NEVADA DEPARTMENT OF TRANSPORTATION

# 2016 PERFORMANCE MANAGEMENT REPORT


December 2016

Rudy Malfabon, P.E.
Director

# 2016 PERFORMANCE MANAGEMENT REPORT

Brian Sandoval


## Performance Management Cycle

Prepared by the
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## State of Nevada Transportation Board Members

| | |
|---|---|
| Brian Sandoval | Chairman/Governor |
| Mark Hutchison | Vice Chairman/Lt. Governor |
| Ron Knecht | State Controller |
| Tom Skancke | Member - District 1 |
| Frank Martin | Member - District 1 |
| Len Savage | Member - District 2 |
| Emil "BJ" Almberg, Jr. | Member - District 3 |

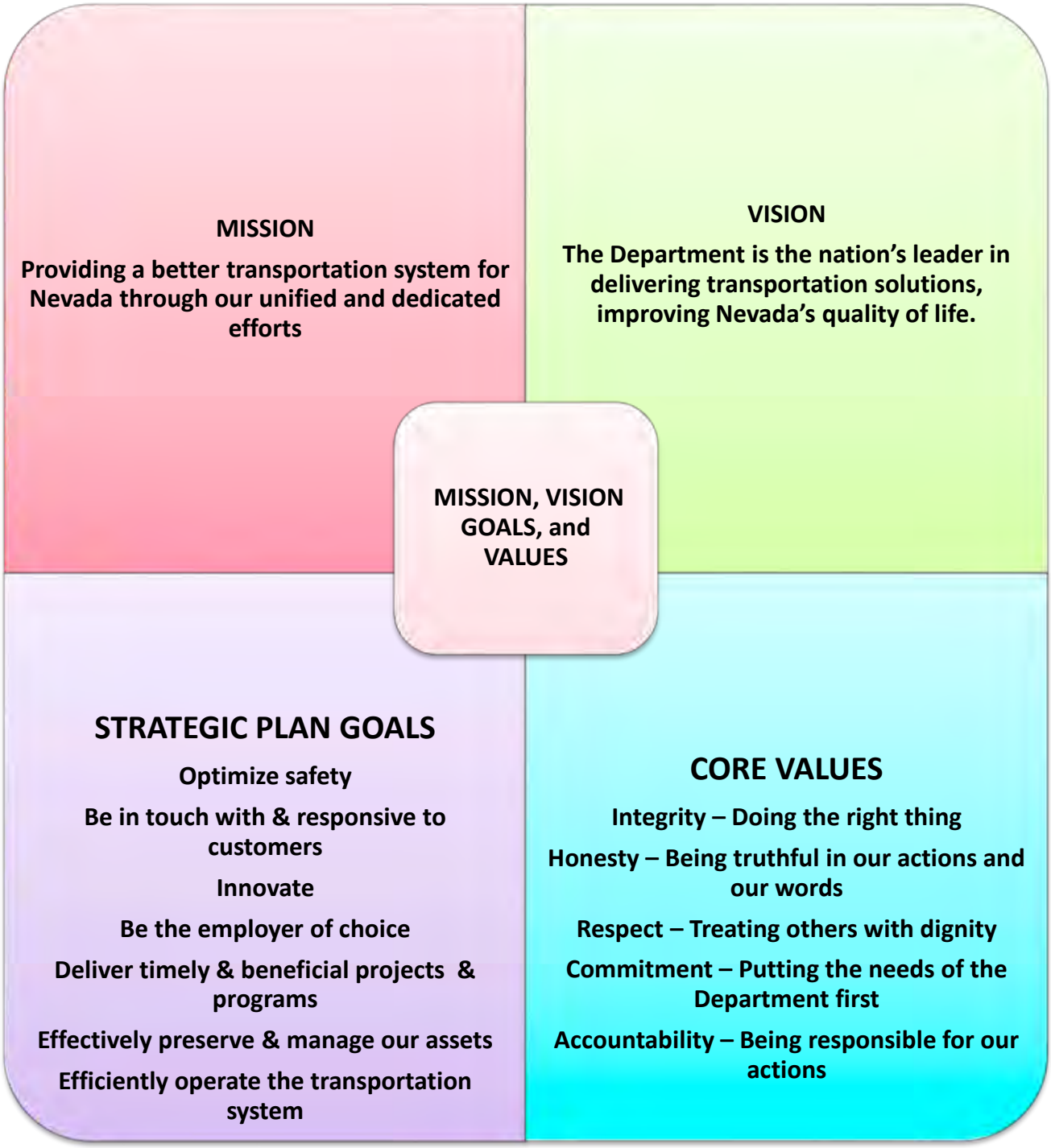
## NDOT Administration

| | |
|---|---|
| Rudy Malfabon | Director |
| Bill Hoffman | Deputy Director |
| Tracy Larkin-Thomason | Deputy Director |
| David Gaskin | Deputy Director – Stormwater |
| John Terry | Assistant Director Engineering |
| Reid Kaiser | Assistant Director Operations |
| Sondra Rosenberg | Assistant Director Planning |
| Robert Nellis | Assistant Director Administration |

## NDOT Staff Involved

Peter Aiyuk – Chief Performance Analysis Engineer
Amir Soltani – Chief of Project Management
Anita Bush – Chief Maintenance and Operations Engineer
Jennifer Eyerly – Chief of Administrative Services
Ken Mammen – Chief Traffic-Safety Engineer
Sharon Foerschler – Chief Construction Engineer
Allison Wall –Human Resources Manager
Mark Evans – Employee Development Manager
Oscar Fuentes – Safety Manager
Jessen Mortensen – Chief Bridge Engineer
Kenneth Lee – Equipment Superintendent
Ruth Borrelli – Chief of Right-Of-Way
Paul Frost – Chief of Roadway Design
Natalie Caffaratti – Scoping Manager
Darin Tedford – Chief Materials Engineer
Sean Sever – Communications Director

# DEPARTMENT VISION, MISSION, AND GOALS



# INTRODUCTION

NDOT's Performance Management is a collaborative process in which all major divisions of the department are involved in monitoring their quarterly, 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 of the department, 5) helps align performance targets with customer expectations, and 6) helps in delivering essential and high quality projects. The Nevada 2007 Legislative Assembly Bill 595 requires the Department to develop a performance management plan for measuring its performance, which must include performance measures approved by the Board of Directors of the Department. The specific requirements of the Assembly Bill 595 are as follows:

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

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

- Goals and objectives of the department and current status of meeting those goals
- Schedule, 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 Benefit-Cost Analysis for capacity projects that cost at least $25 million (NRS 408.3195).**

The annual report will include the criteria used in the benefit-cost 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. Submit report to the Governor and the Director of the Legislative Counsel Bureau for transmittal to the Interim Finance Committee.

# PERFORMANCE MANAGEMENT DASHBOARD (EXECUTIVE SUMMARIES)

# EXECUTIVE SUMMARY

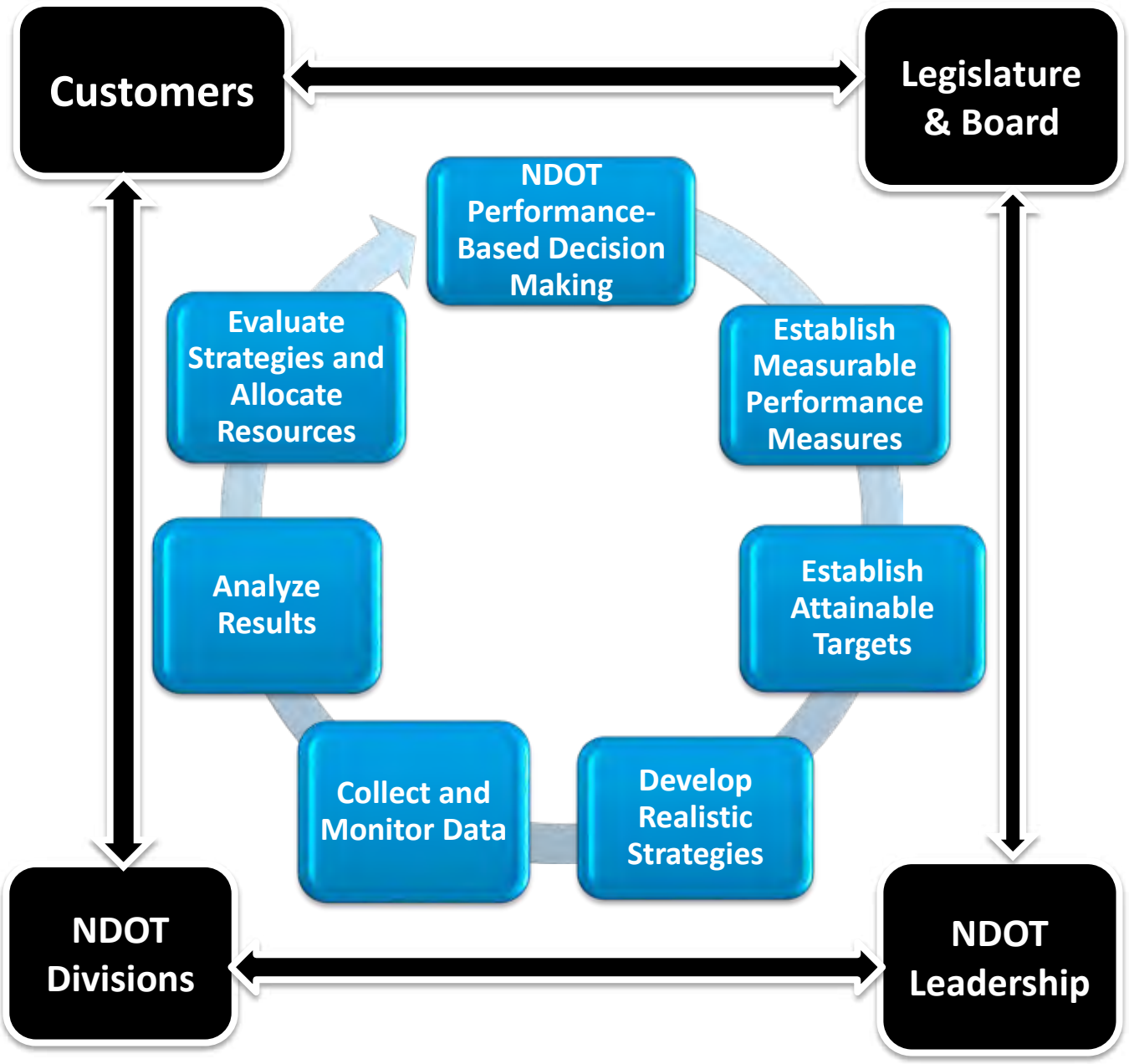
NDOT's Performance Management is a collaborative process in which all the major divisions of the department are involved in monitoring their quarterly, annual and ultimate performance targets resulting in a customer-oriented, balanced, effective, efficient, transparent and performance-based decision 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, 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 legislature.

In Fiscal Year 2016, NDOT continued to monitor its performance-based management process. The performance management dashboard, the performance measures overview, and the detailed data trends sections of this report provide further information regarding NDOT's performance in Fiscal Year 2016.

## 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 communication, 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 cycle that includes identifying realistic and specific performance measures, establishing measurable and attainable targets, developing comprehensive and effective strategies to help achieve the targets, collect quarterly data and monitor, and evaluating strategies to help allocate our resources most effectively and efficiently. The following graph shows the performance management process,



# 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 NDOT Fleet
10. Maintain NDOT Facilities
11. Emergency Management, Security and Continuity of Operations
12. Reduce Fatal & Serious Injury Crashes
13. Project Delivery- Schedule and Estimate for Bid Advertisement
14. Maintain State Bridges
15. Streamline Permitting Process

# Performance Measures Overview


**Performance Measures Overview**

| Performance Measure | | Target | Current (Status) | Target Met | Trend (5yrs or less) | Desired Trend |
|---|---|---|---|---|---|---|
| **Employee** | | | | | | |
| Reduce Work Place Accidents (1) | Injuries/Illnesses per 100 employees | 10% Annual Reduction | 2.4% Decrease | | | |
| | Injuries/Illnesses requiring medical attention per 100 employees | 10% Annual Reduction | 0.3% Decrease | | | |
| Provide Employee Training (2) | Percentage Employees Trained According to Requirements | 77% Compliance Annually | Average 71% Compliance | | | |
| Improve Employee Satisfaction (3) | Percentage Employees Satisfied with NDOT | 75% Annually | 57% Satisfied | | | |
| **Project Delivery** | | | | | | |
| Streamline Agreement Process (4) | Percentage Agreements Processed within 30 days | 90% Annually | 96% Processed within 30 days | | | |
| Streamline Project Delivery – Bid Opening to Construction Completion (7) | Percentage Projects Completed on Schedule and Within Budget | 80% Annually | 97% within Budget | | | |
| | | | 97% within Schedule | | | |
| | | | 74% Change Order < 3% Cost Increase | | | |
| Streamline Project Delivery – Schedule and Estimate for Bid Advertisement (13) | Percentage of Scheduled Projects Advertised within the Reporting Year | 75% Advertised within the Reporting Year | 88% Performance | | | |
| | Percentage of Advertised & Awarded Projects within Established Construction Cost Estimate Range | 75% Delivered within Established Cost Estimate Range | 29% (Oct. Est) | | | |
| | | | 47% (Eng. Est) | | | |
| Streamline Permitting Process (15) | Percentage Encroachment Permits Processed within 45 days | 95% Annual | 95.4% Processed within 45 Days | | | |


## Performance Measures Overview

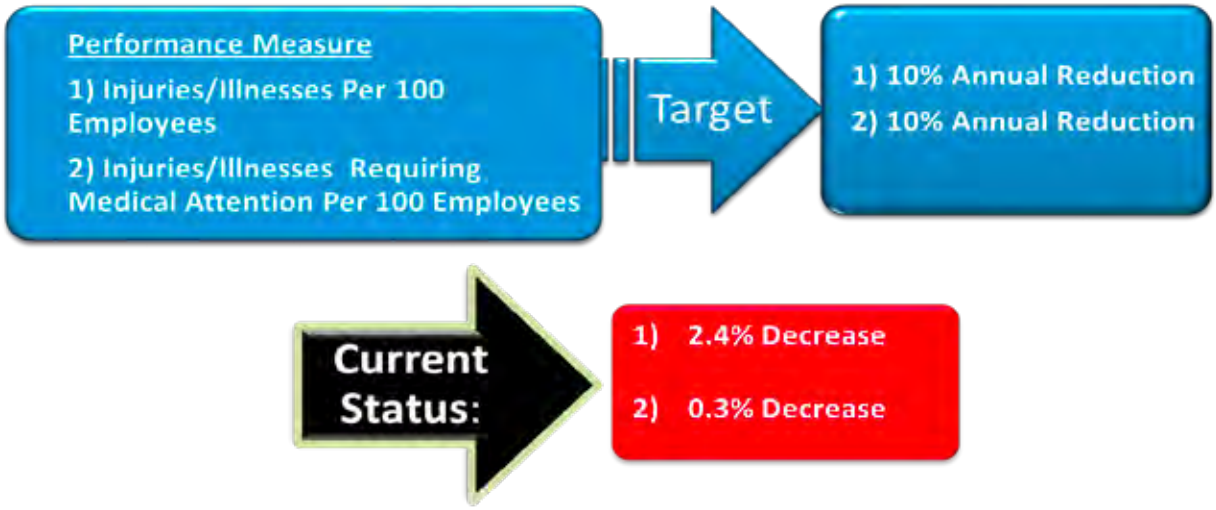
| Performance Measure | | Target | Current (Status) | Target Met | Trend (5yrs or less) | Desired Trend |
|---|---|---|---|---|---|---|
| **Assets** | | | | | | |
| Maintain State Highway Pavement (8) | State Roadways Maintained at "Fair or Better" Condition (Road category definition in report) | Category 1: 95% | 98.2% | | | |
| | | Category 2: 95% | 94.2% | | | |
| | | Category 3: 95% | 96.5% | | | |
| | | Category 4: 95% | 81.3% | | | |
| | | Category 5: 95% | 49.0% | | | |
| Maintain NDOT Fleet (9) | Percentage Mobile Equipment in Need of Replacement | 1% Annual Decrease | 10.6% Increase | | | |
| | Percentage Fleet in Compliance with Condition Criteria | 1% Increase | 1.8% Increase | | | |
| Maintain NDOT Facilities (10) | Percentage of Facilities Assessments & Condition | 2% Annual Increase | 3% Increase | | | |
| Maintain State Bridges (14) | Annual Reduction in Structurally Deficient (SD) Bridges | Replace or Rehabilitate at least 1 SD Bridge Per Year | 1 Bridge replaced | | | |
| **Safety** | | | | | | |
| Emergency Management, Security and Continuity of Operations (11) | Percentage of Emergency Management Plans Implemented | 100% Annually | 87.5% Compliance | | | |
| Reduce Fatal Crashes (12) | Number of Traffic Fatalities | Reduce five year avg. traffic fatalities by 3.1% annually | 3.5% Increase | | | |
| | Number of Serious Traffic Injuries | Reduce five year rolling avg. of serious injuries by 3.1% annually | 3.3% Decrease | | | |
| | Number of Traffic Fatalities per 100M VMT | Reduce five year rolling avg. of fatalities per 100M VMT by 3.1% annually | 1% Increase | | | |
| | Number of Serious Traffic Injuries per 100M VMT | Reduce five year rolling avg. of serious injuries per 100M VMT by 3.1% annually | 7.4% Decrease | | | |
| **Our Partners** | | | | | | |
| Improve Customer and Public Outreach (5) | Customer Satisfaction & Public Outreach | Annual Increase in Social Media Goals (Facebook likes, Twitter followers & retweets, YouTube views) | 39.5% Average Increase above set targets | | | |
| Reduce and Maintain Congestion Levels on the State Maintained Roadway System (6) | Percent Interstate providing for reliable travel time | 90% | 95.80% | | | |
| | Percent Non-Interstate NHS providing for reliable travel time | 90% | 92.00% | | | |
| | Percent Urban Interstate where Peak-Hour Travel Time meets expectation | Pending | NA | NA | | |
| | Percent Urban Non-Interstate NHS where Peak-Hour Travel Time meets expectation | Pending | NA | NA | | |

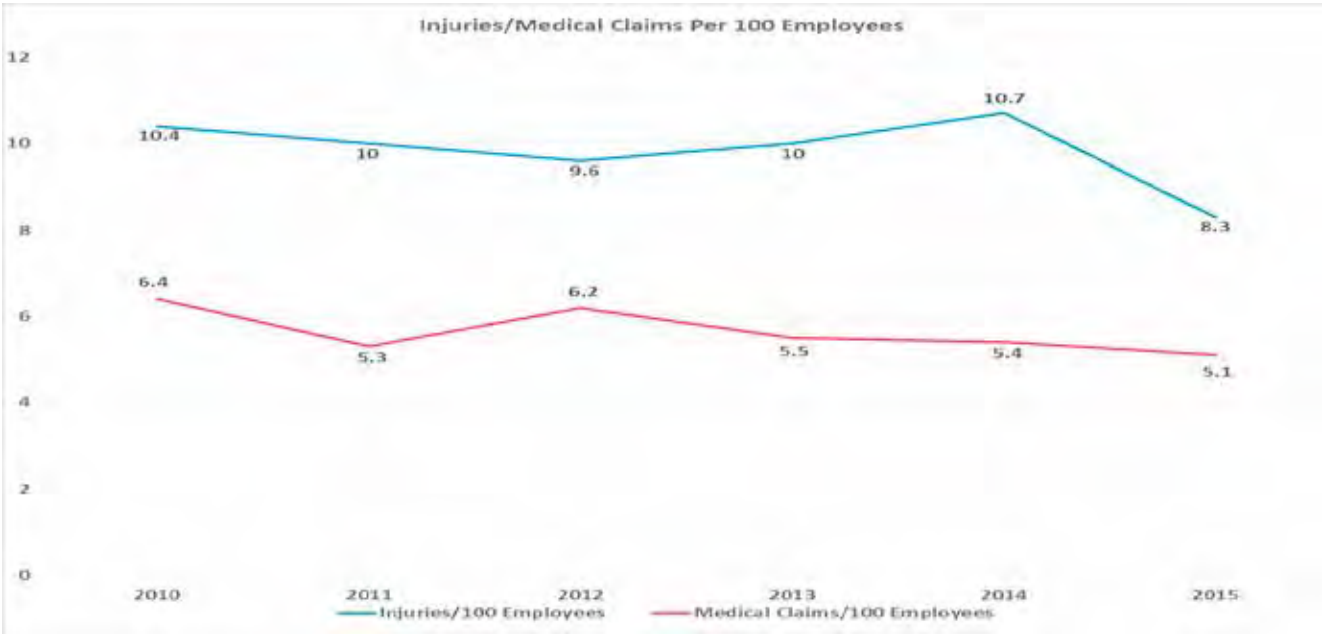
# PERFORMANCE DASHBOARD

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 2016. Detailed information regarding each performance measure is provided in the "Performance Management Detailed Data Trends" section of this report.

# 1. Reduce Workplace Accidents

**Executive Summary**: This Performance Measure has two parts to track; the rate of workplace injuries/illnesses, and the severity of employee workplace injuries/illnesses. Comparing Calendar Year 2015 to Calendar Year 2014, work place injuries and illnesses as a percentage of the number of employees decreased by 2.37% from 10.68% in 2014 to 8.31% in 2015. The percentage of medical claims also went down from 5.43% in 2014 to 5.12% in 2015. However, the average claim cost went up from $7,168.96 in 2014 to $11,973.92 in 2015. Both target 1 and 2 were not met because though there were decreases in the rates compared to the previous year, the 10% reduction target set for the performance measure was not met. For detailed information about this performance measure please refer to page 29.



# 2. Provide Employee Training

**Executive Summary**: What is tracked for this performance measure is the percentage of employees trained in accordance with prescribed training plans and State statue training requirements. The target for State fiscal year 2016 was set at 77% for all required training, and 71% compliance was achieved which is below the set target. However, this number is one percentage point higher than in SFY 2015. For detailed information about performance measure 2, please refer to page 33.



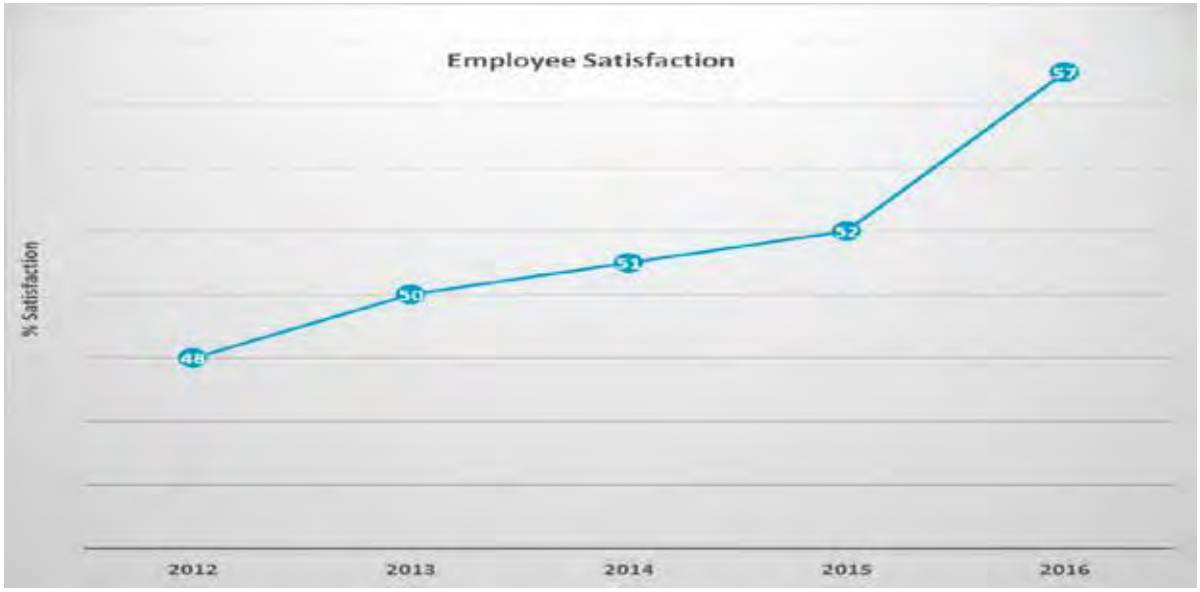
# 3. Improve Employee Satisfaction

**Executive Summary**: This performance measure tracks the percentage of employees who are satisfied with the NDOT work environment. The methodology for tracking this performance measure is through the yearly employee satisfaction survey.

The percentage of employees surveyed who are extremely or somewhat satisfied with NDOT in State FY 2016 is 57%. This is lower than the set target of 75% annual satisfaction. However, this is 5% higher than it was in 2015.

For detailed information about performance measure 3, please refer to page 38.



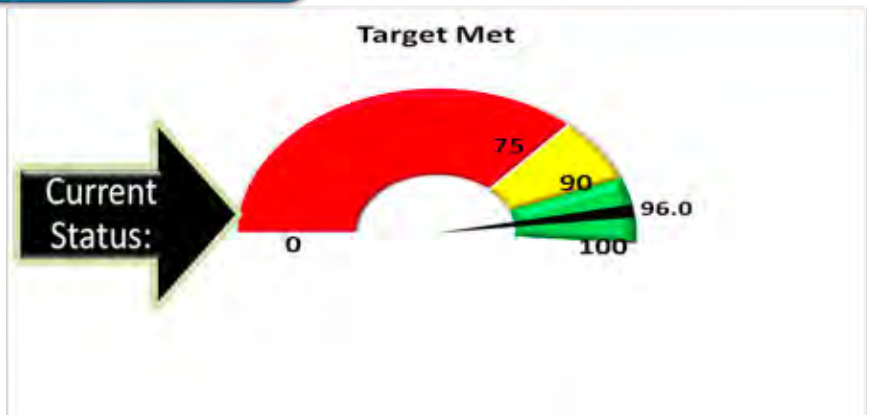


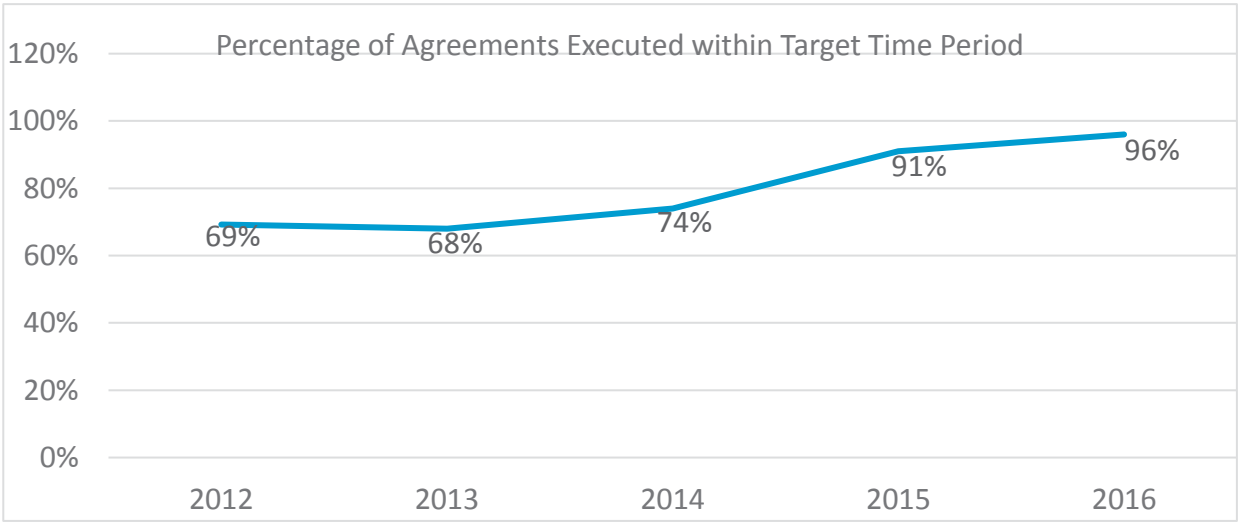
# 4. Streamline Agreement Process

**Executive Summary**: In state fiscal year 2016, 96% of all agreements submitted to Agreement Services were executed within 30 day or less. This exceeds the performance target of 90%.

Also, in FY 2016 it took an average of 12 days excluding time agreement with second party or awaiting Transportation Board approval to execute an agreement. This is a better performance compared to FY 2015 which took an average of 15 days.

For detailed information about performance measure 4, please refer to page 42.

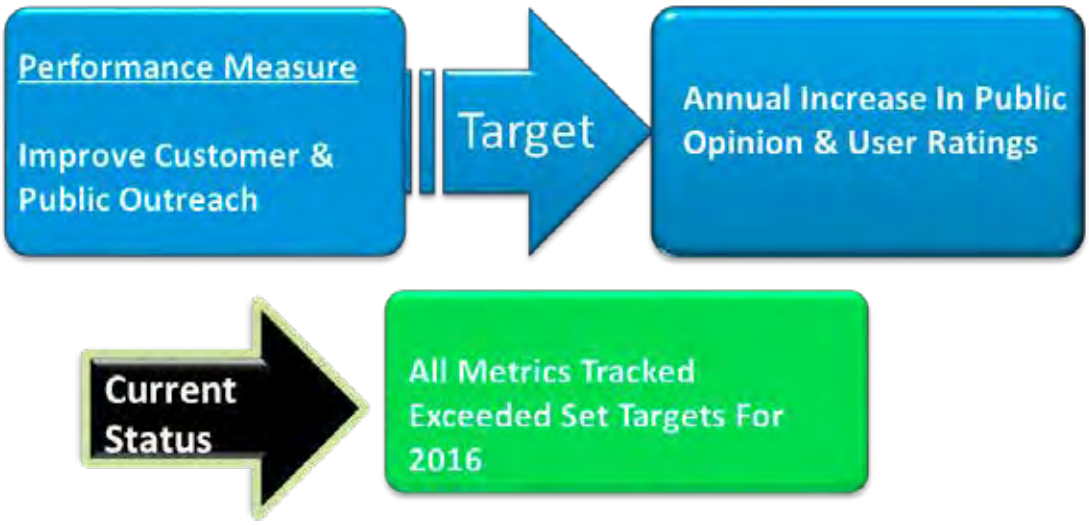



# 5. Improve Customer and Public Outreach

**Executive Summary**: This performance measure works toward meeting the NDOT Strategic Plan goal to be in touch with our customers. This performance measure is aligned with the goals and strategies set forth within the NDOT communications plan. The performance metrics that are tracked, measured and analyzed to determine how the department is doing are: Facebook likes, Twitter followers, Twitter retweets and You Tube views. Public Information staff are also improving all performance areas including making the NDOT website more user friendly, increasing internal and media communications, and improving public involvement.

The communications director is the champion of this Performance Measure and FY 2016 is the first year the section starts tracking and reporting on this measure. 2016 will be the beginning year for trend analysis for this performance measure.

For more information about this Performance Measure, please refer to page 45.




Social Media Goals

- Increase Facebook likes to 1,800 by the end of fiscal year (FY16) - **increased to 2,890**
- Increase Twitter followers to 14,000 by the end of fiscal year (FY16) – **increased to 16,500**
- Increase Twitter retweets by 10% by the end of fiscal year (FY16) – **increased by 38%**
- Increase YouTube views by 10% by the end of fiscal year (FY16) – **increased by 61.5%**

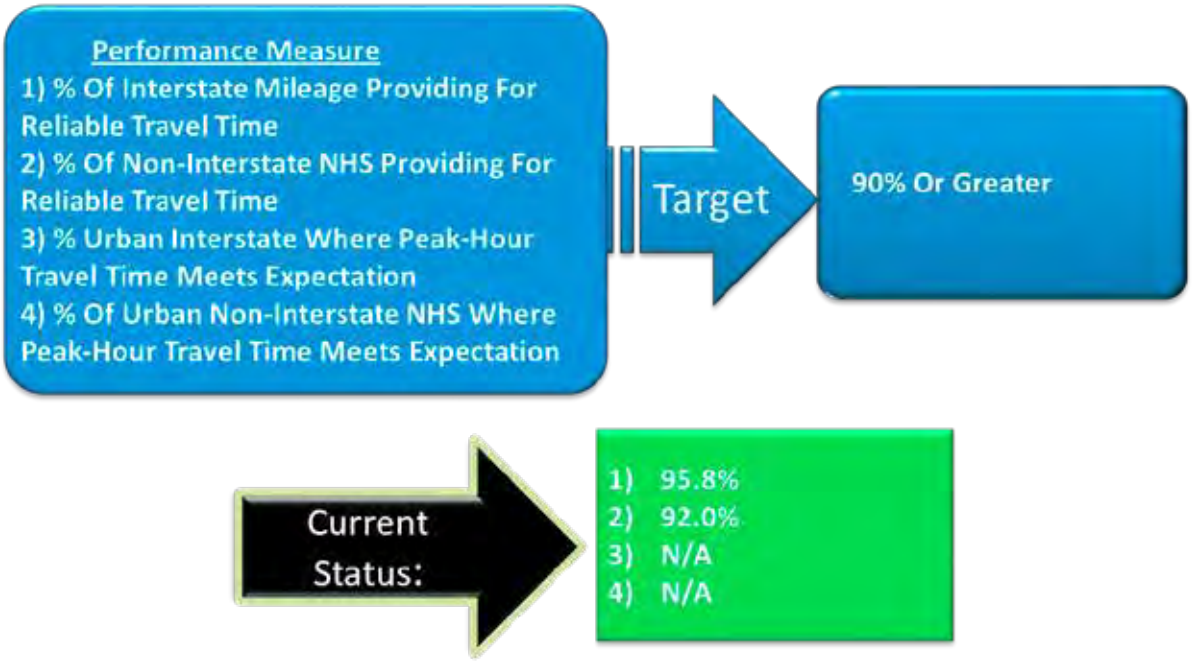
# 6. Reduce and Maintain Congestion Levels on the State Maintained Roadway System

**Executive Summary:** There are four parts to this performance measure. Only two of the four performance metrics, Percent of Nevada Interstate system mileage providing for reliable travel time, and the percent of Nevada non-interstate NHS roads providing for reliable travel time were measured and reported. Percent of Peak-Hour Travel Time for Interstate and Non-Interstate NHS routes in urbanized areas were not measured due to insufficient data.

This Performance Measure met target based on the two metrics with a performance of 95.8% and 92.0% respectively. A target of 90% of the Interstate and Non-Interstate NHS system mileage is expected to have travel time that is less than one and one half times the estimated travel time.

For detailed information about this Performance Measure refer to page 47.

**Definition of Travel Time Reliability** – Travel Time Reliability is an indication of consistency or expectation by drivers that it will take an estimated amount of time to traverse a certain distance on a stretch of highway. It is measured by the day or at different times of the day.



# 7. Streamline Project Delivery – Bid Opening to Construction Completion

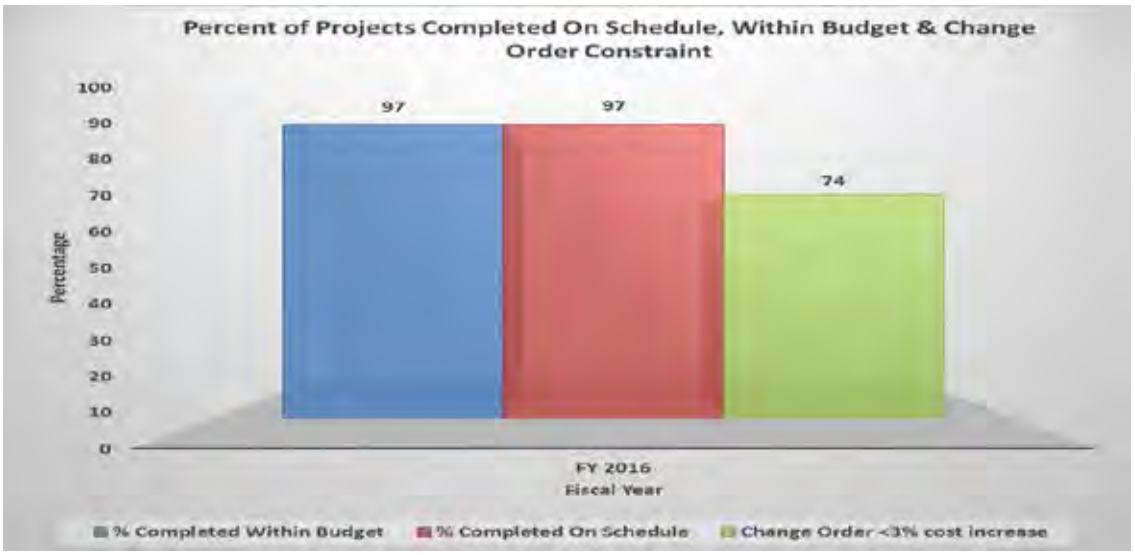
**Executive Summary**: This performance measure tracks the percentage of Design Bid Build and Construction Manager at Risk projects completed within the established ranges for cost estimate, change orders and schedule.

This performance measure is based on completed contracts and does not include projects in progress. In FY 2016, an average of 97% of completed contracts were within budget, 97% within schedule, and 74% had change orders less than a three percent cost increase. For detailed information about performance measure 7, please refer to page 50.

**Performance Measure**
1) Percent Projects Completed Within 10% Of Original Programmed Budget
2) Percent Projects Completed Within 10% Of Original Assigned Working Days
3) Percent Projects Completed With Cost Increase Of Less Than 3% Change Orders

Target: 80% Annually

Current Status:
1) 97% Within Budget
2) 97% Within Schedule
3) 74% Change Order < 3 % Cost Increase

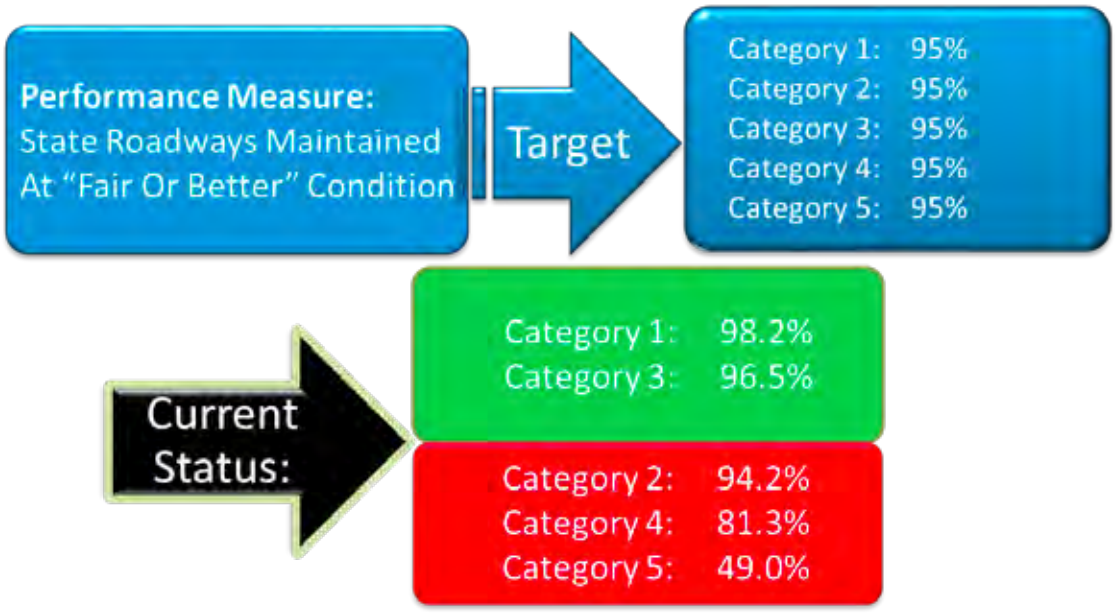


# 8. Maintain State Highway Pavement

**Executive Summary**: In fiscal year 2016 NDOT was unable to address the needs of categories 2, 4 and 5 roadways to bring them up to the minimum condition target of 95%. Categories 1 and 3 met the performance target.

In order for the Department to maintain the roadway network in fair or better condition, rehabilitation work is performed on the roadways each year. To increase the percentage of pavements in "Fair" or better condition, rehabilitation work must be performed on all roads in excess of the rate of deterioration of the pavement.

For detailed information about performance measure 8, please refer to page 54.



# 9. Maintain NDOT Fleet

**Executive Summary**: During State fiscal year 2016, the percentage of the NDOT mobile equipment fleet requiring replacement increased by 10.6% over the prior year, and by 28.3% over the base year 2007. The percentage of fleet in compliance with preventive maintenance requirements to ensure the expected life of our vehicles is not compromised increased by 1.8% over the prior year, but decreased by 11% compared to the base year. Performance target 1 was not met, while Performance target 2 was met.

For detailed information about performance measure 9, please refer to page 62.

**Performance Measure**

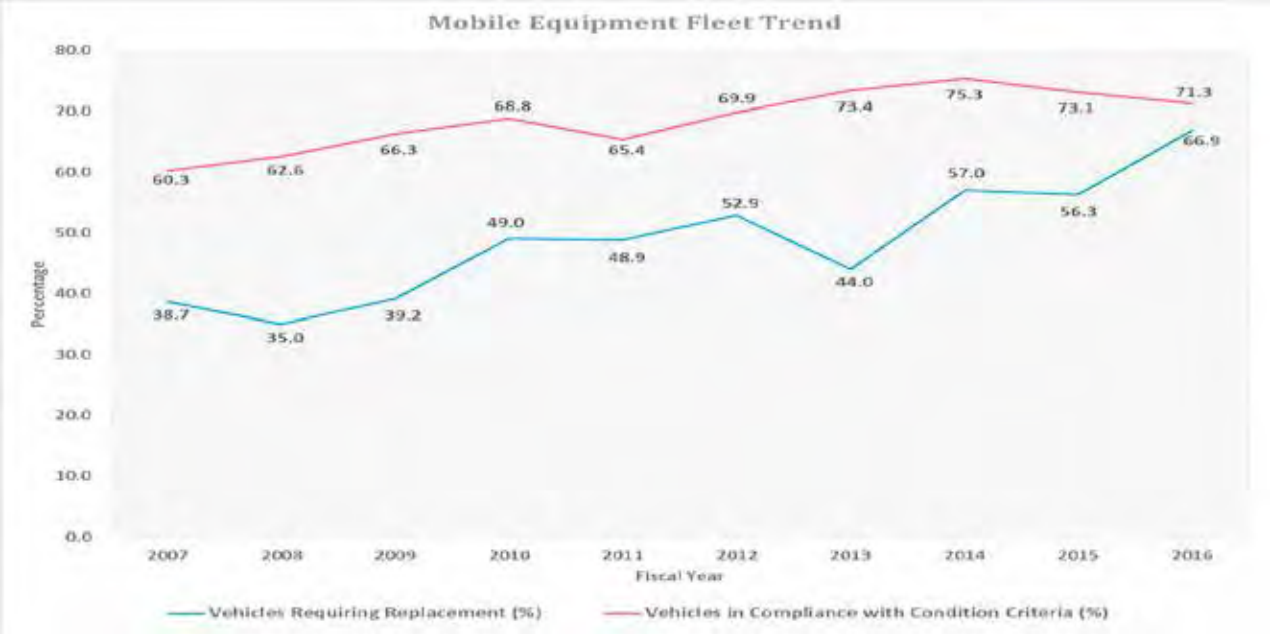
1) Percentage Mobile Equipment In Need Of Replacement
2) Percentage Fleet In Compliance With Condition Criteria

**Target**

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

**Current Status:**

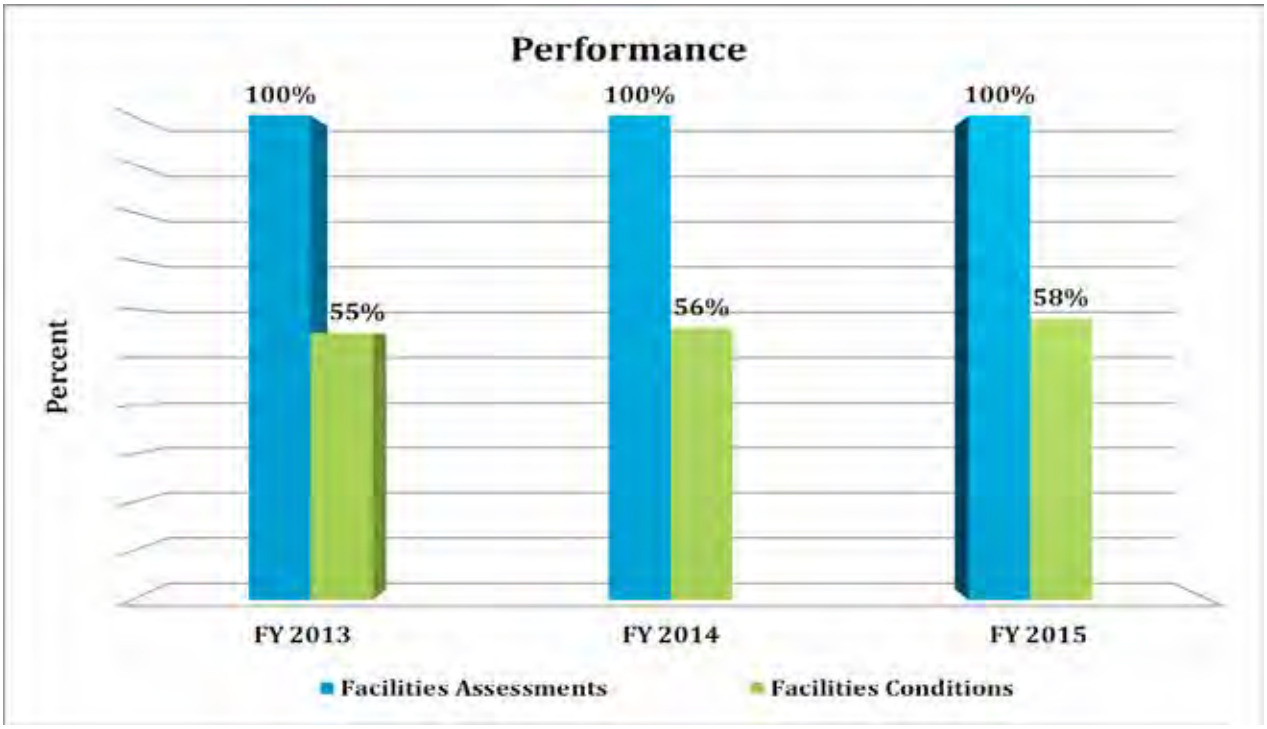
1) 10.6% Increase
2) 1.8% Increase



# 10. Maintain NDOT Facilities

**Executive Summary**: State fiscal year 2013 is considered the base year for this performance measure because NDOT adopted a new method to measure the performance of the "facilities condition" that includes finer details compared to prior years. In fiscal year 2016 an overall performance of 61% facilities assessments and condition was achieved. This is higher by eight percentage points compared to the base year, and three percentage points higher than the year before. The performance in fiscal year 2016 of 3% met the established target of a 2% annual increase.

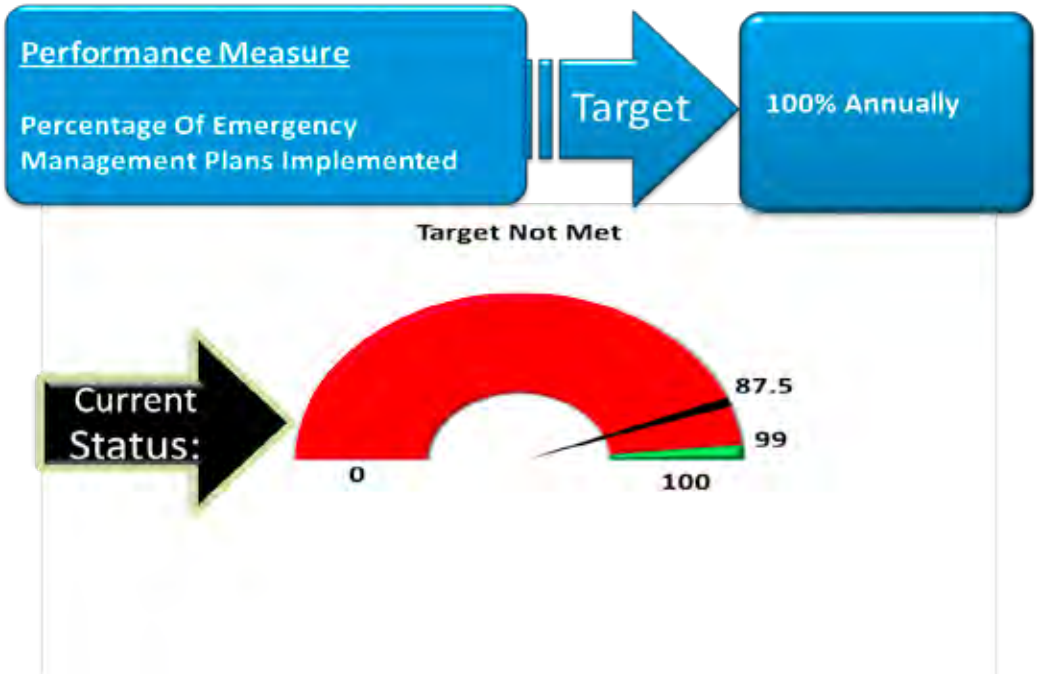
For detailed information about performance measure 10, please refer to page 65.

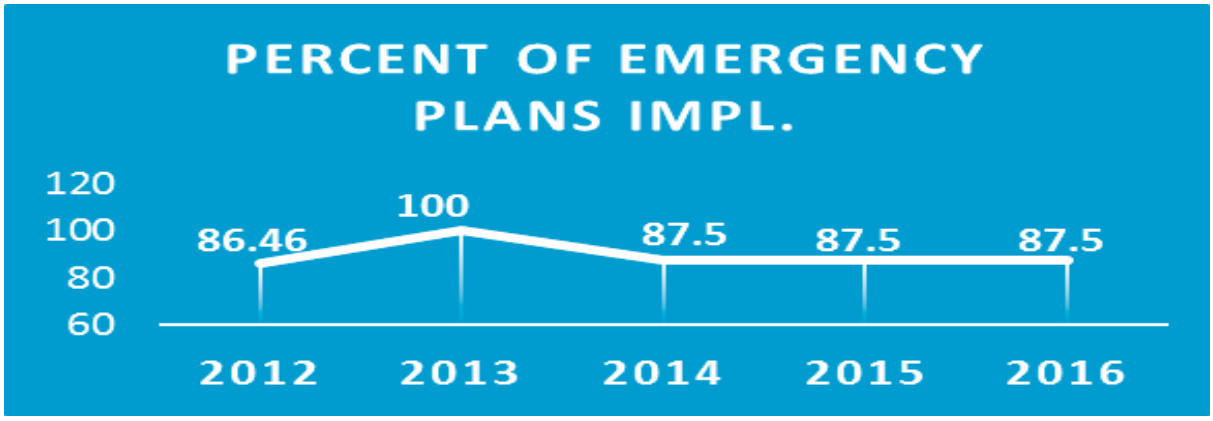



# 11. Emergency Management, Security, and Continuity of Operations

**Executive Summary** This performance measure tracks the percentage of emergency plans that have been completed, training and education provided to appropriate personnel, and plans tested, exercised and updated. Training and updates are completed on a biennial basis. In fiscal year 2016 we achieved an 87.5% compliance level, which did not meet our goal for the year of 100%. The reason for not meeting the target is because the Homeland Security Plan was not updated. The reason it was not updated was because of approved absences of key NDOT staff, time spent on the Beatty fire/flood event, and preparation for mass migration workshop in Las Vegas (VG-17).

For detailed information about performance measure 11, please refer to page 73.



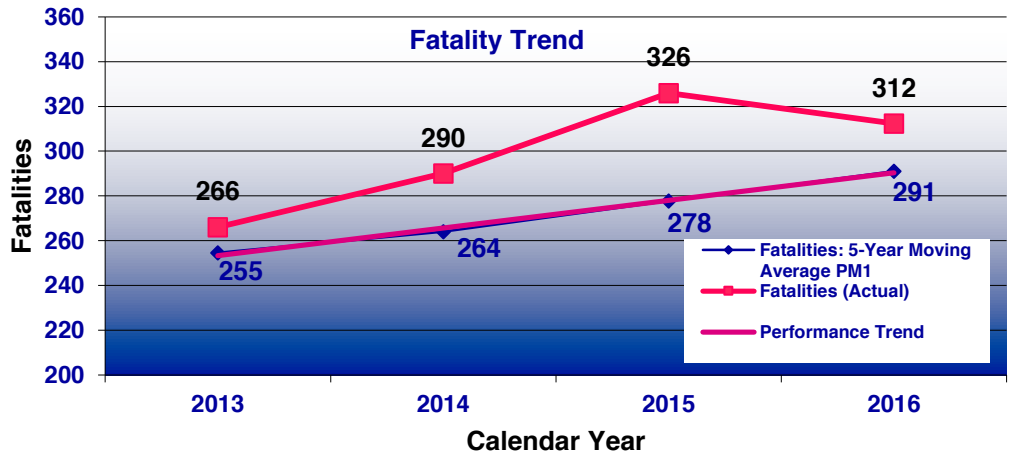
# 12. Reduce Fatal Crashes

**Executive Summary**: During fiscal year 2016, NDOT continued to work with their partners to implement the strategies of the Strategic Highway Safety Plan.

NDOT has changed the reporting format for this performance measure to comply with changes in the federal reporting requirements for both the FHWA and the NHTSA. This performance measure now has four parts that will be tracked as shown below.

The performance target is an average annual decrease of the five-year rolling average by 3.1%.

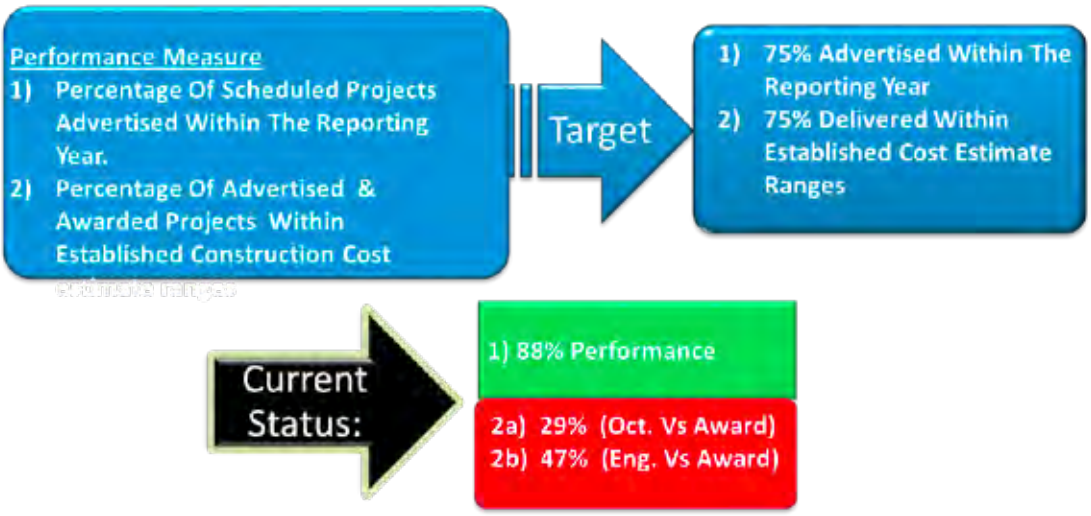
The data presented is from 2010 to 2014 and the analysis uses the five-year average. For detailed information about performance measure 12, please refer to page 77.

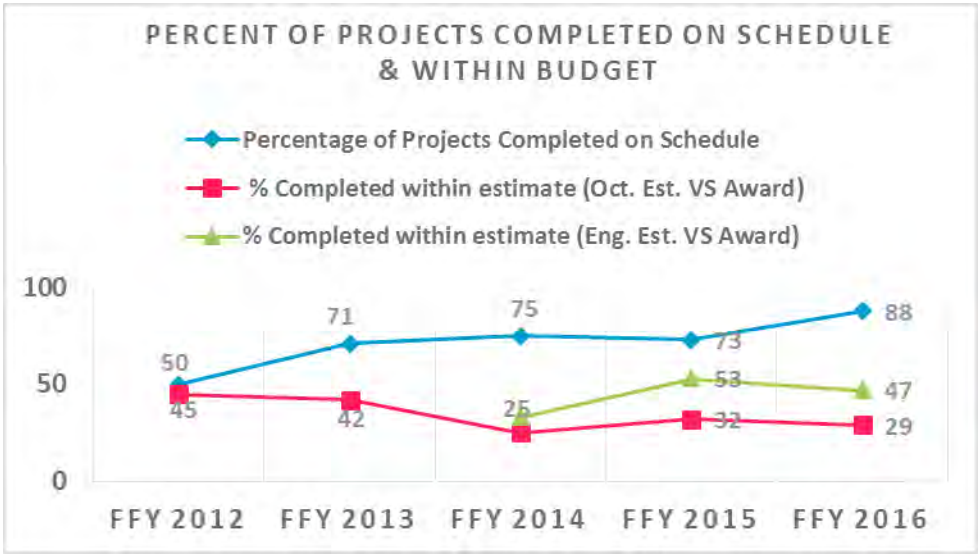



# 13. Streamline Project Delivery - Schedule and Estimate for Bid Advertisement

**Executive Summary**: This performance measure has been established as the percentage of scheduled projects advertised within the reporting year, and the percentage of advertised and awarded projects within the established construction cost estimate ranges. The construction cost estimate ranges are +/-15% of the October estimate of construction costs and +/-10% of the engineer's estimate of construction costs at time of bid.

The performance measure incorporates the majority of projects advertised by the Department. Contracts managed through the districts and maintenance sections were not included as they are developed through a separate process than the typical transportation project. Capital improvement projects completed by the Architecture Division were also excluded from this performance measure. For detailed information about performance measure 13, please refer to page 82.



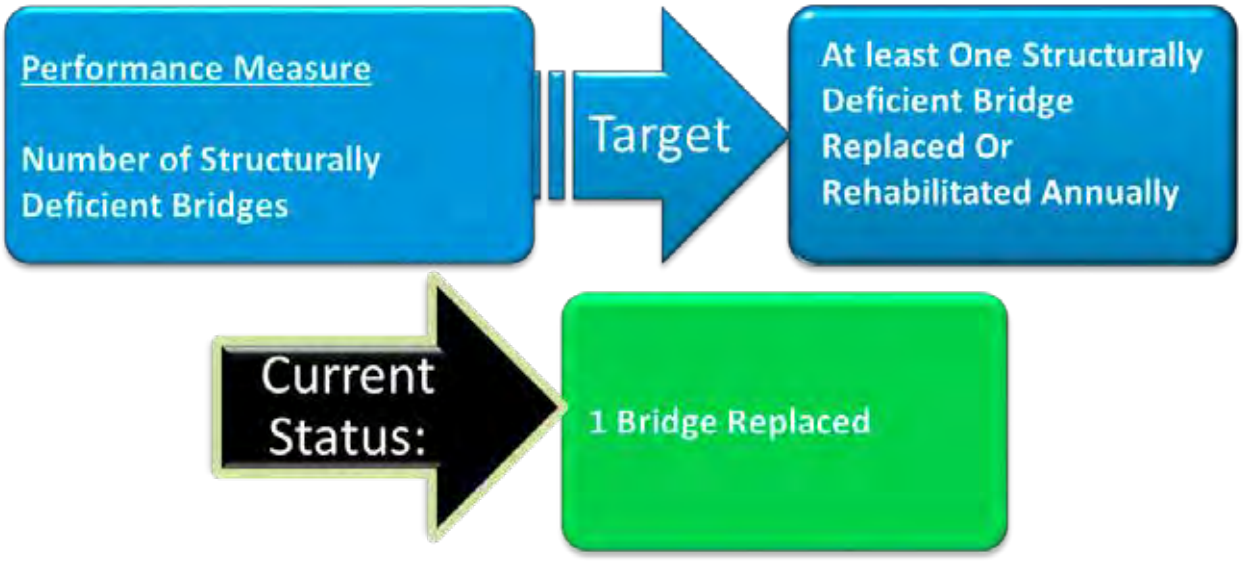



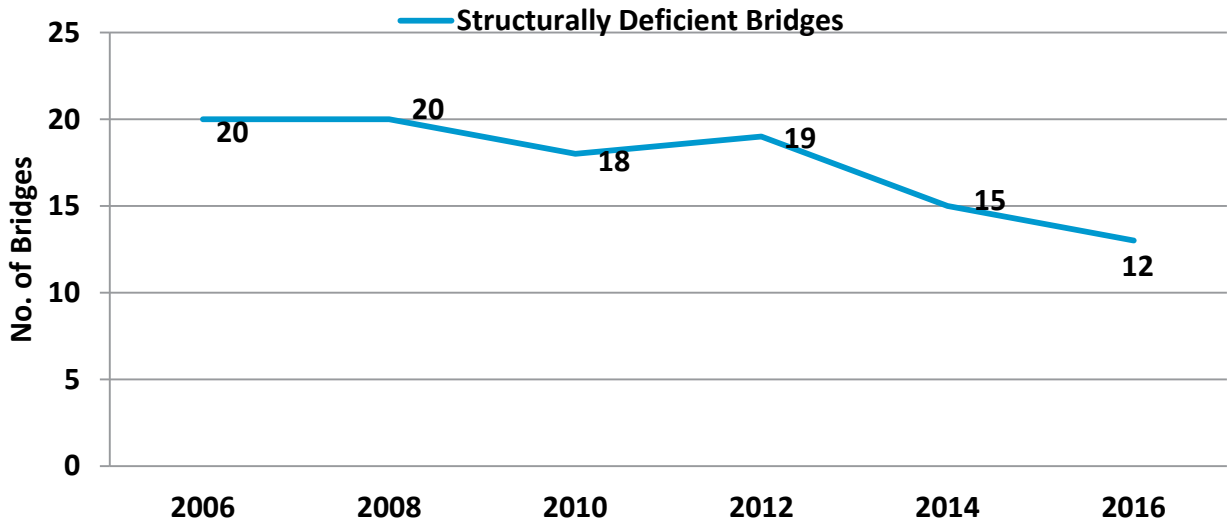
# 14. Maintain State Bridges

**Executive Summary**: The performance measure for the Structures division was modified to include only department-owned bridges which are categorized as Structurally Deficient (SD). The use of Functionally Obsolete category has been eliminated because it does not reflect bridge condition, maintenance or replacement needs. This is in line with the MAP-21 ACT.

During calendar year 2015, NDOT replaced one bridge which was structurally deficient. This meets the performance target of replacing or rehabilitating at least one bridge per year.

For detailed information about performance measure 14, please refer to page 87.

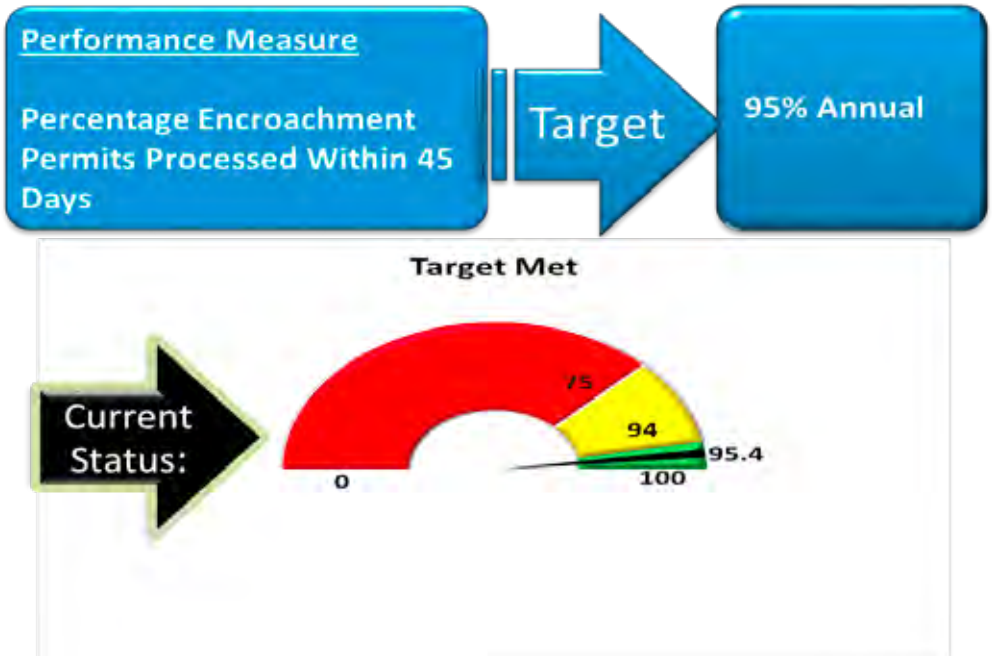


# 15. Streamline Permitting Process

**Executive Summary**: During state fiscal year 2016, the NDOT Right-Of-Way Division processed a total of 646 permits of which 616 were processed within 45 days. This translates to a 95.4% performance which slightly exceeds the performance target of 95% but below the 97.4% performance in fiscal year 2015. Transportation Policy (TP) 10-1-3 ENCROACHMENT PROCESSING TIME SCHEDULE is to ensure timely and quality service for NDOT encroachment permit customers.

For detailed information about performance measure 15, please refer to page 92.




| Summary of Status | Dist. 1 | Dist. 2 | Dist. 3 | HQ | Total | |
|---|---|---|---|---|---|---|
| Total permits accepted | 754 | 314 | 128 | 0 | 1,198 | |
| Total permits processed in more than 45 days | 26 | 3 | 1 | 0 | 30 | |
| Total permits processed within 45 days | 380 | 193 | 43 | 0 | 616 | |
| Total permits processed | 406 | 196 | 44 | 0 | 646 | |
| Total permits processed with re-reviews | 52 | 33 | 4 | 0 | 89 | |
| Total permits processed through FHWA | 40 | 12 | 3 | 0 | 55 | |
| Percent permits processed in more than 45 days | 6.40% | 1.53% | 2.27% | 0.00% | 4.64% | |
| Percent permits processed within 45 days | 93.60% | 98.47% | 97.73% | 0.00% | 95.36% | |

# DETAILED PERFORMANCE MANAGEMENT DATA

# 1. REDUCE WORK PLACE ACCIDENTS

**Performance Measure:**
The rate of injuries is reported as the number of work place injuries and illnesses (i.e. number of C-1 forms filed) per 100 employees and number of injuries and illnesses requiring medical attention (i.e. number of C-3 forms filed) per 100 employees as documented through annual OSHA 300 Log Reporting data. Data is based on calendar year per federal reporting requirements.

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

**Champion:**
Safety and Loss Control Section Manager
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.

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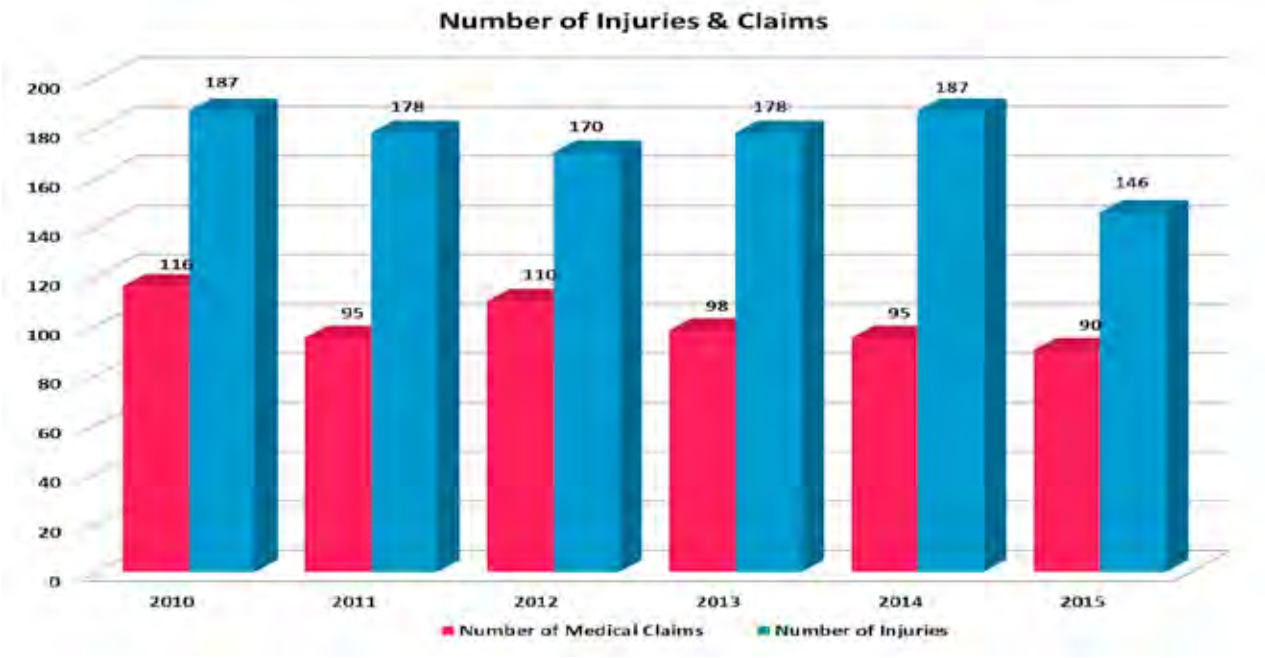
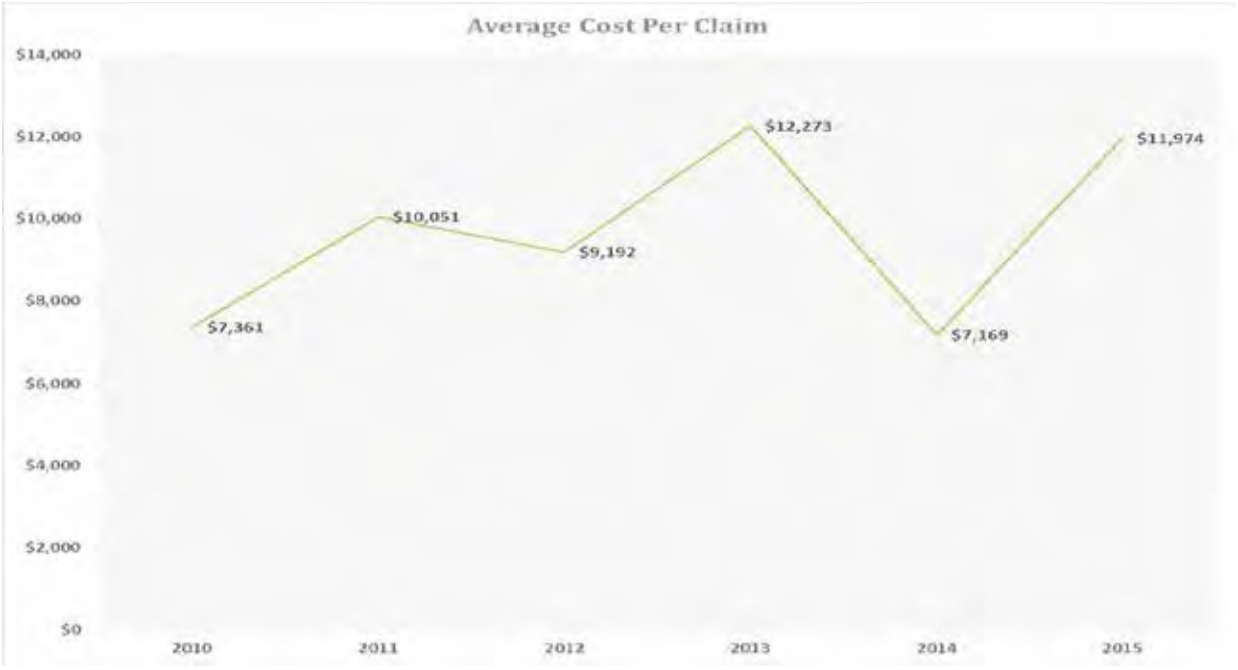
**Measurement and Supporting Data:**

| *Calendar Year* | *2010* | *2011* | *2012* | *2013* | *2014* | *2015* |
|---|---|---|---|---|---|---|
| **Total # of Injuries** | 187 | 178 | 170 | 178 | 187 | 146 |
| **# Injuries/All Employees** | 10.4% | 10% | 9.61% | 10% | 10.68 | 8.31 |
| **Total # Medical Claims** | 116 | 95 | 110 | 98 | 95 | 90 |
| **Medical/Employees** | 6.4% | 5.3% | 6.2% | 5.51% | 5.43 | 5.12 |
| **Average Claim Cost** | $7,361 | $10,051 | $9,192 | $12,273 | 7,168.96 | 11.973.92 |
| **Average # Employees** | 1798 | 1783 | 1769 | 1777 | 1751 | 1757 |




The annual baseline is the average of 2010 through 2015. Data is reported on a calendar year pursuant to federal OSHA reporting and the State total is the average number of employees during any given quarter or year. Claim costs include all medical expenses and any reserves. The target to reduce injuries by 10% was not met by the end of the year for total injuries, but injuries were reduced compared to the previous year.

The majority of injuries sustained in calendar year 2015 were due to strains and sprains; back and shoulder which are two of the top four causes of injuries per Federal OSHA. The number of back and shoulder claims went from 3 in CY 2014 up to 9 in CY 2015.



**Strategies for Improvement Next Calendar Year**

**Short range to next reporting:**
Continue outreach workers' compensation training for all Districts and Divisions. Claim costs have been added to the data and the Safety and Loss Control Section has worked diligently with the agencies third-party administration overseen by the State of Nevada Risk Management Division to provide the best medical treatment for agency employees and methods to control costs.

**Long range:**
1) Continue identifying specific safety training that can be conducted by existing staff and take cooperative steps to ensure courses are conducted, including Global Harmonization System, First Aid/CPR/AED, New Employee Safety Orientation, and OSHA-mandated classes.

2) As time and resources permit, continue efforts to develop and distribute an Employee Safety Survey in order to assess the agency's culture or attitude as it pertains to safety; and evaluate the responses to determine areas of need within the safety program.

3) Develop and implement a safety and health fair for NDOT employees.

4) Increase staff by two additional agency safety/loss control coordinators to reduce workers' compensation claims that will focus on workplace inspections, training and assist Districts and Divisions with motor vehicle accident investigations.

5) Increase staff by one clerical support to perform clerical and data entry assignments.

6) Include safety/loss control in all levels of projects to ensure the safety and health of all NDOT employees and contractor employees.

**Were the targets met?**
No

**What "strategies for improvement" were successful?**
Increased communications by providing bi-monthly safety e-mails have increased safety awareness and have prompted overwhelming input from workers that are committed to improve the safety program. The agency safety/loss control coordinator and the safety/loss control safety trainer have worked together to increase the number of trained employees.

The vehicle database continues to be maintained by the Safety and Loss Control Section as required by the Federal Motor Carrier Safety Administration.

The safety/loss control coordinator and safety trainer conducted the majority of CPR/First Aid and AED training. This was completed and all of the Districts have safety staff certified to teach CPR/first aid and AED.

The headquarters building is equipped with six emergency evacuation chairs, two per floor. The basement is equipped with a powered emergency evacuation chair to mobilize employees that require assistance.

Cooperative efforts between the Training Section and Safety and Loss Control to implement a learning management system to track all training were successful. Several mandatory safety courses were identified in the system, specifically targeting new hires or new supervisory staff.

**What "strategies for improvement" were not successful? Why?**

The motor vehicle accident database in conjunction with the State of Nevada Risk Management Division database indicate that for the past three years deductibles and vehicle/heavy equipment repairs costs have increased in all Districts and Divisions. All Districts and Divisions must perform effective pre-trip/post-trip inspections of all vehicles and comply with NDOT's seatbelt and no texting policies to reduce these costs in the future. The State of Nevada Risk Management Division plans to increase NDOT's motor vehicle accident deductibles from $500 to $700 next year. The heavy equipment deductibles will increase from $5,000 to $7,000 due to the number of at-fault employee accidents.

In CY 2014 workers' compensation cost per claim was $7,169 and in CY 2015 cost per claim increased to $11,974 resulting in a 40% increase. This increase attributes to particular body parts injured that increase treatment and lost timework. Several permanent partial disability awards and rehabilitation buyouts were paid out to settle claim closures. Additionally, Districts and Divisions can do more by conducting routine workplace inspections to ensure potential safety and health hazards are eliminated or corrected.

**Does this performance measure effectively measure what is desired?**
No

**Is there a better performance measure that should be considered?**
Not at this time.

**Will meeting the next yearly target have a fiscal impact? If so, explain:**
There will be an increased cost to the Safety/Loss Control travel budget due to additional workers' compensation training for all Districts and Divisions. This will support the "new approach" system in place for injured workers' to receive the best medical treatment and understanding of NDOT workers' compensation policies and workers' compensation Nevada Revised Statutes and Nevada Administrative Codes. In addition, the agency safety/loss control coordinator and the NDOT safety trainer will continue to conduct inspections and training throughout the agency.

# 2. PROVIDE EMPLOYEE TRAINING

**Performance Measure:**
Percentage of employees trained in accordance with prescribed training plans and State statute training requirements.
**Ultimate Target:** 100% compliance for all required training

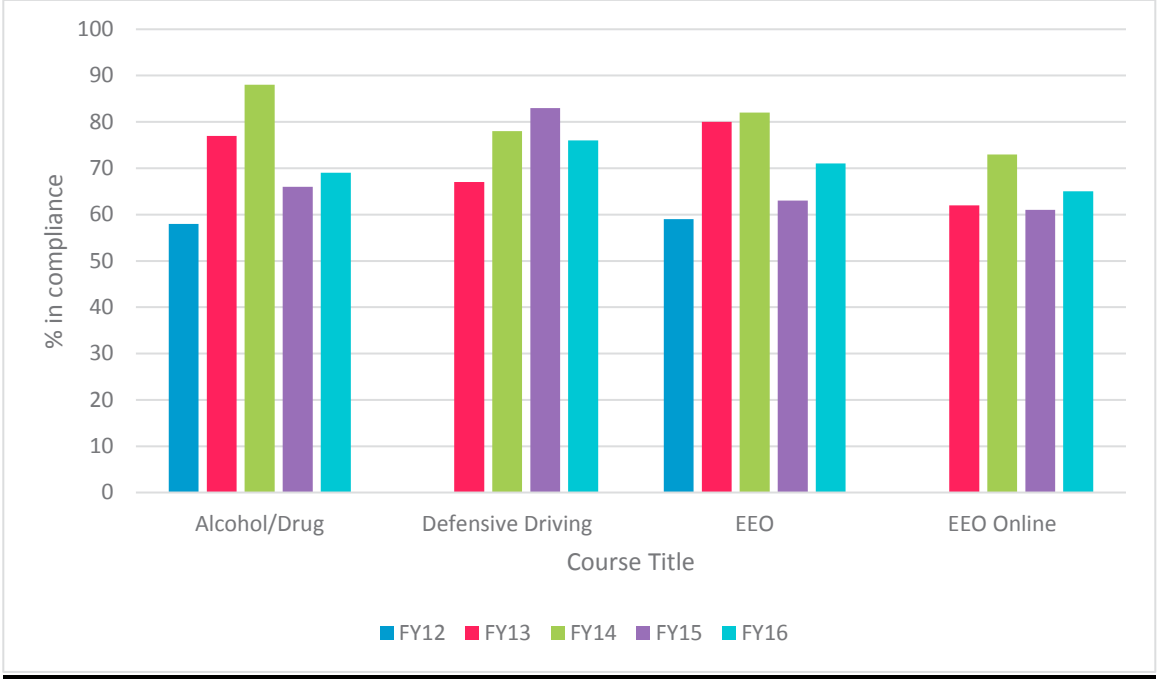
**FY16 Target:** 77% compliance for all required training

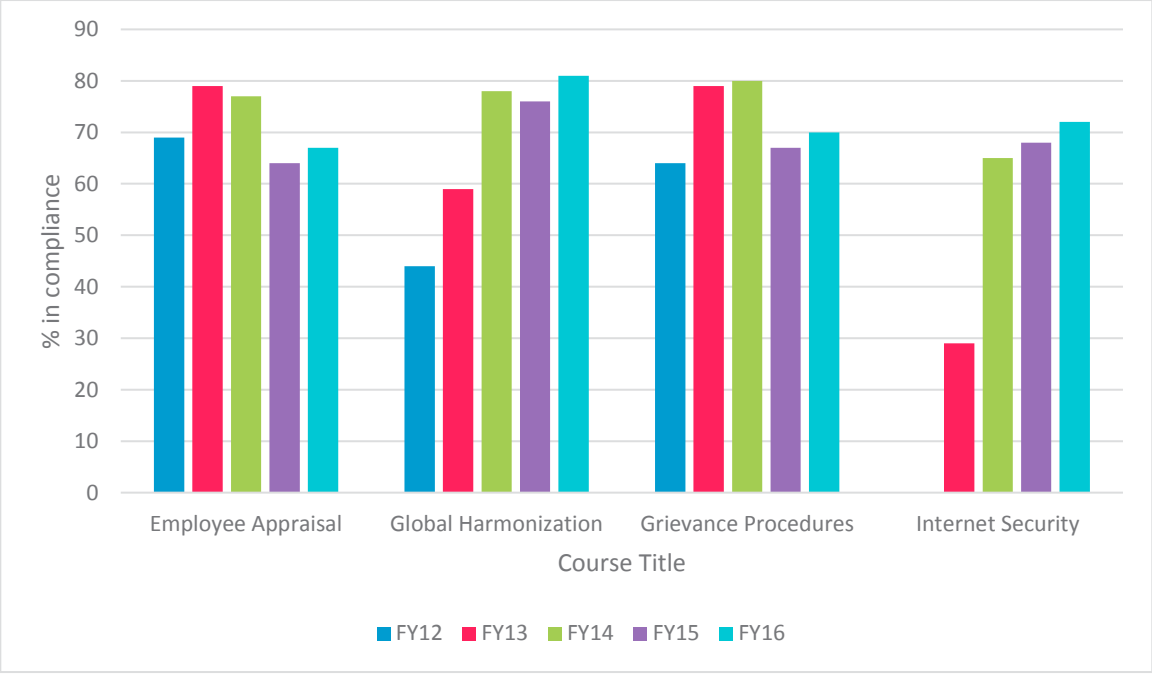
**Measurement and Supporting Data:**

| | Total Employees Requiring Training* | % in compliance for FY | | | | | # Trained in FY |
|---|---|---|---|---|---|---|---|
| **Requirement** | | **2012** | **2013** | **2014** | **2015** | **2016** | **2016** |
| Alcohol & Drug Program | 479 | 58 | 77 | 88 | 66 | 69 | 144 |
| Defensive Driving | 1617 | - | 67 | 78 | 83 | 76 | 370 |
| EEO | 479 | 59 | 80 | 82 | 63 | 71 | 174 |
| EEO -Online | 479 | - | 62 | 73 | 61 | 65 | 148 |
| Employee Appraisal | 1617 | 69 | 79 | 77 | 64 | 67 | 120 |
| Global Harmonization | 1617 | 44 | 59 | 78 | 76 | 81 | 244 |
| Grievance Procedures | 479 | 64 | 79 | 80 | 67 | 70 | 174 |
| Internet Security Awareness | 1617 | - | 29 | 65 | 68 | 72 | 469 |
| Interviewing & Hiring | 479 | 66 | 82 | 78 | 68 | 74 | 165 |
| Progressive Discipline | 479 | 63 | 79 | 78 | 65 | 71 | 179 |
| Sexual Harassment Prevention | 1617 | 85 | 76 | 93 | 92 | 74 | 714 |
| Work Performance Standards | 479 | 69 | 79 | 77 | 64 | 67 | 119 |

*Number of employees and supervisors on 6/30/16
**The frequency of attendance ranges from one time only to once every two years.

Defensive Driving, EEO Online, and Internet Security Awareness were not tracked as performance measures until FY13. The Work Performance Standards class became a requirement in October 2013, and NDOT has taught it as one class in conjunction with the Employee Appraisal class.


100
90
80
70
60
50
40
30
20
10
0
% in compliance
Alcohol/Drug
Defensive Driving
EEO
EEO Online
Course Title
FY12
FY13
FY14
FY15
FY16


90
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Employee Appraisal
Global Harmonization
Grievance Procedures
Internet Security
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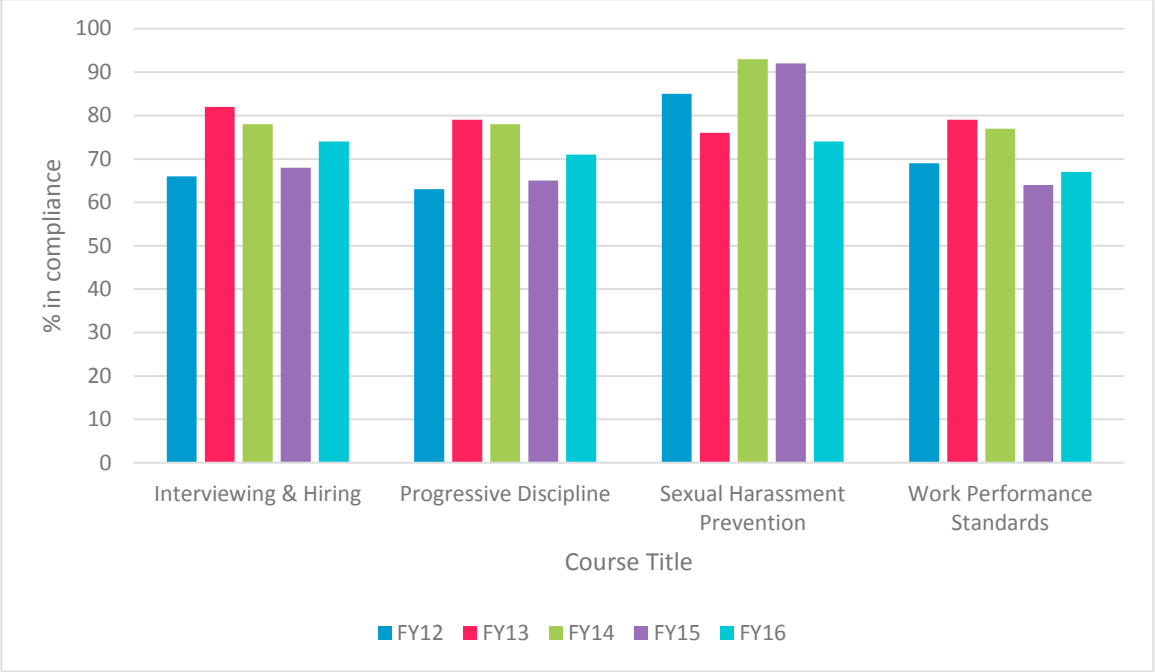
FY15
FY16




**Overview:**

The FY2016 compliance targets were not met but compliance increased from the previous fiscal year. Training courses for this fiscal year were scheduled based on anticipated needs with a targeted enrollment of 20. The average enrollment for classes was 13. The lower compliance numbers reflect the need for the agency to find additional ways to motivate employees to enroll and attend the required classes.

**Were the targets met?**

The target is 100% compliance overall and the FY16 target was 77%. The average for the 12 required classes was 71% which shows an increase of 1% from last fiscal year's average of 70%. The level of compliance for 10 of the 12 classes increased. The level of compliance for the Preventing Sexual Harassment class decreased by 18%. The level of compliance for Defensive Driving dropped by 7%, but it is likely that this number will increase as more sign-in sheets are submitted by the Districts. Additionally, more classes were cancelled because of low enrollment, personnel changes, and instructor unavailability. This is the second highest level of compliance for the required classes over the past five years. The high was in 2014 with an average compliance rate of 79%.

**Which "strategies for improvement" were successful?**

Follow-up emails to employees helped build employees' awareness of the classes that they needed to attend.

**Which "strategies for improvement" were not successful?**

Although reminders helped boost enrollment, there were a greater number of no shows or last minute drops than in previous years. Also, at the beginning of the 2016 calendar year, the Training Section was assigned three new programs that were previously performed by the Human Resources Division. This limited the Training Section's ability to make a stronger push during the second half of the year to schedule additional classes to boost up the numbers

**What new "strategies for improvement" will be initiated in FY 2017?**

**Short range to next reporting:**

- During FY16, NDOT HR Personnel Officer Melody Duley worked with NDOTs IT Division to develop a module in a new HR system (eHR) that will give employees, training coordinators, supervisors and managers easy access to information on employees' training compliance. The system went live in August.
- The instructor-led supervisory class with the lowest compliance level is the combined Work Performance Standards/Employee Appraisal.
- Make a stronger effort on the Preventing Sexual Harassment class, which has shown the most significant drop in compliance. Promoting the online class and developing an NDOT-specific online class could help increase compliance for this requirement.
- NDOT employees have typically preferred instructor-led classes and previous HR management viewed instructor-led classes as more effective and NDOT-specific. Although the Division of Human Resource Management offers online classes in the majority of the required topics, NDOT has not promoted them based on their perceived limitations. The NDOT Training Section will be assessing these classes to determine their effectiveness for our agency and employees or the possibility of enhancing them with NDOT-specific material.
- District and Divisions will be challenged to take a more proactive role in getting classes scheduled to meet their employees' training needs.
- Two new required classes will be added for FY 2017: FMLA for supervisors and Stormwater Awareness for all employees.
- Provide more cross-training among HR Division and Training Section so that there are back-up instructors available if the assigned instructor is not available.

**Long range:**

- Continue to refine the eHR training module.
- Add additional Stormwater classes as needs of specific employee groups are determined.

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

Yes.

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

The new eHR system reports each employees level of compliance with the classes required for them. This might be a useful statistic to report.

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

Required training requires travel money, and budget limitations could have an impact on the availability of training in all locations. Staff time for travel and teaching may also affect overtime budgets.

**Target for Next Three Fiscal Years:**

Turnover of NDOT employees in general as well as increased workload and turnover for the instructors of various classes will affect the agency's ability to hit the ultimate target of 100%. Adding new required classes will also lower the overall average. The new eHR system, which will also remind employee that they are out of compliance with specific classes, should help raise compliance. The average increase in compliance for the required classes has been 1.75% over the past four fiscal years. Based on the functionality of the eHR system and cross-training of instructors to provide more flexibility in scheduling, optimistic targets for the next three fiscal years reflect a 3% percent increase per year:

FY17: 74%

FY17: 77%

FY18: 80%

# 3. IMPROVE EMPLOYEE SATISFACTION

**Performance Measure:**

Percentage rating obtained from employee satisfaction survey

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

Champion: Chief, Human Resources

**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 quality staff. A satisfied workforce will excel at their duties and 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:**

| | |
|---|---|
| 2008 FY (Base Number) | 70% |
| 2009 FY | 67% |
| 2010 FY | 62% |
| 2011 FY | 50% |
| 2012 FY | 48% |
| 2013 FY | 50% |
| 2014 FY | 51% |
| 2015 FY | 52% |
| 2016 FY | 57% |

**Overview**

**Employee Satisfaction Survey Results**

49% strongly or somewhat agree they would recommend NDOT to a friend as a good place to work.
57% of employees are extremely or somewhat satisfied with NDOT.
70% say their boss/supervisor lives up to NDOT's standard code of ethics extremely or very well.

**Work Environment** *(% responding extremely or somewhat satisfied)*
71% understand the mission of the division or district
65% believe their work makes good use of their skills and abilities
61% believe their work place is a safe and supportive environment
72% believe they have the equipment to do their job well
62% believe the amount of work they have to do is reasonable
68% believe the physical conditions (light, heat, space, appearance) in their work area are good
63% believe they are informed on issues relating to their work environment
47% believe there is adequate staffing in their department

**Supervision** *(% responding strongly or somewhat agree)*
74% believe they are able to express any concerns to their supervisor
72% believe that their work performance standards have been clearly explained to them
62% believe their supervisor recognizes when they go above and beyond their normal scope of duties
66% believe their supervisor communicates effectively
66% believe they are provided appropriate training opportunities for their position
62% believe they are encouraged to find creative and new solutions to existing duties

**Management** *(% responding strongly or somewhat agree)*
55% believe they are able to express any concerns to management
53% believe that management clearly communicates the mission/goals of NDOT
42% believe management recognizes when they go above and beyond their normal scope of duties
45% believe management sets clear priorities
40% believe management applies policy decisions consistently throughout NDOT

**Other** *(% responding extremely or somewhat satisfied)*
81% are satisfied with their job security
74% are satisfied with the flexibility of work hours
61% are satisfied with their opportunities to work on interesting projects
30% are satisfied with their benefits
49% are satisfied with their opportunities to use new technologies
24% are satisfied with their salary
46% are satisfied with their opportunities for advancement

**Was the annual target met?**
No

Fifty-seven percent (57%) of employees are extremely or somewhat satisfied with the Nevada Department of Transportation as an employer compared to seventy percent (70%) the base year. The percentage did increase from fifty-two percent (52%) last year.
While employee participation in the survey decreased from last fiscal year, it is still the third highest employee participation since the survey began.

**What "strategies for improvement" were successful?**
The percentage of employees who are extremely or somewhat satisfied with the Nevada Department of Transportation as an employer has increased five percent (5%) from last year. This has been the largest increase since the base year of 2008.

**What "strategies for improvement" were not successful? Why?**
The percentage of employees who strongly or somewhat agree that the physical conditions in their work area are good has decreased four percent (4%) this year with a five percent (5%) increase from the baseline year.
The percentage of employees who strongly or somewhat agree that they have the equipment to do their job well decreased to sixty-two percent (62%) this year with an eight percent (8%) decrease from the baseline year.
The percentage of employees who strongly agree or somewhat agree that management applies policy decisions consistently throughout NDOT has decreased two percent (2%) from last year with a decrease of nine percent (9%) from the base year.
The percentage of employees who strongly agree or somewhat agree that management sets clear priorities has decreased four percent (4%) from last year with an overall increase of three percent (3%) from the base year.
The percentage of employees who strongly or somewhat agree that they are provided appropriate training opportunities for their position has decreased six percent (6%) this year with a five percent (5%) increase from the baseline year. Sixty-six percent (66%) of the employees believe they are provided appropriate training opportunities for their position.
The percentage of employees who strongly or somewhat agree that they are satisfied with the flexibility of their work hours has decreased one percent (1%) with a six percent (6%) increase from the baseline year. Seventy-four percent (74%) of employees are satisfied with the flexibility of work hours.

The overall target was to increase employee satisfaction to seventy-five percent (75%). The percentage of employees who would recommend the Nevada Department of Transportation to a friend as a good place to work remained the same at forty-nine percent (49%) in 2016, which is a decrease from seventy-five percent (75%) in 2008.

The current economic environment and overall decrease in State pay and benefits is continuing to have a direct impact on the satisfaction of the Nevada Department of Transportation employees. The percentage of employees who are somewhat dissatisfied or extremely dissatisfied with salaries is sixty-one percent (61%). The percentage of employees who are somewhat dissatisfied or

extremely dissatisfied with benefits is sixty percent (60%). Employees continue to comment that they do not get paid enough.

Almost all of the comments that were left in the open-ended portion of the general section revolved around salary and benefits. A significant proportion of respondents simply stated that they do not get paid enough (e.g., "…the pay hasn't kept up with the cost of living throughout the years."), while others do not feel that there are adequate benefits and advancement opportunities. One person said "I would recommend it to someone who wanted job security, or like interesting work, or was just starting out. I would not recommend it to someone looking for career advancement or a living wage for our profession." Many employees did state that the flexibility of their work hours is a positive aspect of working for NDOT (e.g., "I love the flexibility of work hours. It is one of the best reasons to work here.").

**What "strategies for improvement" will be initiated in FY2016?**
**Short range to next reporting:**

1. Continue communications from management to employees including "Muffins with Malfabon" and Division Head Staff Meetings.
2. The Department will focus on flexibility in the workplace, job security, training opportunities and a pleasant work environment for employees.
3. The Department will continue to evaluate pay inequities.
4. Encourage and require supervisory training, in compliance with regulations, that includes communication, management styles, and coaching. This strategy directly correlates with performance measure #2.
5. Communicate to employees that the survey results have been reviewed. Throughout the year NDOT will communicate with employees and tie those communications back to the survey results.

**Long range:**
Continue conducting and analyzing annual satisfaction surveys and making appropriate recommendations to the Director's Office for addressing employee satisfaction.

**Does this performance measure effectively measure what is desired?**
Yes, 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.

**Is there a better performance measure that should be considered?**
No; however, employee job satisfaction hinges in part on pay and benefits. Now that furloughs have been eliminated we are likely to see improvement in the results of the survey.

**Will meeting the next yearly target have a fiscal impact? If so, explain.** No.

# 4. STREAMLINE AGREEMENT EXECUTION PROCESS

**Performance Measure:**
Percentage of Agreements executed within 30 days from when division submits agreement to the date when it is fully executed, excluding time the agreement is with the second party for signature or awaiting Transportation Board approval.

**Target:** 90%

**Champion:**
Administrative Services Division Chief

**Support Divisions:**
All divisions that procure professional services over $2,500

**Strategy Plan Support:**
An agreement is the instrument used to procure a variety of services for NDOT. The Agreement Services section ensures that NDOT procures these services in accordance with established laws, rules and regulations. Delays in executing agreements have a tremendous impact on the operations, delaying what can often be critical services, or services that impact the timely delivery of projects. Agreements for services over $300,000 require approval of the Transportation Board; agreements less than $300,000 and certain services exempt from Board approval (such as right-of-way acquisitions and interlocal agreements) can be executed with approval from the NDOT director.

This performance measure helps meet the department's mission to provide a better transportation system for Nevada through our unified and dedicated efforts by helping to accomplish the goals of: delivering timely and beneficial projects and programs; being responsive to our customers; effectively preserving and managing our assets; and efficiently operating the transportation system.

**Summary:**
For fiscal year 2016, the average number of calendar days to execute agreements, measured from the time they were submitted to Agreement Services until the time of agreement execution but excluding the time the agreement was with the second party or awaiting Transportation Board approval, was 12 days. The Department executed 506 agreements during the fiscal year, and 485 of those were executed in 30 days or less. Therefore 96% of all agreements were executed within 30 days, exceeding the target of 90%. This is an improvement over fiscal year 2015 where the average number of days to execute agreements was 15 days.

It is significant to note that of the 21 agreements not executed within 30 days, over 50% of them (12 agreements) were with other public entities. These include cooperative, interlocal and Local Public Agency (LPA) agreement types. These types of agreements often require extensive coordination with

the other public entities, and items often must be discussed with Boards of Directors and other authorities within the entity. This extensive coordination contributes to the length of time it takes to execute these types of agreements.

**Measurement and Supporting Data:**

| | Number of Agreements Executed | Number Executed Within 30 Days | Percent Executed Within 30 Days | Average Number of Days to Execute |
|---|---|---|---|---|
| FY 2016 | 506 | 485 | 96% | 12 |

**Strategies for Improvement**

**Short range to next reporting:**
Hire administrative service officer staff in Agreement Services to act as account managers for each NDOT Division's agreements. Have them engaged in the procurement process, monitoring agreements execution to ensure it is happening as efficiently and effectively as possible.

**Long range:**
Thoroughly assess the current performance measure, data collected, it's relevance to reporting actual performance, and make revisions as applicable. Have all Agreement Services staff understand the performance measure, what is measured, and how each stage of processing an agreement affects the measure. Provide quarterly feedback to staff about the current processing time, and implement continuous improvements to decrease processing time without sacrificing accuracy and adherence to laws, rules and regulations. Maintain up-do-date documentation regarding procurement and agreement execution processes and procedures.

**Were the targets met?**
Yes

**What "strategies for improvement" were successful?**
Fully implementing DocuSign has helped to achieve and exceed the current performance measure. Paula Aiazzi was hired as a temporary employee to implement DocuSign. Her contract was approved by the Board of Examiners in March 2016 to allow NDOT to hire her – she is a former state employee. Without Paula's assistance we may not have been so readily able to meet and improve upon the measure, or to advance the effective use of DocuSign.

Tracking agreements using the tracking log was successful in identifying when an agreement had taken longer than it should have to process, allowing Agreement Services to follow up with the project manager. Keeping track of the many stages of processing an agreement helped identify

where in the process the delay occurred. Training staff on the performance measures helped to highlight the importance of the data and the underlying performance being measured.

All quote documentation is now accepted electronically, contributing to decreased processing time. Using DocuSign has created significant efficiencies in obtaining signatures, as can be seen by the improvement in the performance measure over the previous fiscal year. The average processing time decreased from 15 days in FY2015 to 12 days in FY2016.

**What "strategies for improvement" were not successful? Why?**
N/A

**What new "strategies for improvement" will be initiated in FY2017?**
**Short range to next reporting:**
Several Local Public Agencies (LPAs) have expressed interest in using DocuSign to electronically sign their agreements. Administrative Services staff are working with NDOT Legal, NDOT LPA section and the LPAs to finalize document routing. Once test documents have been successfully processed Agreement Services will send future LPA agreements via DocuSign, which should decrease processing times.

In addition the Administrative Services Division Chief is working with other division chiefs to identify vacant positions for reclassification to Agreement Managers. These positions will closely monitor procurement, agreement execution, and management of agreements throughout the life of projects being undertaken by their assigned division(s). This will help further expedite the procurement process.

**Long range strategy:**
Continue to assess the relevance of performance measure data, revising the measure as necessary to accurately reflect the time it takes to process an agreement. Mandate that all agreements must be processed via DocuSign.

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

**Is there a better performance measure that should be considered?**
No

Will meeting the next yearly target have a fiscal impact? If so, explain**.**
Yes. Procuring services more expediently will make Department operations more efficient, resulting in faster delivery of projects, more timely maintenance of facilities, and an overall higher standard of service provided. This will result in overall cost savings. Expeditious procurement will also ensure that NDOT meets the Environmental Protection Agency (EPA) Consent Decree terms and conditions to avoid future penalties or sanctions.

# 5. IMPROVE CUSTOMER & PUBLIC OUTREACH

**Performance Measure:**
Improve Customer & Public Outreach.

**Annual Target:**
Goals set forth in NDOT communications plan.

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

**Overview of performance measure:**
This performance measure works toward meeting the NDOT Strategic Plan goal to be in touch with the public and our customers. NDOT operates in a frequently changing environment where communication is extremely important. Projects, programs, and demographics are constantly evolving, along with the challenges that accompany them. NDOT has consistently overcome these challenges with a strong focus on proactively providing accurate and reliable information to all who may be affected. NDOT will continue to find new ways to approach communication to expand our reach across multiple communication channels in an effort to improve the agency's customer and public outreach.

**Measurement and Supporting Data:**
Supporting Data:
NDOT recently partnered with a University of Nevada, Reno, Reynolds School of Journalism class to develop a communications plan for the department that includes a positioning statement, key messages, a goal strategy, target audience and most importantly, branding and a tagline. The brand, "safe and connected," demonstrates how greatly NDOT cares for the safety of Nevada's drivers and pedestrians and keeps them mobile and connected every day. The plan, which was enhanced and further developed by the NDOT Communications staff and interns, stresses the need to continue to focus on NDOT's mission of roadway safety and connectivity through a variety of communication channels.

Measurement:
NDOT Communications is happy to report that most of the measurement goals for fiscal year 2016 have been met. In some cases, goals were exceeded by a very large amount. Final results are listed in red.

Social Media

- Increase Facebook likes to 1,800 by the end of fiscal year (FY16) - *increased to 2,890*
- Increase Twitter followers to 14,000 by the end of fiscal year (FY16) – *increased to 16,500*

- Increase Twitter retweets by 10% by the end of fiscal year (FY16) – *increased by 38%*
- Increase YouTube views by 10% by the end of fiscal year (FY16) – *increased by 61.5%*

Website

- Regularly remind content editors to update/archive/delete material at least once a quarter to maintain relevant information. *Goal met – editors reminded every quarter.*
- Review all pages of website for inconsistent formatting, grammar mistakes, and other errors at least once a quarter. *Goal met – sections of website reviewed and updated every quarter.*

Important note: Current NDOT website is undergoing a major redesign that should go live in late 2016. One of the features being discussed is an "Ask DOTi" button on the homepage people could click on to get their customer service inquiries answered almost instantly.

Internal Communications

- Publish an online newsletter twice a month highlighting important upcoming events and project updates. *Goal met – email newsletter distributed to more than 1,600 employees bi-weekly.*

Media Relations

- Provide media training to NDOT employees. Offer at least one training session per quarter. *Goal not met – It was determined that this goal was a bit far-reaching. Most NDOT employees do not directly answer media questions, therefore the training isn't needed for everyone. A media training session with AASHTO is being planned early next year for those positions who do have direct media contact.*

Public Involvement

- Utilize emerging technology (such as Facebook Q&A sessions) for questions during at least one public involvement activity before the end of fiscal year (FY16). *Goal met – NDOT streamed a live memorial ceremony for a fallen NDOT worker that generated 157 playbacks. More than 90 people watched the event live.*
- Increase use of social media to recruit public to attend events. Measure a five percent increase in attendance due to social media. *Goal met – Notices for all public meetings throughout the year were posted on NDOT's Facebook and Twitter pages. The five percent increase was probably met, but statistics weren't compiled, so there's no definite proof. A box has recently been added to the public meeting sign-in sheets to help better measure where people heard about the meeting.*

Customer Service

Post a bi-yearly NDOT satisfaction survey on social media and the website gauging the public's perception of NDOT. *Goal met – a "how we did" customer satisfaction survey is now being sent out to everyone who sends the NDOT public information office an email request. Results are being tabulated and will be available for fiscal year 2017. A request for proposal is also being developed to hire a company to do a phone and/or online survey every two years to measure the public opinion of NDOT and customer/user ratings, similar to what NDOT has done in the past.*

# 6. REDUCE AND MAINTAIN TRAFFIC CONGESTION ON STATE MAINTAINED ROADS

**Performance Measure:**

- Percent of Nevada interstate system mileage providing for reliable travel time
- Percent of Nevada non-interstate NHS roads providing for reliable travel time
- Percent of the interstate system in Nevada urbanized areas where peak-hour travel time meets expectations
- Percent of the non-interstate NHS in Nevada urbanized areas where peak-hour travel times meet expectations

**Annual Target:** 90%

**Ultimate Target:** 97%

**Champion:**

Chief, Performance Analysis Engineer & Chief of Traffic Operations

**Support Divisions:**

All

**Definition**:
Travel Time Reliability is an indication of consistency or expectation by drivers that it will take an estimated amount of time to traverse a certain distance on a stretch of highway. It is measured day by day or at different times of the day.
The methodology used to measure the performance metric of travel time reliability in this report is the Planning Time Index.

**Strategy Plan Support:**
This performance measure is a very significant indicator of the performance of the department because it is core to its central mission of providing a "better transportation system" for Nevada.

The National Performance Measurement Research Data Set (NPMRDS) was used to track and measure performance of NDOT's interstate and non-interstate NHS roadway systems. Based on the analysis using calendar year 2015 data, 1,182 out of 1,234 interstate lane miles tracked provided for reliable travel times translating to 95.8%.
Also, 3,547 out of 3,854 miles of non-interstate NHS roads tracked provided for reliable travel time equating to 92%.

A bench mark of 90% of the interstate/non-interstate NHS roads is expected to have a travel time that is less than 1.5 times the expected travel times.

All calculations were made based on the data currently available in the NPMRDS which includes some unreliable information and is also missing geometric and traffic information for certain segments of roadways.

This performance measure and metric have been chosen in order to align with anticipated system performance requirement from US DOT due to Moving Ahead for Progress in the 21st Century (MAP-21) Act passed by Congress and signed into law July 6, 2012 and the FAST-Act.
This alignment will lead to simplicity in tracking, measuring and reporting on system performance/congestion to both the Federal Highway Administration (FHWA) and the state.

Two of the four performance measures with the peak-hour travel time metric have not been reported in 2016. This is because there is insufficient data and limited resources to accomplish the task at this time. However, it is anticipated that all the necessary data and resources will be in place by the time NDOT is required to report system performance measures to the FHWA.

The NDOT congestion measuring system is an evolving process. Refinements will be made continuously as more and "cleaner" data, with coverage of more road segment, across all geographic locations within the state, and for all time periods, become available.

When fully functioning, the system will utilize information from many sources including the Freeways and Arterials System of Transportation (FAST), Washoe County's future Traffic Management Center and others.
NPMRDS, INRIX data and analytical tools make up the engine that drives the system. It makes calculating the metric to determine target achievement or failure less cumbersome and more efficient.

**Where the targets met? :**
Yes
**Does this Performance Measure effectively measure what is desired? :**
Yes
At this time, only mileage on the interstate and non-interstate NHS routes were tracked and measured based on level of travel time reliability. Performance based on peak-hour travel time for urbanized areas was not measured because of lack of data and other resources.

**Is there a better Performance Measure that should be considered?** :
Not at this time. As mentioned above, an important reason these were chosen is to align with MAP-21 system performance requirements.
Also, it captures most aspects affecting mobility which is an indication of how well the network is performing.

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

Keeping and enhancing the current congestion measuring and reporting system requires yearly investments in access to INRIX data and analytical tools, as well as other components to make it more robust.

# 7. STREAMLINE PROJECT DELIVERY: BID OPENING TO CONSTRUCTION COMPLETION

**Performance Measure:**

Percentage of Design Bid Build and Construction Manager at Risk projects completed within the established ranges for cost estimate, change orders and schedule.

Budget Measure: Projects completed within 10% of original programmed budget.

Change Order Measure: Projects completed with cost increase of less than 3% in change orders.

Schedule Measure: Projects completed within 10% of original assigned working days.

Overall Target: 80% of projects completed within budget, schedule and change order measures.

**Champion:**
Chief Construction Engineer

**Support Divisions:**
All

**Strategy Plan Support:**
This performance measure works towards meeting the Department of Transportation Strategic Plan goals by delivering timely and beneficial construction projects. This measure helps to optimize safety for road users, be responsive to our customers while efficiently maintaining and operating the transportation system.

**Summary of Previous Years:**

| Year | % Closed Contracts within Budget | % Closed Contracts within Schedule | % Closed Contracts within Cost Increase |
|---|---|---|---|
| 2015 | 94 | 85 | 68 |
| | **% Open Contracts Within Budget** | **% Active Contracts Within Schedule** | |
| 2014 | 76 | 92 | N/A |
| 2013 | 76 | 77 | N/A |
| 2012 | 71 | 78 | N/A |
| 2011 | 76 | 86 | N/A |
| 2010 | 88 | 95 | N/A |

**Summary for Fiscal Year 2016:**

| FY 2016 | Number of ***Completed*** Contracts | ***Completed*** Contracts Within Budget | ***Completed*** Contracts Within Schedule | ***Completed*** Contracts with Change Orders Less than 3% cost increase | ***Completed*** Contracts with CE Budget |
|---|---|---|---|---|---|
| 1st Quarter | 7 | 100% | 100% | 71% | 71% |
| 2nd Quarter | 10 | 90% | 90% | 90% | 30% |
| 3rd Quarter | 3 | 100% | 100% | 67% | 67% |
| 4th Quarter | 11 | 100% | 100% | 64% | 45% |
| YR Total/ Average | 31 Total | 97% | 97% | 74% | 48% |

**Background for Change in Reporting Criteria:**
Beginning with FY 2015, performance measure reporting has been revised to measure the performance of completed contracts. The previous years from 2010 to 2014, performance measures were not based on completed contracts but rather open and active contracts. The reason for that approach was based on the previous interpretation of reporting requirements.

Reporting on open and active contracts does not accurately account for the true performance of the contracts; work is either ongoing (active contracts) or work has been completed (open contracts) but final quantities and/or schedules have not been balanced. By reporting the performance of active/open contracts, the interpreted data may be skewed or subjective due to incomplete quantities and schedules. Some open/active contracts were reported across multiple quarters and fiscal years also skewing the data. In addition, the completed contracts were not captured in the reported data.

Contracts are considered completed when the contract is closed out administratively and financially with the balancing of final quantities and schedules. By reporting on completed contracts, the true performance of the contracts is captured and the reporting is an accurate representation of the performance measures.

**Current Reporting**

**FY 2016 Budget Performance:**
Performance is based on contracts completed and closed out administratively and financially. The budget is the contract award amount plus contingencies as programmed by the Department. Contingencies are included in all contracts to account for potential quantity overruns and change orders. The budget performance is reported as the total amount paid compared to the budget.

**FY 2016 Change Order Performance:**
Performance is based on the comparison of change order values to the award amount not including contingencies. Contracts completed with change orders exceeding 3% of the award amount were reported.

**FY 2016 Schedule Performance:**
Performance is based on the number of working days awarded to the contract in the original contract documents compared to the final number of working days assessed to the contract.

**Were the targets met?**
The target performance measures for the budget and schedule were met and exceeded. However, the performance measure for change orders was not. As stated above, the budget for all construction contracts includes contingencies. The contingencies are designed to account for variabilities in quantities and potential change orders encountered during construction. The contract quantities are estimated based on design calculations but paid quantities are based on actual field installations. It is important to note that actual quantities paid can be higher or lower than estimated design quantities.

Per the "Nevada Department of Transportation Project Cost Estimation Guide," contingencies are set at 7% for contracts less than $3 million, 5% for contracts between $3 million and $25 million and 3% for contracts greater than $25 million. Therefore, contracts with change orders exceeding 3% will typically fall within the budget while exceeding the performance measure for change orders.

**Strategies for Improvement for FY 2016**

**Short range strategies on change orders:**
Continue to work with Design, Project Management and other divisions to improve the quality of design plans and specifications with an increased emphasis on training and educating new NDOT employees on developing quality plans and specifications and calculating accurate quantities.

- Take on an increased interactive role with the project development teams to identify potential conflicts or issues and spend time in the field reviewing current conditions in an effort to minimize change orders during construction.
- Continue to serve as active participants in the bid review and analysis team to assist in evaluating contractor bids to identify potential plan, specification and quantity inconsistencies which may lead to change orders.

**Long range strategies on change orders:**

- Continue to identify and track trends to assist in reducing recurrences of common errors and conflicts which lead to change orders.
- Provide consistent guidance to internal Divisions and educate new employees on issues that arise during construction to prevent recurrence on future projects.

- Continue to monitor active and open contracts for budget, change order and schedule performance.

**What "strategies for improvement" were successful?**
The improvements made revolve around the correct measure of performance: completed contracts. The true performance of any given contract can only be measured when it is completed, not during ongoing construction or balancing of final quantities and/or schedule. A reduction in change orders is an ongoing challenge with staff turnover, contractor workload and market fluctuations. Department personnel are actively involved with improving the quality of design and minimizing avoidable change orders.

**What "strategies for improvement" were not successful? Why?**
Performance measures based on open or active contracts were not successful as the interpreted data may be skewed or subjective due to incomplete quantities and schedules. In addition change order performance was not tracked or reported on prior to 2015 due to previous administration.

**Does this Performance Measure effectively measure what is desired?**
Yes, this performance measure accurately reflects project performance for budget and schedule.

**Is there a better Performance Measure that should be considered?**
No

**Will meeting the next yearly target have a fiscal impact? If so, explain.**
Yes, meeting the target for change orders will reduce the expenditures on projects which will have a direct fiscal impact to the Department. Budget and schedule targets are currently being met; however, close monitoring and management during active construction will help maintain or improve these target levels and further reduce costs and time.

# 8. MAINTAIN STATE HIGHWAY PAVEMENT

**Performance Measure:**
Percentage of state maintained roadways in fair or better condition.

**Ultimate Target:**
Perform annual rehabilitation as necessary to maintain the condition of the roadway network in conformance with the established goals and additional rehabilitation as necessary to eliminate the accumulated backlog.

**Annual Target:**

| | | |
|---|---|---|
| Category 1: | 95% | Minimum fair or better condition |
| Category 2: | 95% | Minimum fair or better condition |
| Category 3: | 95% | Minimum fair or better condition |
| Category 4: | 95% | Minimum fair or better condition |
| Category 5: | 95% | Minimum fair or better condition |

**Strategy Plan Support:**
This performance measure supports the Department's Strategic Plan to effectively preserve and maintain NDOT's pavement assets. In order for the Department to maintain the roadway network in fair or better condition, maintenance and rehabilitation work is performed on the roadways each year. To increase the percentage of pavements in "fair" or better condition, this work must be constructed on all roads in excess of the rate of deterioration of the pavement.

The Department's Pavement Management System (PMS) is used to maintain and improve the condition of the entire state-maintained roadway network. This network consists of a 5,397 mile inventory that is classified into five separate road prioritization categories. Each road prioritization category consists of pavements that share similar rates of deterioration and require similar timing for maintenance and rehabilitation repair work. The pavement in each road prioritization category is objectively rated and quantified using the Present Serviceability Index (PSI) pavement condition rating system. This rating system is divided into six sections that correspond to pavement in very good, good, fair, mediocre, poor, and very poor or failed condition.

Various maintenance and rehabilitation repair strategies are constructed to improve pavement condition. Maintenance repair strategies include work such as chip seals, filling potholes, and patching. Rehabilitation repair strategies include work such as asphalt overlays and recycling methods. The cost and construction timing for the various repair strategies are significantly different and contingent on the pavement condition at the time of the repair. There is a significant cost savings when pavement is proactively rehabilitated in fair condition as compared to reactively reconstructed in very poor condition. Repair work costs as much as six times more for major

reconstruction when pavement is in very poor or failed condition as compared to the less invasive rehabilitation techniques that can be used when pavement is in fair or better condition.

**Measurement and Supporting Data:**

**Current Pavement Condition of the State-Maintained Road Network**

A pavement condition target of 95% minimum fair or better has been established for each category of road. This target represents a reasonable condition in which the road should be maintained. It also represents a balance between condition and expense. It is known that smoother roads in better condition are less expensive to maintain and rehabilitate. Inversely, when roads become rough, cracked or rutted, more money must be spent to bring them back to acceptable condition. Under current funding levels, an expectation of fair or better condition is a realistic balance between available funding and acceptable condition. A description of each of the condition categories listed below is also included later in this report.

TABLE 1 illustrates the current condition of the roadway network for which NDOT is responsible and includes the annual targets which have been established for the condition of the roads. For this particular data collection period, only 5,096 miles of the total 5,397 miles of the roadway network were surveyed and are reported on in this table. This is due to the fact that not all roads in the system are tested for ride and/or condition.

**TABLE 1. Pavement Condition versus Annual Target by Road Category**

| Condition | PSI Rating Scale | PSI Condition by Road Prioritization Category<br>Percentage (%) and Number of Miles | | | | | |
|---|---|---|---|---|---|---|---|
| | | Road Category 1 | Road Category 2 | Road Category 3 | Road Category 4 | Road Category 5 | Roadway Network Totals |
| Very Good | 5.00 to 4.00 | 83.0%<br>441 | 49.5%<br>458 | 31.6%<br>377 | 9.1%<br>75 | 0.8%<br>12 | **26.7%**<br>**1,363** |
| Good | 3.99 to 3.50 | 12.2%<br>65 | 31.1%<br>287 | 47.2%<br>563 | 37.7%<br>312 | 12.8%<br>207 | **28.2%**<br>**1,435** |
| Fair | 3.49 to 3.00 | 3.0%<br>16 | 13.6%<br>126 | 17.7%<br>211 | 34.6%<br>287 | 35.4%<br>573 | **23.8%**<br>**1,212** |
| Mediocre | 2.99 to 2.50 | 0.8%<br>4 | 4.2%<br>39 | 2.6%<br>31 | 14.1%<br>117 | 26.4%<br>427 | **12.1%**<br>**618** |
| Poor | 2.49 to 2.00 | 1.0%<br>5.39 | 1.0%<br>9 | 0.5%<br>6 | 3.0%<br>25 | 16.0%<br>259 | **6.0%**<br>**304** |
| Very Poor | < 2.00 | 0.0%<br>0 | 0.6%<br>5 | 0.5%<br>6 | 1.5%<br>13 | 8.7%<br>140 | **3.2%**<br>**164** |
| **Total Miles:** | | **532** | **924** | **1,193** | **829** | **1,619** | **5,096** |
| **Condition Goal: Min. Percentage of Roads in Fair or Better Condition** | | **95%** | **95%** | **95%** | **95%** | **95%** | **----** |
| **Current Condition: Percentage of Roads in Fair or Better Condition** | | **98.2%** | **94.2%** | **96.5%** | **81.3%** | **49.0%** | **----** |
| **Does the current condition meet the condition goal?** | | **YES** | **NO** | **YES** | **NO** | **NO** | **----** |

*2015 PSI calculated using IRI and rutting condition values only. Cracking data not available.

***Pavement Preservation Repair Work for the State-Maintained Road Network***

During fiscal years 2016, NDOT advertised approximately $95 million worth of contract maintenance and rehabilitation pavement repair work. These expenditures addressed the preservation needs for approximately 174 miles of roads. TABLE 2 contains a financial summary of the advertised maintenance and rehabilitation pavement repair work that was accomplished on the state-maintained roadway network during fiscal year 2016 along with the corresponding amount of mileage that was improved.

**TABLE 2. Advertised Pavement Repair Work for Fiscal Year 2016**

| Fiscal Year | Contract Maintenance Repair Work Expenditure and Mileage | Contract Rehabilitation Repair Work Expenditure and Mileage | Total Contract Maintenance and Rehabilitation Repair Work Expenditure and Mileage |
|---|---|---|---|
| **2016** | $12,162,908 | $82,829,770 | $94,992,678 |
| | 113 Miles | 61 Miles | 174 Miles |

***Backlog of Pavement Preservation Repair Work***

Due to funding constraints, a backlog of pavement preservation repair work has accumulated over the years. In TABLE 1, a red line is visible at the bottom of the fair condition level. The established goal of 95% fair or better requires that at least 95% of the roads are above the red line. The backlog is calculated by multiplying the percentage of miles in excess of 5% that are below the red line by the estimated cost of rehabilitating those roads. The total backlog cost based on 2015 condition is shown in TABLE 3.

**TABLE 3. Backlog of Pavement Preservation Repair Work for Entire Network**

| Road Prioritization Category | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Deficient Pavement in Miles** | 0 | 7.2 | 0 | 113.5 | 745.4 |
| **Estimated Cost to Rehabilitate Pavement Per Mile** | $2.1M | $1.3M | $0.7M | $0.6M | $0.5M |
| **Total Cost to Rehabilitate Pavement Per Road Category** | $0M | $9.4 | $0M | $68.1M | $372.7 |
| **Total Backlog of Pavement Rehabilitation Work** | **$450.2M** | | | | |

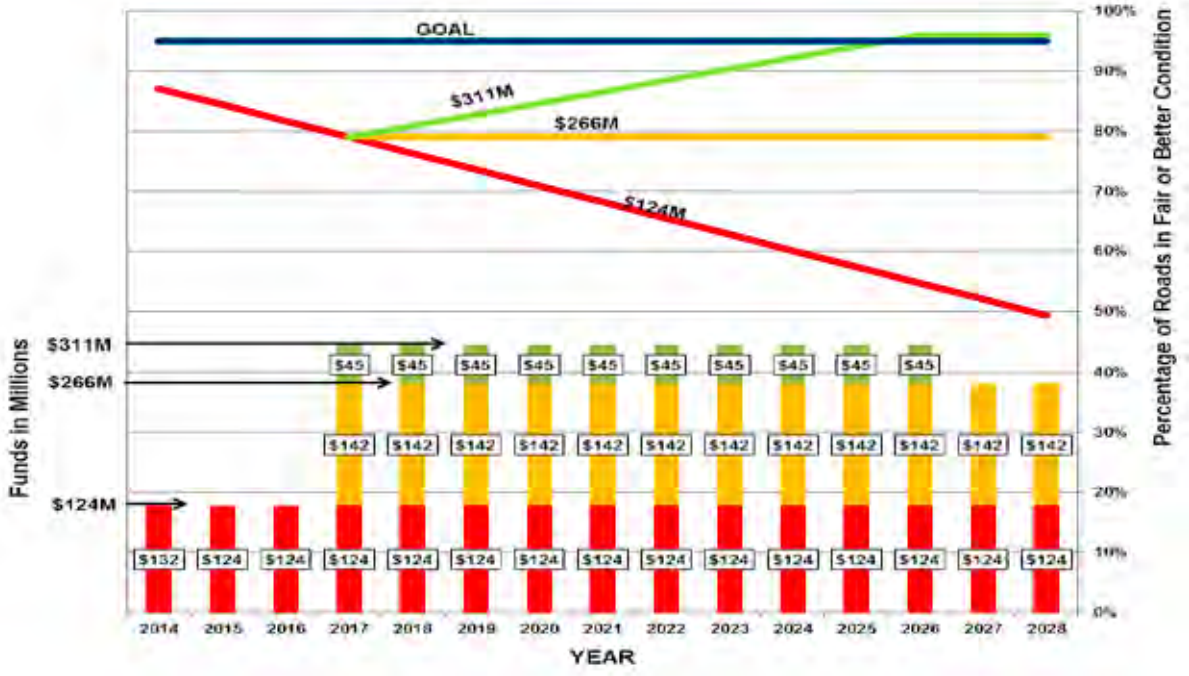
*Numbers used to fill in the table were from BI.

***Effects of Future Funding on Backlog and Pavement Condition***

The estimated total backlog of pavement preservation work is only a part of the funding gap that currently exists in the budget for maintenance and rehabilitation. As illustrated by the red line in Figure 1 below, in spite of an average $124 million dollars spent annually on the roads in the state-owned roadway network, the average condition of the roads continues to deteriorate.

Currently, on average, only 79% of the entire state-owned roadway network is in fair or better condition. It has been estimated that an additional $142 million dollars needs to be spent on our roads annually to simply maintain the current condition, represented by the yellow line. To improve the condition of the network to meet the established goals, an additional $450 million, divided across ten years, would need to be spent to eliminate the backlog, shown as the green line. The total amount of funding required maintaining the condition of the roads at a higher level, meeting the goal of 95%, would likely be less than the total of $124 million and $142 million due to the lower cost of maintaining roads in better condition. These estimates are based on current conditions, predicted future conditions, current material and construction costs and current deterioration models.

**FIGURE 1. Effects of Additional Funding on Pavement Condition**




***Background Information***

In order to effectively monitor the condition of all the state-maintained pavements and to prioritize which pavements need rehabilitation, NDOT has classified the 5,397 miles of roads

on the state-maintained roadway network into five separate road prioritization categories. These categories are based on heavy truck equivalent single axle loads (ESALs), average daily traffic (ADT), and federal guidelines for highway classification descriptions. The roads within each category have similar in-place pavement thicknesses, similar rates of deterioration, and require similar timing for maintenance and rehabilitation work.

TABLE 4 lists the five separate road prioritization categories and corresponding descriptions. Also listed are several examples of easily recognized roads throughout the state to assist with understanding the significance of the descriptions.

**TABLE 4. NDOT's Road Prioritization Categories**

| Road Prioritization Categories | [1]Description | Examples |
|---|---|---|
| 1 | Controlled Access Roads | IR015, Clark County<br>IR580, Washoe County<br>IR080, Elko County |
| 2 | ESAL > 540<br>or<br>ADT > 10,000 | SR146, St. Rose Parkway, Clark County<br>US050, Lincoln Highway, Carson City<br>SR227, Fifth Street, Elko County |
| 3 | 540 ≥ ESAL > 405<br>or<br>1,600 < ADT ≤ 10,000 + NHS | SR157, Kyle Canyon Road, Clark County<br>SR028, Lake Tahoe Area, Douglas County<br>SR225, West Urban Limits of Elko, Elko County |
| 4 | 405 ≥ ESAL > 270<br>or<br>400 < ADT ≤ 1,600 | SR158, Deer Creek Road, Clark County<br>SR206, Foothill Road/Genoa Lane, Douglas County<br>SR228, Jiggs Road, Elko County |
| 5 | ADT ≤ 400 | SR156, Lee Canyon Road, Clark County<br>SR121, Dixie Valley Road, Churchill County<br>SR229, Secret Pass Road, Elko County |

[1]ESAL is an acronym for "Equivalent Single Axle Load." This engineering concept is the basis for the method used to quantify the standard loading of trucks and count the heavy trucks that travel on roads. ADT is an acronym for "Average Daily Traffic." The Pavement Management System includes the ADT data, as provided by NDOT's Traffic Division, for every road in the state-maintained roadway network. NHS is an acronym for the "National Highway System." The NHS consists of roads important to the nation's economy, defense, and mobility as defined by the United States Department of Transportation.

The concept that pavements should provide a smooth, comfortable, and safe ride for travelers requires a pavement condition rating system that includes all the attributes important to travelers. These attributes include travelers' responses to motion and appearance as demonstrated by a smooth riding surface that is free from cracking, patching, and potholes. A pavement condition rating system has been developed that objectively measures all the attributes that are important to travelers. This rating system is called the Present Serviceability Index (PSI) as mentioned in the strategy plan support section.

The PSI pavement condition rating system values are calculated using pavement roughness measurements and mathematical formulas that quantify pavement distresses such as cracking, raveling, rutting, and potholes. These measurements and formulas are combined and standardized into an objective rating scale numbered from zero to five. Pavements rated from four to five are interpreted as pavements in "new" or very good condition with very smooth surfaces that are completely free of distress or irregularities. Pavements rated less than two are interpreted as pavements in very poor or failed condition having the roughest of surfaces that are no longer navigable at the posted speed limit. The PSI pavement rating system is used to quantify the pavement condition for each route within the state-maintained roadway network.

TABLE 5 illustrates how the PSI rating scale is subdivided into six separate sections that correspond to pavements in very good, good, fair, mediocre, poor, and very poor or failed condition. Descriptions of the various pavement conditions include the types of distresses that typically occur at each condition level.

**TABLE 5. NDOT's Road Prioritization Categories**

| Pavement Conditions | PSI Rating Scale | Description of Pavement Conditions |
|---|---|---|
| **Very Good** | **5.00 to 4.00** | Pavements in "very good" condition have an excellent, very smooth ride quality and are completely free of pavement distress. Pavements are in "new" condition. |
| **Good** | **3.99 to 3.50** | Pavements in "good" condition have a very smooth ride quality and begin to show minor distresses that are typically environmental rather than load related. Distresses include minor non-wheelpath longitudinal and transverse cracks as well as minor surface raveling. |
| **Fair** | **3.49 to 3.00** | Pavements in "fair" condition have a good ride quality except noticeable environmental distress has developed. Non-wheelpath longitudinal and transverse cracks are frequent. There is light surface oxidation and weathering. Structural distress in the form of ruts and fatigue cracks begin to occur. |
| **Mediocre** | **2.99 to 2.50** | Pavements in "mediocre" condition have a barely acceptable ride quality and have accumulated significant environmental and structural distresses. Pavements have non-wheelpath longitudinal cracking and transverse cracks so closely spaced that block cracks develop. Ruts and fatigue cracks are present. |
| **Poor** | **2.49 to 2.00** | Pavements in "poor" condition have a poor ride quality and have accumulated large amounts of environmental and structural related distresses. The non-wheelpath longitudinal and transverse cracks are severe. The surface is weathered, rutted, and fatigue cracks are widespread. |
| **Very Poor or Failed** | **< 2.00** | Pavements in "very poor" condition have a very poor ride quality and have accumulated significant environmental and structural distresses. The surface is pitted and there are wide non-wheelpath longitudinal and transverse cracks. Networked, spalled fatigue cracks and deep ruts are prevalent. The deterioration is so advanced potholes are prevalent. The roads are no longer navigable at the posted speed limits. |

**Strategies for Improvement**

**Short Range to next reporting:**

1. Use pavement prediction models to anticipate future pavement condition levels. This will help predict what amount of funding will be required in the future.

2. Collect pavement condition data as frequently as possible to provide the most accurate information regarding the state-maintained roadway network.

**Long Range:**

1. Assist in the effort to distribute limited funding in the most appropriate manner, addressing the targets for all performance measures.

2. Monitor the effects of rehabilitation and preservation strategies versus the actual needs of the system and make any necessary updates and adjustments to the rehabilitation program.

3. Take steps to create decision tree models that will document the decision making processes used when determining the timing of pavement rehabilitation work and the selection of the type of repair strategy used.

**Annual Evaluation of Performance Measure**

**Was the annual target met?**
The annual target was met for road categories 1 and 3, but not for categories 2, 4 and 5. Current funding levels do not allow meeting the annual target in every category.

**What "strategies for improvement" were successful?**
Previous performance measure strategies for improvement such as focusing on high volume roads have resulted in road categories 1 and 3 meeting the targets for pavement condition. This is important due to the amount of traffic and the cost to rehabilitate those roads. Categories 2, 4, and 5 roads are allowed to deteriorate into less than fair conditions because of funding constraints. Without increased funding for pavement rehabilitation the condition of the roads will continue to decline.

**What "strategies for improvement" were not successful?**

None

**What new "strategies for improvement" will be implemented in 2016?**

**Short range to next reporting:**
The Department will concentrate on implementing the strategies listed above.

**Long Range:**
The Department will concentrate on implementing the strategies listed above.

**Does this performance measure effectively measure what is desired?**
Based on the deterioration rates of state-maintained roadways, the annual and ultimate targets represent what is realistic, cost effective and acceptable.

**Is there a better performance measure that should be considered?**
Other performance measures exist and have been investigated by the Department. This measure accurately portrays the experience of the traveling public and what condition is reasonable for the roadway network.

**Will meeting the next yearly target have a fiscal impact? If so, explain.**
Yes, the impact of underfunding the annual needs of the system will lead to an increased backlog and deterioration of the entire roadway network. Proactively applying rehabilitation and preservation strategies to the state-maintained roadway network can extend pavement service life and reduce costly reconstruction project costs by 4 to 6 times. Costly reconstruction projects not only impact the Department's budget, but impact the traveling public for longer periods of time due to longer construction projects.

# 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 lifespan 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 | Change | |
|---|---|---|---|---|
| FY 2007 | 38.65 % | 60.30 % | | |
| FY 2008 | 34.96% | 62.55 % | -3.69% | +2.25 % |
| FY 2009 | 39.18 % | 66.30 % | +.53 % | +6.00 % |
| FY 2010 | 49.01% | 68.84 % | +10.36 % | +8.84 % |
| FY 2011 | 48.88% | 65.42% | +10.23% | +5.12% |
| FY 2012 | 52.86 % | 69.86 % | +14.21% | +9.56 % |
| FY 2013 | 44.00 % | 73.41 % | +5.35 % | +13.11% |
| FY 2014 | 56.99% | 75.28% | +18.34% | +14.98% |
| FY 2015 | 56.29% | 73.11% | +17.64% | +12.81% |
| FY 16 | 66.91% | 71.31% | +28.26% | +11.01% |
| DIST I | 68.13% | 71.35% | | |
| DIST II | 60.30% | 67.80% | | |
| DIST III | 61.69% | 68.96% | | |
| EQ_HQ | 44.64% | 78.29% | | |

**Strategy Plan Support**

In Fiscal Year 2010 the Equipment Division initiated a rebuild program that extends the life of equipment for an additional lifespan. Equipment that has reached or exceeded replacement criteria is rebuilt to like-new condition for considerably less than the cost of purchasing new equipment. The rebuild program also assists in assuring that NDOT is adequately equipped for its work effort in maintaining public safety.

The vehicles in the fleet are important to deliver projects and maintain a safe highway system. Equipment in good condition ensures the ability of NDOT to perform its business as well as provide 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.

**Strategies for Improvement**

**Short range to next reporting:**

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

**ANNUAL EVALUATION OF PERFORMANCE MEASURE**

**Was the annual target met?**

No on 1. Yes on 2.

**What "strategies for improvement" were successful?**

1) We were successful in minimizing the number of vehicles retained.
2) We were successful in performing a condition audit of the fleet which identified vehicles that needed further attention.

**What "strategies for improvement" were not successful? Why?**

1) Strategies to reduce replacement deficit were detrimentally effected from loss of funds.
2) Unable to develop a predictive maintenance program due to lack of available personnel.

**What new "strategies for improvement" will be initiated in FY 2017?**

**Short range to next reporting:**

1) Attempt to rebuild more units.
2) Improve notification process for timely preventive maintenance.

**Long range:**

1) Reduce fleet size through utilization assessments.
2) Develop predictive maintenance program.

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

Yes

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

No

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

1) Yes – Meeting the target will require substantial use of funds.
2) Yes – Meeting the target extends the life of the vehicle while ensuring the safety and reliability of the fleet, thus reducing the need to utilize funds for repairs and replacements.

# 10. MAINTAIN NDOT FACILITIES

**Performance Measure:**
Percent of facilities assessments completed, facilities condition performance rating, and priority needs.

**Annual Target:** Increase by 2% per predicted projects in FY 2015 annual report.

**Ultimate Target:** 100%

**Strategy Plan Support:**
Facility Condition Analysis (FCA) reports assist the Architecture Section with maintaining the various buildings and structures of NDOT in compliance with applicable statutes, regulations, and codes. FCA reports are records of the condition of the buildings and their needs. Without FCA reports, it is not possible for the Architecture Section to equitably track or prioritize the needs of all of the buildings.

Each Department-owned and maintained facility will be evaluated on a seven-year cycle. Completion of the priority work items will return the facility to normal operation, defer deterioration, correct fire/life safety hazards, or correct ADA requirements.
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.

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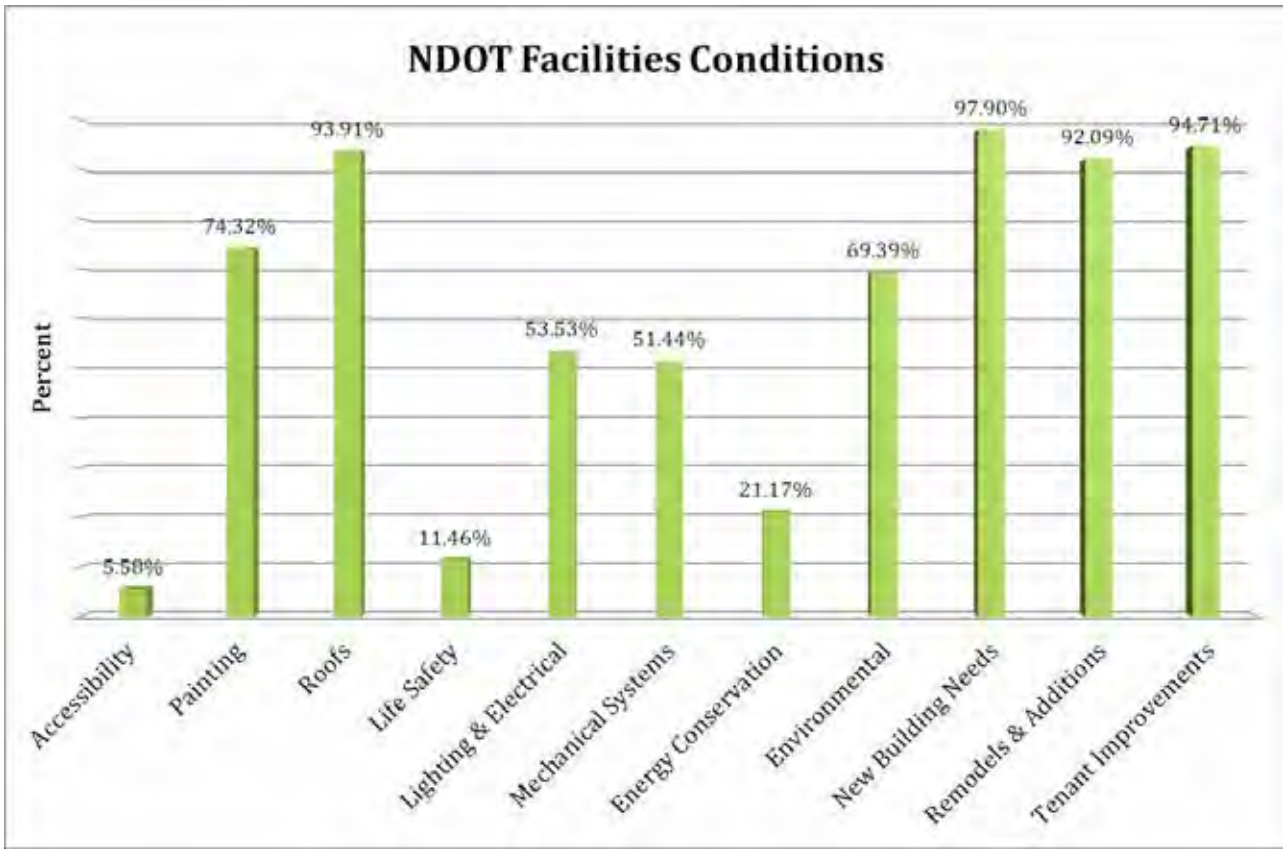
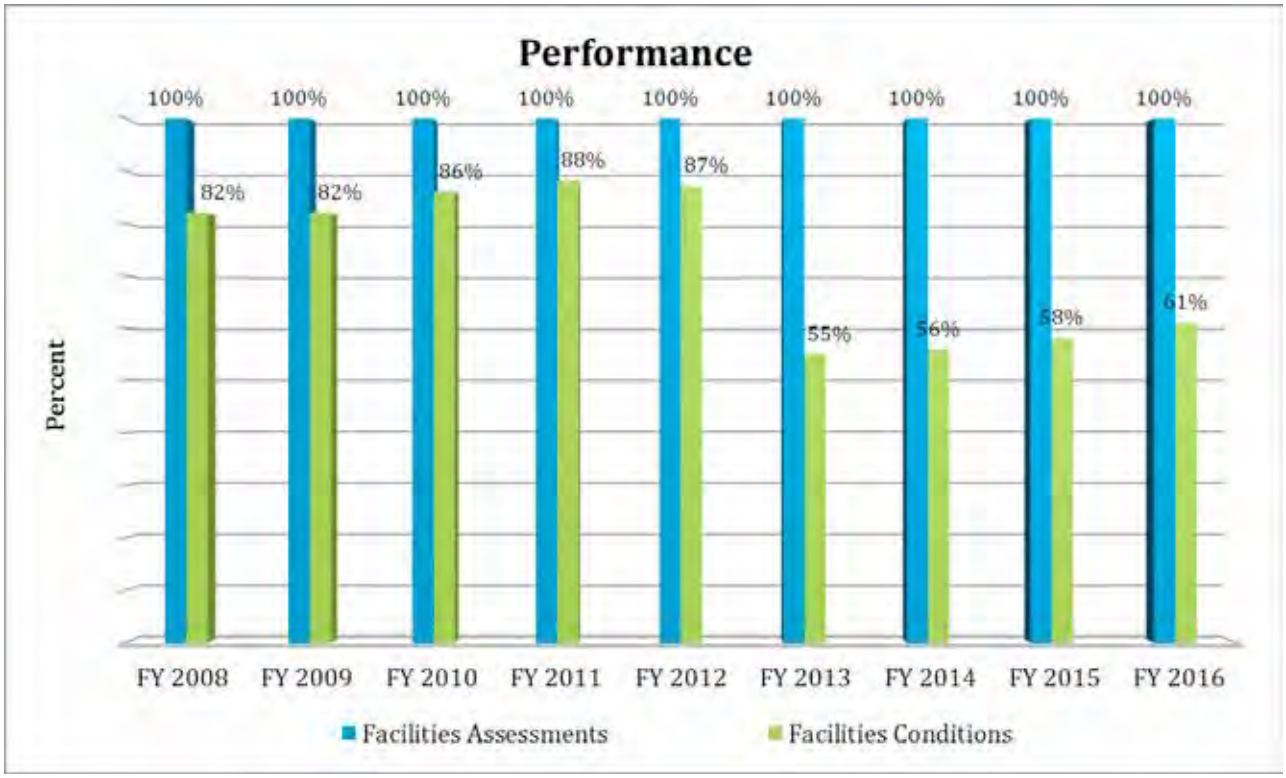
**Measurement and Supporting Data:**

| | |
|---|---|
| 2011 FY | 87% |
| 2012 FY | 87% |
| 2013 FY (New Method - Base Number) | 53% |
| 2013 FY | 55% |
| 2014 FY (September 2014) | 56% |
| 2015 FY | 58% |
| 2016 FY | 61% |


NDOT Facilities Conditions
Percent
5.58%
74.32%
93.91%
11.46%
53.53%
51.44%
21.17%
69.39%
97.90%
92.09%
94.71%
Accessibility
Painting
Roofs
Life Safety
Lighting & Electrical
Mechanical Systems
Energy Conservation
Environmental
New Building Needs
Remodels & Additions
Tenant Improvements


Performance
Percent
100%
82%
100%
82%
100%
86%
100%
88%
100%
87%
100%
55%
100%
56%
100%
58%
100%
61%
FY 2008
FY 2009
FY 2010
FY 2011
FY 2012
FY 2013
FY 2014
FY 2015
FY 2016
Facilities Assessments
Facilities Conditions

**Strategies for Improvement:**

**Short range to next reporting**:
Prioritize projects for the lowest performing categories, which are accessibility, life safety/egress, and energy.

When project managers visit a site that is difficult to reach or requires significant travel time, they should plan out that trip to include time for inspection of other facilities during the trip which are nearby, or which are on the way. Project managers should complete a site visit report upon return to the office after visiting a location, especially if that location is difficult to reach or requires a significant amount of travel time.

Project managers need to regularly update the Performance Measure #10 spreadsheet. An up-to-date spreadsheet can be studied by a project manager prior to visiting a facility to help him focus on inspecting portions of the site which the spreadsheet indicates may be deficient. When updating the spreadsheet, project managers need to include notes in the cells. For example, the majority of buildings are identified as needing energy improvements. This could be as simple as needing a little bit of insulation in the roof, or as complex as requiring new windows, doors, HVAC, roof ventilation, lighting upgrades and more. A note in the cell would make the need clear.

**Long range**:

Architecture needs a more clearly defined program. Projects which cannot be reasonably completed in one fiscal year should be compiled into a list, and all projects on the list should be evaluated concurrently approximately six months prior to the legislative session. Projects recommended for approval should be sent to legislature, and any projects approved by legislature should be programmed into their own work programs, separate from Architecture's base budget.

Architecture's annual operating budget should largely be comprised of programs which have a certain amount of spending authority reserved for each program. For example, "statewide HVAC", "statewide painting", "statewide accessibility", "statewide furniture", etc. The balance of the operating budget could be reserved for consultant fees, "mini" CIP's (i.e. projects which take less than one year to complete and less than $1million or so each), and unexpected project requests which occur throughout the year.

**ANNUAL EVALUATION OF PERFORMANCE MEASURE**

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

Facilities improvements completed during FY 2016 are listed below.

<u>Accessibility</u>

- Ely Administration building

Building Envelope:

- Carson Headquarters windows replacement
- Battle Mountain maintenance station building roof
- Carson City maintenance station, all building exteriors painted
- Tonopah crew room & five-bay shop reroof

Communications, IT, Security

- Cameras and ccure locks at Carson City hangar.
- Galletti equipment division gates
- Various cameras and ccure at Hot Springs
- Added cameras and ccure locks at Fallon maintenance station
- Added cameras and ccure locks at Fernley maintenance station
- Cameras installed at Las Vegas North
- Wellington gate ccure
- New cameras at Carson headquarter
- New cameras in Elko maintenance station
- Carson headquarter "lock-down" button
- Ongoing ccure equipment maintenance

Electrical

- Winnemucca lab/service shop/vehicle storage building electrical service upgrade

Environmental

- None

Fire and Life Safety

- Carson headquarters 2nd/3rd floor fire sprinklers
- Carson headquarters emergency egress improvements

Lighting

- Montgomery Pass lighting upgrade
- Las Vegas South maintenance station lighting upgrade to storage buildings

Mechanical

- Carson headquarters chiller replacement
- Las Vegas lab chiller repair
- Carson City headquarters room 115 HVAC

New Construction

- Goldfield Bottling Plant (county rest area)
- Fallon bay extensions
- Fernley bay extensions
- Salt/sand sprung at Fairview
- Fairview brine station

Plumbing

- Galletti sign shop hot water heating system partial asbestos replacement and repairs

- Quinn River well and phase I water main replacement
- Wadsworth Rest Area plumbing repairs
- New fuel depots at Fallon, Bluejay

Renovation
- Traffic Safety manufactured building ramp
- Fernley maintenance station ramp

Site
- Elko maintenance station drainage and sidewalk

Tenant Improvement
- Reno progress lab
- Stormwater division offices
- Director's Office
- Human Resources
- Accounting
- Hot Springs room 109
- Traffic Safety manufactured building ramp
- Legal office
- Relocate headquarter receptionist
- Pilot's office, Carson City hangar
- Various R/W offices
- Las Vegas North Project Management manufactured building

**What "strategies for improvement" were successful?**
The development of a new method of calculating performance measure #10 which incorporates everything we do (the old method only included selected code elements such as the fire sprinklers and electrical items included in the 2005 Facility Assessment Report). The new method will utilize the 2012 Assessment Study that provides data on categories such as accessibility, painting, roofs, life safety (Building Code related), lighting and electrical, mechanical systems, energy conservation, and environmental (wash pads and storm water). Additional elements such as new building needs, remodels or additions, and tenant improvements are also included. This data will be used to measure the facilities needs and the progress towards maintaining our facilities in an effective manner.

**What "strategies for improvement" were not successful? Why?**
The old method of calculating this performance measure was limited in scope and the items were difficult to track. There were many items of work that were not captured when measuring our performance. It did not provide meaningful and easily identifiable elements that could be tracked to show improvement or lack of improvement.
The new method is set up to be a "living document" allowing staff to input data and monitor the progress of improving our facilities. Items will be easier to track and the data gives a better picture of our program.

**What new "strategies for improvement" will be initiated in FY2016?**

**Short range to next reporting:**
See "Strategies for Improvement" as stated above

**Long range:**
See "Strategies for Improvement" as stated above

Facilities improvements that will complete in the 2017 fiscal year:

Target % increase complete is estimated at 2% for the FY 2017

Accessibility:

- Assist External Civil Rights with self-assessment for barrier removal plan
- Headquarter (Carson City) new elevators
- Galletti headquarter new elevators. Also includes consolidated fire alarm and HVAC study.

Building Envelope:

- Replace Emigrant rollup doors
- Enclose vehicle stalls at Tonopah maintenance station
- Replace roof at Carson HQ
- Replace roof at Roop Annex
- Replace roof walk pads at Las Vegas South maintenance station

Communications, IT, Security:

- Statewide ccure

Electrical:

- New backup gensets at Las Vegas North
- Fairview electrical upgrade

Environmental:

- Statewide wash pad program. Design is ongoing. Sites designated to receive wash pads in FY 2017: Wells maintenance station, Ely maintenance station, Virginia City maintenance station, Tonopah maintenance station, and Trento
- Decant basins in district 1 and district 2
- Obtain transfer station permit at I-515/Flamingo
- Las Vegas North maintenance station site-wide improvements NOTE: May be removed from list if new site is developed
- Retaining wall at Tonopah maintenance station
- Construct roof over oil drum storage at Tonopah maintenance station

Fire, Life Safety:

- Demolish storage building at Searchlight maintenance station
- Add security fence to Galletti complex
- Lighting:
- Various lighting upgrades statewide as time permits

Mechanical:

- District 2 – Reno, equip shop evaporative coolers
- Abate/replace entire heating water plumbing system at Galletti sign shop
- Evaporative cooling replacement and addition for the vehicle bays and shops at Galletti.
- Replace boiler at Carson City Motorpool

New Construction:

- Design new paint shop for Elko maintenance station
- Sprung at Mina
- Sprung at Montgomery Pass
- Sprung at Alamo
- Ladybird Park electric vehicle charge station
- Hidden Springs electric vehicle charge station
- Design for various electric vehicle charge stations on US93 and SR318
- Wellington salt/sand canopy and pusher walls
- Elko manufactured building for communications and environmental staff
- Las Vegas North new Administrative building. NOTE: May be removed from list if new site is developed
- Tonopah design for new office and shop to house storm water crew and equipment.
- Install brine filling stations at Incline, Logging Road, & Spooner
- Construct salt brine manufacturing facility in Garnerville
- Install Silver Springs manufactured building
- Install new crew manufactured building at Fernley maintenance station

Plumbing:

- Continuation of statewide fuel program: Wellington, Gardnerville, Elko, Ely, Panaca, Ruby Valley, Fernley, Winnemucca, Mina, Beatty, Montgomery Pass, Emigrant Pass, Carson City Motorpool, Big Smokey Valley, Wendover, Goldfield, Searchlight, Eureka, Mt. Rose, Austin, Wells, Virginia City, Incline
- Design replacement of remainder of potable water system at Quinn River
- Kingsbury Grade Crew Room water and sewer lines

Renovations:

- Siding replacement for residences at Mountain Springs, Orvada, and Quinn River
- Replace Architecture carpet
- Remodel Carson City headquarter asphalt laboratory
- Winnemucca progress laboratory
- Replace column footing baseplates at Elko maintenance station 10-wheeler shed
- Statewide seismic study

Site:

- Relocate Fallon Safety/Training manufactured building
- Rehabilitate Trinity rest area, phase I

Tenant Improvement Projects:

- Design Tonopah administration building. remodel
- Reconfigure headquarter Traffic Safety manufactured building at Carson headquarter
- Reconfigure records division

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

**Is there a better performance measure that should be considered?**
No.

**Will meeting the next yearly target have a fiscal impact? If so, explain.**
Yes. Failure to meet the performance measure will result in disruptions to district work flows, inability to hire staff, continued building leases, property damage/loss, etc.

# 11. EMERGENCY MANAGEMENT, SECURITY AND CONTINUITY OF OPERATIONS

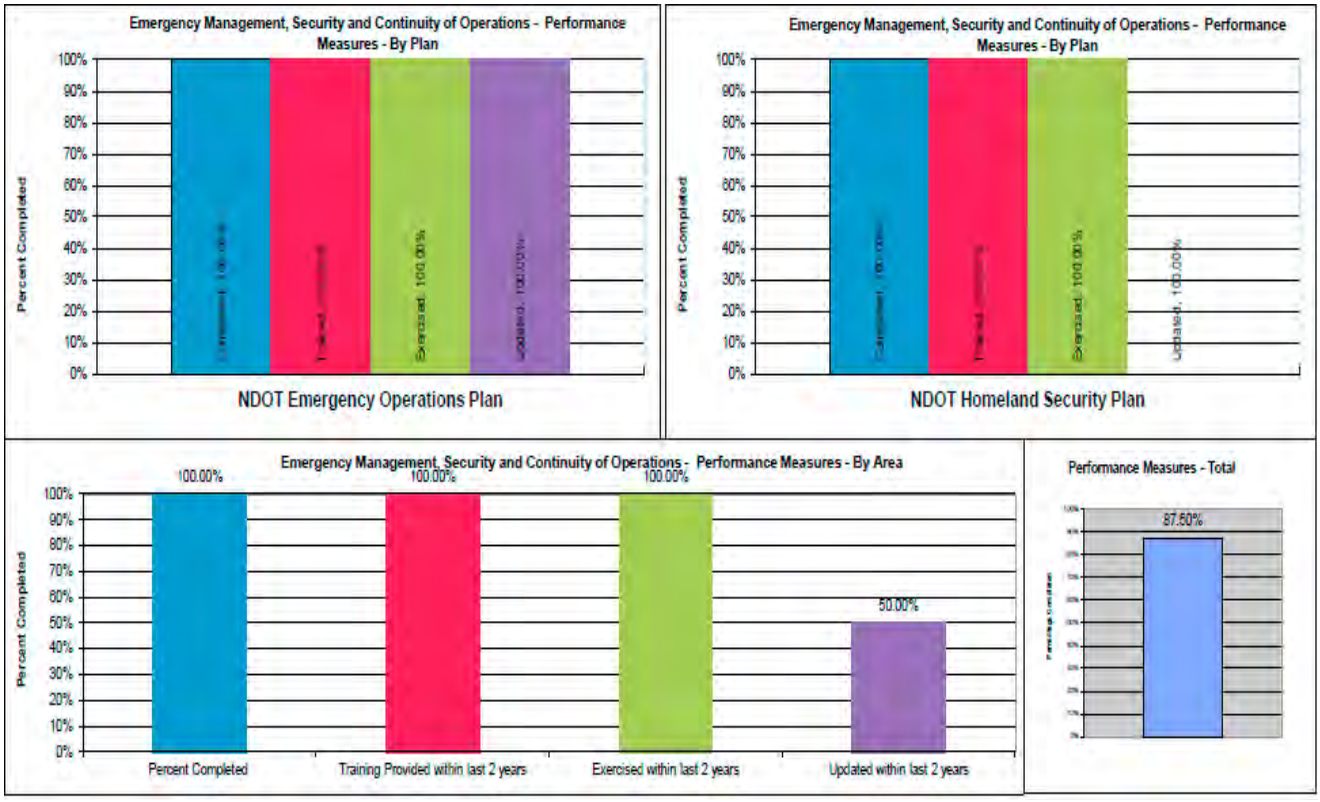
**Performance Measure:**

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

- NDOT Emergency Operations Plan
- NDOT Security Plan

**Ultimate Target**: 100%

**Annual Target**: 100%



**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.

**Summary: July 2015 – June 2016**:
On July 15, 2015 we conducted the emergency management/security functional exercise "operation muddy waters". This exercise was designed to assess previous changes to the NDOT Emergency Operations Plan (EOP). We also incorporated our Security Plan into this exercise by validating the effectiveness of the relationship between the EOP and the Security Plan.
This exercise was designed/developed by a team with varying disciplines, DOT, Law Enforcement, Fire, Emergency Management, and Weather. This exercise included the activation of the ESF-1 Desk at the State Emergency Operations Center (SEOC), along with the activation of NDOT headquarter Emergency Operations Center (EOC) (headquarter 3rd Floor). The exercise scenario was severe thunderstorms that caused flooding, debris flows and high winds, throughout the state.

In October 2015, our focus was the finalization and release of the NDOT EOC (Emergency Operations Center) road closure mapping program. We used and tested the program during "operation muddy waters" and discovered several issues with the program. However, we resolved those issues working with NDOT IT and our contracted vendor and the program now is up and running.

**Training FY2016:**
During this fiscal year, a number of training sessions was provided or attended by NDOT personnel: For a complete list of all the training provided or attended contact the Maintenance and Asset Management division or the Performance Analysis division.

**Exercises FY2016:**
During this fiscal year, a number of exercises were provided or attended by NDOT personnel: For a complete list of all the exercises provided or attended contact the Maintenance and Asset Management division or the Performance Analysis division.

**Updates**:
The following plans/procedures received updates during this fiscal year:
July 1st– The contact list for the NDOT Emergency Operations Plan was updated to reflect changes in personnel and positions.

October 1st– The contact list for the NDOT Emergency Operations Plan was updated to reflect changes in personnel and positions.

January 1st– The contact list for the NDOT Emergency Operations Plan was updated to reflect changes in personnel and positions.

April 1st– The contact list for the NDOT Emergency Operations Plan was updated to reflect changes in personnel and positions.

As mentioned earlier in this report the update of the EOP was approved, finalized and distributed. However, the Security Plan update has not been completed. With a new staff and the training required to get the staff up to speed, approved absence of Supervisor during March and April, the work on the Beatty fire/flooding event and the preparation for Vigilant Guard 17 (VG-17), there was not enough time to complete the update to the Emergency Operations Plan. After the VG-17 exercise in November NDOT will be focusing on the Security Plan and its update.

**Strategies for Improvement: As applicable**
Short range:
In November of 2016, NDOT will be participating in VG-17. This is a Functional exercise that the Nevada and California National Guards, Nevada Department of Emergency Management and other agencies will be conducting and participating in. This is a massive weeklong exercise. NDOT Emergency Management will prepare for this and will activate the NDOT's headquarter EOC as well as the SEOC's Emergency Support Function 1 (ESF-1) desk during this exercise.

**Long range:**
Exercises will continue to be held at least twice each year, with the after action reports use to update NDOT Emergency Operations and Security plans. Training will be held in preparation for these exercises, as well as after the exercises to mitigate areas of improvement identified in the exercises.

**Were the targets met**?
No

**What "strategies for improvement" were successful?**
Conducting exercises successfully tests and provides training for NDOT personnel on disaster response activities. It also provides valuable feedback needed to update our plans and procedures. Regular exercises will remain a fundamental part of our strategy. Training is also being supplied to the Districts at an accelerated pace based on their requests and feedback received from the exercises.
Consolidation of the Emergency Operation Plans (State Level Emergency Operations Plan, District Emergency Operations Plan, Continuity of Operations Plan, and Southern Nevada Evacuation Plan) into one plan with multiple annexes has proven to be successful. All feedback from the personnel involved has been positive, indicating it is more efficient and easier to respond when there is only one plan to reference.

**What "strategies for improvement" were not successful? Why?**
(See above for comments on updates on "Short Range".

**What new "strategies for improvement" will be initiated in FY2016?**
Short range:
The strategies implemented to date have been successful in achieving our performance measures. We will continue to update and refine as determined to be necessary the Emergency Operations and Security plans.

Long range strategy:
Completion of the Security Plan for approval and distribution.

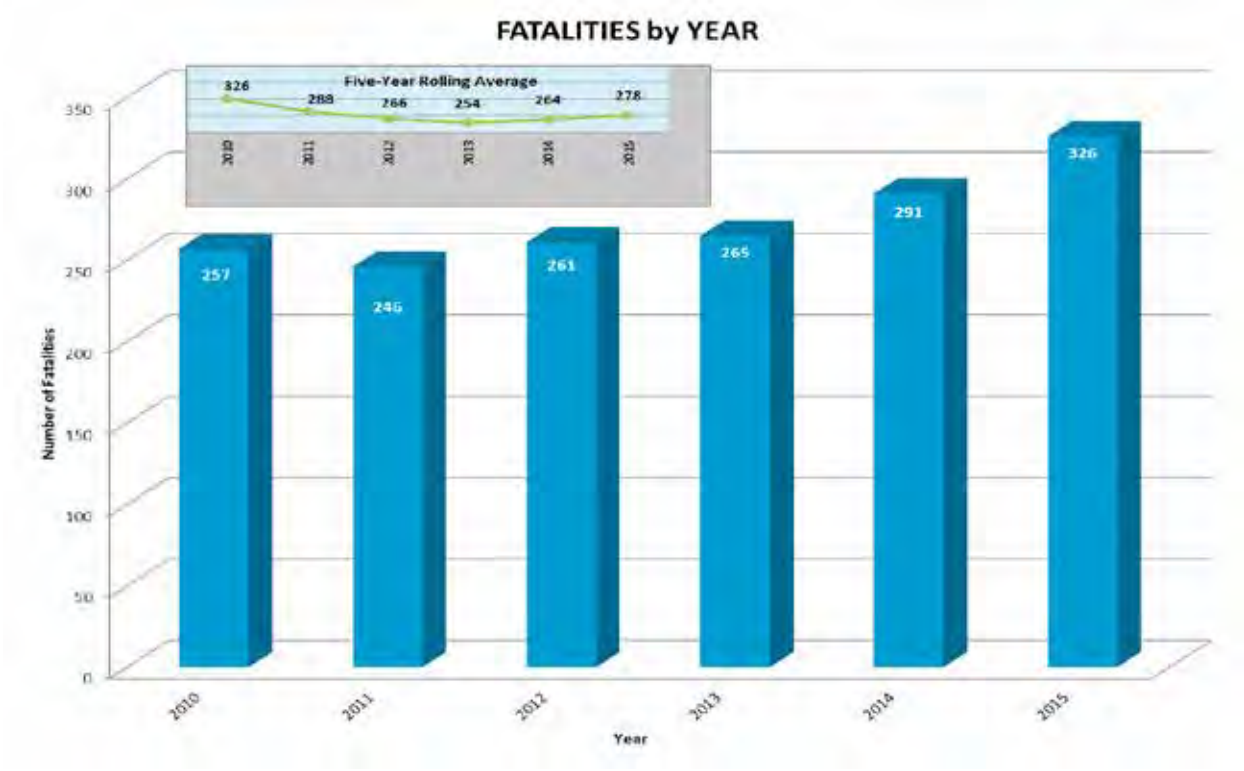
**Does this performance measure effectively measure what is desired?**
**Yes**

**Is there a better performance measure that should be considered?**
No, based on our years of performing this function and our experience we feel at this point that what we are currently measuring is working.
This Performance Measure has been revised to reflect the merging of separate plans. The Mobile Fleet Security Plan has already been incorporated into the NDOT Homeland Security Plan. The Continuity of Operations Plan, District Level Emergency Operations Plan and the Southern Nevada Evacuation Plan have been included into the NDOT Emergency Operations Plan.

**Will meeting the next yearly target have a fiscal impact? If so, explain.**
No fiscal impact is anticipated.

# 12. REDUCE FATAL CRASHES

**Performance Measure:**
Number of fatalities and serious injuries on Nevada's streets and highways
**Annual Target:** An average annual decrease of the five-year rolling average by 3.1% resulting in halving traffic fatalities and serious injuries by 2030
**Ultimate Target:** Zero
The State of Nevada has been experiencing an unfortunate increase in fatalities on our roadways since 2012. This increase has impacted the five year rolling average upward.




**Measurement and Supporting Data:**

**Measure 1:** Number of traffic fatalities
Target – Reduce the five year rolling average of number of traffic fatalities by 3.1% annually

**Measure 2:** Number of serious traffic injuries
Target – Reduce the five year rolling average of the number of serious injuries by 3.1% annually
**Measure 3**: Number of fatalities per 100 million vehicle miles traveled
Target – Reduce the five year rolling average of the number of fatalities per 100 million vehicle miles travelled by 3.1% annually

**Measure 4:** Number of serious Injuries per 100 million vehicle miles travelled

Target - **:** Reduce the five year rolling average of the number of serious injuries per 100 million vehicle miles traveled by 3.1% annually

**Strategies for Improvement**
**Short range to next reporting:**

- The 2016-2020 Strategic Highway Safety Plan (SHSP) has been approved by the National Executive Committee on Traffic Safety (NECTS) and NDOT is currently working under the new document
- Promote Zero Fatalities to the public (the fifth E of safety, everyone)
    a. www.zerofatalitiesnv.com website
    b. Media
    c. Grassroots Marketing
- The next Safety Summit is tentatively planned for May of 2017 and will be held in Reno this year
- Expand the Road Safety Assessment (RSA) program by completing the mitigations database and tracking tools associated with the RSA program. We will also be including "work zone" RSA's in major projects as a standard item.
- Continue to invest NDOT's safety funds on strategies identified in the SHSP
    a. Implement cost effective improvements to keep vehicles in their lane
    b. Analyze crash data to locate sites with high number of run-off-road crashes and install shoulder and centerline rumble strips
    c. Expand the systemic safety program beyond centerline rumble strips
        i. Flashing Yellow Arrows, Roundabouts, median cable rail projects, shoulder widening and slope flattening, turn pockets on state routes with posted speeds over 55 MPH.
    d. Perform pedestrian corridor studies to identify engineering improvements for inclusion in future projects.
    e. Follow the principles of access management
    f. Implement geometric intersection improvements
- Cooperate and support Office of Traffic Safety's efforts with public education programs through TV/radio to increase safe behavior by the public
- Continue the safety capacity building initiative to grow the safety discipline throughout Nevada by (a) developing stronger ties to our universities and (b) rolling out the Highway Safety Manual to transportation safety professionals throughout the state
- We are pursuing more pedestrian enhancement projects with the additional $10,000,000 of state funds

**Long range:**

- Introduce new safety mitigations to Nevada for assessment and adoption into policy

- ❖ Participate in the development and expansion of the Traffic Incident Management program in order to efficiently manage traffic crashes
- ❖ Bring safety to the planning process as a quantitative measure
- ❖ Keep Nevada at the forefront of the Safety initiatives at the national level

**Was the annual target met?**

Target # 1. No.

Actual fatalities, and the five year rolling average number of fatalities both increased in 2014 and are projected to be higher in 2015. However, the performance trend is in line with the five year rolling average and both are significantly lower than the actual fatality number.


Target # 2. Yes

The five year moving average for serious injuries decreased by 3.3 % which is higher than the set target of 3.1%.

Target # 3. No.

The five year moving average of the fatality rate decreased only by 1% in 2014. This percentage rate is lower than the set target of 3.1% annually.

Target # 4. Yes.

A 7.4% performance was achieved in 2014 for this performance measure. This is significantly higher than the set annual target of 3.1%.

**What "strategies for improvement" were successful?**
NDOT has been targeting run-off-the-road crashes and has found success by coupling safety improvements with NDOT roadway projects like: (a) incorporating median cable barrier projects into NDOT roadway projects currently under design, (b) identifying safety improvements in the planning process through NDOT's Road Safety Assessment program, (c) identifying slope flattening locations for future projects. The Department has also adopted the use of the "safety edge" as a standard practice, and in addition, has established a Traffic Incident Management (TIM) program in coordination with Southern Nevada RTC, Nevada Highway Patrol and emergency responders in order to efficiently manage traffic crashes in the Las Vegas area. The TIM program is now underway in northern Nevada. Safety messages are now being coordinated statewide through the SHSP Strategic Communications Alliance (SCA). Safety partners throughout the state now have a messaging calendar so each partner will be speaking about the same issue at the same time, thereby amplifying the message.

**What "strategies for improvement" were not successful? Why?** It is difficult to determine what is causing the increase in fatalities and which strategies are not working. There is a shift in the types of crashes with an increase in pedestrian and motorcycle fatalities, and a decrease in other types of crashes such as lane departures. This indicates that lane departure mitigation strategies are effective. Two strategies, primary seat belt and automated enforcement laws were not passed by the legislature in 2015 and therefore could not be implemented as identified in the SHSP. The primary seat belt law will be reintroduced in the next legislative cycle. Automated Enforcement has yet to be introduced as there are no willing champions.
Staffing resources at all agencies are always a challenge, but when more staffing resources become available strategies for improvement would be quickly, comprehensively, and effectively implemented.

**What new "strategies for improvement" will be initiated in FY2016?**
**Short range to next reporting:**
Given the relatively short duration for implementation of the low cost engineering strategies, the Safety Division does not anticipate revising the short term strategies. NDOT 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:**
Implement the updated Nevada Strategic Highway Safety plan's strategies many of which may be short term for specific locations, but long term for their aggregate effect. Implementing them in enough locations will drive down the fatal and injury crash numbers. Those improvements as noted above are submitted to NDOT Planning for inclusion into project programing documents as well as in the five-year project list. It will take a longer timeframe to realize their safety benefits.
The States Zero Fatalities campaign has gained momentum and has reached 65% of the state's residence in one form or another since its inception. This is up 30% from 2012. NDOT is seeking a goal of 75% in market reach in the next 4 years. Safety Engineering is also planning on conducting up to three corridor "safety management plans" each year statewide for the next four years.

**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 and serious injuries. Approximately half of all traffic fatalities do not occur on NDOT maintained roadways. The Department cannot achieve the goal without the cooperation and assistance of partners in the areas of law enforcement, education, emergency medical response and all of the local public agencies. The NDOT is constantly improving the working relations with local agencies to help achieve this goal.

**Is there a better performance measure that should be considered?** Yes.
If the goal is to measure the NDOT performance on traffic safety, a measure more closely aligned with the department's safety program should be considered and only track State owned roadways.

**Will meeting the next yearly target have a fiscal impact? If so, explain.**
Yes. The Department will continue to spend funds to improve the safety of the entire State transportation system. NDOT will also continue working with our partners to take advantage of opportunities to reduce the severity and frequency of motor vehicle crashes statewide. Every life saved, and every serious injury avoided lessens or eliminates the cost to the families who would have been affected, as well as reduce the need for response by law enforcement, emergency medical services, and trauma centers.

# 13. STREAMLINE PROJECT DELIVERY: SCHEDULE AND ESTIMATE FOR BID ADVERTISEMENT

**Performance Measure:**
This performance measure has been established as the percentage of scheduled projects advertised within the reporting year and the percentage of advertised and awarded projects within the established construction cost estimate ranges. The construction cost estimate ranges are +/-15% of the October estimate of construction costs and +/-10% of the engineer's estimate of construction costs at time of bid.

The performance measure incorporates the majority of projects advertised by the Department. Contracts managed through the districts and maintenance sections were not included as they are developed through a separate process than the typical transportation project. Capital improvement projects completed by the Architecture Division were also excluded from this performance measure.

The list of scheduled projects was established early during the yearly reporting period of October 1 – September 30. This reporting period for the performance measure was established to match the federal fiscal year. A large percentage of the Department's program is delivered using federal funds. The Department strives to use all available federal funds every year. Being able to meet the federal obligation authority limits every year is a goal of the Department. Doing so enables the Department to request and in most cases receive additional obligation authority, allowing the Department to spend more federal funds and therefore produce more projects for the state.

**Annual Target:** 75% **Ultimate Target:** 80%

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

**Project Delivery Data:**
At the beginning of the reporting period, 34 projects were planned/scheduled for delivery and out of these 30 were delivered.

Over the course of the reporting period a total of 38 (planned & not planned) projects were delivered.

- ❖ 30 were planned for delivery at the beginning of the reporting period
- ❖ 8 were not planned
    - 8 were delivered early due to changes in program priorities

**Project Estimate Data:**

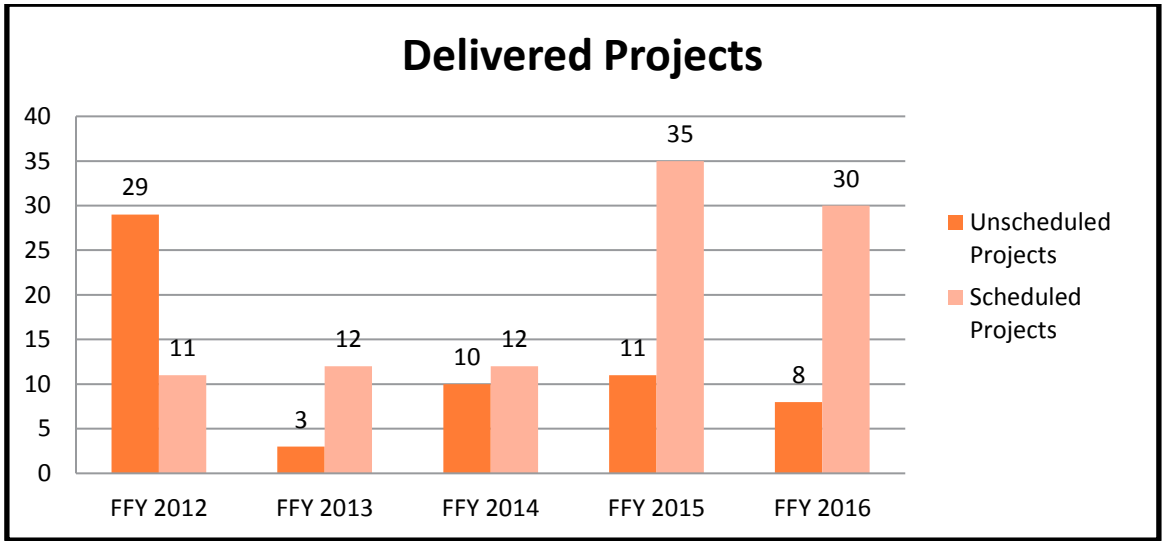
Over the course of the reporting period, 28 projects out of the 30* planned projects delivered were measured for performance within the established construction cost estimate range between the October estimate and the award costs, of which:

- 8 project award costs were within the +/- 15% range
- 20 project award costs were **not** within the +/- 15% range
- 1 project award cost had not been determined yet
- 1 project changed delivery method to a 3 Quote and therefore exclude

*The 8 non-planned projects were excluded from this delivery total because they did not have an October estimate to compare against.

Over the course of the reporting period, 36 projects out of the 38 total delivered projects were measured for performance within the established construction cost estimate range between engineer's estimate at the time of bid and the award costs, of which:

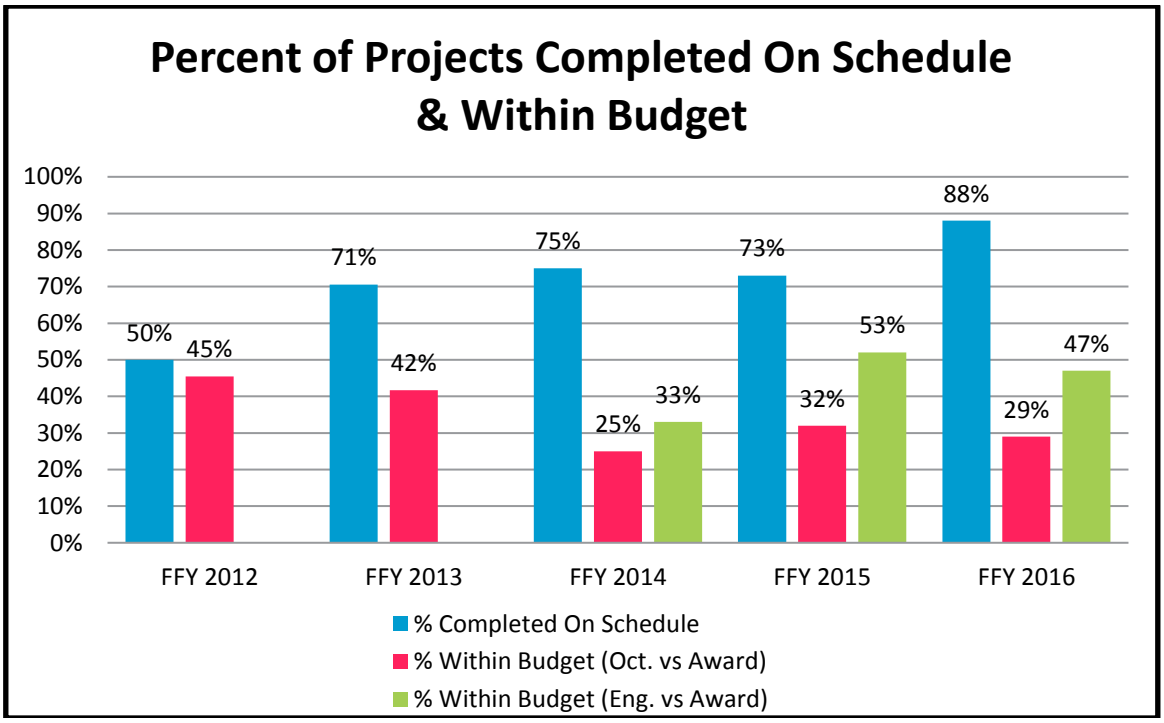
- 17 project award costs were within the +/- 10% range
- 19 project award costs were **not** within the +/- 10% range
- 1 project award costs have not been determined yet
- 1 project changed delivery method to a 3 Quote and therefore excluded




**Measurement and Supporting Data:**
The established list of scheduled projects included 34 projects. Of the 34 projects, 30 (88%) scheduled/planned projects were advertised within the reporting year.

Of the 30 projects that were scheduled and delivered for this reporting year, 28 have been awarded. Of the 28 projects scheduled and awarded, 8 (29%) of the project's award costs fell within +/- 15% of the October cost estimate.

Of the 38 projects delivered during reporting year, 36 have been awarded. Of the 36 projects awarded, 17 (47%) of the project's award costs fell within +/- 10% of the engineer's estimate at time of bid.




**Were the annual targets met?**
The delivery target of 75% of scheduled projects was met this year with a performance of 88%.

The awarded construction cost estimate target of 70% of delivered projects within +/- 15% of the October cost estimate was not met this year with a performance of 29%.

The awarded construction cost estimate target of 70% of delivered projects within +/- 10% of the engineer's estimate at bid was not met this year with a performance of 47%.

Although we met our performance goal for project delivery, the projects that did fail were delayed due to project scope change and change in Department priorities.

Majority of the failed construction cost estimates were due to the awarded construction cost estimates coming in above the engineer's estimate at bid.

**What new "strategies for improvement" will be initiated?**

Over the past four years we have successfully met our annual delivery performance of 70%. In an effort to eventually achieve our "ultimate" goal of 80% we increased the annual goal to 75% for this reporting period. We need to continue to incrementally increase our annual performance goal. If we meet the current annual goal of 75% next reporting period, we recommend increasing the goal to the final goal of 80% for the delivery performance.

**Short range for next reporting period:**

- Continue to document reporting criteria and establish clear definitions for the criteria
  - Document if cost estimates are risk based
- At the October baseline list development, further document project scope elements, project unknowns and other risks that affect the cost estimate
- Continue to coordinate with all impacted divisions to establish the list of projects to be measured early
- Continue working with impacted divisions on establishing the 5 year plan
  - Identify projects earlier
  - Prioritize projects for resource management
  - Prioritize projects to meet funding levels
- Continue to monitor project progress through monthly status meetings to identify and address risks to schedule
- Continue to coordinate with all impacted divisions to verify project cost estimates early
- Continue to coordinate with all impacted divisions to have PSAMS data updated
- Evaluate the performance measure target levels for both the construction cost estimate and project delivery schedule performance

**Long range:**

- Review contingency and risk factors and evaluate impacts to project schedule and cost estimates
- Standardize contingency and risk factors
- Establish process for early price checks of project cost estimates
- Use Scoping effort to improve scope of work, estimate and schedule of projects
- Incorporate planning and environmental efforts earlier into project development
- Use the 5 year plan to
  - Identify projects earlier
  - Prioritize projects for resource management
  - Prioritize projects to meet funding levels

**Does this performance measure effectively measure what is desired?**
The performance measure provides a measure of how well we are doing at producing projects within the year. It does not identify where the delivery issues are, however, the project status documentation during the tracking of the performance data should assist with better identifying where there are issues in the process. The Department can then develop and/or modify processes or procedures to improve those areas. The performance measure can then be used to evaluate the effectiveness of the changes.

**Is there a better performance measure that should be considered?**
There does not appear to be a better performance measure at this time for project delivery but there are some adjustments to the data tracking that can be made to add value to the performance measure. More detailed documentation on the cause for delivery delays such as unforeseen changes to projects, changes in priorities, mandates, funding impacts, and specific project development issues will help us better identify where improvements need to be made.

The October baseline construction cost estimates established at the beginning of the reporting period are still at various levels (i.e., planning, 30%, 60%, and 90% and final engineers estimate) and therefore it is difficult to make an "apples to apples" comparison with the award estimate and determine the true cost estimating performance issues. To achieve a true measure of our cost estimating performance early in the project development process, we need to establish a common early project development milestone that we track the cost estimate at the same point for each project. We can then better track and identify the early cost estimating issues causing us to miss our goal.

Adding the engineer's estimate at the time of bid as a comparison criteria has given us a more consistent measure of our cost estimating at the end of the project development process.

The FHWA Stewardship Performance indicators have been introduced for FFY 2016. There are overlapping goals in relation to NDOT's Performance Measure 13. In future performance measure tracking and reporting for project delivery and estimates we would like to work towards making the goals align.

**Will meeting the next yearly target have a fiscal impact? If so, explain.**
Yes. Meeting the yearly targets will allow the Department to optimize project funding and potentially deliver more projects.

# 14. MAINTAIN STATE BRIDGES

**Performance Measure:**
Number of Department-owned bridges which are categorized as Structurally Deficient (SD) or Functionally Obsolete (FO).

**Summary:**
Number of Department-owned bridges which are categorized as Structurally Deficient (SD) or Functionally Obsolete (FO). The base figure is 37 of 1045 bridges (*State Highway Preservation Report – 2007*). This base figure was established based on the federal eligibility requirements of the Highway Bridge Program (HBP) in effect at that time. Prior to MAP-21, eligibility and priority for funding projects under the HBP program was based on a bridge's sufficiency rating and other factors. 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. Previously, under the HBP, a bridge was eligible for replacement when its sufficiency rating was less than 50 and was eligible for rehabilitation when its sufficiency rating was less than or equal to 80. In addition to meeting the sufficiency rating requirement, a bridge also had to 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 either the road it carries or the undercrossing route.) Additionally, seismic retrofit and scour mitigation activities were eligible activities under the HBP program. MAP-21 combined the HBP program with other funding categories; however, the criteria previously used in the HBP program are still relevant factors to consider when prioritizing potential bridge projects.

MAP-21 eliminated the functionally obsolete classification as a funding criteria therefore, the information presented below only includes data related to structurally deficient bridges. Because the functionally obsolete designation does not reflect bridge condition, maintenance, or replacement needs the Structures Division no longer considers it in the development of NDOT work program. Subsequent reports will no longer include any references to the Functionally Obsolete designation.

**Annual Target:**
Replace or rehabilitate at least one Department-owned SD bridges annually. The goal is evaluated based on the contracts awarded in a given calendar year. Tables have been included to allow for ease of tracking. The tables do not include structures that are subject to routine preservation and maintenance (such as expansion joint replacement, repair of deck cracking, etc.) activities included in 3R or District Betterment projects.

Table 1 lists all projects that meet the Department's established performance measures. Table 2 includes additional structural work performed by the Department that does not meet the

performance measures. These projects are often eligible for federal funding but do not satisfy the performance measure of reducing the number of structurally deficient bridges owned by the Department.

As shown in the table, these are primarily seismic retrofits or bridge replacements. The Department's on-going efforts to retrofit seismically deficient bridges are an important part of our annual work plan, but seismic deficiency alone does not relate to a structurally deficient classification and does not meet the performance criteria. The table also include the replacement of several structurally deficient bridges that are owned by other agencies. While it is essential these bridges be replaced, they do not meet the performance criteria which only addresses Department-owned structures.

**Ultimate Target:** Zero

TABLE 1: TRACKING OF PROJECTS THAT MEET PERFORMANCE MEASURE CRITERIA

| Year | Target Met Y-N/# of Bridges | Structure #'s | County | Contract # | Description of Work/Comments |
|---|---|---|---|---|---|
| 2008 | Yes/1 | B-89 | CL | 3360 | Replacement of Bunkerville Br. |
| 2009 | Yes/1 | H-788 | CL | 3366BD | Replacement of Wm Springs Br. (FO) |
| 2010 | No | - | - | - | - |
| 2011 | No | - | - | - | 3476 bid rejected |
| 2012 | Yes/4 | G-884 E/W<br>G-885 E/W | EU | 3525 | Rehab & Seismic retrofit |
| 2013 | Yes /2 | B-1066 E/W | EL | 3540 | Carlin Retrofit- remove from FO list. |
| 2014 | Yes /2 | B-395<br>G-324 | EU | 3557 | Replace 2 SD bridges on FR EU02 at Dunphy |
| 2015 | Yes/1 | B-100 | CH | 3608 | Replace SD bridge on SR115 |
| 2016 | Expect Yes/1 | B-474 | DO | - | Replace SD bridge on SR757 (pending utility relocation) |
| 2017 | Expect Yes/2 | I-1899<br>B-1392E | CL<br>PE | -<br>- | Replace SD bridge on SR582<br>Replace SD bridge on I-80 |

TABLE 2: TRACKING OF PROJECTS THAT DO NOT MEET PERFORMANCE MEASURE CRITERIA

| Year | # of Bridges | Owner | Structure #'s | County | Contract # | Description of Work/Comments |
|---|---|---|---|---|---|---|
| 2008 | - | | - | - | - | - |
| 2009 | - | | - | - | - | - |
| 2010 | - | | - | - | - | - |
| 2011 | 2 | NV | I-843 E/W | WA | 3443 | I-80 Seismic retrofit |
| | 1 | NV | I-1452 | CL | 3445 | I-515 Seismic retrofit |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 1 | EL | B-1942 | EL | 3459 | Replace S. Fork Owyhee River Br |
| | 2 | NV | I-975N/S | CL | 3447DB | Replace I-15 Bridges (Not SD or FO) |
| 2012 | 1 | CH | B-1592 | CH | 3515 | Replace Alcorn Rd Br |
| | 16 | NV | Various | HU | 3524 | Rehab structures and seismic retrofit (some) of I-80 structures in Winnemucca. |
| | 2 | NV | G-927 E/W | EL | 3461 | Rehab & Seismic retrofit. I-80 Bridges. Not SD. |
| 2013 | 1 | EL | B-1662 | EL | 3538R | Replace Mary's River Br. Contract completed 11/13. |
| | 6 | NV | B-1111, 1112, 1113 E/W | EL | 3540 | Seismic Retrofit/Rehab of I-80 bridges @ Carlin Tunnel. Contract awarded 5/13. |
| 2014 | 2 | NV | I-1773, I-1774 | WA | 3574 | Seismic retrofit of 2 bridges on I-580 |
| | 1 | Reno | B-178 | WA | - | Replace 1 SD bridge |
| 2015 | 4 | NV | H-948, G-949, G-953, I-956 | CL | 3597 | Seismic Retrofit of 4 bridges on I-15 |
| | 1 | LY | B-1610 | LY | 3601 | Replace 1 SD bridge on Nordyke road |
| | 4 | NV | B-1262 N/S, B-1263 N/S | DO | 3595 | Seismic retrofit and scour mitigation of 4 bridges |
| | 3 | NV | I-1261, I-812 N/S | WA | 3598 | Seismic retrofit of 3 bridges on I-580 |
| 2016 | - | | - | - | - | - |
| 2017 | 4 | NV | G-772 E/W | WA | - | Scour mitigation of 2 bridges on I-80 |

A table has been included in order to provide historical reporting of SD bridges.

| | TOTAL STATE OWNED BRIDGES | STATE SD BRIDGES | COMMENTS |
|---|---|---|---|
| 2006 BASELINE | 1045 | 20 | 2007 Report. |
| 2008 | 1056 | 20 | 2009 Report. |
| 2010 | 1064 | 18 | 2011 Report. |
| 2012 | 1116 | 19 | 2013 Report. |
| 2014 | 1154 | 15 | 2015 Report. |
| 2016 | 1163 | 12 | 2017 Report (Draft) |

NOTES: Bridge counts shown are based on information reported in the NDOT State Preservation Report published every 2 years.

(1) Bridge counts shown are based on the number of SD bridges as reported in the NDOT State Highway Preservation Report. This report is published every 2 years.

A description of Structurally Deficient bridges from the 2015 Nevada State Highway Preservation Report is included below for information.

A bridge is considered structurally deficient when significant load-carrying elements are found to be in poor condition, has insufficient load carrying capacity and may have weight limits posted to remain in service, or may be more susceptible to flooding with significant traffic impacts.

Due to the fact that the term "structurally deficient" causes undue concern, FHWA is considering changing the terminology. The term does not imply that the bridge is unsafe. Safety and maintenance concerns are identified during regularly scheduled inspections.

**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 bridges. The Bridge 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.

**Measurement and Supporting Data:**
Fiscal year 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 above for additional data.

**Strategies for Improvement**

**Short range to next reporting:**
Evaluate programmed projects for possible preservation actions, corrective maintenance and risk reduction activities and include these activities into project scope as appropriate.

NDOT Bridge Division provides information regarding state bridge policies and practices to local agencies in order to cooperate with and assist them.

**Long range:**
Perform bridge rehabilitation and replacement as allowed under the MAP-21 program and the FAST Act. Continue to consider previous criteria used to establish eligibility under the previous HBP program, and utilize preservation strategies to extend performance and serviceability of elements commonly causing deterioration of structures. These include repairs such as deck

repair/replacement, deck overlays, replacement of bridge joints, fatigue crack repair and repainting of steel structures. Maintain seismic retrofit program and scour mitigation program to minimize risks from these extreme events.

Seek additional funds to reduce the time frame for eliminating structurally deficient bridges. Many of the Department's bridges entered the inventory with the construction of the interstate system in the 1960's, and as these bridges continue to age, the number categorized as structurally deficient will continue to increase. While the Department has reduced the overall number of deficient bridges in recent years, at current funding levels, it is anticipated that the number of SD bridges will increase more rapidly than they can be replaced.

**ANNUAL EVALUATION OF PERFORMANCE MEASURE**

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

**What "strategies for improvement" were successful?** The current strategies have had mixed success when considering the annual goal established in October 2010. Originally, the goal of replacing/rehabilitating 1 bridge biennially was successful.

**What "strategies for improvement" were not successful? Why?** N/A

**What "strategies for improvement" will be implemented in 2016?**
**Short range to next reporting:** Additional short range strategies beyond those stated have not been identified.

**Long range:** Additional long range strategies beyond those stated have not been identified.

**Does this performance measure effectively measure what is desired?**
Yes. The performance measure does allow tracking of the state owned SD bridges.

**Is there a better performance measure that should be considered?**
No. Use of a percentage based measurement (as some states use) was considered. A percentage based measure could show a decrease in SD bridges (thus an improvement), as new structures are added to the inventory. This could occur with no decrease in the actual number of SD bridges; therefore, the numerical based measure is viewed as superior.

**Will meeting the next yearly target have a fiscal impact?** Not at this time. The performance measure was established based on the current revenue. As the bridges age and deteriorate and the infrastructure grows, additional structures will become SD, increasing the number of these structures in Nevada's inventory.

# 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:**

| Summary of Status | Dist. 1 | Dist. 2 | Dist. 3 | HQ | Total | |
|---|---|---|---|---|---|---|
| Total permits accepted | 754 | 314 | 128 | 0 | 1,198 | |
| Total permits processed in more than 45 days | 26 | 3 | 1 | 0 | 30 | |
| Total permits processed within 45 days | 380 | 193 | 43 | 0 | 616 | |
| Total permits processed | 406 | 196 | 44 | 0 | 646 | |
| Total permits processed with re-reviews | 52 | 33 | 4 | 0 | 89 | |
| Total permits processed through FHWA | 40 | 12 | 3 | 0 | 55 | |
| Percent permits processed in more than 45 days | 6.40% | 1.53% | 2.27% | 0.00% | 4.64% | |
| Percent permits processed within 45 days | 93.60% | 98.47% | 97.73% | 0.00% | 95.36% | |

Note: All calculations in this report have been handled in accordance with TP-1-10-3

We missed the performance target of 95% for the fourth quarter. This quarter we processed 92.12% of all permits statewide.

**Overview of Performance Measure:**

The Performance Measure identified for the R/W Division is to process 95% of encroachment permits within 45 days. The development of Transportation Policy (TP) 10-1-3 ENCROACHMENT PERMIT PROCESSING TIME SCHEDULE sets a 45 working day process for all accepted encroachment permit applications.

**Were the 4th quarter targets met?**

No. As stated above, 92.12% of all permits processed were done within 45 days or less. The 4th quarter performance for each district is as follows: District 1 achieved 89.47%, processing 133 permits, District 2 achieved 96.61% while processing 59 permits, and District 3 achieved 100% while processing 11 permits. District 1 accepted 200 permits, District 2 accepted 93 permits, and District 3 accepted 38 permits.

**Was the target met?**
Yes. All three Districts annual reporting reflects that 95.36% of all permits processed were done within 45 days or less. The annual performance for each district is as follows: District 1 achieved 93.60%, processing 406 permits, District 2 achieved 98.47% while processing 196 permits, and District 3 achieved 97.73% while processing 44 permits. District 1 accepted 754 permits, District 2 accepted 314 permits, and District 3 accepted 128 permits.

**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 successful 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 continues to improve the processing time.

The Encroachment Permit Process is a key component of IRWIN. The complete implementation of the IRWIN system as of October 1, 2011, has improved flow through the review process and will provide up to date and accurate reporting. It is critical that all Districts continue to use IRWIN and keep the information as up to date as possible. There is no anticipated direct fiscal impact for next year.

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

**Is there a better performance measure that should be considered?**
No.
During the last economic downturn the state experienced a decrease in the number of permits submitted. As the economy recovers we are seeing an increase in permits as well as more projects going out to bid. The Chief Performance Engineer has suggested that we increase the goal of 95%. After discussing the increasing workloads of the different divisions it was determined that the goal of 95% would remain as is for the time being.

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

There is no anticipated direct fiscal impact for next year.

**Was the annual target met?**

Yes.

Targets for Next Three Fiscal Years:

FY17: 95%
FY18: 95%
FY19: 95%

# STATE HIGHWAY FUND ANNUAL REVENUE AND EXPENDITURES

# STATE HIGHWAY FUND ANNUAL REVENUE AND EXPENDITURES

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, 2016. 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 FY 2016 revenues into the State Highway Fund were approximately $1.29 billion while the second table contains the total FY 2016 actual expenditures, which were approximately $1 billion. These two tables also include other detailed financial data about transportation-related revenues and expenditures.
The third table indicates the Highway fund balance was slightly less in FY 2015 compared to FY 2014 of about $317 million.

# Revenue

| State of Nevada<br>Highway Special Revenue Fund<br>Schedule Of Revenues And Receipts - Budgetary Basis<br>For The Years Ended June 30, 2016 and 2015<br>(In thousands) | | |
|---|---|---|
| | 2016 | 2015 |
| State user taxes | | |
| Gasoline taxes | $ 200,076 | $ 193,392 |
| Motor vehicle fees and taxes | | |
| Vehicle registration & bicycle safety fees | 113,890 | 110,262 |
| Motor carrier fees | 40,911 | 40,150 |
| Drivers license fees | 27,034 | 26,218 |
| Special fuel taxes | 84,723 | 81,120 |
| Total motor vehicle fees and taxes | 266,558 | 257,750 |
| Total state revenue | 466,634 | 451,142 |
| Federal Aid reimbursement | | |
| Department of Interior | - | - |
| Federal Aviation Administration | 72 | 61 |
| Federal Emergency Management Administration | - | - |
| Federal Highway Administration | 442,917 | 301,280 |
| Federal Rail Administration | - | - |
| Federal Transit Administration | 7,849 | 7,332 |
| Total Federal Aid | 450,838 | 308,673 |
| Miscellaneous receipts | | |
| Departments of Motor Vehicles & Public Safety authorized revenue | 96,757 | 50,057 |
| Appropriations from other funds | 153 | 11 |
| Proceeds from sale of bonds | 200,008 | - |
| Agreement income | 26,133 | 8,853 |
| Interest | 2,593 | 1,452 |
| Sale of surplus property | 881 | 140 |
| AB595 property tax | 20,264 | 20,142 |
| AB595 bond revenue | 1,438 | 1,187 |
| Other sales & reimbursements | 27,611 | 19,502 |
| Total miscellaneous receipts | 375,838 | 101,344 |
| Total revenue and receipts - budgetary basis | $ 1,293,310 | $ 861,159 |

State of Nevada
Highway Special Revenue Fund
Comparative Schedule of Expenditures and Disbursements - Budgetary Basis
For the Fiscal Year Ending June 30, 2016 and 2015
(In thousands)

| | 2016 | | | 2015 |
|---|---|---|---|---|
| | Budgeted | Actual Using Budgetary Basis | Variance Favorable (Unfavorable) | Actual Using Budgetary Basis |
| Department of Transportation | | | | |
| Labor | $ 137,426 | $ 124,331 | $ 13,095 | $ 119,171 |
| Travel | 2,733 | 2,559 | 174 | 1,839 |
| Operating | 71,383 | 67,579 | 3,804 | 59,948 |
| Equipment | 22,335 | 16,896 | 5,439 | 6,485 |
| Capital improvements | 648,235 | 508,232 | 140,003 | 388,858 |
| Bond expenditures | 259,189 | 65,009 | 194,180 | 39,902 |
| Other programs | 18,829 | 12,391 | 6,438 | 9,569 |
| Total operations | 1,160,130 | 796,997 | 363,133 | 625,772 |
| Cost of fuel sold to other agencies | 3,501 | 2,298 | 1,203 | 3,097 |
| Total Department of Transportation | 1,163,631 | 799,295 | 364,336 | 628,869 |
| Department of Motor Vehicles | 149,685 | 119,132 | 30,553 | 90,412 |
| Department of Public Safety | 88,860 | 78,499 | 10,361 | 74,885 |
| | 238,545 | 197,631 | 40,914 | 165,297 |
| Appropriations to other funds | | | | |
| Board of Examiners | - | - | - | - |
| Transportation Services Authority | 2,798 | 2,460 | 338 | 2,103 |
| Public Works Board | 497 | 497 | - | 4,457 |
| Traffic Safety | 273 | 250 | 23 | 180 |
| Investigations | 388 | 371 | 17 | 348 |
| DMV Training Division | 759 | 695 | 64 | 734 |
| DMV Emergence Response | 319 | 319 | - | - |
| Fleet Services Capital Purchase | 325 | 325 | - | 488 |
| Legislative Counsel Bureau | 5 | - | 5 | - |
| Dept of Information Technology | - | - | - | - |
| Total appropriations to other funds | 5,364 | 4,917 | 447 | 8,310 |
| Other disbursements | | | | |
| Transfer to bond fund | 84,000 | 68,527 | 15,473 | 67,815 |
| Total other disbursements | 84,000 | 68,527 | 15,473 | 67,815 |
| Total expenditures & disbursements | | | | |
| - Budgetary basis | $ 1,491,540 | $ 1,070,370 | $ 421,170 | $ 870,291 |

| STATE HIGHWAY FUND BALANCE (BUDGETARY BASIS)<br>STATE FISCAL YEARS 2012 - 2015 | | | |
|---|---|---|---|
| | **ACTUAL FY 2013** | **ACTUAL FY 2014** | **ACTUAL FY 2015** |
| **BEGINNING FUND BALANCE:** | | | |
| GENERAL OBLIGATION BONDS | $0 | $0 | $94,090,812 |
| RESTRICTED FUNDS | 14,748,883 | 26,510,031 | 22,534,088 |
| OTHER HIGHWAY FUND | 119,249,117 | 105,153,969 | 216,821,100 |
| **TOTAL BEGINNING FUND BALANCE:** | **$133,998,000** | **$131,664,000** | **$333,446,000** |
| | | | |
| **ADD:** | | | |
| REVENUES | $909,000,826 | $884,469,371 | $861,159,660 |
| BOND PROCEEDS | 0 | 100,018,664 | 0 |
| **TOTAL ADDITIONS:** | **$909,000,826** | **$984,488,035** | **$861,159,660** |
| | | | |
| **DEDUCT:** | | | |
| DEPT OF TRANS. NON-BOND EXPENDITURES | $660,630,189 | $526,427,064 | $588,711,452 |
| DEPT OF TRANS. BOND EXPENDITURES | 0 | 5,927,852 | 39,901,579 |
| EXP. & APPROP TO OTHER AGENCIES | 246,298,958 | 246,016,342 | 241,676,159 |
| **TOTAL DEDUCTIONS:** | **$906,929,147** | **$778,371,258** | **$870,289,190** |
| | | | |
| **ADJUSTING ENTRIES:** | | | |
| CONTROLLERS OFFICE CAFR ADJUSTMENTS | -$4,405,680 | -$4,334,777 | -$6,954,923 |
| **TOTAL ADJUSTING ENTRIES:** | -$4,405,680 | -$4,334,777 | -$6,954,923 |
| | | | |
| **ENDING FUND BALANCE:** | | | |
| GENERAL OBLIGATION BONDS | $0 | $94,090,812 | $54,189,233 |
| RESTRICTED FUNDS | 26,510,031 | 22,534,088 | $17,967,597 |
| OTHER HIGHWAY FUND | 105,153,969 | 216,821,100 | 245,204,718 |
| **TOTAL ENDING FUND BALANCE:** | **$131,664,000** | **$333,446,000** | **$317,361,548** |

# 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:** Identifies 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 affect 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 SUMMARY SHEETS

## MAJOR PROJECTS

I-15 Projects

- I-15 North Phase 2 Package A - Craig Road to Speedway Boulevard
- I-15 North Phase 3 - Speedway Boulevard to Apex Interchange
- I-15 North Phase 4 - I-15/CC-215 Northern Beltway Interchange
- I-15 NEON DB
- I-15 Urban Resort Corridor Study
- I-15 South Bermuda Road Interchange
- I-15 South Pebble Road Overpass
- I-15 South Starr Avenue Interchange
- I-15 South Las Vegas Boulevard from St. Rose Parkway to Sunset Road
- I-15 South Phase 2A-2B
- I-15 South Sloan Road Interchange
- I-15 South – Stateline to Sloan Road

I-515/I-11Projects

- I-11 Phase 1 - Foothills Drive Grade Sep to Silverline Road North of US-95
- I-11 Phase 2 - Silverline Road to the Nevada Interchange

US-95 Northwest Projects

- US-95 Northwest Phase 2B – Ann Road to Kyle Canyon Road (SR 157)
- US-95 Northwest Phase 3A – CC 215 Beltway Interchange
- US-95 Northwest Phase 3B – CC 215 Beltway Interchange
- US-95 Northwest Phase 3C – CC 215 Beltway Interchange
- US-95 Northwest Phase 3D – CC 215 Beltway Interchange
- US-95 Northwest Phase 3E – CC 215 Beltway Interchange
- US-95 Northwest Phase 5 – Kyle Canyon Road (SR 157) Interchange

Northern Nevada Projects

- I-80 – Robb to Vista
- US-395 North – McCarran Blvd. to Stead Blvd.
- Pyramid Highway - US 395 Connection
- US-395 Carson City Freeway Phase 2B – S. Carson St. to Fairview Dr.

## I 15 North - Part 2 Package A

**Craig Road (SR 573) to Speedway Boulevard**

**Project Sponsor: NDOT**

**Project Manager: Dwayne Wilkinson, P.E.**

**(702) 671-8879**

### Project Description:

- This project consists of corridor improvements from Craig Road to Speedway Blvd inclusive of:
- Capacity improvements - widening Craig Rd to Speedway Blvd from 4 to 6 lanes
- Remove & replace PCCP with ACP (Craig to Lamb)
- Drainage improvements
- Widen & seismic retrofit of 4 structures (G-958N, G-958S, G-961N & G-961S) over 2 UPRR crossings
- Landscape and aesthetic improvements
- Right-of-way fence replacement
- All construction within the existing I-15 right-of-way
- Project length: 4.8 miles

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

Complete

**Construction:**

2016 3rd Quarter - 2018


### Project Cost Range:

**Engineering:**

$ 1.8 M

**Right of Way:**

$ 0.14 M

**Construction:**

$ 37.6- $ 39.5 M

**Total Project Cost:**

$ 39.5 - $ 41.4 M

### Project Benefits:

- Improve safety
- Reduce travel times
- Decrease congestion
- Improve freeway operations
- Increase life of pavement
- Increase I-15 capacity to accommodate projected traffic

### What's Changed Since Last Update?

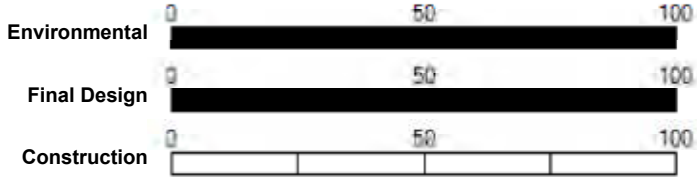
- Scope: No change
- Schedule: Updated
- Cost: Updated
- Construction contract awarded to Las Vegas Paving on 6/7/2016 for $33,800,000; Notice to Proceed is pending

### Project risks:

- Coordination with railroad during bridge construction
- Drilled shaft construction
- Work zone traffic control

### Financial Fine Points(Key Assumptions):

- Total funding expended for Construction: $0
- Total funding expended for Design of all packages: $ 1,921,000
- Total funding expended for the Environmental Phase for all packages: $875,000
- Construction inflation escalation (3.7%) is to midpoint of construction




**October 2016**

NEVADA DOT

2

## I 15 North - Phase 3

**Speedway Boulevard to Apex Interchange**

**Project Sponsor: NDOT**

**Project Manager: Jenica Keller, P.E.**

**(775) 888-7592**

### 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.
- Construct new interchange between Speedway Boulevard and Apex Interchange
- Project length: 4.6 miles

### Schedule:

**Planning:**
Complete
**Environmental Phase:**
Complete
**Final Design:**
2018 - 2020
**Construction:**
2020 - 2022


### Project Cost Range:

**Engineering:**
$10 - $12 million
**Right-of-Way:**
$3 - $3.6 million
**Construction:**
$75 - $85 million
**Total Project Cost:**
$88 - $101 million

### Project Benefits:

- Improve safety
- Reduce trip times
- Improve access to areas planned for development in North Las Vegas
- Improve operations
- Increase capacity

### What's Changed Since Last Update?

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

### Project risks:

- Funding for Final Design has not been indentified in the STIP
- Timely completion of design
- Right of Way for new interchange has not be determined
- Uncertainty of proposed Sheep Mountain Parkway terminus
- Northern project limits may be modified to accommodate improvements at Garnet Interchange

### 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 (4.12%) is to approximate midpoint of construction
- Funding source for this project has not yet been identified

**Environmental complete**


**Design Complete**


**October 2016**

NEVADA DOT

## I 15 North - Phase 4

**I 15 / CC 215 Northern Beltway Interchange**

**Project Sponsor: NDOT**

**Project Manager: Samantha Dowd, P. E.**

**(775)-888-7589**

### Project Description:

- This is the last of four phases of improvements to the I-15 North Corridor between US 95 and Apex Interchange (15 miles)
- 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 generally within the existing I-15 and CC-215 Rights-of-Way. However, 1 to 4 acres may be required to construct the project

### Schedule:

**Planning:**
Complete
**Environmental:**
Complete
**Final Design:**
Start 2015 - 2019
**Construction:**
2019 - 2022


### Project Cost Range:

**Engineering:**
$8.8 - $13.8 million
**Right-of-Way:**
$1.8 - $3.2million
**Construction:**
$130.1 - $138.7 million
**Total Project Cost:**
$140.7 - $155.7 million

### Project Benefits:

- Improve safety
- Reduce trip times
- Improve access to areas planned for development in North Las Vegas
- Improve operations with full freeway-to-freeway connectivity
- Increase capacity

### What's Changed Since Last Update?

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

### Project risks:

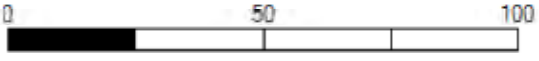
- Cost and schedule impact of stucture design
- Cost and schedule impact of utility relocations
- Timely completion of preliminary engineering
- Railroad involvement - UPRR permits & agreement amendment
- Availability of construction funds
- Acquisition of 1 to 4 acres may be required to construct the project

### Financial Fine Points(Key Assumptions):

- Total funding expended for preliminary engineering: $ 2,034,000
- Total funding expended for I-15 North environmental phase: $875,000
- Escalation is to 2020 approximate midpoint of construction
- Construction funding has been identified

**% Environmental Complete**


**% Design Complete**




**October 2016**

NEVADA DOT

## Project NEON Design-Build

**I-15 Sahara to Spaghetti Bowl**

**Project Sponsor: NDOT**

**Project Manager: Dale Keller, P.E.**

**(775) 888-7603**

### Project Description:

- HOV Direct Connector from US 95 to I 15 and I-15 widening improvements from Spaghetti Bowl to south of Sahara; Add/Drop lanes at Oakey/Wyoming
- Local Access Improvements to Las Vegas Downtown Redevelopment
- New access to Alta
- I-15/Charleston Interchange Reconstruction
- Project Length: 4.83 miles
- *This project now includes what was previously Phases 1-4.

### Schedule:

**Planning:**
Complete

**Environmental:**
Complete

**Release Final RFP:**
Complete

**Selection of Design-Builder:**
October 2015

**Construction:**
Spring 2016

### Project Cost Range:

**Engineering:**
$34 - $36 Million

**Right-of-Way and Utilities:**
$285 - $295 Million

**Construction:**
$525 - $575 Million

**Construction Engineering:**
$40 - $50 Million

**Total Project Cost:**
$850 - $900 Million

### Project Benefits:

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

### What's Changed Since Last Update?

- Scope - 2nd NEPA Re-evaluation is approved
- Schedule - Execute Design-Build Contract November 2015
- Cost - No change

### Project risks:

- Complex construction in a high volume dense urban area
- Complexity in maintaining traffic, staging, relocating utilities and reducing impacts
- Complex right-of-way issues may impact schedule and cost

### Financial Fine Points(Key Assumptions):

- Total Funding Expended: $157,000,000
- Inflation escalation (4%) to 2020 approximate midpoint of construction
- Additional Federal, State, Local and Regional Funding will be required
- Transportation Board approved the authority to bond for the Project.

**% Environmental Complete**

0 — 50 — 100

**Design Complete**

0 — 50 — 100

**October 2016**

NEVADA DOT

## I 15 Urban Resort Corridor Study

**Project Sponsor: NDOT**

**Senior Project Manager: Jeff Lerud**

**(702) 671-8865**

### 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 stragegy 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:**
Completed
**Environmental:**
TBD
**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 - No Change
- Cost - No Change
- Planning Phase Completed

### 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: $786,738

**Planning complete** 0 — 50 — 100

**October 2016**

## I 15 South - Bermuda Road Interchange

**Project Sponsor: City of Henderson**

**Project Manager: Ryan Wheeler, P.E.**

**(702) 671-8876**

## 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 interchange at Bermuda Road.

## Schedule:

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


## Project Cost Range:

(Estimates per June 2014 CRA)
**Engineering:**
$9.5 - $10 M
**Right-of-Way:**
$1.5 - $2 M
**Construction:**
$93 - $98 M
**Total Project Cost:**
$104 - $110 M

## Project Benefits:

- Interchanges on I-15 reduce congested traffic on the main line and associated regional facilities.
- Connect Regional traffic.

## What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Schedule. Unfunded on 2035 RTP.
- Cost - adjusted per June 2014 CRA

## Project risks:

- Unit price and property escalation may affect project cost.
- Funding uncertainty

## 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 (Financial Plan 2009): Q10 Extended ($57.1M) and STP Clark County ($60M).


**October 2016**

NEVADA DOT

## I 15 South - Pebble Road Overpass

**Project Sponsor: Clark County**

**Project Manager: Ryan Wheeler, P.E.**

**(702) 671-8876**

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


### Project Cost Range:

(Environmental Phase Estimates/Removal from RTP)

**Engineering:**
$6.5 - $7 M
**Right-of-Way:**
$8 - $10 M
**Construction:**
$51.5 - $53 M
**Total Project Cost:**
$66 - $70 M

### Project Benefits:

- Interchanges on I-15 reduce congested traffic on the main line and associated regional facilities.
- Connect regional traffic.
- Improve origin destination time of travel.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - This project was removed from 2030 RTP.
- Cost - No Change

### Project risks:

- Unit price and property escalation may affect project cost.
- Lack of funding may push this project well into the future

### Financial Fine Points(Key Assumptions):

- Funding not available until 2040. Project was removed from current Financial Plan. Project costs will be impacted due to inflation.
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Funding Source (Financial Plan 2009): Private Developers ($30M)

**% Environmental Complete**


**% Design Complete**


**October 2016**

NEVADA DOT

## I 15 South - Starr Avenue Interchange

**Project Sponsor: City of Henderson**

**Senior Project Manager: Ryan Wheeler**

**(702) 671-8876**

### Project Description:

- I-15 South, from Sloan Road to Tropicana Ave. has been broken into nine packages to address funding and constructability opportunities.
- This project is one piece of the overall I-15 South Corridor
- Construct a new interchange at Starr Avenue with on & off-ramps
- Connect to Las Vegas Blvd (east side) and Dean Martin Drive (west side)
- I-15 over Starr Avenue and shifted 50 ft. to the east of the existing I-15.

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

2010-2016

**Construction:**

2017-2018


### Project Cost Range:

(Environmental Phase Estimates)

**Preliminary Engineering:**

$10 - $11 M

**Right-of-Way:**

$8 - $14 M

**Construction:**

$40 - $58 M

**Total Project Cost:**

$58 - $83 M

### Project Benefits:

- Improve access to I-15 with new interchange
- Connect east-west regional traffic from Las Vegas Blvd to/from Dean Martin Drive
- Improve I-15 mainline capacity

### What's Changed Since Last Update?

- Scope - No change
- Schedule - No change
- Cost - No Change
- Website updated July 2016 to reflect current configuration. Fact Sheet and FAQ sheets updated.

### Project risks:

- Uncertain Right of Way costs
- Material and labor cost escalation
- Availability of funding
- Utility & bill board relocation
- Cell phone tower, re-location potential or avoidance

### Financial Fine Points(Key Assumptions):

- Total funding expended for Starr Interchange: $122,500
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% for year 2018 approximate midpoint of construction.
- Funding Source (RTP 2035): Interstate Maintenance Discretionary ($3.44M), SAFETEA-LU Priority Project ($7.20M), Local Funds ($12.98 M), STP Clark County ($52.80 M) and Public Lands Highways ($1.19 M).

**% Environmental Complete**

0 50 100

**% Design Complete**

0 50 100

**October 2016**

NEVADA DOT

## I 15 South - Las Vegas Boulevard

**St. Rose Parkway to Sunset Road**

**Project Sponsor: Clark County**

**Project Manager: Jason S. Tyrrell, P.E.**

**(702) 671-8852**

### 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 - *Completed as of July 2011
- Package 2: Las Vegas Boulevard from St. Rose to Silverado Ranch

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

Package 1- Complete ,

Package 2- Complete

**Construction:**

Package 1 -Complete,

Package 2 Bid Opening

Oct 15 2016


### Project Cost Range:

**(Environmental phase estimates):**

**Engineering:**

$4 - $4.5 M

**Right-of-Way:**

$0

**Construction:**

$31.5 - $33 M

**Total Project Cost:**

$35.5 - $37.5 M

### 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?

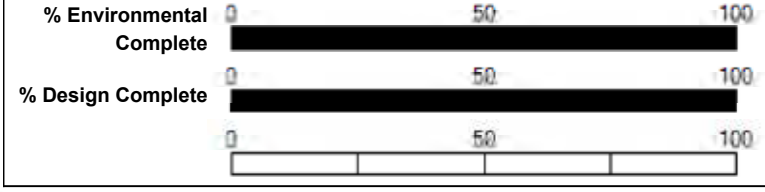
- Scope - No Change
- Schedule - No Change
- Cost - No Change
- Project opened bids on October 15, 2016

### Project risks:

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

### Financial Fine Points(Key Assumptions):

- Total NDOT Funding Expended for LV Blvd.: $4.3 M
- 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)




**October 2016**

NEVADA DOT

## I 15 South - Phase 2A/2B

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

**Project Sponsor: NDOT**

**Project Manager: Ryan Wheeler, P.E.**

**(702) 671-8876**

### 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
- This project has been divided in two phases:
- Phase 2A: Widening I-15 from Sloan to Blue Diamond (SR160) 6 to 8 lanes
- Phase 2B: Widen from Sloan to Blue Diamond (SR160) 8 to 10 lanes, restripe collector-distributor ramps from Blue Diamond (SR160) to Tropicana Ave, replace concrete section between I-215 & Tropicana Ave and replace Tropicana Interchange.

### Schedule:

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


### Project Cost Range:

(Estimates per June 2014 CRA)

**Engineering:**
$43 - $44 M
**Right-of-Way:**
$0
**Construction:**
$476 - $505 M
**Total Project Cost:**
$519 - $549 M

### 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?

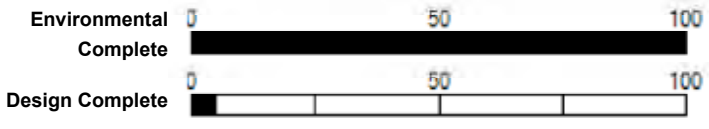
- Scope - No Change
- Schedule - No Change
- Cost - adjusted per June 2014 CRA

### Project risks:

- Complexity in maintaining traffic staging, relocating utilities and reducing impacts to traveling public.
- Sloan Interchange improvements to be constructed prior to widening to accommodate additional lanes

### Financial Fine Points(Key Assumptions):

- Funding not available until 2018-2024 per STIP.
- Total funding expended for I-15 South Environmental Studies (all phases): $3.5 million
- Inflation index distribution of 2% - 5% is to approximate midpoint of construction.




**October 2016**

NEVADA DOT

## I 15 South - Sloan Road Interchange

**Project Sponsor: City of Henderson**

**Project Manager: Ryan Wheeler, P.E.**

**(702) 671-8876**

### 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:

(Estimates per June 2014 CRA)
**Engineering:**
$12.5 - $13 M
**Right-of-Way:**
$23.5 - $24.5 M
**Construction:**
$119.5 - $124.5 M
**Total Project Cost:**
$155.5 - $162 M

### Project Benefits:

- Interchanges on I-15 reduce congested traffic on the main line and associated regional facilities.
- Connect Regional traffic.
- Improve origin destination time of travel.

### What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - adjusted per June 2014 CRA.

### Project risks:

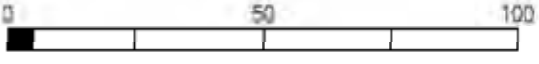
- Unit price and property escalation may affect project cost.
- Sloan Interchange to be constructed prior to widening to accommodate additional lanes

### 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 (RTP 2035): STP Clark County ($65M)

**Environmental Complete**


**Design Complete:**




**October 2016**

NEVADA DOT

## I 15 South - Stateline to Sloan

**Project Sponsor: NDOT**

**Project Manager: Ryan Wheeler, P. E.**

**(702) 671-8876**

### Project Description:

- Reconstruct interchange ramps at Primm, Jean and Sloan Interchanges to address safety issues.
- Signing improvements with DMS signs on I-15.
- Shoulder improvements.

### Schedule:

**Planning:**
2013 - 2015
**Environmental:**
TBD
**Final Design:**
TBD
**Construction:**
TBD

### Project Cost Range:

**Engineering:**
$3 - $4 M
**Right-of-Way:**
TBD
**Construction:**
$35 - $50 M
**Total Project Cost:**
$38 - $54 M

### Project Benefits:

- Update ramp geometrics to current standards.
- Decrease congestion.
- Improve communications and driver awareness with message signs.
- Improve on/off ramps at Primm, Jean and Sloan Interchanges.

### What's Changed Since Last Update?

- Scope -Scope modified to Safety project
- 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
- Funding: Government Services Tax $52 Million
- Inflation Index of 3% is to approximate midpoint of construction.

**Planning Scoping** 0 50 100

**October 2016**

NEVADA DOT

## I 11 Phase 1

**Foothills Drive Grade Sep to Silverline Road north of US 95**

**Project Sponsor: NDOT**

**Senior Project Manager : Ryan Wheeler, P.E.**

**(702) 671-8876**

### Project Description:

- Project was originally to be delivered via a series of five separate packages.
- One package regarding tortoise fencing/plant salvaging was completed ahead of the project
- Realignment of US 93 / US 95 to create an access controlled facility from Foothill Drive to Silverline Road
- One new diamond Interchange along with one Frontage Road will be constructed
- Direct Connector Ramps from the new facility to and from US 93 will be constructed
- A railroad bridge will be constructed to re-connect the previously severed trackes separated by US 93
- Project length: 2.5 miles

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

Complete

**Construction:**

Package 2A Complete

Contract awarded on Feb 10, 2015 to Fisher Sand & Gravel

Notice to Proceed issued May 11th 2015


### Project Cost Range:

(Final Design Phase Estimates)

**Engineering:**

$5 - $8 million

**Right-of-Way:**

$10 - $28 million

**Construction (Completed Phase 2A only):**

$1.4 million

**Construction (All Packages):**

$85 - $100 million

**Total Project Cost:**

$100 - $138 million

### Project Benefits:

- Improves safety by eliminating a half-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
- Reconnects railroad tracks previously severed by US 93
- Connects Henderson's trail system with the River Mountain Loop Trail
- Completes initial phase of the Boulder City Bypass

### What's Changed Since Last Update?

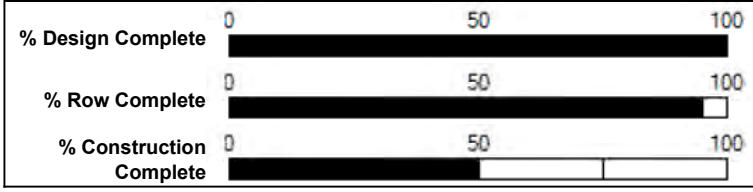
- Cost - Fisher Sand and Gravel construction bid of $83 Million
- Major earthwork construction activities are underway
- Bridge construction and drainage structures are being constructed

### Project risks:

- Right-of-Way acquisition schedule
- Final reports for NOA testing have been published and can be found on the main project website at www.i-11phaseone.com
- NOA mitigation has been determined and Contractor will follow an approved NOA Management Plan
- Timely completion of the utility agreements and associated ammendments

### Financial Fine Points(Key Assumptions):

- Total funding expended (Preliminary Engineering & Environmental): $7,459,449
- Total funding expended (Right-of-Way): $18,858,124
- Total funding Expended for BC Bypass Environmental studies (all phases): $5,199,679
- Total funding expended for construction of Phase 2A: $1.4 million (actual)




**October 2016**

NEVADA DOT

## I 11 Phase 2

**Silverline Road north of US 95 to the Nevada Interchange**

**Project Sponsor: Nevada Department of Transportation**

**Project Partner: Regional Transporation Commision of Southern Nevada**

**Senior Project Manager: Ryan Wheeler, P.E.**

**(702) 671-8876**

### Project Description:

- Provide connection between Phase I from north of the 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
- NDOT working with RTC to administer Design-Build Procurement for Phase 2
- Project length: 12.5 miles
- Project was approved to be administered using Design-Build delivery method by the RTC Board of Commissioners following the passage of AB413 for fuel tax index Bill

### Schedule:

**Planning:**

Complete

**Environmental:**

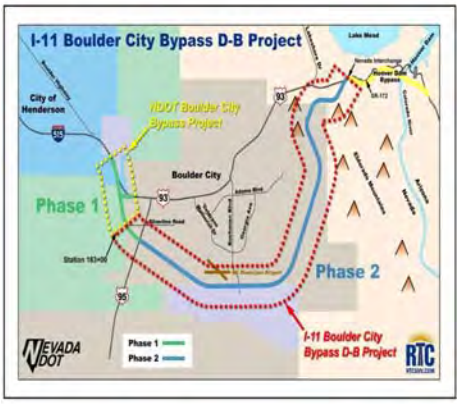
Complete

**Final Design:**

2015-2016

**Construction:**

2015-2018




### Project Cost Range:

(Planning phase estimates)

**Engineering:**

$15 - $25 million

**Right-of-Way:**

$2 - $4 million

**Construction:**

$225 - $300 million

**Total Project Cost:**

$240 - $330 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?

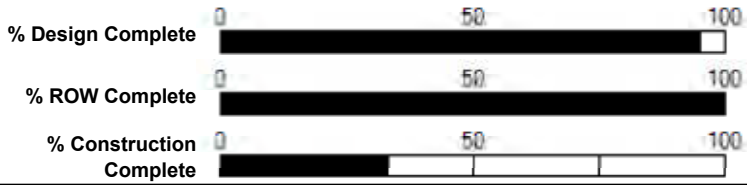
- Schedule - RTC of Southern NV administering Phase 2 as a Design-Build Contract
- Las Vegas paving was the successful Design-Builder; a notice to procced was issued on April 20, 2015
- Cost - $225 million was LVP bid to construct
- Earthwork continues moving forward, bridge construction is underway, paving has initiated.

### Project risks:

- Difficult design & construction issues in a mountainous terrain may affect cost & schedule.
- Final reports for NOA testing have been published and can be found on the main project website at www.i-11nv.com
- NOA mitigation has been determined and Contractor will follow an approved NOA Management Plan

### Financial Fine Points(Key Assumptions):

- Total funding Expended: $60,193,778
- Total funding Expended for BC Bypass environmental studies (all phases): $5,199,679
- Inflation escalation (4%) is to 2016 approximate midpoint of construction.
- Federal Funding is covering majority of the work through reimbursement of RTC Southern Nevada using AB413 fuel tax indexing revenues advanced construction mechanisms




**October 2016**

NEVADA DOT

## US 95 Northwest - Phase 2B

**Durango Drive to Kyle Canyon Road**

**Project Sponsor: NDOT**

**Project Manager: Jenica Keller , P.E.**

**(775) 888-7592**

### 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
- Widen Durango Drive to Kyle Canyon Road to 6 lanes
- Construct High Occupancy Vehicle Direct Access Ramps at Elkhorn
- Construct a regional flood control facility from Centennial to Grand Teton
- Project length: 2.45 miles
- Phase 2B will advertise with Phase 5

### Schedule:

**Planning :**

Complete

**Environmental :**

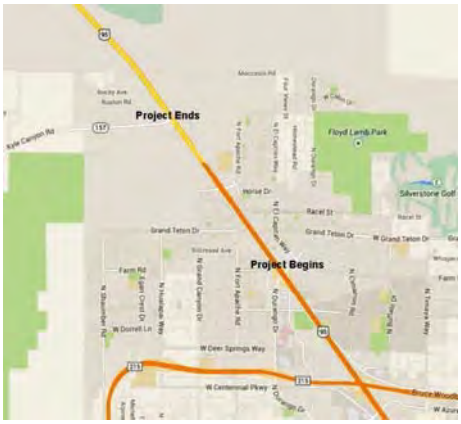
Complete

**Final Design:**

Complete in 2017

**Advertise:**

2017




### Project Cost Range:

**(Environmental Phase Estimates):**

**Engineering (All Phases):**

$2 - $3 million

**Right of Way (All Phases):**

$0, No acquisitions required

**Construction (All Phases):**

$89 - $96 million

**Construction (2B):**

$51 - $58 million

**Total Project Cost (All Phases) :**

$91 - $99 million

### Project Benefits:

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

### What's Changed Since Last Update?

- Scope - Added Regional Flood Control Improvements
- Schedule - Delayed 6 months for added scope
- Cost - Increased $23-23 million for added scope

### Project risks:

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

### Financial Fine Points(Key Assumptions):

- Total funding expended for Phase 2: $40.07 million
- Total funding expended for US 95 Northwest Environmental Studies (all phases) : $5 million
- Inflation escalation (3.33%) to midpoint of construction in 2018.
- Funding source for Phase 2B and 5:
- Federal: $52.8 million
- State: $2.8 million
- Local: $24.4 million

**% Design complete** 0 50 100

**October 2016**

## US 95 Northwest - Phase 3A

**Clark County 215 Interchange**

**Project Sponsor: NDOT, City Las Vegas and Clark County**

**Senior Project Manager: Jenica Keller, P. E.**

**(775) 888-7592**

### Project Description:

- This is the third phase of the US 95 Northwest project that extends from Washington Avenue to Kyle Canyon Road
- Construct new system to system interchange at CC 215
- This third phase is anticipated to be constructed in 5 subparts (A-E)
- Phase 3A: Ramps providing north to east, west to south and east to south movements as well as regional flood control facilty work (2015)

### Schedule:

**Planning:**
Complete

**Environmental:**
Complete

**Final Design:**
Complete

**Advertise:**
Complete

**Construction:**
Start October 2015 -
Complete 2nd Quarter 2018


### Project Cost Range:

**(Construction Phase Estimates):**

**Engineering (All Phases):**
$14 - $15 million

**Right-of-Way (All Phases):**
$0 - $1 million

**Construction (All Phases):**
$200 - $230 million

**Construction (3A):**
$41 - $44 million

**Total Project Cost (All Phases):**
$214 - $246 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 right of way and utility issues may impact schedule and costs.

### Financial Fine Points(Key Assumptions):

- Total funding expended for Phase 3: $38.83 million
- Total funding expended for US 95 Northwest Environmental Studies (all phases): $5 million
- Inflation escalation (2.85%) to midpoint of construction 2016
- Funding source:
- Federal: $25 million
- State: $1.3 million
- Local: $31.7 million

**% Design Complete** 0 — 50 — 100

**% Construction Complete** 0 — 50 — 100

**October 2016**

NEVADA DOT

## US 95 Northwest - Phase 3B

**Clark County 215 Interchange**

**Project Sponsor: NDOT, City Las Vegas and Clark County**

**Senior Project Manager: Jenica Keller, P.E.**

**(775) 888-7592**

### Project Description:

- This is the third phase of the US 95 Northwest project that extends from Washington Avenue to Kyle Canyon Road
- Construct new system to system interchange at CC 215
- This third phase is anticipated to be constructed in 5 subparts (A-E)
- Phase 3B: major utility relocations
- Phase 3B has been cancelled. The utility will be protected in place in lieu of relocated

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete


### What's Changed Since Last Update?

- Phase 3B Cancelled in Fall 2016

**October 2016**

## US 95 Northwest - Phase 3C

**Clark County 215 Interchange**

**Project Sponsor: NDOT, City of Las Vegas and Clark County**

**Senior Project Manager: Jenica Keller, P.E.**

**(775) 888-7592**

### Project Description:

- This is the third phase of the US 95 Northwest project that extends from Washington Avenue to Kyle Canyon Road
- Construct new system to system interchange at CC 215
- This third phase is anticipated to be constructed in 5 subparts (A-E)
- Phase 3C: widen CC 215 interchange at Sky Pointe, provide local access to Sky Pointe and Centennial (2021)

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

Ongoing


### Project Cost Range:

**(Environmental Phase Estimates):**

**Engineering (All Phases):**

$14 - $15 million

**Right of Way (All Phases):**

$0 - $1 million

**Construction (All Phases):**

$200 - $230 million

**Construction (3C):**

$56 - $64 million

**Total Project Cost (All Phases):**

$214 - $246 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 right of way and utility issues may impact schedule and cost

### Financial Fine Points(Key Assumptions):

- Total funding expended for Phase 3: $38.83 million
- Total funding expended for US 95 Northwest Environmental Studies (all phases): $5 million
- 3C: inflation escalation (4.12%) to midpoint of construction 2025
- Funding source: TBD

**% Design Complete** 0 50 100

**% ROW Complete** 0 50 100

**October 2016**

NEVADA DOT

## US 95 Northwest - Phase 3D

**Clark County 215 Interchange**

**Project Sponsor: NDOT, City Las Vegas and Clark County**

**Senior Project Manager: Jenica Keller, P.E.**

**(775) 888-7592**

### Project Description:

- This is the thrid phase of the US 95 Northwest project that extends from Washington Avenue to Kyle Canyon Road
- Construct new system to system interchange at CC 215
- This third phase is anticipated to be constructed in 5 subparts (A-E)
- Phase 3D: widen CC 215 interchange at John Herbert and provide local access to Oso Blanca (2024)

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

Ongoing

### Project Cost Range:

**(Environmental Phase Estimates):**

**Engineering (All Phases):**

$14 - $15 million

**Right of Way (All Phases):**

$0 - $1 million

**Construction (All Phases):**

$200 - $230 million

**Construction (3D):**

$61 - $72 million

**Total Project Cost (All Phases):**

$214 - $246 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 right of way and utility issues may impact schedule and cost

### Financial Fine Points(Key Assumptions):

- Total funding expended for Phase 3: $38.83 million
- Total funding expended for US 95 Northwest Environmental Studies (all phases): $5 million
- 3D: inflation escalation (4.12%) to midpoint of construction 2031
- Funding source: TBD

**% Design Complete** 0 50 100

**% ROW Complete** 0 50 100

**October 2016**

NEVADA DOT

## US 95 Northwest - Phase 3E

**Clark County 215 Interchange**

**Project Sponsor: NDOT, City Las Vegas and Clark County**

**Senior Project Manager: Jenica Keller, P.E.**

**(775) 888-7592**

### Project Description:

- This is the third phase of the US 95 Northwest project that extends from Washington Avenue to Kyle Canyon Road
- Construct new system to system interchange
- This third phase is anticipated to be constructed in 5 subparts (A-E)
- Phase 3E: final interchange ramps (2027)

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

Ongoing


### Project Cost Range:

**(Environmental Phase Estimates):**

**Engineering (All Phases):**

$14 - $15 million

**Right of Way (All Phases):**

$0 - $1 million

**Construction (All Phases):**

$200 - $230 million

**Construction (3E):**

$29 - $35 million

**Total Project Cost (All Phases):**

$214 - $246 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
- Schedue - No change
- Cost - No change

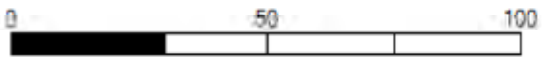
### Project risks:

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

### Financial Fine Points(Key Assumptions):

- Total funding expended for Phase 3: $38.83 million
- Total funding expended for US 95 Northwest Environmental Studies (all phases): $5 million
- 3E: Inflation escalation (4.12%) to midpoint of construction 2033
- Funding source: TBD

**% Design Complete**




**% ROW Complete**


**October 2016**

NEVADA DOT

## US 95 Northwest - Phase 5

**Kyle Canyon Road Interchange**

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

**Senior Project Manager: Jenica Keller, P.E.**

**(775) 888-7592**

### 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
- Phase 5 will advertise with Phase 2B

### Schedule:

**Planning:**

Complete

**Environmental:**

Complete

**Final Design:**

Complete in 2017

**Advertise:**

2017


### Project Cost Range:

**Engineering:**

$3 - $4 million

**Right-of-Way:**

$0, No acquisitions required

**Construction:**

$20 - $22 million

**Total Project Cost:**

$23 - $26 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 - Delayed 6 months for Phase 2B work
- Cost - Reduced cost by $0-4 million due to no R/W and progression of design

### Project risks:

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

### Financial Fine Points(Key Assumptions):

- Total Expended for Final Design: $1.43 million
- Total Expended for Environmental Studies (all US 95 Northwest phases): $5 million
- Inflation escalation (3.33%) to midpoint of Construction in 2018
- Funding source for Phase 2B and 5:
- Federal: $52.8 million
- State: $2.8 million
- Local: $24.4 million

**Design complete** 0 50 100

**October 2016**

NEVADA DOT

## I 80 Robb to Vista

**Project Sponsor: NDOT**

**Senior Project Manager: Jeff Lerud**

**(702) 671-8865**

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 capacity improvements to the I-80/I-580 interchange (Spaghetti Bowl)
- I-80 Robb Drive to Vista Boulevard Design-Build completed Decemeber 2013.
- Phase II scoping will commence after completion of the I-80 Robb to Vista design/build project.
- Project Length: 10.4 miles

### Schedule:

**Planning:**

2008 - 2014

**Environmental:**

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 - Planning extended
- 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

**October 2016**

NEVADA DOT

## US 395 North - McCarran Blvd to Stead Blvd

**Project Sponsor: NDOT**

**Senior Project Manager: Jeff Lerud, P.E.**

**(702) 671-8865**

### 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:**

TBD

**Environmental:**

TBD

**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 - The project has been put on hold subject to funding availability.
- 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 approximate mid-point of construction
- No funding has been identified for this project

**Planning Complete:** 0 — 50 — 100

**October 2016**

## Pyramid Highway/US 395 Connection

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

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

**NDOT Project Manager: Nick Johnson, P.E.**

**www.pyramidus395connection.com**

**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:**

Complete

**Environmental:**

2010 - 2016

**Final Environmental Impact Statement (FEIS):**

Winter 2014-2015

**Record of Decision (ROD):**

Fall 2016

**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 - The anticipated date for the ROD has been extended to 2017
- Cost - No change.

### Project risks:

- Construction in a dense urban residential area
- Funding sources for all phases not identified
- Complex right of way and utility issues may impact schedule and costs.

### Financial Fine Points(Key Assumptions):

- Total RTC Funding Expended - $7,300,000
- Inflation escalation (2.7%) to midpoint of construction in 2020

**% Environmental Complete** 0 — 50 — 100

**October 2016**

## US 395 Carson City Freeway - Phase 2B

**South Carson Street to Fairview Drive**

**Project Sponsor: NDOT**

**Senior Project Manager: Jeff Lerud**

**(702) 671-8865**

### Project Description:

- This project will be delivered in four packages. Construction is complete for Phase 2B Packages 1 & 2.
- Phase 2B Package 3 & 4 will complete the remainder of the project
- 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 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:**
Complete
**Final Design:**
Complete
**Construction:**
TBD

### Project Cost Range:

**(Final design phase estimates):**
**Engineering:**
$11 - $13 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 - Package 3 & 4 will complete the remainder of the Freeway
- Schedule - TBD
- 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: $54 million
- Inflation escalation (2.7%) to midpoint of construction in 2017.
- Construction funding source: TBD

**% Design Complete** 0 50 100

**% ROW Complete** 0 50 100

**October 2016**

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. Furthermore, B/C analysis has been done for some projects that do not meet the minimum dollar threshold but the information will beneficial to management for decision making purposes. The department has policy (TP 1-11-1) that guides the B/C analysis Program.

The B/C ratios for several projects have been determined for FY 2010 through FY 2016. The following table reports the B/C ratio results of a total of 23 projects. Attempt has been made to include B/C ratios for entire projects and not the ratios of individual phases.

| Major Projects | B/C Ratio | Fiscal Year |
|---|---|---|
| I-80 – Design-Build | 3.57 | 2010 |
| I-580/Meadowood Complex Improvements | 2.70 | 2011 |
| I-215/ Airport Connector Interchange | 3.08 | 2011 |
| I-80 from Robb Drive to Vista Blvd | 3.77 | 2011 |
| SR 160 Widening: SR 159 to Mountain Springs | 2.10 | 2012 |
| I-15 Interchange at Milepost 118 in Mesquite, Nevada | 5.0 | 2013 |
| US 93 Pavement Rehabilitation & Truck Climbing Lanes | 8.3 | 2013 |
| South McCarran Boulevard – Phase I Virginia Street to Mira Loma Drive | 3.57 | 2013 |
| South McCarran Boulevard – Phase II Mira Loma Drive to Greg Street | 2.47 | 2013 |
| US 395 Southern Corridor E Clearview Drive SR 88 | 2.13 | 2013 |
| US-50 Widening Project Chaves Road to Roy's Road | 1.9 | 2013 |
| F Street Connection Washington Ave. to Bonanza Road | 1.15 | 2013 |
| USA Parkway | 17.3 | 2013 |
| I-15 NEON (All Phases) | 2.3 | 2014 |

| | | |
|---|---|---|
| Boulder City Bypass: Phases I and II Foothills Drive to West of the Hoover Dam Bypass | 0.94 | 2014 |
| I-15 Pavement Rehabilitation: Dry Lake Rest Area to Logandale/Overton Interchange | 1.7 | 2014 |
| Carson City Freeway (All Phases) | 2.14 | 2014 |
| SR 593 Tropicana Avenue: Dean Martin Drive to Boulder Highway (The project starts at Dean Martin Drive and ends at SR 582 Boulder Highway (SR 593 CL-3.50 to -10.85)) | 2.5 | 2014 |
| I-15 North-Part 2 Package D (Capacity Improvements): Craig Rd. to Speedway Blvd | 7.1 | 2014 |
| US 95 North-Phase 2A (Ann Road to Durango Drive) | 4.2 | 2014 |
| I 215 from I 15 to Windmill Lane (Airport Connector) | 2.6 | 2015 |
| US 95 NW Phase 3A; CC 215 from US 95 to Tenaya Way MP CL 0.88 - N/E & W/S Ramps and S/B collector road | 1.2 | 2015 |
| SR 593, Tropicana Ave. at SR 604 Las Vegas Blvd. (Replace Escalators) | 1.2 | 2015 |

# 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 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, and capital cost. In addition, the limitation of the B/C analysis is presented.

**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 local mean wage plus fringe benefits. The wage values came from the Nevada Department of Employment, Training, and Rehabilitation. A 50% fringe was used because it was an average of several labor groups. Vehicle occupancy was based in household surveys, census data and travel demand output.

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

| Metropolitan Statistical Area | Personal Travel ($/hour) | Business Travel ($/hour) | Vehicle Occupancy Rate |
|---|---|---|---|
| Carson City | $9.05 | $33.35 | 1.43 |
| Las Vegas – Paradise | $7.97 | $30.35 | 1.45 |
| Reno - Sparks | $8.31 | $32.03 | 1.28 |

Crash Benefits:

Freeways and Expressways with controlled access normally have lower crash rates than local streets and roads with 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.

**Table E-2 Nevada Crash Severity Numbers of the Larger Counties**

| Location | Traffic Crashes | Number of Crashes | PDO[1] | INJURY | FATAL | Crash Rates[2] |
|---|---|---|---|---|---|---|
| Clark County | 71.03% | 27796 | 13305 | 14322 | 169 | 163.01 |
| Washoe County | 17.64% | 6905 | 4283 | 2591 | 31 | 191.81 |
| Carson City/Douglas County | 3.35% | 1311 | 902 | 403 | 6 | 159.17 |

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

**Table E-3 Nevada Crash Rates & VMT by County**

**FY 2015 CRASH TOTALS BY COUNTY, RATES,**
**ANNUAL VEHICLE MILES TRAVELED, AND POPULATION**

| COUNTY | TOTAL CRASHES | % OF TOTAL CRASHES | TOTAL AVM | % OF TOTAL AVM | POPULATION | CRASH RATE |
|---|---|---|---|---|---|---|
| CARSON | 729 | 1.86% | 379,430,322 | 1.51% | 54,694 | 192.13 |
| CHURCHILL | 378 | 0.97% | 314,062,510 | 1.25% | 25,517 | 120.36 |
| CLARK | 27796 | 71.03% | 17,051,929,114 | 67.99% | 2,088,149 | 163.01 |
| DOUGLAS | 582 | 1.49% | 459,704,168 | 1.83% | 48,347 | 126.60 |
| ELKO | 895 | 2.29% | 770,243,679 | 3.07% | 54,054 | 116.20 |
| ESMERALDA | 37 | 0.09% | 110,707,655 | 0.44% | 973 | 33.42 |
| EUREKA | 90 | 0.23% | 131,554,026 | 0.52% | 1,915 | 68.41 |
| HUMBOLDT | 256 | 0.65% | 340,513,623 | 1.36% | 17,687 | 75.18 |
| LANDER | 105 | 0.27% | 139,045,524 | 0.55% | 6,699 | 75.51 |
| LINCOLN | 142 | 0.36% | 126,727,434 | 0.51% | 5,045 | 112.05 |
| LYON | 418 | 1.07% | 449,603,793 | 1.79% | 53,652 | 92.97 |
| MINERAL | 53 | 0.14% | 125,230,011 | 0.50% | 4,523 | 42.32 |
| NYE | 454 | 1.16% | 599,931,175 | 2.39% | 45,619 | 75.68 |
| PERSHING | 88 | 0.22% | 260,663,067 | 1.04% | 6,770 | 33.76 |
| STOREY | 87 | 0.22% | 39,134,732 | 0.16% | 3,981 | 222.31 |
| WASHOE | 6905 | 17.64% | 3,599,884,288 | 14.35% | 444,008 | 191.81 |
| WHITE PINE | 120 | 0.31% | 180,491,651 | 0.72% | 10,301 | 66.49 |
| TOTAL | 39135 | 100.00% | 25,078,856,772 | 100.00% | 2,871,934 | 156.05 |

Crash Rates Expressed In Crashes Per 100,000,000 Vehicles Miles Traveled.

NV St Demographer Pop. Projections 2015-2019

July 1, 2014 - June 30, 2015

AVM 2015 unofficial

The crash costs were derived using Highway Safety Manual's Crash Cost Estimates. Consumer Price Index (CPI) and Employment Cost Index (ECI) were obtained from the Bureau of Labor Statistics. 2001 crash costs were converted into 2015 dollar value. Table E-4 shows the values obtained as 2015 CPI adjusted human capital and comprehensive societal crash costs. Table E-5 lists crash costs by the Abbreviated Injury Scale (AIS) levels from the Benefit-Cost Analyses Guidance for Transportation Investment Generating Economic Recovery (TIGER) Grant Applicants.

**Table E-4 Crash Cost Assumptions (2015 USD)**

| Crash Severity | 2001 Human Capital Costs | 2001 Comprehensive Societal Costs | Cost Difference | 2015 CPI adjusted Human Capital Costs | 2015 ECI Adjusted Cost Difference | 2015 Adjusted Comprehensive Societal Costs |
|---|---|---|---|---|---|---|
| Fatal (K) | $1,245,600 | $4,008,900 | $2,763,300 | $1,678,416 | $3,987,139 | **$5,665,555** |
| Disabling Injury (A) | $111,400 | $216,000 | $104,600 | $150,109 | $150,926 | **$301,035** |
| Evident Injury (B) | $41,900 | $79,000 | $37,100 | $56,459 | $53,531 | **$109,990** |
| Possible Injury ( C ) | $28,400 | $44,900 | $16,500 | $38,268 | $23,808 | **$62,076** |
| PDO (O) | $6,400 | $7,400 | $1,000 | $8,624 | $1,443 | **$10,067** |

**Table E-5 Crash Cost Assumptions (2015 USD)**

| AIS Level | Unit value |
|---|---|
| AIS 1 | $28,800 |
| AIS 2 | $451,200 |
| AIS 3 | $1,008,000 |
| AIS 4 | $2,553,600 |
| AIS 5 | $5,692,800 |
| AIS 6 | $9,600,000 |

* Use Table E-5 cost for TIGER grant applications only

Motor Vehicle Emissions and Costs:
The rate of motor vehicle emissions and associated health costs was based on the TIGER Benefit-Cost Analysis Guidance and is contained in Table E-6.

**Table E-6 Vehicle Emission Health Cost Assumptions (2015 USD)**

| Emission Type | Cost ($/ton) |
|---|---|
| Carbon dioxide ($CO_2$) | Varies* |
| Particulate matter (PM) | $332,625 |
| Nitrogen oxides ($NO_X$) | $7,546 |
| Sulfur dioxide ($SO_X$) | $42,975 |
| Volatile organic compounds ($VOC_S$) | $1,844 |

*See Tiger Guide

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.
- Auto/Bus-$13.17: (50 percent of $20.58 times occupancy rate); Mean hourly wage, all occupations. 2016 Nevada Occupational Employment & Wages (OES); http://nevadaworkforce.com/OES. Accessed on October 2016.
  Trucks-$27.50 ($22.92 times 20.0 percent for benefits); Mean hourly wage, heavy and tractor-trailer truck drivers. 2016 Nevada Occupational Employment & Wages (OES); http://nevadaworkforce.com/OES. Accessed on October 2016.

Cost per Gallon of Fuel:

- Mid-Grade Fuel: $2.58/gallon. Source: AAA Daily Fuel Gauge Report, Nevada Average, August 19, 2016. http://gasprices.aaa.com/?state=NV
- Diesel fuel: $2.514/gallon. Source: AAA Daily Fuel Gauge Report, Nevada Average, August 19, 2016. http://gasprices.aaa.com/?state=NV

Non-fuel Operating Costs:

Table E-7 shows the vehicle non-fuel operating cost assumptions.

**Table E-7 Vehicle Non-fuel Operating Cost (2015 USD)**

| **Non-fuel Operating Costs** | **Car** ($/mile) | **Truck** ($/mile) |
|---|---|---|
| Tires | $0.0150 | $0.0300 |
| Depreciation | $0.3177 | $0.3406 |
| Maintenance | $0.0547 | $0.1201 |

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

**Limitations**

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 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 area wide 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.

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 used 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

# 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.

The Department's future transportation project priority rationale will be guided by our Nevada "Long-Range Transportation Plan" (LRTP). The LRTP is envisioned to enhance NDOT's performance-based planning, programming and project prioritization practices. The LRTP will have three phases: Visioning, Trend and Forecast Analysis and Performance Planning. Additionally, the plan will: identify future transportation needs, guide future decision-making, include an overarching vision and be a part of a continuous transportation planning process. The LRTP will be a living document that contains support tools that meet federal transportation planning requirements."

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 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.

There are 2008 bridges in the Nevada DOT bridge inventory. Of these, 1163 are owned and maintained by the department, 771 bridges are maintained by Nevada Counties and Cities, 56 are maintained by other government and state agencies and 7 are maintained by the railroad. There are 11 private bridges listed in the bridge inventory.

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 5,397 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 51 percent of Nevada's traffic and 74 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 $266 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 Safety engineering studies 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
- 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 ALTERNATIVES PROGRAM (TAP)

The TAP is a cost reimbursement program that provides federal transportation funding for eligible projects that improve non-motorized mobility, scenic accessibility, environmental management, historic preservation and safe route to school programs.
Project sponsors are required to provide a minimum funds match of 5% and the rest is covered by federal funds.
To be eligible, activities must fall within two broad categories: 1) Transportation infrastructure (constructed improvements); 2) Non infrastructure projects (efforts related to education, Encouragement, Enforcement and Education).
The State's allocation is divided up between urban areas over 200,000 in population; areas under 5,000 in population; areas between 5,000 and 200,000 in populations and a statewide allocation that can be spent in any area. The largest urbanized areas of the state under the jurisdiction of the RTC of Southern Nevada and Washoe RTC prioritize TAP projects following their respective TAP guidelines.
Eligible project sponsors include, but are not limited to: Tribal Governments, Schools, School Districts, Private Schools, and Government Agencies/Entities. Other organizations may only apply when partnered with an eligible sponsor.
Nevada's TAP projects are prioritized for funding by the TAP Scoring Committee. Members of this committee represent a wide range of transportation interests, including Bicycle/Pedestrian Advocate, Tourism/Economic Development, Engineers and Planners. Once the Committee completes its ranking, the list is forwarded to the NDOT Director for approval. Upon the Director's approval, the TAP projects are included in the Statewide Transportation Improvement Program (STIP).

More information about Nevada's TAP program can be found by going to WWW.nevadadot.com/tap.

# APPENDIX C

# 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 and Public Outreach

## PLANNING DIVISION

Reduce Fatal Crashes

## OPERATIONS DIVISION

Reduce and Maintain Traffic Congestion
Streamline Project Delivery: Bid Opening to Construction Completion
Maintain State Highway Pavement
Maintain NDOT Fleet
Maintain NDOT Facilities
Emergency Management, Security, and Continuity of Operations

## ENGINEERING DIVISION

Streamline Project Delivery: Schedule and Estimate for Bid Advertisement
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:** 77 % **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 30 days from when division submits agreement to the date when it is fully executed, excluding time the agreement is with the second party for signature or awaiting Transportation Board approval.

**Annual Target:** 90%

**Ultimate Target:** 90%.

**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:**

Improve Customer and Public Outreach.

**Annual Target:**

Exceed goals set forth in NDOT's communications plan

**Ultimate Target:**

Increases in public opinion and customer/user ratings.

**Division(s) Responsible:**

Communications Office- Communications Director

**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:**

- Percent of Nevada interstate system mileage providing for reliable travel time
- Percent of Nevada non-interstate NHS roads providing for reliable travel time

- Percent of the interstate system in Nevada urbanized areas where Peak-Hour Travel Time meets expectations
- Percent of the non-interstate NHS in Nevada urbanized areas where Peak-Hour Travel Times meet expectations

**Ultimate Target:** The ultimate target will be determined with the goal of allocating available resources to maintain the roadway network at an acceptable level that is reflective of the Department's mission, vision and goals.

**Division(s) Responsible:**

Traffic Operations – Chief Traffic Operations Engineer

Performance Analysis – Chief Performance Analysis Engineer

**Support Divisions:**

Roadway Systems, Traffic Information

**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 by identifying bottleneck locations on the NDOT maintained roadway system, which will be prioritized for improvements depending upon funding and resources available. 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.
The Congestion Monitoring System being developed will be an evolving system that will be regularly updated and improved as the practice of congestion management improves as well as data collection and analyses tools improve.

## 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:** 80%  **Ultimate Target:** 80%

**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 HIGHWAY PAVEMENT

**Performance Measure:**

Percentage of state maintained roadways in fair or better condition.

**Annual Target:** 95% **Ultimate Target:** 100%

**Division(s) Responsible:**

Materials Division- Chief Materials Engineer

**Support Divisions:**
Materials, Maintenance & Asset Management, Construction, Design, Project Management, Performance Analysis and the Districts.

**Strategy Plan Support:**
Proactive approach in pavement preservation 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.

## 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:**

Percent of facilities assessments completed and percent of facilities conditions and priority needs.

**Annual Target:** Increase by 2%

**Ultimate Target:** 100%

**Division(s) Responsible:**

Maintenance and Operations- Chief Maintenance Operations Engineer

**Support Divisions:**

Districts, Administrative Services

**Strategy Plan Support:**
Facility Condition Analysis (FCA) reports will ensure our buildings comply with building and safety codes, are safe and properly maintained. Each Department owned and maintained facility will be evaluated on a seven year cycle. Completion of the priority work items will return the facility to normal operation, defer deterioration, correct fire/life safety hazard, or correct ADA requirements. 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:
NDOT Homeland Security Plan

NDOT Emergency Operations Plan

**Annual Target:** 100% **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 and serious injuries on Nevada's streets and highways.

**Annual Target:** An average annual decrease of the five-year rolling average by 3.1% resulting in halving traffic fatalities and serious injuries by 2030.

**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 FOR BID ADVERTISEMENT

**Performance Measure:**

Percentage of scheduled projects advertised within the reporting year and within the established construction cost estimate range.

**Annual target: 70%**

**Ultimate Target:** 80%

**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 categorized as Structurally Deficient (SD) or Functionally Obsolete (FO). Base figure is 37 of 1045 bridges (*State Highway Preservation Report – 2007*. This base figure was established based on the federal eligibility requirements of the Highway Bridge Program (HBP) in effect at the time)

Prior to MAP-21, eligibility and priority for funding projects under the HBP was based on a bridge's Sufficiency Rating and other factors. 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.

MAP-21 eliminated the Functionally Obsolete classification as a funding criteria; therefore the information presented below only includes data related to Structurally Deficient bridges. Because the FO designation does not reflect bridge condition, maintenance or replacement needs, the Structures Division no longer considers it in the development of our work program. Subsequent reports will no longer include any references to the Functionally Obsolete designation.

**Annual Target:** Replace or Rehabilitate at least one Department owned structurally deficient or functionally obsolete bridge. The goal is evaluated based on the contracts awarded in a given year.

**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 or rehabilitating structurally deficient and functionally obsolete bridges. The Structures Division will seek and implement innovative solutions to the challenges faced by the Bridge Program. The Division will deliver

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. 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 D

# LAS VEGAS CONVENTION AND VISITORS AUTHORITY FUNDED PROJECTS

**Nevada Department of Transportation**

**Las Vegas Convention and Visitors Authority Funded Projects**

Information as of October 26, 2016

Summary of AB595 bonding revenues programmed or scheduled for active projects as of October 26, 2016:

***Budget Account 4665 Rev Code 4118 - AB595 LVCVA Bond Reimb. Received to Date: $284,082,535 (a)***

| Status | PCEMS # | EA # | Location | Description | Amount |
|---|---|---|---|---|---|
| Scheduled & Programmed | 7-03007 | 73824 | SR 593, Tropicana Avenue, from CL 0.49 to CL 0.65; SR 604, Las Vegas Blvd, CL 37.99 To 38.11 | Tropicana Pedestrian Bridge Escalators Replacement: Remove and Replace Sixteen Escalators | $ 19,612,883 |

(a) Reimbursement received associated with I-15 projects equals approx. $278.8M

Reimbursement received associated with pedestrian bridge escalators noted above equals approx. $5.3M

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