays due to internal turnover and funding reallocations
- Cost - No change

### Project risks:

- Environmental process under development - project scope, schedule & cost not fully defined.
- Complex Right-of-Way issues may impact schedule and cost.
- Environmental mitigation may affect schedule and cost.
- Extreme drainage and potentially geotechnical issues in mountainous areas

### Financial Fine Points(Key Assumptions):

- Total funding Expended: $70K
- Funding sources:
- * $1.5 million Federal (Earmark) - NO LONGER AVAILABLE
- * $1 million State (STP Clark)
- * $1 million State (STP Statewide)
- * $63 - $93 million in construction funding - unidentified source

**Environmental Clearance - NEPA** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## I 580 Freeway Extension

**Project Sponsor - Nevada Department of Transportation**

**NDOT Project Manager - Tony Lorenzi, P.E.**

**32**

**Phone: (775) 888-7317**

### Project Description:

- 8.5 Miles of new 6-lane controlled access freeway
- Complete Mt. Rose Interchange (SR431) and construct a new interchange at Bowers Mansion Road (SR 429)
- Construct two grade separations and five bridges
- Construct Kelly Canyon Road (frontage road) and Parker Ranch Road to maintain local access at south end of project
- Ten water quality basins for treating storm water runoff

### Schedule:

**Planning:**

Completed

**Environmental Clearance:**

Completed

**Final Design:**

Completed

**Construction:**

Complete 4th quarter 2012

### Project Cost Range:

**Engineering:**

$31 M

**Right-of-Way:**

$51 M

**Construction:**

$500 M to $575 M

**Estimated Total Project Costs:**

$582 M to $657 M

### Project Benefits:

- Construction will result in 27 miles of uninterrupted controlled access facility that meets interstate standards
- Will serve as the primary interstate highway for transportation linking Mexico with Canada and a major local arterial
- Will provide only all weather route connection between Carson City and Reno, Sparks & I 80
- Completion will alleviate congestion and explosive growth of over 61,700 vehicles per day predicted to travel in North Carson on I 580/US 395
- Projected to reduce the over 2,570 accidents and 16 fatalities that occurred in a 10 year span within similar limits

### What's Changed Since Last Update?

- Scope - No change.
- Schedule - No change
- Cost - No change

### Project risks:

- Complex construction in a rural mountainous freeway setting (High)
- Construction in geothermally altered earth (Medium)
- Delays due to weather/temperatures (Low)

### Financial Fine Points(Key Assumptions):

- Total Funding Expended - $382,500,000
- Engineering - $33,400,000
- Right-of-Way - $50,100,000
- Construction - $299,000,000
- Bond Funds
- Inflation escalation (4%) is to 2009 approximate midpoint of construction

**% Construction Complete** 0 50 100

**Updated:**
**June , 2010**

# I 580 at Meadowood Mall Way

**Project Sponsors: Washoe County Regional Transportation Commission and Nevada Department of Transportation**

**Washoe RTC Project Manager: Michele Dennis, P.E.**

**Phone: (775) 335-1861**

**NDOT Project Manager: Adam T. Searcy, P.E.**

**33**

**(702) 671-8864**

## Project Description:

- Construct grade separation at I 580 and Meadowood Mall Way.
- Extend Meadowood Mall Way from S. Virginia Street to Kietzke Lane.
- Add I 580 southbound off- and northbound on-ramps at Meadowood Mall Way.
- Add frontage roads between Neil Road and Meadowood Mall Way.

## Schedule:

**Planning:**

Completed

**Environmental Clearance:**

Completed

**Final Design:**

Completed

**Construction:**

Start June 2010 - complete, 2nd quarter 2012

## Project Cost Range:

**(Design phase estimates):**

**Engineering:**

$7 million

**Right-of-Way:**

$5 million

**Construction:**

$22 - $24 million

**Total Project Cost:**

$34 - $36 million

## Project Benefits:

- Accommodate present and future traffic demand entering and exiting I 580.
- Reduce traffic volumes at the on- and off-ramps in the project area.
- Improve the levels of service (LOS) at several key intersections in the project area.
- Provide additional Freeway access to reduce the volume of traffic using the south Virginia Street ramps.
- Reduce traffic at the intersection of South McCarran Blvd./South Virginia Street.
- Improve traffic circulation on arterial streets in the area.

## What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - Reduced to reflect low bids

## Project risks:

- Complex construction in an urban/retail commercial area.
- Complexity in maintaining traffic, and reducing impacts to retail businesses.
- Simultaneous construction adminstered by RTC in project limits.

## Financial Fine Points(Key Assumptions):

- Total NDOT funding: $158,600
- $31.8 M - Federal Funds

**Construction** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

# I 80 From Robb Drive to Vista Boulevard - Design Build

**Project Sponsor: NDOT**

**Senior Project Manager: Jim Gallegos, P.E.**

34

**(775) 888-7320**

## Project Description:

- This is an early action project, part of I-80 Robb Drive to Vista Blvd.
- Replace the concrete pavement between Keytone Avenue and 4th Street - this pavement is beyond repair
- Install a fiber optic trunk line and Intelligent Transportation System (ITS) Infrastructure.
- Construct operational improvements at various locations
- Procurement & Delivery will be by the Design Build method

## Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete by 3rd quarter 2010

**Final Design:**

Complete in 2011

**Construction:**

2011 - 2013

## Project Cost Range:

**Engineering:**

$3-$5 million

**Right-of-Way:**

$1 - $2 million

**Construction:**

$36 - $73 million

**Total Project Cost:**

$40 - $80

## Project Benefits:

- Improve the riding surface by replacing the existing concrete pavement
- Enhance traffic safety with improved striping & signing
- Improve traffic operations throughout the corridor
- Reduce emergency response time for traffic incidents

## What's Changed Since Last Update?

- Scope - Initial Report
- Schedule - Initial Report
- Budget - Initial Report

## Project risks:

- The availability of funding could impact the project scope
- Proposed traffic management strategies could encounter resistance from the project stakeholders
- Utility impacts within the project limits could affect the schedule

## Financial Fine Points(Key Assumptions):

- Total funding expended: $750,000
- Funding source: Federal, State & Local Funds

**% Procurement Complete** 0 50 100

**Updated:**
**July , 2010**

NEVADA DOT

## I 80 Robb to Vista

**Project Sponsor: NDOT**

**Project Manager: Jim Gallegos**

**(775) 888-7597**

35

Robb to Vista I-80 Keeping Reno/Sparks Moving

### Project Description:

- Make operational and capacity improvements to I-80 from Robb Drive to Vista Blvd.
- Make operational and capcity improvements to the I-80/I-580 interchange (Spaghetti Bowl)
- Phase II scoping will commence ofter completion of the I-80 Robb to Vista design/build project completed.
- Project Length: 10.4 miles

### Schedule:

**Planning:**

2008 - 2011

**Environmental Clearance:**

TBD

**Final Design:**

TBD

**Construction:**

TBD

### Project Cost Range:

(Planning Phase Estimates)

**Engineering:**

$85 - $105 million

**Right-of-Way:**

$95 - $125 million

**Construction:**

$900 - $1.1 billion

**Total Project Cost:**

$1.08 billion - $1.33 billion

### Project Benefits:

- Improve operations and capacity along I-80.
- Improve safety
- Provide better connectivity between I-80 and I-580/US 395.
- Accommodate future projected traffic.

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No change

### Project risks:

- Limited Right-of-Way
- Phase II and beyond unfunded- delay in identifying needed funds will affect schedule and increase costs.
- Environmental process not started - Project cost, scope and schedule may be impacted.
- Resources may need to be reallocated to higher priority projects - project cost, scope and schedule may be impacted.

### Financial Fine Points(Key Assumptions):

- Total Funding Expended by NDOT: $140, 000
- Inflation escalation (4%) is to 2020 approximate midpoint of construction
- Additional Federal, State, and local funding will/may be required

**Planning Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

## SR 445 Pyramid Highway Improvements

**Project Sponsor: Washoe County RTC and NDOT**

**Washoe RTC Project Manager: Doug Maloy, P.E.**

**NDOT Project Manager: Phil Slagel, P.E.**

36

**Phone: (775) 888-7318**

### Project Description:

- Calle de la Plato to La Pasada- Transition from 4 Lane Arterial to 6 lane freeway
- La Pasada to Sparks Blvd. - Develop Pyramid alignment into 6 lane freeway with frontage roads.
- Continue 6 lane freeway from Sparks Blvd. to Dics Dr. either on the Pyramid alignment with frontage roads or on a separate alignment to the west.
- Extend 6 lane freeway through Sun Valley to US-395
- Widen and improve Pyramid highway from Disc Dr. to Queen Way
- Widen and extend Disc Dr. to Vista Blvd.

### Schedule:

**Planning:**

Completed

**Environmental Clearance:**

2010 - 2012

**Final Design:**

TBD

**Construction:**

TBD

### Project Cost Range:

(Planning phase estimates)

**Engineering:**

$40M - $60M

**Right-of-Way:**

$100M - $150M

**Construction:**

$410M - $660M

**Total Project Costs:**

$550M - $870M

### Project Benefits:

- Address congestion and safety along the Pyramid Highway and McCarran Blvd. Corridors
- Provide alternative access to freeway system
- Improve safety

### What's Changed Since Last Update?

- Scope - No change.
- Schedule - Environmental Clearance will extend to 2012 due to additional effort required to clarify alternatives analysis
- Cost - No change.

### Project risks:

- Construction in a dense urban residential area (High)
- Funding resources for all phases not identified (High)

### Financial Fine Points(Key Assumptions):

- Total NDOT Funding Expended - $1,438,000
- Inflation escalation (4%) is to 2017 approximate midpoint of construction

**% Environmental Complete** 0 50 100

**% Design Complete** 0 50 100

**Updated:**
**June , 2010**

## US 395 Carson City Freeway Phase 2B (Package 1)

**Clearview Drive to Fairview Drive**

**Project Sponsor: NDOT**

**Project Manager: Jim Gallegos, P. E.**

37 **(775) 888-7320**

### Project Description:

- Phase 2B is divided into two packages. This is the first package.
- Construct the Clearview Drive & Koontz Lane Bridge Structures & Edmonds Flood Control Channel
- Relocate major utilities within this area of the corridor in advance of the construction contract.
- Close Valley View Drive & Colorado Street at the freeway right-of-way limits.
- Project length: 1.51 miles

### Schedule:

**Planning:**
Complete

**Environmental Clearance:**
Complete

**Design:**
Complete

**Construction:**
Start 2nd quarter 2010 - Complete 2nd quarter 2012

### Project Cost Range:

(Final Design phase estimates)

**Engineering:**
$0.4 - $0.5 million

**Right-of-Way:**
$1 - $1.5 million

**Construction:**
$10 - $12 million

**Total Project Cost:**
$11.4 - $14 million

### Project Benefits:

- Advance the construction of the project towards completion of the entire route.
- Provide flood control & protection for the community west of the freeway corridor.
- Relocation of the existing utilities will clear the way for future construction contracts.

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No Change
- Cost - No change

### Project risks:

- Concurrent utility relocation will be required and could delay other construction activities.
- Public acceptance of traffic management, dust and noise during construction.

### Financial Fine Points(Key Assumptions):

- Total funding expended: $1.5 million
- Inflation escalation (4%) is to 2011, approximate midpoint of construction.
- Funding - Federal STP Statewide

**Construction** 0 50 100

**Updated:**
**July , 2010**

NEVADA DOT

## US 395 Carson City Freeway Phase 2B

**South Carson Street to Fairview Drive**

**Project Sponsor: NDOT**

**Project Manager: Jim Gallegos, P. E.**

**38** **(775) 888-7320**

### Project Description:

- This project will be delivered in two packages. Refer to Phase 2B-Package 1 report.
- Construct 3 miles of 4 lane access controlled Freeway which will complete the nine mile system around the state Capitol.
- Complete the interchange at Fairview Drive - providing full traffic movements.
- Construct the Snyder Avenue grade separation.
- Construct the South Carson Street Interchange.
- Construct over four miles of sound walls to mitigate traffic noise.
- Construct flood control facilities including detention basins, channels, box culverts, and the Freeway drainage system.
- Project length: 3.37 miles.

### Schedule:

**Planning:**

Complete

**Environmental Clearance:**

Complete

**Final Design:**

TBD

**Construction:**

TBD

### Project Cost Range:

**(Final design phase estimates):**

**Engineering:**

$7 - $8 million

**Right-of-Way:**

$30 - $32 million

**Construction:**

$100 - $150 million

**Total Project Cost:**

$137 - $190 million

### Project Benefits:

- Relieve traffic congestion on Carson Street through Carson City and local streets along the freeway corridor.
- Reduce travel times through the region.
- Provide flood control protection.
- Improve opportunities for economic development along the corridor and downtown.

### What's Changed Since Last Update?

- Scope - Koontz & Clearview Bridges are under construction in a separate phase (Phase 2B-1)
- Schedule - No change
- Cost - No change

### Project risks:

- Project completion date will depend on the availability of funds.
- Concurrent utility relocation will be required.
- Changes in design standards could affect schedule and budget.
- New development along the corridor.

### Financial Fine Points(Key Assumptions):

- Total funding expended: $31 million
- Inflation escalation (4%) is to 2013, approximate midpoint of construction.
- Construction funds have not been identified for this project.

**% Design Complete** 0 50 100

**% ROW Complete** 0 50 100

**Updated:**
**July , 2010**

NEVADA DOT

## US 395 North - McCarran Blvd to Stead Blvd

**Project Sponsor: NDOT**

**Senior Project Manager: Jim Gallegos, P.E.**

**(775) 888-7320**

39

### Project Description:

- Widen US 395 to increase capacity and improve traffic operations.
- Modify interchange ramps and cross streets as necessary to improve operations.
- Widen bridge structures at Stead, Lemmon Drive, Golden Valley, UPRR, Virginia Street, Panther Valley, Parr Blvd and Clear Acre Lane if necessary.
- Perpetuate drainage features.
- Replace and install new signs.

### Schedule:

**Planning:**

2011 - 2012

**Environmental Clearance:**

Start 2012 - 2013

**Final Design:**

TBD

**Construction:**

TBD

### Project Cost Range:

(Planning Phase Estimates)

**Engineering:**

$7 - $9 million

**Right-of-Way:**

$3 - $6 million

**Construction:**

$70 - $85 million

**Total Project Cost:**

$80 - $100 million

### Project Benefits:

- Relieve heavy peak hour congestion and reduces crashes associated with congestion.
- Reduces travel time.
- Improves overall traffic operations.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - Start dates adjsuted to accommodate project funding limitations & priorities
- Cost - No Change

### Project risks:

- Environmental requirements.
- UPRR Clearance and requirements.
- Unknown Right-of-Way and utility impacts.
- Impact of new development in the region.
- Concurrent planning associated with the Pyramid Connector.

### Financial Fine Points(Key Assumptions):

- Total funding expended: $50,000
- Inflation escalation (4%) is to 2015, approximate mid-point of construction
- No funding has been identified for this project

**Planning Complete:** 0 — 50 — 100

**Updated:**
**July , 2010**

NEVADA DOT

## US 395 Northbound - Moana Lane to I-80

**Project Sponsor: NDOT**

**Senior Project Manager: Jim Gallegos, P. E.**

**(775) 888-7320**

40

### Project Description:

- Widen northbound US 395 to improve traffic operatons from the Moana Lane interchange to the I-80 interchange.
- Widen northbound bridges at Vassar, Mill, Glendale, Truckee River, Kietzke, UPRR, and 4th Street.
- Replace overhead sign structures.
- Perpetuate drainage features.
- Reconstruct northbound ramps at Mill, Glendale, Villanova & I-80.
- Project length: 2.87 miles

### Schedule:

**Planning:**
Complete

**Environmental Clearance:**
Complete

**Final Design:**
Complete

**Construction:**
Begin March 2010 - Complete 4th quarter 2011

### Project Cost Range:

**(Final Design Phase Estimates):**

**Engineering:**
$7 - $9 million

**Right-of-Way:**
$3 - $6 million

**Construction:**
$45 - $60 million

**Total Project Cost:**
$55 - $75 million

### Project Benefits:

- Relieves heavy northbound peak hour congestion and reduces crashes associated with congestion.
- Reduces northbound travel time from 16 minutes to 3 minutes in peak hour from Moana to I-80.
- Improves overall northbound traffic operations and reduces multiple weaves and lane changes at the Spaghetti Bowl interchange.

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - Cost range reduced to reflect low bids.

### Project risks:

- Unexpected design or contract document changes during construction
- Private development along the freeway alters the project design and/or construction

### Financial Fine Points(Key Assumptions):

- Total funding Expended: $14.5 million.
- Inflation escalation (4%) is to 2011, mid-point of construction.
- Washoe County RTC contributed $20 million towards the project.
- The AB 595 income stream, federal and state funds will be used to fund the rest of the project.

**Construction** 0 50 100

**Updated:**
**July , 2010**

NEVADA DOT

# APPENDICES

# APPENDIX A

# BENEFIT-COST ANALYSIS OF CAPACITY PROJECTS

The Department is required under NRS 408.3195 to conduct benefit cost analysis for larger highway capacity projects. Specifically, prior to submitting a project to the Board for approval, the Department will prepare such a written analysis for highway projects that will increase capacity on the State Highway System and cost at least $25 million. Subsequently, this analysis was done and is being reported on active projects before the Department requests the Board to approve funding for construction, including right-of-way acquisition and utility work. The Benefit-Cost (B/C) ratio calculations are being done on the larger capacity projects that are expected to be funded for construction within 10 years and, thereby, appear in the Transportation System Projects document. The policy that governs the analysis of benefits and costs, TP 1-11-1, is included at the end of the section entitled Discussion of the Calculations of Costs and Benefits.

The B/C ratios for several projects have been determined using a software package called STEAM (Surface Transportation Efficiency Analysis Model) and consultant B/C services. This package is described in the next section entitled Discussion of the Calculations of Costs and Benefits including the data requirements, and limitations of the STEAM analysis in particular and B/C ratio calculations in general.

The following table reports the B/C ratio of a total of 8 projects that are in the Transportation System Projects document. The table reports results of the analysis: net present value of B/C ratio at a 7 percent discount rate.

| Blue Ribbon Task Force Projects (FY 2008) | NPV B/C* |
|---|---|
| I-15 South Corridor – Tropicana Avenue to Sloan Road | 4.11 |
| US 95 Northwest Corridor – Rainbow Blvd to Kyle Canyon Road | 3.63 |
| I-15 North Corridor – Spaghetti Bowl to Apex | 3.39 |
| I-15 – NEON (Sahara Avenue to Spaghetti Bowl) | 1.97 |
| I-515 – Spaghetti Bowl to Foothills Road | 1.94 |

| Other Major Projects (FY 2009) | NPV B/C* |
|---|---|
| US 395 – Moanna to I-80 Northbound Add Lane | 2.34 |
| US 395 – Carson City Freeway (1996 updated in 2009) | 4.44 |

| Other Major Projects (FY 2010) | |
|---|---|
| I-80 – Design-Build - Present value cost | $79.8 million |
| I-80 – Design-Build - Present value benefit | $285.0 million |
| I-80 – Design-Build - Net present value | $205.2 million |
| I-80 – Design-Build - Benefit-cost ratio | 3.57 |

*Notes: NPV B/C – net present value of benefit/cost ratio at a 7 percent discount rate

The cost data analyzed included: accidents/crashes, fuel consumption, non-fuel vehicle operating, travel time, construction, and emissions. There are some costs that were not included, namely, transit costs (and benefits) and highway maintenance, which need consideration at times.

Other limitations to the B/C ratio that deserve consideration on many projects include 1) the cost of impacts on human communities, 2) the management of roadway assets, especially roadway preservation, 3) the impact of large capacity highway projects on system-wide congestion, 4) there are projects having an economic development benefit, but it is very difficult to quantify, and 4) the level of favorable public opinion toward a project. These limitations are discussed in detail in Appendix E.

In summary, when determining the priority of large capacity projects, the Department will work with and encourage the Regional Transportation Commissions and other Metropolitan Planning Organizations to consider community impacts, roadway preservation, system congestion, and public acceptance in addition to the B/C Ratio.

# DISCUSSION OF THE CALCULATIONS OF COSTS AND BENEFITS

## INTRODUCTION

The determination of the benefit and costs has received considerable use for many decades. The process was first proposed by a French engineer by the name of Dupuit in 1844. The method provides an analysis framework whereby many benefits and costs are quantified. It has become a widely used tool and enables the decision-making process of ranking projects to become more transparent. For the private sector it is a tool to guide private investment and has been certainly been helpful to assist assessing the cost effectiveness of public projects. For the private sector, normally economic efficiency is the primary objective, but the public sector needs to consider economic equity as well. As the social and environmental factor became important, the economic analysis of projects came more complex and, therefore, more difficult.

The application of the B/C ratio calculations for this Annual Report compares each proposed project with a set of factors that are converted to monetary values. This appendix discusses the input data needed to conduct a B/C ratio calculation, which includes; travel time benefits, crash benefits, motor vehicle emissions and cost benefits, vehicle operating cost benefits, capital cost. In addition, the results of the analyses are presented as well as limitation with the B/C analysis.

## INPUT

Travel Time Benefits

Highway speeds and volumes came from the Regional Transportation Commissions and Metropolitan Planning Organizations regional travel demand models. For the value of travel time, the personal travel was 50% of local median wage while business travel by truck/bus drivers was 100% of the mean wage for these occupations plus fringe benefits. The wage value in Clark County came from the Nevada Department of Employment, Training, and Rehabilitation, which was $16.60 in 2005. The state reported a wage of $18.61 for heavy equipment and large truck operators. A 50% fringe was used because it was an average of several labor groups. The same data were obtained for Carson City/Douglass County and Washoe County, and identical calculations were performed. Vehicle occupancy was based in household surveys, census data and travel demand output.

**Table E-1 Travel Cost and Vehicle Occupancy**

| Location | Personal Travel | Business Travel | Vehicle Occupancy |
|---|---|---|---|
| Clark County | $8.30 | $27.92 | 1.45 |
| Carson City/Douglass County | $7.55 | $24.78 | 1.43 |
| Washoe County | $8.83 | $29.25 | 1.28 |

Crash Benefits

The freeway and expressway, with controlled access, crash rates are normally lower than local streets and roads that had little or no access control. Consequently, by increasing freeway capacity more

travelers will benefit from lower accident rates. The rates are illustrated in Table E-2 which contained **2002** data from the Department.

Table E-2 Nevada Crash Rates by Highway Functional Classification (2002)

| Functional Class | PDO[1,2] | Injury[2] | Fatal[2] |
|---|---|---|---|
| Interstate unban | 220 | 85.5 | 0.66 |
| Other urban freeways/expressways | 160 | 63.0 | 0.62 |
| Urban principal arterials | 420 | 225 | 2.18 |
| Urban minor arterials | 354 | 201 | 2.27 |
| Urban collector streets | 229 | 124 | 1.16 |
| Urban local streets | 262 | 93.4 | 0.83 |

Note: [1] Property Damage Only [2] Number of crashes in 100 million vehicle miles of travel

The total cost of accident types is contained in Table E-3. These costs were derived from National Safety Council data and a study by the Urban Institute and FHWA, adjusted to 2005 dollars.

**Table E-3 Accident Cost Assumptions (2005 dollars)**

| Accident Type | Cost |
|---|---|
| Fatality | $4,251,000 |
| Injury | $95,800 |
| Property Damage Only | $7,950 |

Motor Vehicle Emissions and Cost

The rate of motor vehicle emissions and associated health cost was based on data from California and are contained in Table E-4.

**Table E-4 Vehicle Emission Health Cost Assumptions (Dollars/Ton)**

| Emission Type | Cost |
|---|---|
| Carbon monoxide | $127 |
| Fine Participates | $423,000 |
| Nitrogen oxides | $51,600 |
| Hydrocarbons | $7,410 |

Vehicle Operating Costs

The consumption of fuel was determined by the average speed and the zone to zone distances. The fuel consumption rates were based on data from 2000 California Air Resources Board and expressed as gallons per mile and is a function of speed. For the gasoline costs, 2006 data was

used. In Clark County, $2.53 per gallon was used, while $2.81 was used in Carson City/Douglas County and Washoe County. The vehicle maintenance and tire expenses were base on 2004 US Department of Energy cost data. For passenger cars, $0.061 per mile was used while $0.121 was used for trucks.

Capital Cost

The capital cost included all implementation costs, but not any maintenance and repair costs. Likewise transit service costs were not included.

# RESULTS

The results of the analysis of benefits and cost are shown below in Table E-5. The discount rate of 7% was use because of OMB (Office of Management and Budget) Circular A-94. The 7% rate "approximates the marginal pretax rate of return on an average investment in the private sector in recent years."

**Table E-5 RESULTS OF THE COST-BENEFIT ANALYSES**

| Blue Ribbon Task Force Projects (FY 2008) | NPV B/C* |
|---|---|
| I-15 South Corridor – Tropicana Avenue to Sloan Road | 4.11 |
| US 95 Northwest Corridor – Rainbow Blvd to Kyle Canyon Road | 3.63 |
| I-15 North Corridor – Spaghetti Bowl to Apex | 3.39 |
| I-15 – NEON (Sahara Avenue to Spaghetti Bowl) | 1.97 |
| I-515 – Spaghetti Bowl to Foothills Road | 1.94 |

| Other Major Projects (FY 2009) | NPV B/C* |
|---|---|
| US 395 – Moana to I-80 Northbound Add Lane | 2.34 |
| US 395 – Carson City Freeway (1996 updated in 2009) | 4.44 |

| Other Major Projects (FY 2010) | |
|---|---|
| I-80 – Design-Build - Present value cost | $79.8 million |
| I-80 – Design-Build - Present value benefit | $285.0 million |
| I-80 – Design-Build - Net present value | $205.2 million |
| I-80 – Design-Build - Benefit-cost ratio | 3.57 |

*Note: NPV B/C – net present value of benefits and costs that determine the B/C ratio at 7% discount rate

# LIMITATIONS

As stated earlier, there are some costs that were not included, namely, transit and highway maintenance, which will need consideration at times. Future B/C ratios calculations by the Department will include these items when appropriate. However, there are also other limitations to the B/C ratio calculations that deserve consideration on many projects. In general, it is difficult to convert all diverse costs and benefits into monetary values. At times funding limitations might require the selection of an alternative that does not have the highest B/C ratio, simply because there is not sufficient funding. While the B/C ratio calculation reported herein is an excellent parameter to help select projects or alternatives, it does have limitations.

One limitation deals with the project cost impact on humans; therefore, a factor, i.e. community impact, will need to be addressed. Another limitation is the management of roadway assets, which includes but also transcends the maintenance activities. This factor may be called 'roadway preservation' in which the financial impact construction has on roadway preservation is determined.

The third limitation deals with the system impact of large highway capacity projects. Correcting a significant urban freeway congestion problem at a particular site moves the primary 'bottleneck' (site of congestion) to another location. Such a project will probably have considerable benefit within the project limits, but might not provide much, if any, overall system improvement. Consequently, at least one areawide factor is needed to address the system wide impacts. One of the Department's new performance measures is: percent of daily vehicle miles of travel at Level of Service E or worse. This measure is called the 'system congestion index'.

Another limitation with a benefit-cost analysis is that many times a project will have an economic development benefit component. This economic development component is very difficult to quantify monetarily. Different items that can be considered when trying to estimate the economic development component include the number of marginal jobs that a project will enable to be created, the increase in property values along a project, the amount of new tax revenues generated for all levels of government because of the project, and the marginal increase in total Nevada gross product. Each of these items is problematic to estimate by themselves, then to try to estimate the change in these items induced because of transportation projects becomes extremely difficult. For these reasons, the economic development component is not normally considered in a typical NDOT benefit-cost analysis.

The selection of discount rates is a limitation because they are the subject of debate. Nationally, discount rates vary from zero to 7% and sometimes higher. Modeled national inflation rates fluctuate considerably as well; however, NDOT staff believes that the spread between inflation and the discount rate is the important factor. NDOT staff has modeled the discount rate from 0% to 4% higher than inflation and performed sensitivity analyses on a wider range. In most cases, the discount rate and the inflation rate have very little impact on the results of the benefit/cost analysis. The discount rate of 7% is use because of OMB (Office of Management and Budget) Circular A-94 and is applied to all benefit/cost analyses.

The final limitation is the level of favorable public opinion toward a project. If there is a negative public perception toward a particular project, even if the perception is not justified, a high priority score might not suffice for a project to proceed toward implementation. In summary, even a good project needs public support; consequently, the level of public acceptance will be documented, most likely during the NEPA process.

Once the projects have been prioritized, they must be distributed among the various funding categories, meaning that a lower priority project might be funded before a higher priority because it is in a category with much more funding. Additionally, a lower priority project might be simple and easy to design and build compared with a large scale project might have major mitigation issues. In this case, the lower priority would likely be constructed first.

# APPENDIX B

# FINAL DRAFT

Approved _____ BENEFIT/COST ANALYSIS POLICY

## PURPOSE

To establish a policy and procedures for applying Benefit/Cost Analysis during the development of highway projects. Benefit/Cost Analysis may be done for corridor studies and alternatives analysis. Additionally, analysis may be done for innovative intelligent transportation system and traffic operational improvements as well as more conventional construction and reconstruction improvements. The policy will assist the Board of Directors of the Department of Transportation (defined as 'Board' by NRS 408.033) in the selection of projects that will best serve the public.

## POLICY

It is policy of the Department of Transportation to conduct Benefit/Cost Analysis for highway projects expected to increase the capacity of the State highway system and cost at least $25 million. Additionally, other projects that might benefit will be considered for Benefit/Cost Analysis. The Benefit/Cost Analysis studies will be conducted using the requirements specified in NRS Chapter 408.

## SCOPE

This Transportation Policy shall apply to all Department of Transportation districts and divisions in addition to any and all consultants performing Benefit/Cost Analysis for the Department of Transportation.

## RESPONSIBILITY

1) The Chief Operations Analysis Engineer will be responsible for the following:

   a. Revising this Transportation Policy in accordance with TP I-1-1.

   b. Providing assistance and cooperation, as necessary, to project managers, consultants, and others to ensure successful application of Benefit/Cost Analysis.

   c. Managing the Benefit/Cost Analysis Coordinator.

2) The Benefit/Cost Analysis Coordinator will be responsible for the following:

   a. Recommending changes to the Benefit/Cost Analysis policy and procedures.
   b. Developing and monitoring the Benefit/Cost Analysis Plan.
   c. Assuring adherence to Benefit/Cost Analysis Work Tasks.
   d. Assuring Benefit/Cost Analysis is conducted on highway projects expected to increase the capacity of the State highway system and cost at least $25 million and other projects contained in the Benefit/Cost Analysis Plan.
   e. Informing project managers when a project has been selected for Benefit/Cost Analysis.
   f. Acquiring information with the cooperation of the Project Manager that will be needed for Benefit/Cost Analysis.

g. Conducting or coordinating Benefit/Cost Analysis per each Benefit/Cost Analysis work tasks.
h. Maintaining an on-call list of consulting Benefit/Cost Analysis specialists with the Administrative Services Division, and managing Benefit/Cost Analysis consultant agreements.
i. Assisting the project managers in estimating the cost to have a consultant conduct Benefit/Cost Analysis studies.

3) The Assistant Directors of Planning and Engineering will approve the Benefit/Cost Analysis Plan submitted by the Benefit/Cost Analysis Coordinator after approval of the Chief Operations Engineer.
4) Division heads, district engineers, and consultants involved with project development will be responsible for ensuring employees under their authority are aware of this policy and that they cooperate with the Benefit/Cost Analysis Coordinator, project managers and consultant if applicable.

5) The Project Manager will be responsible for the following:

(1) Request the Benefit/Cost Analysis Coordinator to include the Highway Projects in the Benefit/Cost Analysis Plan if those projects increase capacity and the design estimate is at least $25 million.

(2) Request the Benefit/Cost Analysis Coordinator to include other highway projects in the annual Benefit/Cost Analysis Plan which might benefit from a Benefit/Cost Analysis.

(3) Assuring that project funds are programmed and budgeted to pay for the Benefit/Cost Analysis, including any consultants employed.

## DEFINITIONS

**Benefit/Cost Analysis Work Tasks:**

An organized protocol for accomplishing a Benefit/Cost Analysis.

**Benefit/Cost Analysis Coordinator:**

A person trained in Benefit/Cost Analysis and located in the Performance Analysis Division.

**Project Manager:**

The person placed in responsible charge of a Highway Project.

**Benefit/Cost Analysis Plan:**

A list of Projects selected and prioritized annually by the Benefit/Cost Analysis Coordinator for Benefit/Cost Analysis, and approved by the Assistant Directors of Planning and Engineering.

**Highway Project:**

A project listed in the Benefit/Cost Analysis Plan.

**Benefit/Cost Analysis:**

A written analysis of Highway Project costs and benefits includes at a minimum the following:

1) The limits of the project.
2) The period of analysis.
3) The discount rate used in the analysis.
4) The initial costs of the Department for the project, including any costs for design, engineering, the acquisition of land and construction.
5) The future costs of the Department to preserve and maintain the project, discounted to present value.
6) Other costs of the Department for any other construction or any mitigation associated with the project.
7) The cost to highway users for any loss of safety, delays in the time of travel and costs for the operation of vehicles.
8) The value of the benefits of the project including the value of any savings in time of travel, improvements to safety, and savings of the cost of operating vehicles.
9) A discussion of any additional increases in costs that would result from any delays in the performance of any routine maintenance scheduled under the maintenance program of the Department.
10) A format that allows for the comparison of proposed highway projects.

**Benefit/Cost Analysis:**

An analysis of the Highway Project costs and benefits may include:

1) The benefits or costs of the project for other persons and governmental agencies.
2) The value of any other social, economic or environmental benefits or costs of the project.
3) Any costs or benefits that might result from the use of alternative design, construction or financing practices.

# PROCEDURE

1) Initiating the Benefit/Cost Analysis Process:

   a. The Benefit/Cost Analysis Coordinator will review the annual Statewide Transportation Improvement Program and Long Range Element for projects that will need Benefit/Cost Analysis as required or desired under this policy. The projects should be selected prior to January 1 of each year. This will be the primary method of initiating Benefit/Cost Analysis on projects.

   b. To assure adherence to this policy when projects are in the design stage, the Project Manager shall notify the Benefit/Cost Analysis Coordinator of any highway projects that are expected to increase the capacity of the State highway system and cost at least $25 million. The Project Manager may request other highway projects be included in the Benefit/Cost Analysis Plan that could benefit from a Benefit/Cost Analysis. If a significant change in the project scope or budget occurs, the Project Manager may request that the project be included in the Benefit/Cost Analysis Plan, even though a Benefit/Cost Analysis was already conducted.

c. Division heads, district engineers, and the Office of the Director may submit a written request to the Benefit/Cost Analysis Coordinator for a project to be included in the Benefit/Cost Analysis Plan.

2) The Benefit/Cost Analysis Coordinator will prioritize and schedule the projects for Benefit/Cost Analysis and prepare the Benefit/Cost Analysis Plan, and then submit it to the Assistant Directors of Planning and Engineering for approval.
3) A revision to the annual Benefit/Cost Analysis Plan can be initiated by any district, division head or project manager with a written request and justification to the Benefit/Cost Analysis Coordinator. The Benefit/Cost Analysis Coordinator will forward the written request and justification to the Assistant Directors of Planning and Engineering who will consider approving a revision if the analysis cannot wait for the next cycle.
4) For each project identified in the Benefit/Cost Analysis Plan the Benefit/Cost Analysis Coordinator will notify the responsible project managers and cooperatively identify the Benefit/Cost Analysis Work Tasks.
5) The Benefit/Cost Analysis Coordinator will manage the consultant, if a consultant is employed, throughout the execution of the work tasks. The consultant will submit a report describing the Benefit/Cost Analysis, showing all data utilized, documenting assumptions and summarizing the results.
6) The Benefit/Cost Analysis Coordinator with the assistance of the Project Manager will review and critique the consultant's report, and identify any limitations. The limitations will include significant parameters that could not be reasonably converted to monetary values.
7) The Benefit/Cost Analysis Coordinator will submit a memorandum to the Assistant Directors of Planning and Engineering that summarizes the review of Benefit/Cost Analysis and specifies any significant concerns. Additionally, the memorandum will recommend resolution of the concerns.
8) The Benefit/Cost Analysis Coordinator will prepare an annual report of any finding for the Director and the Board, and arrange for its posting on the Department of Transportation Website.

# APPENDIX C

# PROJECT PRIORITY RATIONALE

## INTRODUCTION

Every year, the Department is responsible for the programming of federal and state funding for a wide range of transportation improvement projects across the state. Allocating these significant resources in an equitable, efficient, and effective manner requires a multifaceted approach. The Department has adopted flexible, yet accountable procedures to meet the needs of the traveling public, advance the Department's goals and priorities, and address the needs of a myriad of constituencies across the state.

The Board, comprised primarily of elected officials, provides oversight on the project selection process. The Board annually approves the Transportation System Projects, which contains the Statewide Transportation Improvement Program (STIP), Annual Work Program, and Short and Long-Range Elements. Upon its approval in the fall of every year, the Transportation System Projects document is forwarded to the U.S. Department of Transportation for final approval.

Project priority rationale should be guided by our "Statewide Long-Range Transportation Plan" containing 'Guiding Principles' that provide policy guidance for the development and operation of the Nevada Transportation System. These guiding principles include the following topics: 1) Safety, 2) Mobility and Accessibility, 3) Environmental Stewardship, 4) Fiscal Responsibility, 5) Freight Movement, 6) Asset Management, and 7) Customer Service. For the purpose of this discussion, these principles that directly affect the transportation system are characterized as follows:

1) Safety – To improve the safety of all modes of travel
2) Mobility – To provide a multimodal, interconnected and efficient system
3) Environmental – To ensure the system is considerate to the human and natural
4) environment
5) Fiscal Responsibility – To maximize the transportation funding and invest it wisely
6) Freight Movement – To improve the safety and efficiency of motor carriers
7) Asset Management – To protect the transportation system assets

The following subsections describe the more significant funding programs used by the Department to follow the guiding principles of the Statewide Long-Range Transportation Plan. The programs include: Capacity Projects, Bridge, State Highway Preservation, Highway Safety Improvement, and Transportation Enhancement.

## CAPACITY PROJECTS PROGRAM

The Department cooperates in the development and ensures adoption of Regional Transportation Plans and Regional Transportation Improvement Programs in Nevada. Projects within the jurisdiction of the four Metropolitan Planning Organizations must be included within the Transportation System Projects document without change from regional planning documents approved by the Metropolitan Planning Organizations.

The Department evaluates the capacity project budget by focusing on that portion of the Department budget that is both available to apply towards capacity projects and under the direct control of the Department. This "Potential Capacity Budget" is calculated by adding federal and state components that meet the above criteria. With the approval of the 2007 AB 595, the Department now requires a

benefit/cost analysis on capacity improvement projects that cost at least $25 million. In addition, the Department requires that major projects included in the Transportation System Projects document be evaluated by standard criteria including project feasibility.

As of 2005, entities not within Metropolitan Planning Organizations' jurisdictions are requested to submit a Project Submittal Application for proposed transportation improvement projects. Applications are due to the Program Development Division by January 1. Those projects submitted for consideration are evaluated by a project evaluation team utilizing criteria based on current conditions, project impact, and project complexity. Using these criteria, proposed transportation improvement projects are ranked and submitted to the Director for consideration. The Director recommends the selection of projects advancing into the Annual Work Program of the Transportation System Projects document.

## BRIDGE PROGRAM

Highway assets are managed using two systems: A pavement management system and a bridge management system. Both systems provide an inventory of existing assets, their condition, needed repairs, and repair priorities. The bridge management system aids in identifying bridges in need of replacement and rehabilitation. Federal Highway Bridge Program funds are available to replace and rehabilitate substandard publicly owned highway bridges. While the primary focus of this program is to replace or rehabilitate bridges, these funds can also be used for:

- Conducting federally mandated inspection on all existing bridges
- Compiling federally mandated inventory information
- Upgrading bridges to resist seismic activity
- Mitigating potential scouring of bridge supports due to flooding

Eligible expenses are funded at ninety-five percent federal funds with a five percent match by the bridge's owner. A minimum of fifteen percent of the federal funds must be applied to bridges off the federal-aid system. The remaining balance of federal funds may be applied to bridges on the federal-aid system. Bridges on federal and tribal lands are also eligible but are neither authorized nor administered by the Department.

There are approximately 1819 bridges open to the public in Nevada that are owned and maintained by the Department and local agencies. Additionally, several bridges are owned and maintained by federal agencies and a few by private entities. Of the State and Local bridges, 96 are currently eligible for federal funding. Eligibility and the priority of replacement and rehabilitation projects are based on a bridge's Sufficiency Rating. The Sufficiency Rating is a numerical assessment of a bridge's serviceability, and is calculated based on a compilation of select inventory data and condition assessment data. The importance of a bridge to the transportation system and rate of deterioration are also considered when selecting replacement and rehabilitation projects.

## STATE HIGHWAY PRESERVATION PROGRAM

The Department maintains 5,376 miles of highways. The total number of miles fluctuates annually as new highways are constructed and others are eliminated due to Relinquishment and Road Transfer activities to counties and cities, prompted by the 1999 Assembly Concurrent Resolution (ACR) 3. These highways carry 58 percent of Nevada's traffic and 87 percent of the heavy trucks.

The Department is responsible for protecting highway assets and preserving existing highways. Highway assets are managed using two systems: a pavement management system and a bridge inventory system. Both systems provide an inventory of existing assets, their condition, needed repairs, and repair priorities. The basic principle of pavement preservation is that timely lower-cost improvement will save money and better serve the public. For example, timely overlays will cost about 25 percent of the cost of waiting a few more years when reconstruction is necessary. At present, approximately $300 million is needed annually for pavement preservation projects to maintain the present quality of highway pavements. To preserve the state highway system at low cost, action plans are used that optimize the use of available funds. The Department's action plan in priority order is as follows:

To apply timely overlays on Interstate and other Principal Arterials, Minor Arterials, and other moderate to high volume roads.

To further develop economical repair strategies for our low-volume roads.

To continue coordinating and integrating routine pavement maintenance activities with planned overlay and reconstruction work.

Within this action plan, individual projects are prioritized based on pavement age, traffic volume, axle loads, and condition. From this analysis, an action list is formulated based on the financial consequences of not doing the project. Further assessment data is collected from field surveys in conjunction with district-engineer offices. Collaboratively, repair strategies are formulated along with an appropriate funding level to accomplish the Department's preservation and other goals.

## HIGHWAY SAFETY IMPROVEMENT PROGRAM

The overall objective of the Highway Safety Improvement Program is to implement effective safety measures that reduce the number and severity of crashes on Nevada highways. The Highway Safety Improvement Program consists of several components, namely:

1) Collecting and maintaining data files for crashes, traffic volumes, and highway features.
2) Analyzing data files to determine high crash sites
3) Conducting engineering studies of high crash locations in order to develop highway safety improvements.
4) Establishing priorities for implementing safety improvements.
5) Programming and implementing highway safety improvement projects.
6) Evaluating crashes before and after the implementation of safety improvements.
7) Determining the overall effectiveness of the prescribed safety improvements.

The Department also cooperates with the agencies listed below to implement the Nevada Strategic Highway Safety Plan.

- Department of Health/Bureau of Family Health Services
- RTC of Washoe County
- Department of Public Safety/Office of Traffic Safety Department of Public Safety/Nevada Highway Patrol
- Federal Motor Carrier Safety Administration
- Department of Motor Vehicles

- Federal Highway Administration
- Nevada Sheriffs' and Chiefs' Association
- RTC of Southern Nevada
- Nevada Association of Counties

## TRANSPORTATION ENHANCEMENT PROGRAM

The Transportation Enhancement Program requires that ten percent of the Federal Surface Transportation Program (STP) monies apportioned to each state be set aside for the funding of enhancements to the transportation system. Transportation Enhancement Program funding includes activities such as:

- Pedestrians and bicycles facilities
- Safety and educational activities for pedestrians and bicyclists
- Acquisition of scenic easements and scenic or historic sites
- Landscaping and other scenic beautification
- Rehabilitation of historic transportation buildings, structures, or facilities
- Environmental mitigation of water pollution and habitat connectivity
- Establishment of transportation museums

Local governments, state agencies, and federal agencies may submit applications for project funding. Private groups may apply for project funding, but must apply through a public entity or agency. Projects must be for one of the categories specified by law and must be related to surface transportation.

Enhancement projects are prioritized for funding by the Statewide Transportation Technical Advisory Committee. Members of this committee represent a wide range of transportation interests, including several local, state, and federal agencies. Within the urbanized area, the Metropolitan Planning Organizations initially prioritizes projects in their jurisdictions. A subcommittee of the Statewide Transportation Technical Advisory Committee prioritizes projects from the non-urbanized areas of the state. The Statewide Transportation Technical Advisory Committee approves and recommends to the Director a final priority list of projects. Upon the Director's approval, the enhancement projects are included in the Statewide Transportation Improvement Program (STIP).

# APPENDIX D

# PERFORMANCE MANAGEMENT PLAN

## INTRODUCTION

The Department has developed performance measures among the four major divisions that were developed to support the achievement of the seven Department Strategic Plan Goals, which are to:

1) Optimize safety
2) Be in touch with and responsive to our customers
3) Innovate
4) Be the employer of choice
5) Deliver timely and beneficial projects and programs
6) Effectively preserve and manage our assets
7) Efficiently operate the transportation system

These performance measures are designed to quantify progress in meeting those goals. The fifteen performance measure topics are listed below. The following performance measures plan includes the actual performance measures, annual and ultimate targets, the performance measure champions, brief discussion of the strategy plan support, measurement and supporting data, and short and long range strategies. Additionally, an annual evaluation of the performance measures is included.

## ADMINISTRATION DIVISION

Reduce Work-Place Accidents

Provide Employee Training

Improve Employee Satisfaction

Streamline Agreement Execution Process

Improve Customer Outreach/Satisfaction

## PLANNING DIVISION

Reduce Congestion on the State System

## OPERATIONS DIVISION

Streamline Project Delivery: Schedule and Estimate from Bid Opening to Construction Completion

Maintain State Roadways

Maintain State Fleet

Maintain State Facilities

Provide Continuity of Business Operations

## ENGINEERING DIVISION

Reduce Fatal Crashes

Streamline Project Delivery: Schedule And Estimate after NEPA To Bidding

Maintain State Bridges

Streamline Permitting Process

## 1. REDUCE WORK PLACE ACCIDENTS

**Performance Measure:**

1) The rate of work place injuries/illnesses per 100 employees.
2) The rate of medical claims per 100 employees for work place injuries/illnesses requiring medical attention.

The rate of injuries is reported as the number of work place injuries and illnesses per 100 employees and number of injuries and illnesses requiring medical attention per 100 employees as documented through annual OSHA 300 Log Reporting data. Data is based on calendar year per federal reporting requirements.

**Annual Target:** 10 % Reduction **Ultimate Target:** Zero

**Division(s) Responsible:**

Administrative Services- Safety and Loss Control Manager

Administrative Services- Human Resources Manager

**Support Divisions:**

All

**Strategy Plan Support:**

Safety extends to all aspects of the Department from the roadways to the office. Identifying and reducing risk to the Department, our employees and the public is continuous. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize Safety and Be the Employer of Choice.

## 2. PROVIDE EMPLOYEE TRAINING

**Performance Measure:**

Percentage of employees trained in accordance with prescribed training plans and State statute requirements.

**Annual Target:** 15 % **Ultimate Target:** 100%

**Division(s) Responsible:**

Administrative Services- Employee Development Manager

Administrative Services- Human Resources Manager

**Support Divisions:**

All

**Strategy Plan Support:**

Competency Training of the workforce keeps employees safe and helps to reduce injuries, lost time, and litigation. Competency Training also provides the skills and abilities to enable employees to achieve higher job performance. This benefits the Department and Nevada's citizens by providing a high-quality and safe transportation infrastructure. This performance measure has a positive impact on all of the Department of Transportation's Strategic Plan goals, especially: Optimize safety, be the employer of choice, deliver timely and beneficial projects and programs, effectively preserve and manage our assets, and efficiently operate the transportation system. Both NAC and Division Matrix training are addressed by Training Section competency Training programs.

## 3. IMPROVE EMPLOYEE SATISFACTION

**Performance Measure:**

Percentage rating obtained from employees' satisfaction surveys.

**Annual Target:** Overall rating 75% **Ultimate Target:** Overall rating of 80%.

**Division(s) Responsible:**

Administrative Services- Human Resources Manager

**Support Divisions:**

All

**Strategy Plan Support:**

Positive employee morale is critical to the success of the workplace. It is the backbone of a skilled and dedicated workforce and essential in attracting and retaining a quality staff. A satisfied workforce will excel at their duties. This benefits the Department and our customers. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: optimize safety, be in touch with and responsive to our customers, innovate, be the employer of choice, deliver timely and beneficial projects and programs, effectively preserve and manage our assets, and efficiently operate the transportation system.

## 4. STREAMLINE AGREEMENT EXECUTION PROCESS

**Performance Measure:**

Percentage of Agreements executed within 45 days from when division submits agreement to the date when it is fully executed.

**Annual Target:** 50% **Ultimate Target:** 95%.

**Division(s) Responsible:**

Administrative Services- Asst. Director Administrative Services

Administrative Services- Chief of Administrative Services

**Support Divisions:**

All (unless specific agreement types are looked at*)*

**Strategy Plan Support:**

Agreements are the core of all of our business practices, and must be completed prior to any action being taken. A delay has a tremendous impact in the operations of the Department. This performance measure works toward meeting the Department of Transportation Strategic Plan goals as follows: Speeding up the agreement process will help deliver timely and beneficial projects and programs. It also assists with being responsive to our customers.

## 5. IMPROVE CUSTOMER SATISFACTION

**Performance Measure:**

Numerical ratings obtained from public opinion and customer/user surveys.

**Annual Target:** Annual increases in public opinion and customer/user ratings.

**Ultimate Target:** Increases in public opinion and customer/user ratings.

**Division(s) Responsible:**

Communications Office- Chief of the Communications Office

**Strategy Plan Support:**

Public opinion and user (customer) surveys will assess public information and outreach activities, customer processes, and how well the Department is performing in the eyes of our customers. This is important so we know that we are doing the right things to be transparent, accountable, and efficient. This performance measure works toward meeting the Department of Transportation Strategic Plan goals to be in touch with and responsive to our customers.

## 6. REDUCE AND MAINTAIN CONGESTION LEVELS ON THE STATE MAINTAINED ROADWAY SYSTEM

**Performance Measure:**

Urban roadways – Maintain congestion at Level Service of D for 85% of State urban roadways

Rural roadways – Maintain congestion at Level of Service D for 90% of State rural roadways

**Definition of Level of Service D** – Roadways operating at up to 8 miles per hour less than the Free Flow Speed or Posted Speed Limit, and the traffic carrying capacity of the roadway is less than 0.9.

**Ultimate Target:** Reduce congestion by 1% per year to reach the ultimate target of 90% of State urban roadways at Level of Service D, and 95% of State rural roadways at Level of Service D

**Division(s) Responsible:**

Traffic Information System – Chief Traffic Information System

Performance Analysis – Chief Performance Analysis Engineer

**Support Divisions:**

Roadway Systems, Location, Maintenance and Operations

**Strategy Plan Support:**

This performance measure is one of the most important performance indicators of the NDOT maintained roadway system. It integrates the outcome of our overall investments into one measure that is a direct result of the collaborative efforts of the various divisions of NDOT. It will help reduce congestion and will help identify bottleneck locations on the NDOT maintained roadway system, which will be prioritized for improvements depending upon the funding and resources availability. It works towards meeting the Department of Transportation Strategic Plan to efficiently operate the transportation system by reducing the level of congestion and increasing safety.

This Congestion Monitoring System will be an evolving process and will be updated regularly as more data is integrated into it from the RTC's Freeways and Arterials System of Transportation, and the Washoe County's future Traffic Management Center, Synchro models, and other sources as needed.

## 7. STREAMLINE PROJECT DELIVERY: SCHEDULE AND ESTIMATE FROM BID OPENING TO CONSTRUCTION COMPLETION

**Performance Measure:**

Percentage of projects within established range of cost estimate and schedule to completion

**Annual Target:** 25% Improvement **Ultimate Target:** 100%

**Division(s) Responsible:**

Construction- Chief Construction Engineer

**Support Divisions:**

All

**Strategy Plan Support:**

This performance measure works towards meeting the Department of Transportation Strategic Plan goals by providing timely, beneficial construction projects. This measure helps to optimize safety for road users, be in touch with and responsive to our customers (road users), and efficiently operate the transportation system.

## 8. MAINTAIN STATE ROADWAYS

**Performance Measure:**

Percentage of state maintained pavements needing annual preservation in order to maintain the pavement International Roughness Index (IRI) rating of good or fair condition.

**Annual Target:** 8% **Ultimate Target:** 100%

**Division(s) Responsible:**

Materials Division- Chief Materials Engineer

**Support Divisions:**

Maintenance and Operations, Performance Analysis, Roadway Design and Districts

**Strategy Plan Support:**

Proactive pavement has a huge benefit in maximizing limited funds. Being proactive instead of reactive is more cost effective (4:1) in utilizing transportation project dollars. Pavement condition is also directly related to user vehicle maintenance and safety, and highway capacity. This performance measure works towards meeting the Department of Transportation's Strategic Plan goals to: optimize safety and be in touch with and responsive to our customers by providing smooth, quality pavements. To effectively preserve and manage our assets is a goal supported by implementing the Department's pavement preservation program.

For the Department to keep current with present roadway conditions, approximately $265 million is needed annually, which averages 8% (centerline miles) of the total system. As of June 30, 2010, 1539 center lane miles, or 29%, of the statewide 5308 center lane miles of NDOT maintained highway are in need of overlay or reconstruction, which totals approximately $960 million in costs (paving/reconstruct and ancillary)

## 9. MAINTAIN NDOT FLEET

**Performance Measures:**

1) Percentage of fleet requiring replacement – this measure is the percentage of the fleet that have reached the age or mileage that requires replacement.
2) Percentage of fleet in compliance with condition criteria – this measure is the percentage of the fleet that is maintained as per Department preventive maintenance requirements so that the expected life span of our vehicles is not compromised. As the fleet is maintained on the mileage and/or hourly requirements, compliance has been met.

**Annual Target:**

1) Declining Rate of 1% per year

**Ultimate Target:**

1) 10%

2) Increasing rate of 1% per year.

2) 95% rate of compliance for mileage/hourly requirements

**Division(s) Responsible:**

Equipment Division- Equipment Superintendent

**Support Divisions:**

Districts, Divisions

**Strategy Plan Support:**

The vehicles in the fleet are important to deliver projects and maintain a safe highway system. Equipment in good condition ensures the ability to perform NDOT's business practices and provides a safe and secure tool for staff. These performance measures work towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Be in touch with and responsive to our customers, Innovate, Be the employer of choice, Deliver timely and beneficial projects and programs, Effectively preserve and manage our assets, and Efficiently operate the transportation system.

## 10. MAINTAIN NDOT FACILITIES

**Performance Measure:**

Percentage of building facilities that comply with regulatory building and safety codes.

**Annual Target:** Increase by 3%

**Ultimate Target:** 100%

**Division(s) Responsible:**

Maintenance and Operations- Chief Maintenance Operations Engineer

**Support Divisions:**

Districts, Administrative Services

**Strategy Plan Support:**

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Be in touch with and responsive to our customers, Innovate, Be the employer of choice, Effectively preserve and manage our assets, and Efficiently operate the transportation system.

## 11. EMERGENCY MANAGEMENT, SECURITY AND CONTINUITY OF OPERATIONS

**Performance Measure:**

Percent of emergency plans that have been completed, training and education have been provided to appropriate personnel, the plans have been tested and exercised and the plan has been updated to accommodate changes in departmental processes, federal guidelines, etc. Training and updates should be completed on a biennial basis. Plans include:

Continuity of Operations Plan

State Level Emergency Operations Plan

District Level Emergency Operations Plan

Southern Nevada Evacuation Plan

Infrastructure Security Plan

Mobile Fleet Security Plan

Department Buildings and Facilities Access Management Plan

**Annual Target:** 75% **Ultimate Target:** 100%

**Division(s) Responsible:**

Maintenance and Operations- Chief Maintenance Operations Engineer

**Support Divisions:**

All

**Strategy Plan Support:**

NDOT's emergency plans provide clear guidance on how NDOT will continue to perform critical functions and operations in the event of an emergency or disaster. Being prepared and ready for an emergency is paramount for keeping systems operating during such times, as well as being in a position to respond to health and safety issues. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to:

- Optimize Safety
- Be in touch with and responsive to our customers
- Innovate,
- Deliver timely and beneficial projects and programs,
- Effectively preserve and manage our assets
- Efficiently operate the transportation system

## 12. REDUCE FATAL CRASHES

**Performance Measure:**

Number of fatalities on Nevada's streets and highways.

**Annual Target:** Reduce fatalities by 100 **Ultimate Target:** Zero

**Division(s) Responsible:**

Safety Division- Chief Traffic/Safety Engineer

**Support Divisions:**

All

**Strategy Plan Support:**

All drivers and highway system users should expect a safe highway system. Through efforts of engineering, enforcement, education, emergency response and the will of the highway users, fatal crashes can be eliminated. The strategies for this performance measure will be based on the Nevada Strategic Highway Safety Plan. This performance measure also works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Be in touch with and responsive to our customers, Innovate, Deliver timely and beneficial projects and programs, Effectively preserve and manage our assets, and Efficiently operate the transportation system.

## 13. STREAMLINE PROJECT DELIVERY: SCHEDULE AND ESTIMATE AFTER NEPA APPROVAL TO BIDDING

**Performance Measure:**

Percentage of projects completed within range of established estimate and schedule after the environmental process.

**Annual target:** Reduce number of projects falling outside of estimated schedule range by 25% starting in fiscal year 2009. Improve number of projects falling within the estimated budget range by 25% in FY 2009.

**Ultimate Target:** 100% of projects completed in the scheduled fiscal year and falling within the estimated budget range.

**Division(s) Responsible:**

Project Management Division- Chief of Project Management

Roadway Design Division- Chief Roadway Design Engineer

**Support Divisions:**

All units within the Department that are involved with project development.

**Strategy Plan Support:**

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Be in touch with and responsive to our customers, Deliver timely and beneficial projects and programs, Optimize safety and effectively preserve and manage our assets. Goals are met by:

- Keeping NDOT customers appraised of project risks, opportunities, costs, scope and scheduling issues;
- Implementing standards to improve communication, coordination, and decision making resulting in efficient delivery of projects;

- Focusing and managing available resources towards implementing projects that preserves NDOT's assets, improves safety and relieves congestion.

## 14. MAINTAIN STATE BRIDGES

**Performance Measure:**

Number of Department owned bridges which are eligible for federal funding and are categorized as structurally deficient or functionally obsolete. Base figure is 37 of 1,704 bridges (*State Highway Preservation Report – 2007).* Eligibility and priority for funding projects under the Bridge Program are based on a bridge's Sufficiency Rating. The Sufficiency Rating is a numerical assessment of a bridge's serviceability and is based on condition assessment inspection and inventory data. Its value varies from 0 to 100, with 100 representing no deficiencies. A bridge is eligible for replacement when its Sufficiency Rating is less than 50 and is eligible for rehabilitation when its Sufficiency Rating is less than 80. In addition to meeting the Sufficiency Rating requirement, a bridge must also be classified as either Structurally Deficient or Functionally Obsolete. A bridge is considered Structurally Deficient when key elements reach an established level of deterioration. A bridge is considered Functionally Obsolete when it no longer adequately serves the road it carries.

**Annual Target:** Reduce the number of Department owned structurally deficient or functionally obsolete bridges by 2.7% (1 bridge) biennially.

**Ultimate Target:** Zero

**Division(s) Responsible:**

Structures Division- Chief Structures Engineer

**Support Divisions:**

Design, Project Management, and Districts

**Strategy Plan Support:**

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to: Optimize safety, Innovate, Deliver timely and beneficial projects and programs, and effectively preserve and manage our assets. These goals can be met in the following ways: Safety for the motoring public will be optimized by replacing structurally deficient and rehabilitating functionally obsolete bridges. The Structures Division will seek and implement innovative solutions to the challenges faced by the Bridge Program. The Division will deliver timely and beneficial bridge projects and programs. Meeting this performance measure will help effectively preserve and manage Department assets.

# 15. STREAMLINE PERMITTING PROCESS

**Performance Measure:**

Percentage of permits issued or rejected within 45 days of receipt.

**Annual Target:** 95% **Ultimate Target:** 95%

**Division(s) Responsible:**

Right of Way Division- Chief of Right of Way

**Support Divisions:**

Districts, Project Management, Design, Traffic/Safety and Others as needed

**Strategy Plan Support:**

Every encroachment to connect or work on state right of way requires a permit. This is a large area of our customer service. We must be assured the impact to the system is safe and will not negatively compromise the system, but we must meet the customer's needs for a timely response for their economic development. The majority of permits are relatively simple; however some are very complicated and require an extended technical review, thus the reason for the goal being less than 100%. Current estimates are that 90% of permits are issued or rejected within 60 days. This performance measure works towards meeting the Department of Transportation Strategic Plan goals to Optimize safety, Be in touch with and responsive to our customers, Innovate, and Deliver timely and beneficial projects and programs.

# APPENDIX E

# LAS VEGAS CONVENTION AND VISITORS AUTHORITY

# FUNDED PROJECTS

**NEVADA DEPARTMENT OF TRANSPORTATION**
AB 595 REVENUE SUMMARY FOR LVCVA
FUNDED PROJECTS ONLY
*Information as of August 31, 2010*

**I. SUMMARY OF AB595 REVENUES PROGRAMMED OR SCHEDULED TO DATE:**

***D. Budget Acct 4665 Rev Code 4118 - AB595 LVCVA Bond Reimb. Received to Date: $56,949,757***

* *Projects Programmed (P); Scheduled (S); Contract Price (C):*

| | PCEMS # | EA # | Location | Description | Amount |
|---|---|---|---|---|---|
| (C) | 1-03323 | 73389 | I 15 from I 215 to Sahara Interchange. "Gap Project" | Construct Express Lanes (Widen from 8 to 10 Lanes). | $ 21,864,010 |
| (C) | 1-03344 | 60405 | I 15 From Blue Diamond Road (SR 160) to Tropicana Avenue (SR 593). Design-Build South | Capacity Improvements, New Ramps and Collector-Distributor Roads. | $ 254,637,263 |
| " (P) | 1-03344 | 73423 | I 15 From Blue Diamond Road (SR 160) to Tropicana Avenue (SR 593). Design-Build South | Capacity Improvements, New Ramps and Collector-Distributor Roads. | $ 6,050,000 |
| | | | | **Total** | **$ 282,551,273** |

*Note: Bond Revenue to be reimbursed upon NDOT expenditure & billing.*
I-15 Design-Build South Projects (60405& 73423) are not to exceed $273,545,000 total in LVCVA bonding funds.
Balance of 595L funds under agreement for I-15 Design Build South equals $12,857,737

# I 15 SOUTH PHASE 1A

**From Blue Diamond Road to Tropicana Avenue**

**Project Sponsor: NDOT**

**Asst Chief Project Management: John Terry, P.E.**

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**(775) 888-7321**

## Project Description:

- This is the 1st Phase of the I 15 South Project, from Silverado Ranch Road To Tropicana Avenue (3.86 miles).
- Add collector-distributor lanes from Blue Diamond Road to Tropicana Avenue.
- Braid collector-distributor roads to eliminate weaves between I 215 and Tropicana Avenue.
- Construct Sunset Road Bridge over I 15 and reconstruct Warm Springs Bridge over I 15.
- Delivery and Procurement by Design-Build method.

## Schedule:

**Planning:**
Complete

**Environmental:**
Complete 2009

**Final Design:**
2009 - 2010

**Construction:**
2009 - 2012

## Project Cost Range:

**Engineering:**
$11 - 12 million

**Right-of-Way:**
$0

**Total Estimated Project Cost:**
$290 - $294 million

## Project Benefits:

- Provide additional capacity on I 15
- Reduce operational conflicts between Blue Diamond Road, I 215, Harmon Avenue and Tropicana Avenue
- Improve east-west access across I 15
- Reduce collisions
- Improve transportation system performance

## What's Changed Since Last Update?

- Scope - No change
- Schedule: No Change
- Cost- No Change

## Project risks:

- Major Project Plan required
- New bridges over UPRR require close cooperation
- Tight Right of Way (ROW)
- Difficult schedule for Design-Build process

## Financial Fine Points(Key Assumptions):

- Total funding expended Environmental Study: $3.5 million
- Total funding expended Phase 1A: $40.9 million
- Project funding source: AB 595 (LVCVA via Bonding, Clark County and State)

**% Design Complete** 0 50 100

**% Construction Complete** 0 50 100

**Updated:**
**June , 2010**

NEVADA DOT

Susan Martinovich, P.E.
*Director*

Prepared by the
Performance Analysis Division
NEVADA DEPARTMENT OF TRANSPORTATION
1263 SOUTH STEWART STREET
CARSON CITY, NV 89712
www.nevadadot.com

Jim Gibbons
*Governor*