



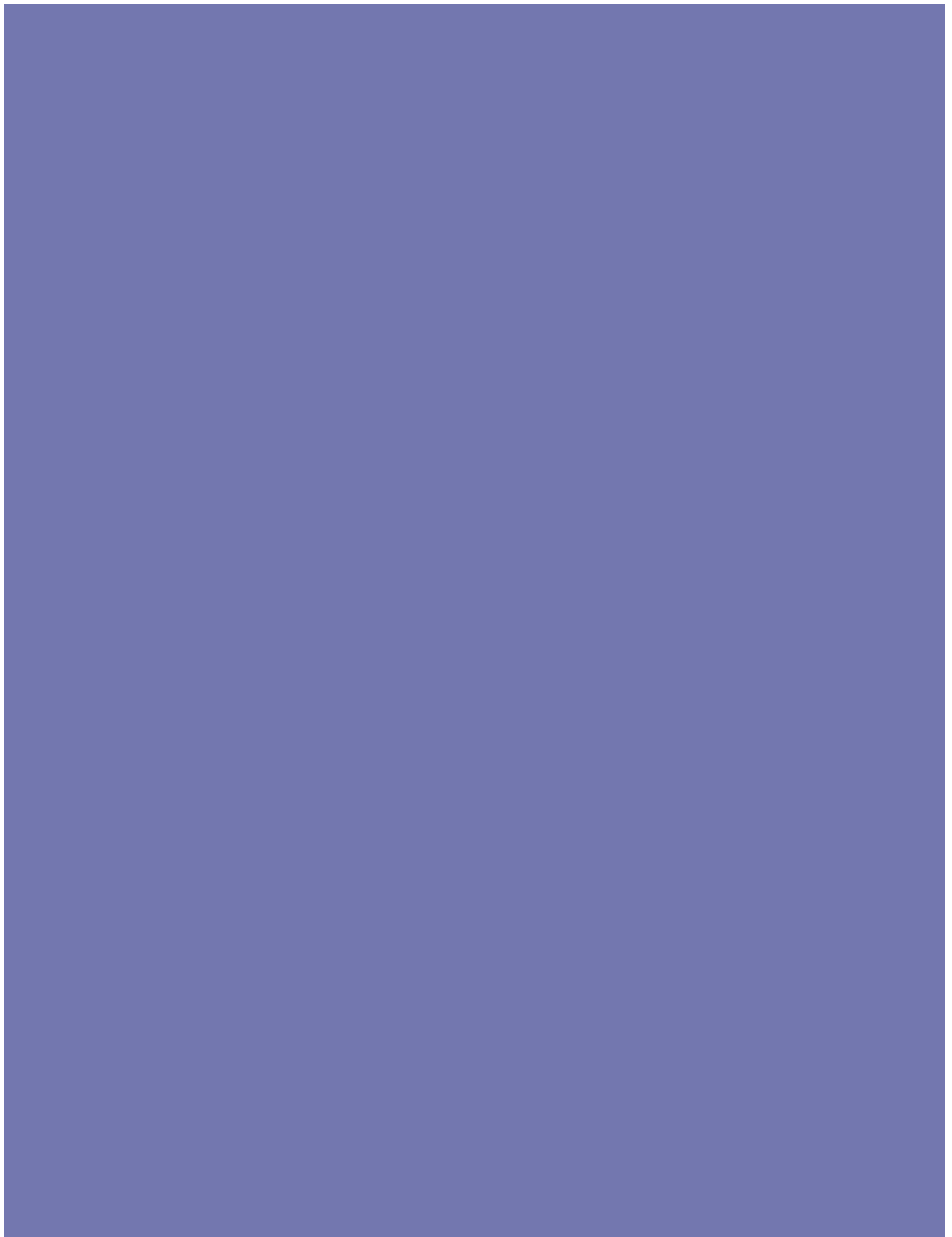
NEVADA DEPARTMENT OF TRANSPORTATION



2020 PERFORMANCE MANAGEMENT REPORT



December 2020





Kristina L. Swallow, P.E.
Director



Steve Sisolak
Governor

2020 PERFORMANCE MANAGEMENT REPORT



Performance Management Cycle

Prepared by the
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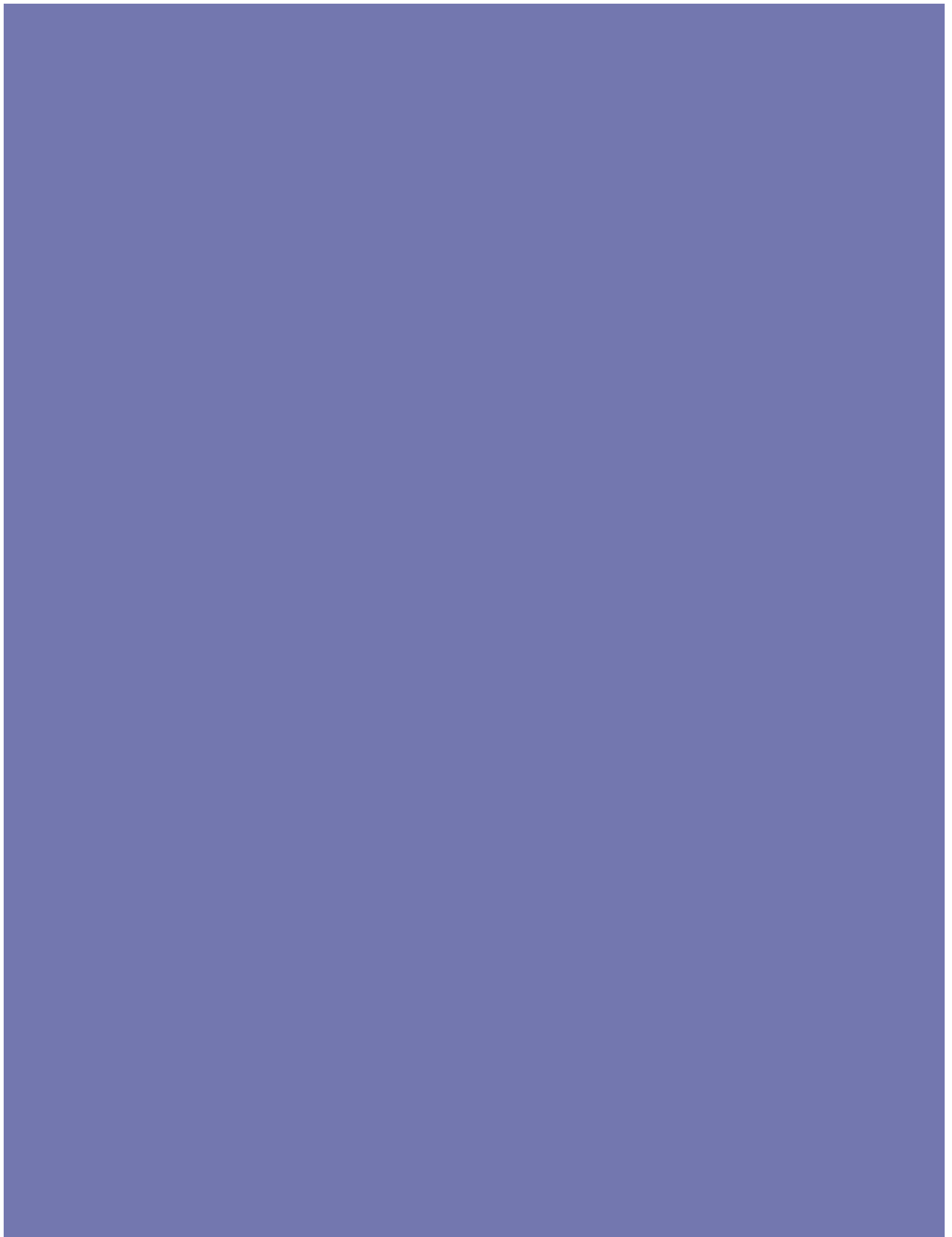


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State of Nevada Transportation Board Members

Steve Sisolak	Chairman/Governor
Kate Marshall	Vice Chairman/Lt. Governor
Catherine Byrne	State Controller
Virginia Valentine	Member - District 1
Justin Kalb	Member – District 1
Stephen Ascuaga	Member - District 2
Vacant	Member - District 3

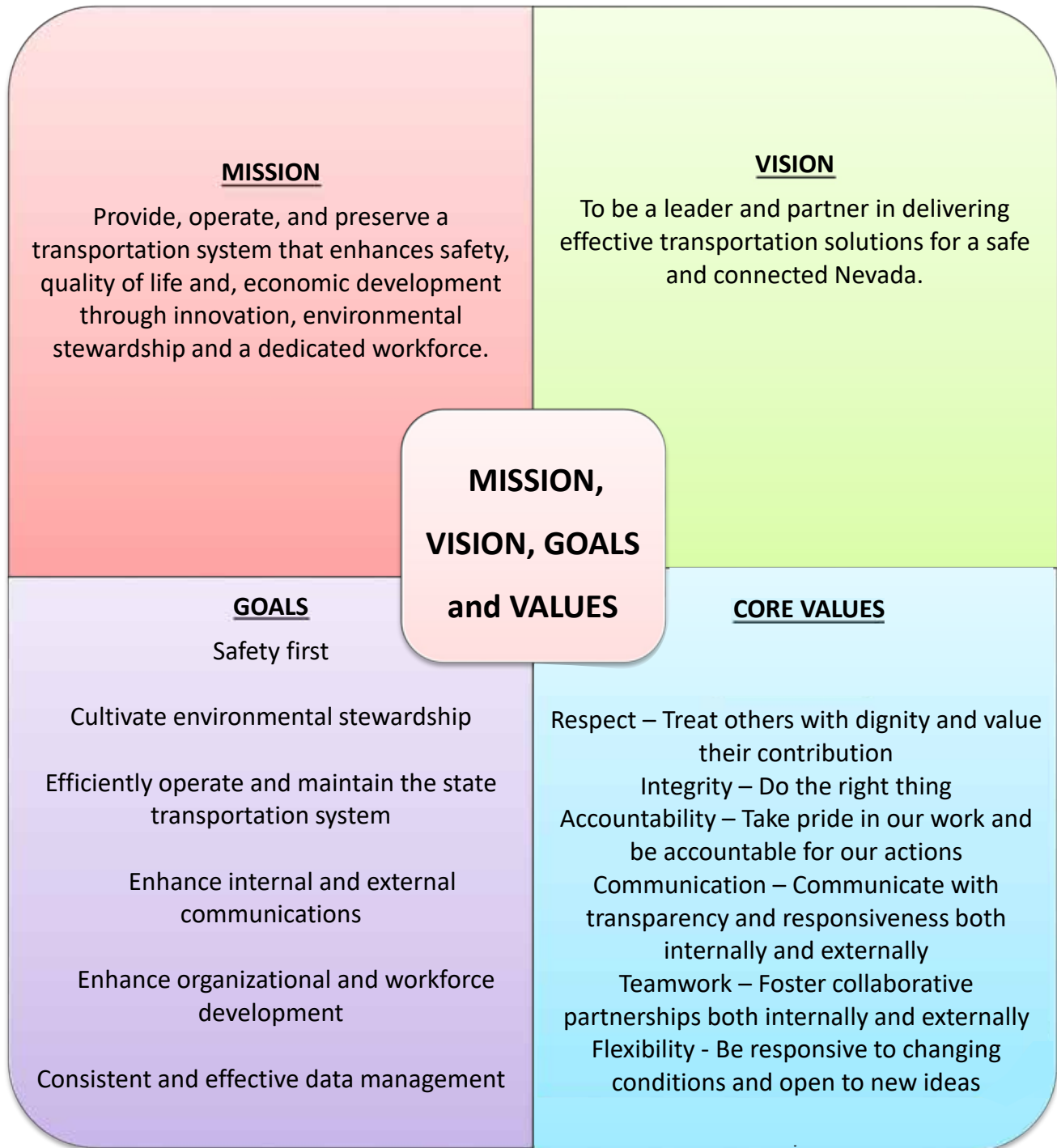
NDOT Administration

Kristina Swallow	Director
Cole Mortensen	Deputy Director – Performance & Planning
Tracy Larkin-Thomason	Deputy Director – Operations & Maintenance
Clifford Lawson	Deputy Director – Project Delivery
Felicia Denney	Assistant Director – Administration
Sondra Rosenberg	Assistant Director - Planning
Jeffrey Lerud	Assistant Director – Engineering
Darin Tedford	Assistant Director – Operations
Ryan McInerney	Communications Director

NDOT Staff Involved

Peter Aiyuk – Chief Performance Analysis Engineer
Nick Johnson – Chief of Project Management
Anita Bush – Chief Maintenance and Operations Engineer
Maya Bourgeois – Chief of Administrative Services
Fred Shakal – Chief Traffic Safety Engineer
Sharon Foerschler – Chief Construction Engineer
Allison Wall – Human Resources Manager
Barbara Stearns – Employee Development Manager
Oscar Fuentes – Safety Manager
Jessen Mortensen – Chief Bridge Engineer
Wayne Miller – Equipment Superintendent
Craig Reynoldson – Chief Right-Of-Way Agent
Scott Hein – Chief of Roadway Design
Natalie Caffaratti – Assistant Chief of Roadway Design
Pan Changlin – Chief Materials Engineer

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, and transparent decision-making process. It is a dynamic process, and improvements are incorporated into the performance management process on an ongoing basis. 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 Department-wide performance, 3) helps identify and implement efficient and cost-effective performance-based programs, 4) links projects to the 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 required 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 (NRS 408.133)

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 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). As these funds have been fully expended, no projects utilized these funds during this time period.

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. Report submitted to the Governor and the Director of the Legislative Counsel Bureau for transmittal to the Interim Finance Committee.

**PERFORMANCE MANAGEMENT
DASHBOARD
(EXECUTIVE SUMMARIES)**

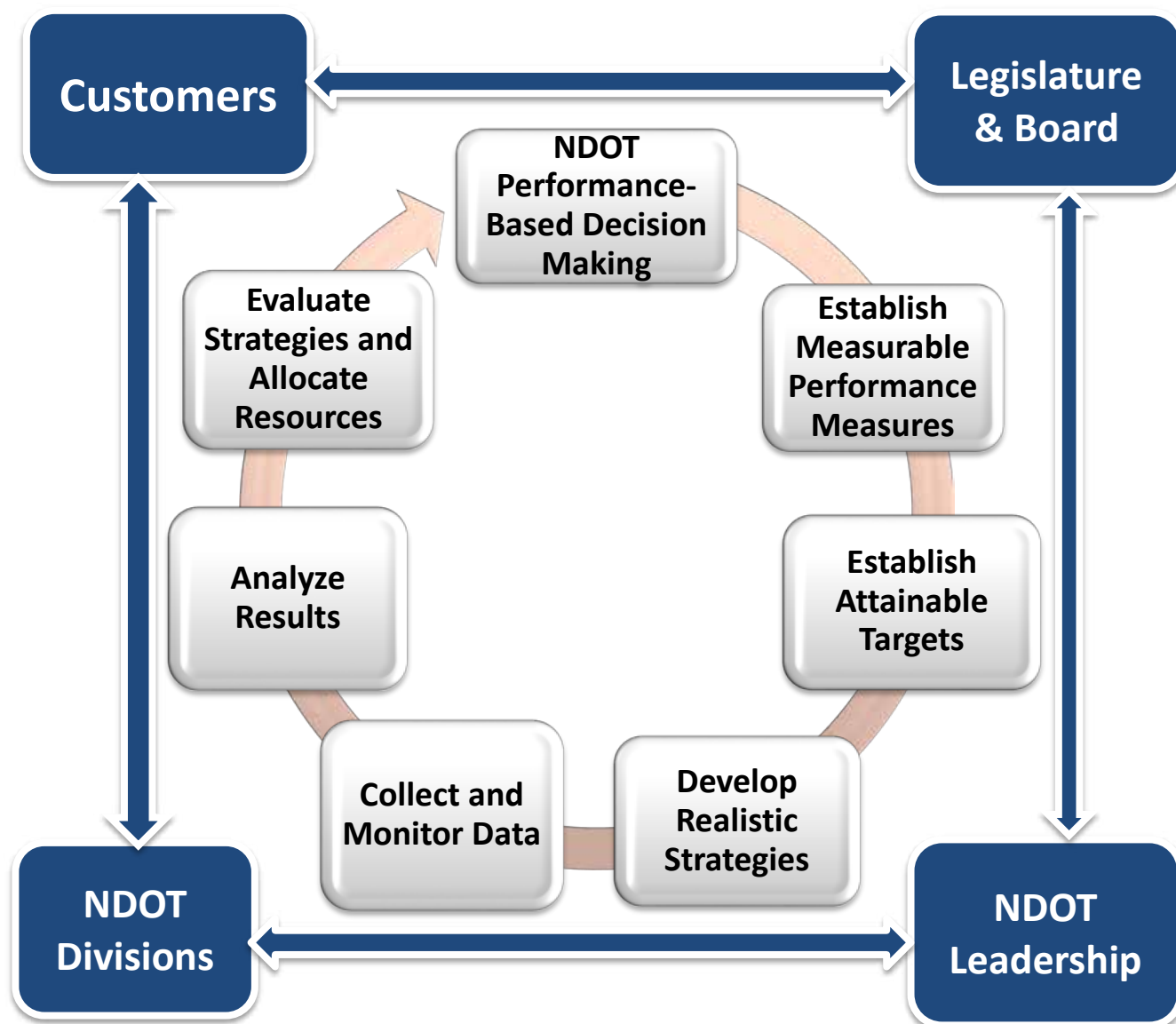
EXECUTIVE SUMMARY

NDOT has established 16 performance goals and performance measures to track, monitor, and report for 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 process by conducting quarterly performance 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 accountable 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 2020, NDOT continued to monitor its performance-based management process. The performance management dashboard, the performance measures overview, and the detailed data trends section of this report provide further information regarding NDOT's performance in Fiscal Year 2020.

NDOT STRATEGIC PERFORMANCE MANAGEMENT PROCESS

NDOT’s 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, collecting quarterly data and monitoring, and evaluating strategies to help allocate our resources most effectively and efficiently. The following graphic shows the performance management process.



PERFORMANCE GOALS - 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. Improve Travel Reliability & Reduce Delay

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

16. Reduce Greenhouse Gas Emissions



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	2% Annual reduction	1.3% Increase					
	Injuries/Illnesses requiring medical attention per 100 employees	2% Annual reduction	0.2% Increase					
Provide Employee Training (2)	Percentage employees trained according to requirements	83% Compliance annually	Average 90% compliance					
Improve Employee Satisfaction (3)	Percentage employees satisfied with NDOT	75% Annually	75% Satisfied					
Project Delivery								
Streamline Agreement Process (4)	Percentage agreements processed within 20 days	90% Annually	99.4% Processed within 20 days					
Streamline Project Delivery – Bid Opening to Construction Completion (7)	Percentage projects completed on schedule and within budget	80% Annually	98% within budget					
			100% 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	80% Advertised within the reporting year	63% Performance					
			Percentage of advertised & awarded projects within established construction cost estimate range	80% Delivered within established cost estimate range	55% (Oct. vs Award)			
					31% (Eng. vs Award)			
Streamline Permitting Process (15)	Percentage encroachment permits processed within 45 days	95% Annual	95.2% Processed within 45 days					
Assets								
Maintain State Highway Pavement (8)	State roadways maintained at "fair or better" condition (Road category definition in report)	Category 1: 95%	96.0%					
		Category 2: 90%	88.3%					
		Category 3: 85%	94.4%					
		Category 4: 75%	75.0%					
		Category 5: 50%	44.4%					
Maintain NDOT Fleet (9)	Percentage mobile equipment in need of replacement	1% Annual decrease	4.2% decrease					
	Percentage fleet in compliance with condition criteria	1% Annual increase	2.3% increase					
Maintain NDOT Facilities (10)	Percentage of facilities assessments & condition	2% Annual increase	0%					
Maintain State Bridges (14)	Percentage bridges on the NHS in good condition	35% or greater	41%					
	Percentage bridges on the NHS in poor condition	7% or less	1%					
	Percentage bridges on the Non-NHS in good condition	35% or greater	44%					
	Percentage bridges on the Non-NHS in poor condition	7% or less	0.9%					



Performance Measures Overview

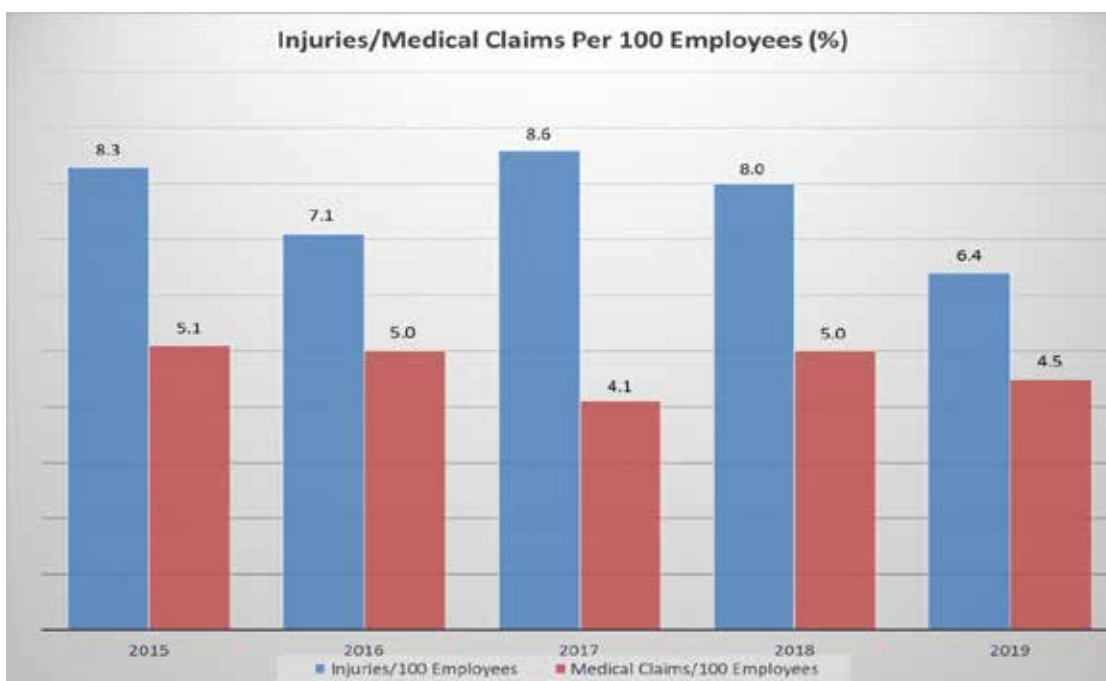
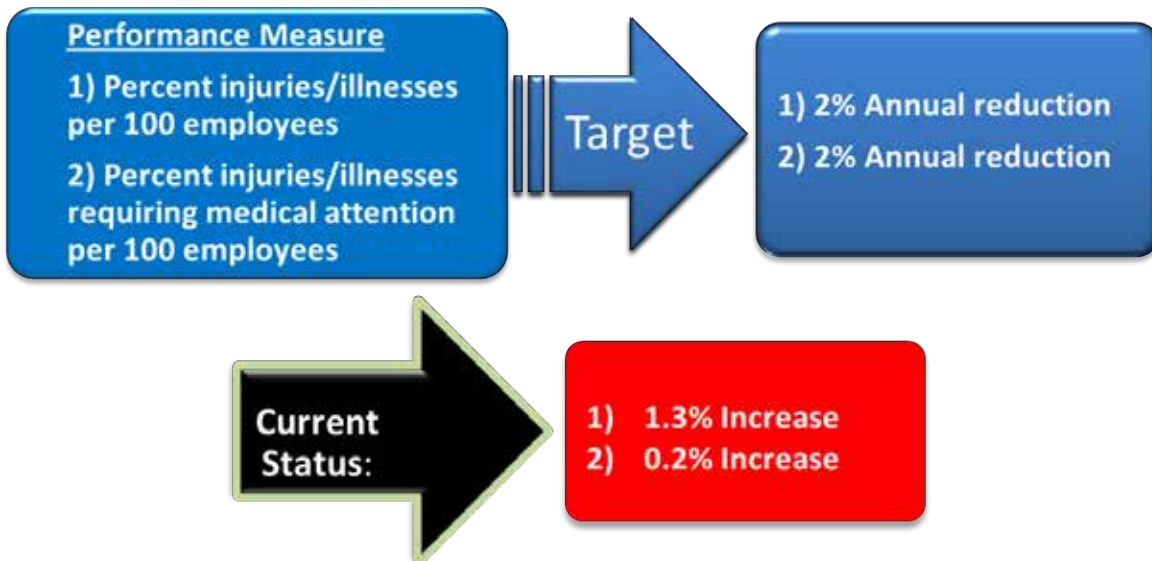
Performance Measure		Target	Current (Status)	Target Met	Trend (5yrs or less)	Desired Trend
Safety						
Emergency Management, Security and Continuity of Operations (11)	Percentage of emergency management plans implemented	100% Annually	100% Compliance	👍		⬆️
Reduce Fatal & Serious Injury Crashes (12)	Number of traffic fatalities	Reduction in the # of traffic fatalities compared to the trend value of 330.4	319.2	👍		⬇️
	Number of serious traffic injuries	Reduction in the # of serious injuries compared to the trend value of 1,214.4	1,186.4	👍		⬇️
	Number of traffic fatalities per 100M VMT	Reduction in the rate of fatalities per 100M VMT compared to the trend value of 1.24	1.21	👍		⬇️
	Number of serious traffic injuries per 100M VMT	Reduction in the rate of serious injuries per 100M VMT compared to the trend value of 4.97	4.51	👍		⬇️
	Number of non-motorized fatalities and serious injuries	Reduction in the # of non-motorized fatalities & serious injuries compared to the trend value of 312.2	299.1	👍		⬇️
Our Partners						
Improve Customer and Public Outreach (5)	Customer satisfaction & public outreach	75% Positive satisfaction level (Annual customer satisfaction survey)	75%	👍		⬆️
Improve travel reliability and reduce delay on the State Roadway System (6)	Percent of person-miles traveled on Nevada interstate that are reliable	86.8% or higher	85.1%	🚫		⬆️
	Percent of person-miles traveled on Nevada non-interstate NHS that are reliable	70% or higher	86.3%	👍		⬆️
	Annual hours of peak-hour excessive delay per capita (Urbanized Areas)	12 hrs or less	7.4 hrs	👍		⬇️
	Percent of non-single occupancy vehicle travel in Nevada urbanized areas	21.3% or higher	21.4%	👍		⬆️
	Freight trip reliability Index	1.28 or less	1.28	👍		⬇️
Reduce Greenhouse Gas Emissions	Percent reduction in greenhouse gas emissions	In alignment with state's goal (2005 baseline)	28% reduction by 2025 and 45% reduction by 2030	N/A (Being developed)		⬇️

PERFORMANCE DASHBOARD

The following Performance Management Dashboard provides an executive summary of each of the 16 performance goals and their related performance measures, targets, and the status of each performance measure in relation to established targets for Fiscal Year 2020. Detailed information regarding each performance measure is provided in the “Performance Management Detailed Data Trends” section of this report.

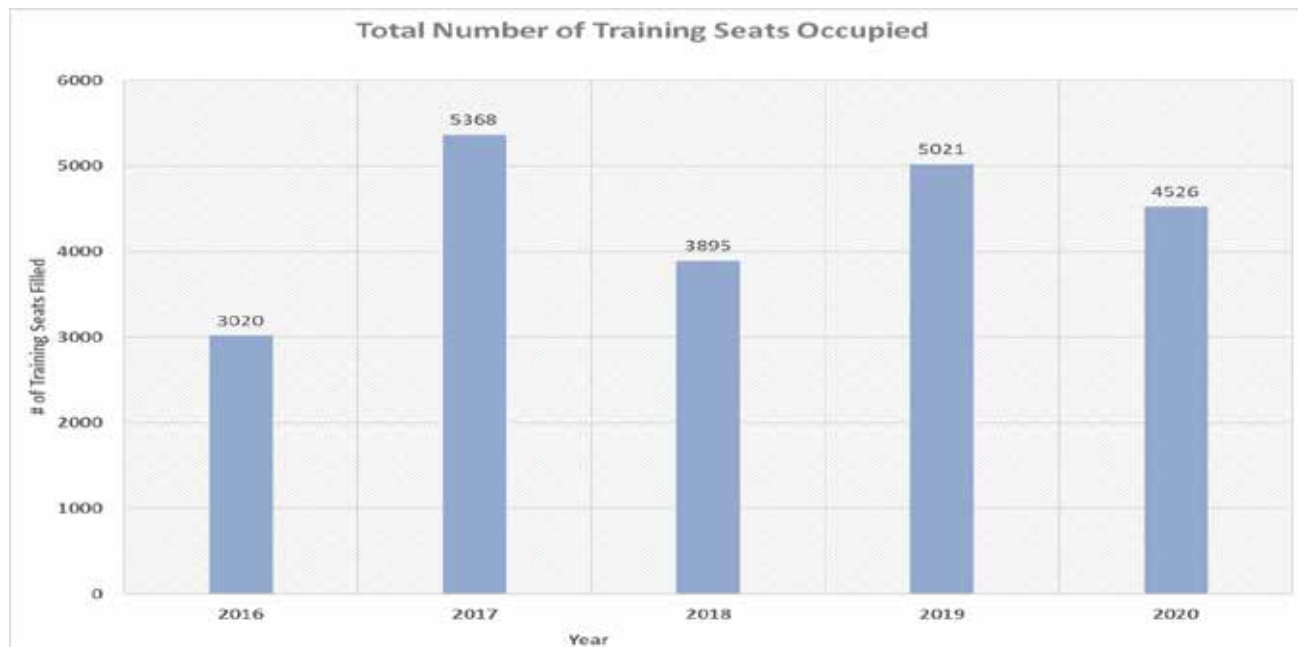
1. Reduce Workplace Accidents

Executive Summary: Two performance measures have been established for this Performance goal: percent of workplace injuries/illnesses per one hundred employees, and, percent of injuries/illnesses requiring medical attention per one hundred employees. The data is tracked per calendar year and uses a five-year rolling average. The five-year rolling average (2015 to 2019) for the injuries/illnesses not requiring medical attention increased from 6.4% to 7.7% compared to the previous five-year average, while injuries/illnesses requiring medical attention was almost flat at 4.7% compared to 4.5% for the previous five-year average. The average claim cost also increased from \$10,917 to \$12,083. For detailed information refer to page 29.



2. Provide Employee Training

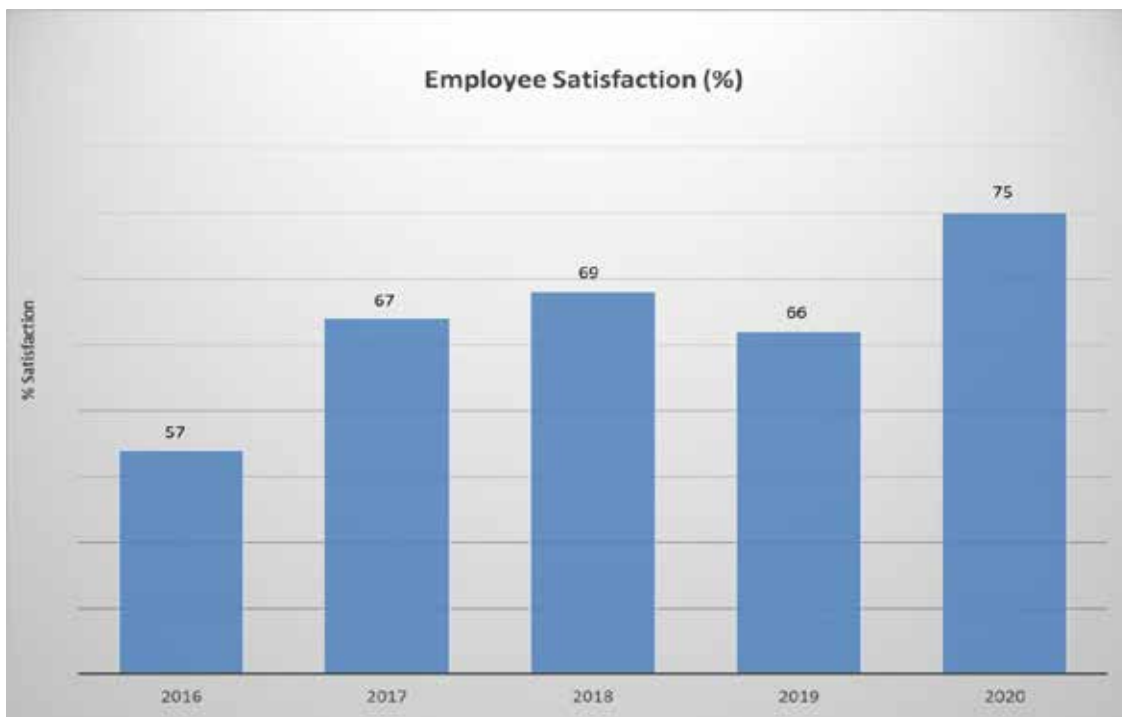
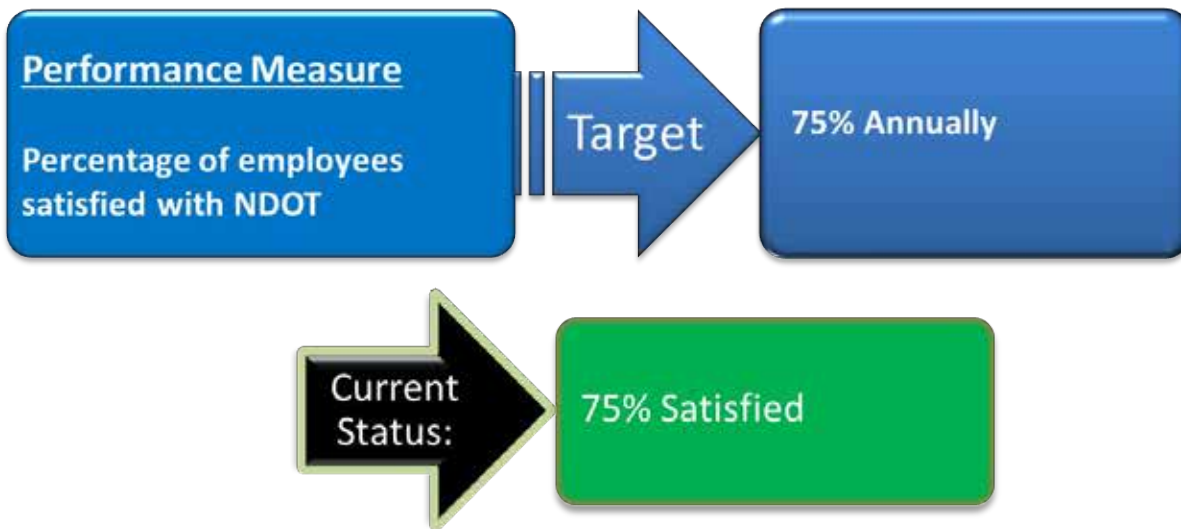
Executive Summary: The performance measure for this goal tracks the percentage of employees trained in accordance with prescribed training plans, the Nevada Revised Statute (NRS), and the Nevada Administrative Code (NAC) training requirements. The data is tracked through the state fiscal year. The target for required training in FY 2020 was 83%. A 90% compliance was achieved, which is seven percentage points above the established target. The compliance level is also three percentage points above what was achieved in 2019. This high level of achievement is due to increased use of computer technology as an effective strategy to increase employee participation. For detailed information refer to page 33.



3. Improve Employee Satisfaction

Executive Summary: The performance measure for this goal is 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, and it is measured each state fiscal year.

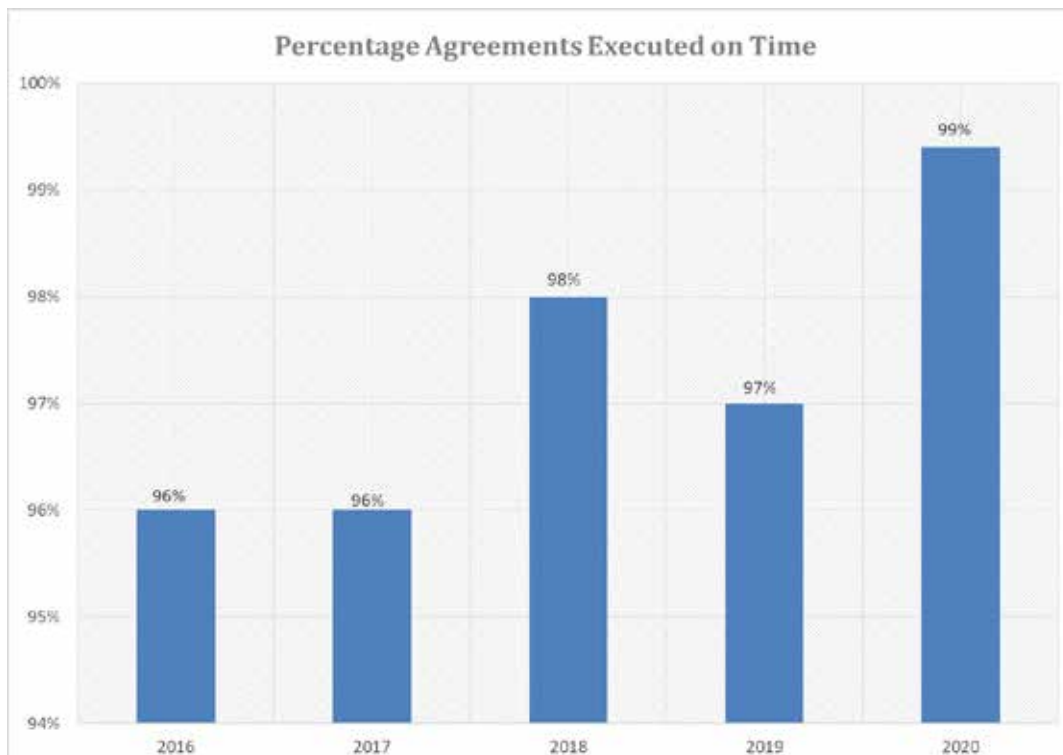
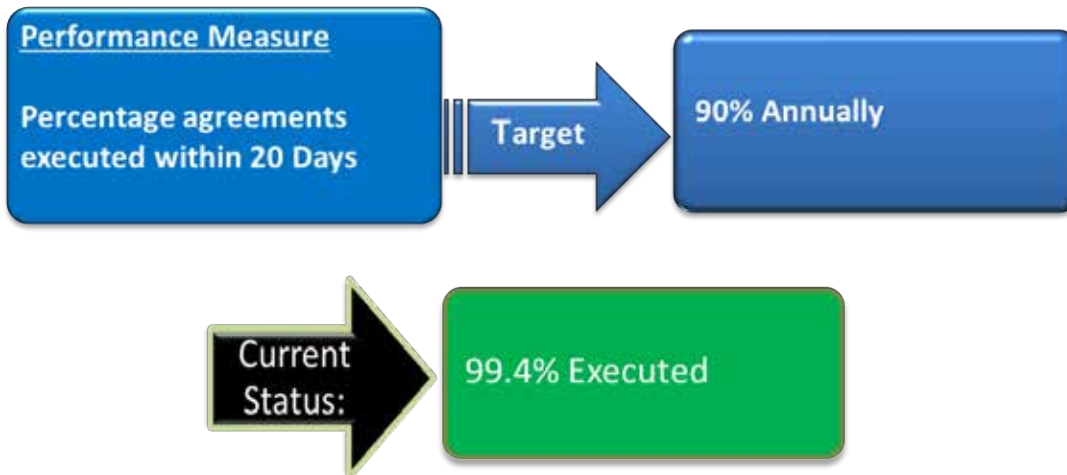
The percentage of employees surveyed who are extremely or somewhat satisfied with NDOT in 2020 is 75%. The target for this measure is 75% satisfaction. The 2020 satisfaction level increased from what was observed in 2019. For detailed information refer to page 39.



4. Streamline Agreement Process

Executive Summary: In state fiscal year (SFY) 2020, 99.4% of all agreements submitted to the Agreement Services section were executed within 20 days or less. This exceeds the established target of 90%. The time period to process an agreement was changed from 30 days or less to 20 days or less in 2020.

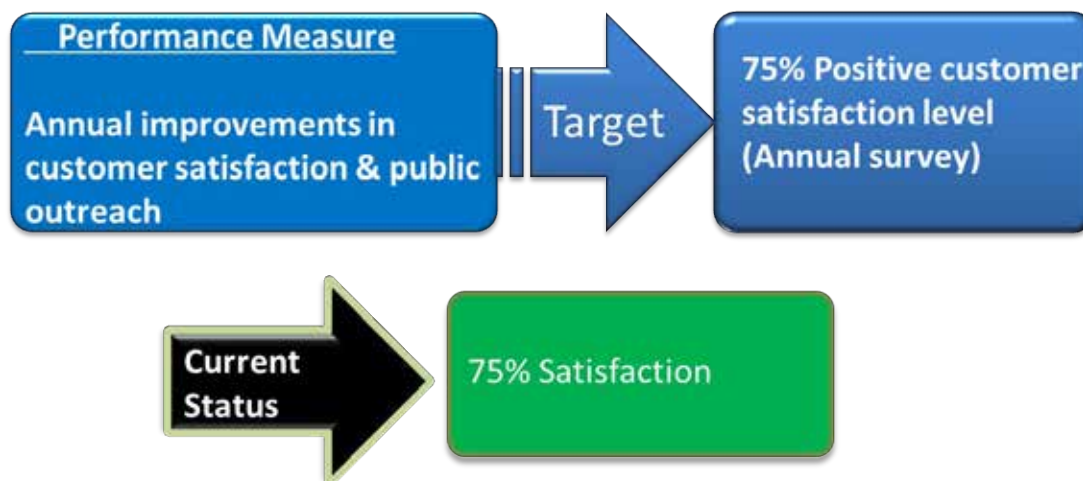
In 2020 it took an average of six calendar days, excluding the time agreements were with secondary parties or awaiting Transportation Board approval, to execute the agreement. This year had a higher performance in the average number of days it took to execute an agreement. The six-day average was significantly less than the maximum 20 days established for the target. For detailed information refer to page 43.



5. Improve Customer and Public Outreach

Executive Summary: This performance measure works toward meeting the NDOT Strategic Plan goal to be in touch with the public and our customers. It is aligned with the goals and strategies set forth in the NDOT communications plan. The performance metrics that are tracked and measured to determine how the Department is doing include the following: Facebook likes, Twitter engagement, and Instagram followers. Also, the Public Information staff have improved on all performance areas including maintaining the NDOT website, increasing internal and external communications, and improving public involvement.

In (SFY) 2020 a customer satisfaction level of 75% was achieved. This performance met the set target of 75%. The satisfaction level is determined from the Annual Customer Service Survey. For more information refer to page 46.



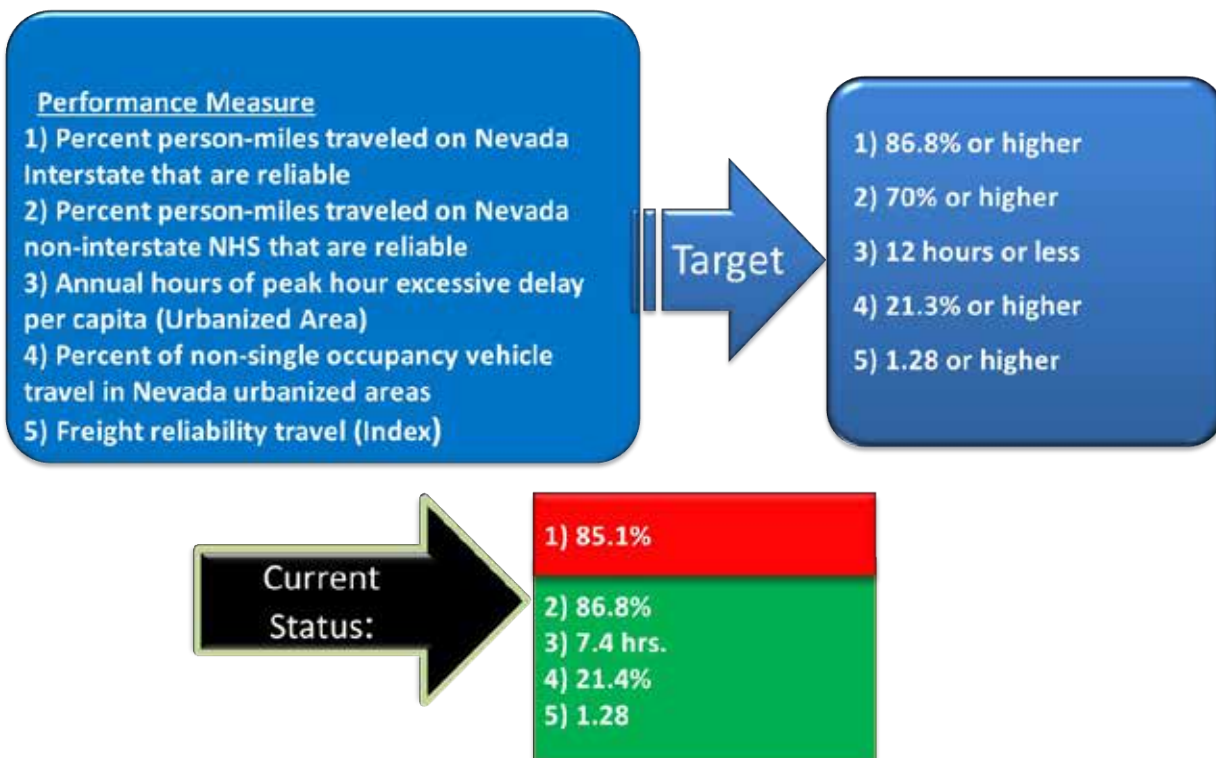
Social Media

- Increased Facebook likes to 14,500 by the end of fiscal year 2020 – Goal met. Total Facebook likes as of September 18, 2020 = 14,865, and 19,761 people follow NDOT’s page. Facebook likes grew by 14.7% from June 30, 2019 to September 18, 2020.
- On Twitter, maintain two quarters or more with an .4% engagement rate or greater by the end of fiscal year 2020 (an engagement rate between 0.09% and 0.33% is considered high nationally). – Goal met. The engagement rate for April-June 2020 was .8%. The engagement rate for the previous quarter averaged .6%.
- Increase the number of Instagram followers to 2,500 by the end of fiscal year 2020 - Goal met. The total number of Instagram followers as of September 18, 2020 was 2,683. Instagram followers grew by 46.2% from June 30, 2019 to September 18, 2020.

6. Improve Travel Reliability & Reduce delay on the State Maintained Roadways

Executive Summary: There are five performance measures related to this performance goal: percent of person-miles traveled on Nevada interstates that are reliable; percent of person-miles traveled on Nevada non-interstate NHS routes that are reliable; annual hours of peak hour excessive delay per capita; percent of non-single occupancy vehicle travel in Nevada urbanized areas, and truck travel time reliability index on the Nevada interstate system. This new goal, performance measures and targets were adopted in 2020.

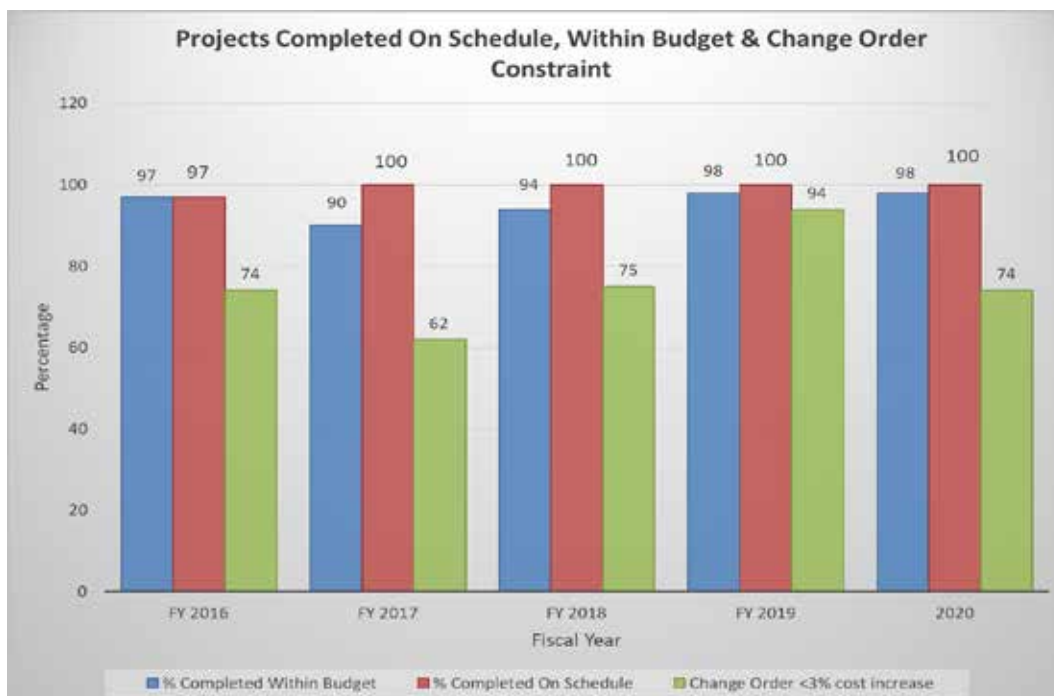
The National Performance Measurement Research Data Set (NPMRDS) was used to analyze the performance of Nevada’s interstate and non-Interstate NHS roadway systems. Based on the analysis using calendar year (CY) 2019 data, 85.1% of person-miles traveled on Nevada interstate was reliable, falling short of the target of 86.8%. The non-interstate NHS roadways had an 86.8% reliability, which exceeds the 70% target that was set. Targets for the annual hours of peak hour excessive delay per capita, percent of non-single occupancy vehicle travel, and truck travel time reliability index were all achieved. For detailed information refer to page 50.



7. Streamline Project Delivery – Bid Opening to Construction Completion

Executive Summary: In this performance goal, the percentages of Design Bid Build and Construction Manager at Risk projects completed are evaluated based on cost estimate, change orders, and schedule compared to established targets.

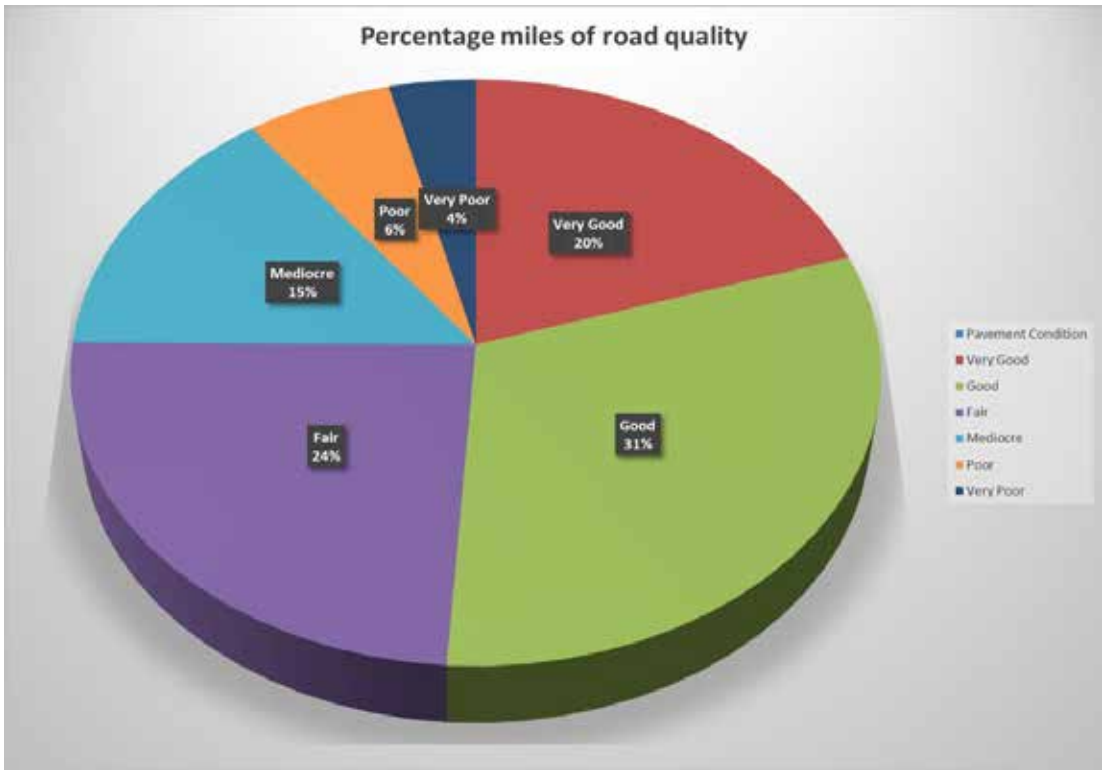
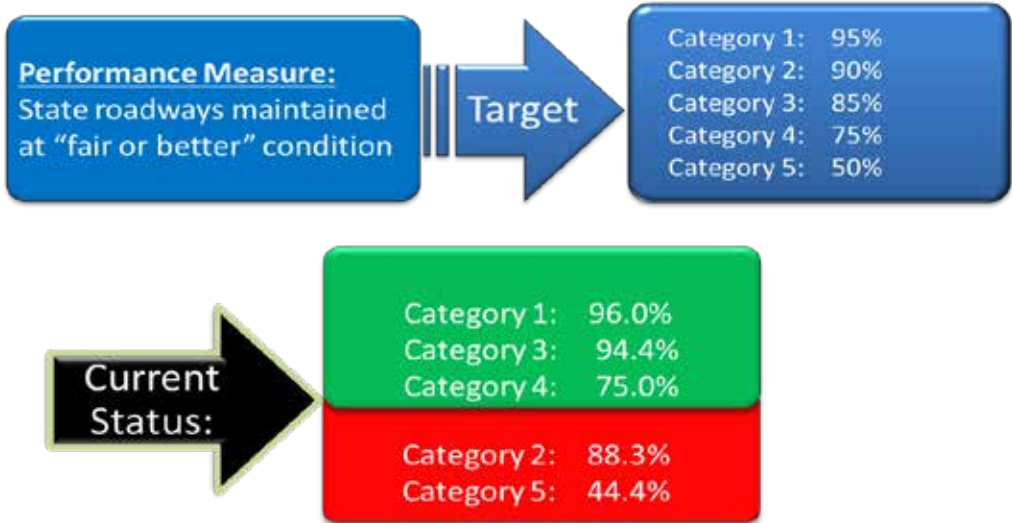
The evaluation does not include projects in progress - only completed projects. In state fiscal year (SFY) 2020 an average of 98% of completed contracts were within budget, 100% were within schedule, and 74% had change orders of less than a three percent cost increase. Cost estimate and schedule met and exceeded their set targets while the change order target was not met. For detailed information refer to page 54.



8. Maintain State Highway Pavement

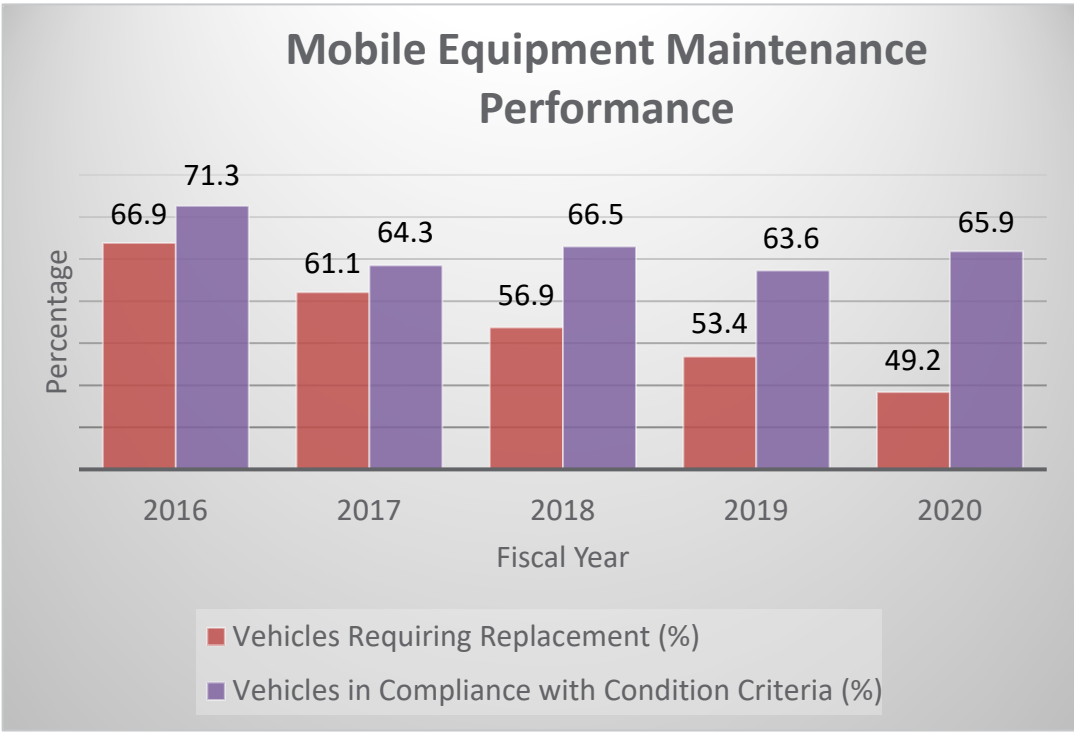
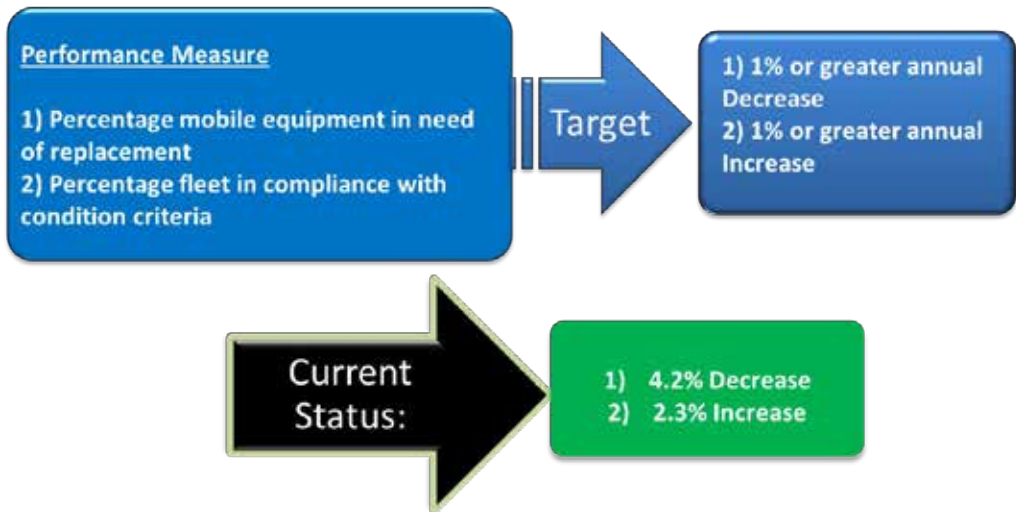
Executive Summary: In state fiscal year (SFY) 2020 NDOT was able to meet the performance targets for pavement condition for categories 1, 3, and 4 roadways, but was unable to address the needs of categories 2 and 5 roadways to bring them up to the minimum target level. New targets for this performance measure were adopted in 2020 to better reflect proper utilization of preservation funds.

To maintain the roadway network in fair or better condition, the Department performs rehabilitation work on the roadways each year. To increase the percentage of pavements in “fair or better” condition, rehabilitation work must exceed the rate of deterioration of the pavement on all roads. For detailed information refer to page 57.



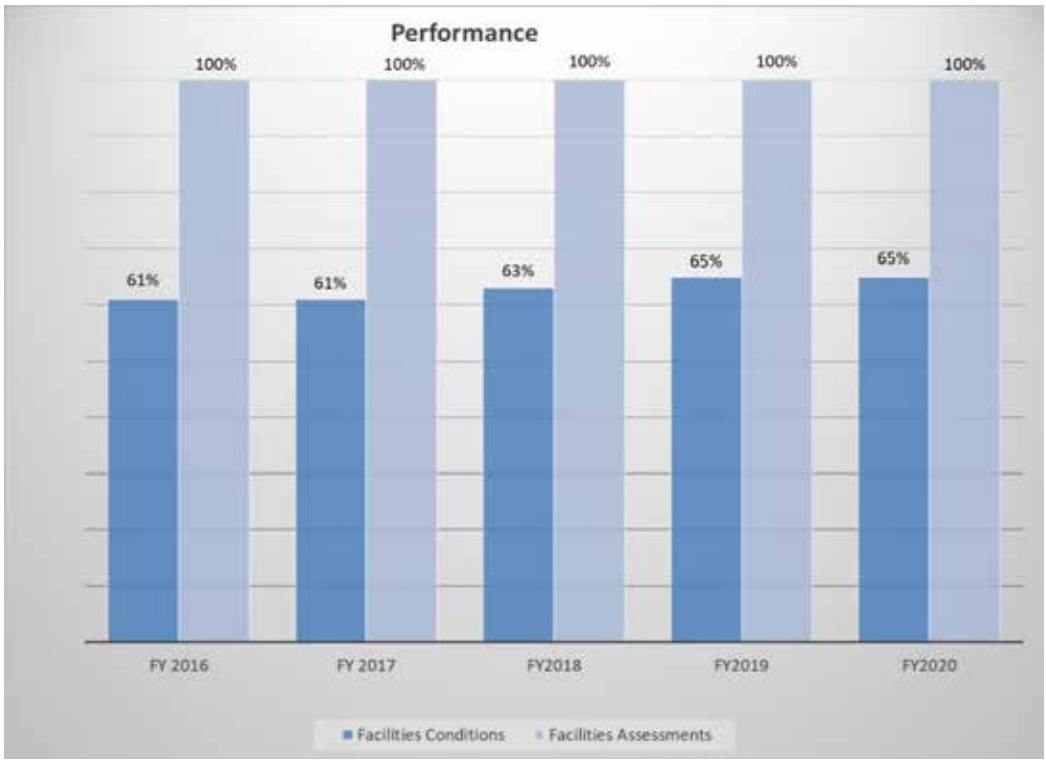
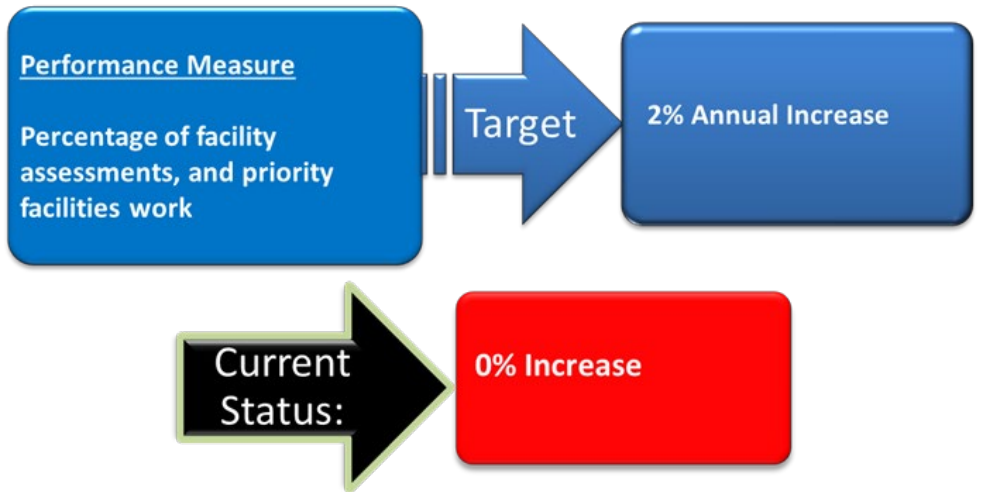
9. Maintain NDOT Fleet

Executive Summary: In state fiscal year (SFY) 2020 the percentage of the NDOT mobile equipment fleet requiring replacement decreased by 4.2% compared to the previous year. The percentage of fleet in compliance with preventive maintenance requirement to ensure the expected life of Department vehicles is not compromised. This performance measure increased by 2.3% compared to the previous year. This is the first year the simple method was utilized to improve clarity of the data. Both performance measures targets were met. For detailed information refer to page 65.



10. Maintain NDOT Facilities

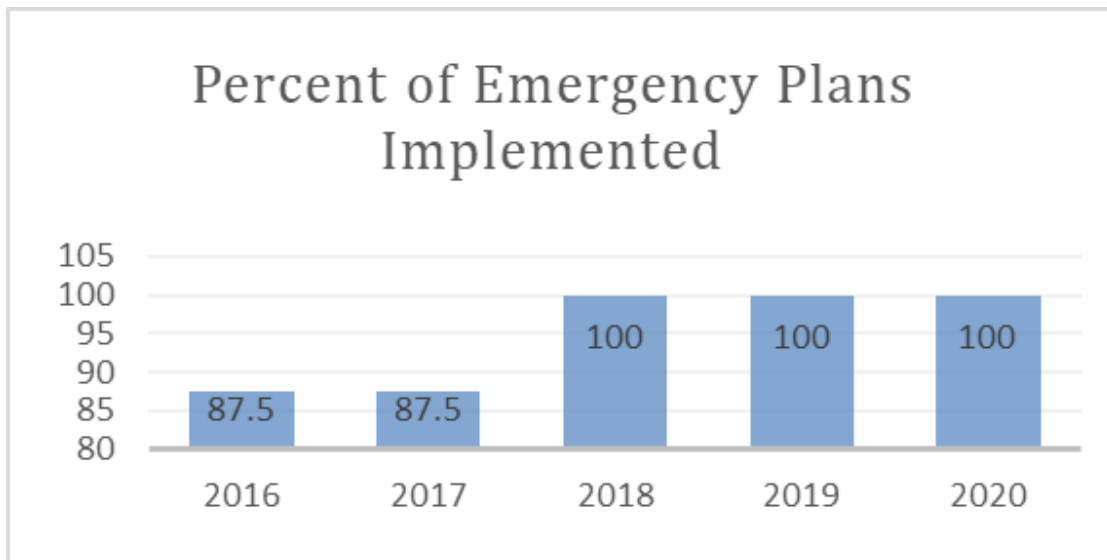
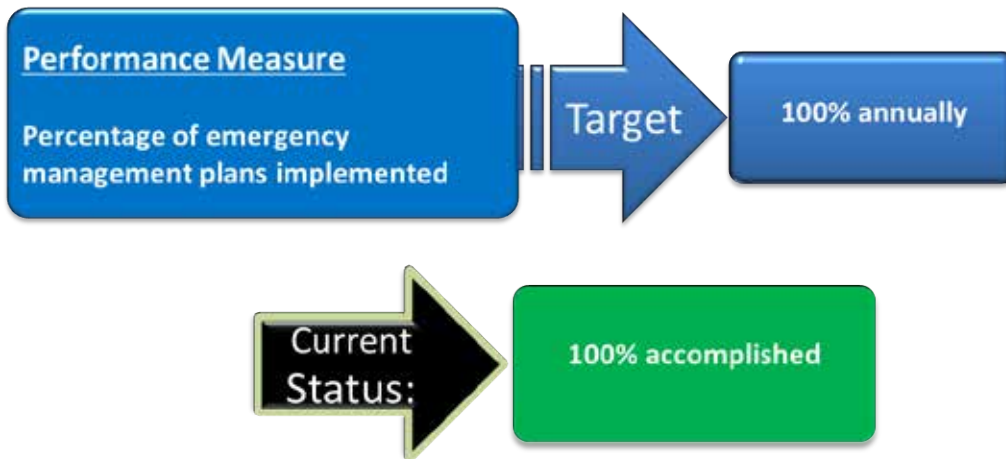
Executive Summary: The performance measure for this goal is the percentage completion of facilities assessments, and percentage completion of priority facilities work. The final rating is a composite score of eleven condition elements. An overall performance of 65% rating was achieved for this performance period. This is the same level of performance as was in 2019. A 2% annual increase is the annual target. This performance measure did not meet its target. For detailed information refer to page 69.



11. Emergency Management, Security, and Continuity of Operations

Executive Summary This performance measure involves tracking the percentage of NDOT Emergency Management Plans completed, training and education provided to the appropriate personnel about the plans, tests and emergency exercises performed in executing the plans, and updating the plans. Training, exercises and Plans update have to be completed within a four-year cycle.

In state fiscal year 2020, NDOT obtained a 100% compliance level and met the established target. The target is now attainable compared to prior years because the training and update cycle was changed to every four years as opposed to every two years. The four-year cycle provides enough time to manage staff and attend to real emergencies, as well as focus more attention to the emergency plans. For detailed information refer to page 73.



12. Reduce Fatal & Serious Injury Crashes

Executive Summary: There are five performance measures under this performance goal. They have been adjusted to align with the reporting requirements by the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA). Modifications were made to the performance targets for this performance measure in 2020 to provide for better understanding.

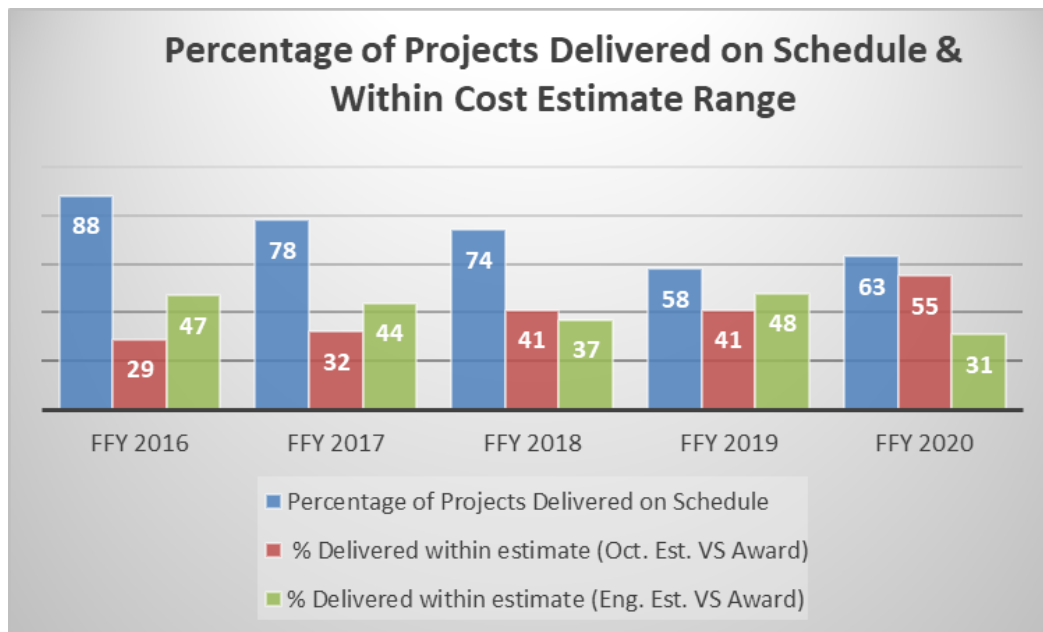
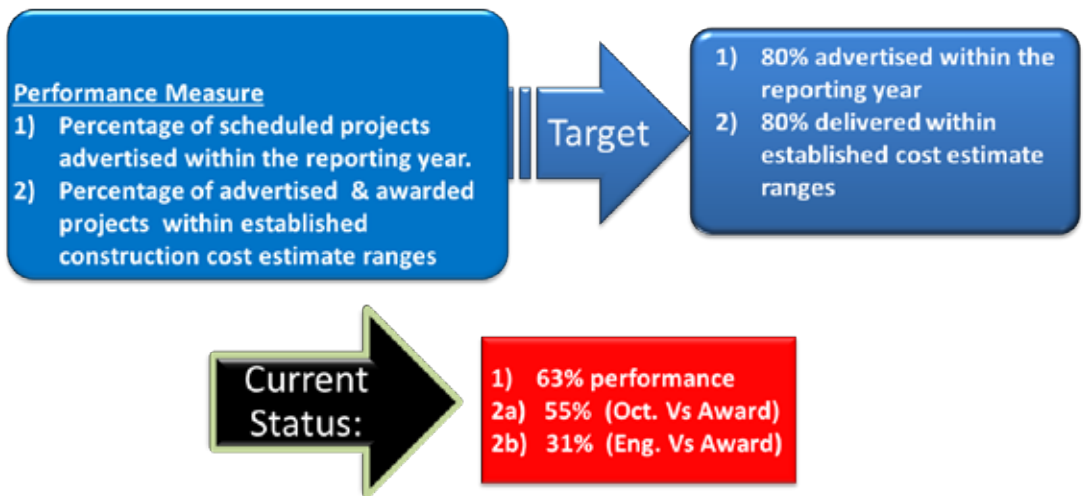
Information provided in this section covers data from 2015 to most of 2019, and the analysis uses projections to the end of 2019 and a five-year rolling average. Data is per calendar year (CY). Performance targets for all five performance measures were met. For detailed information refer to page 77.



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

Executive Summary: This performance measure is 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.

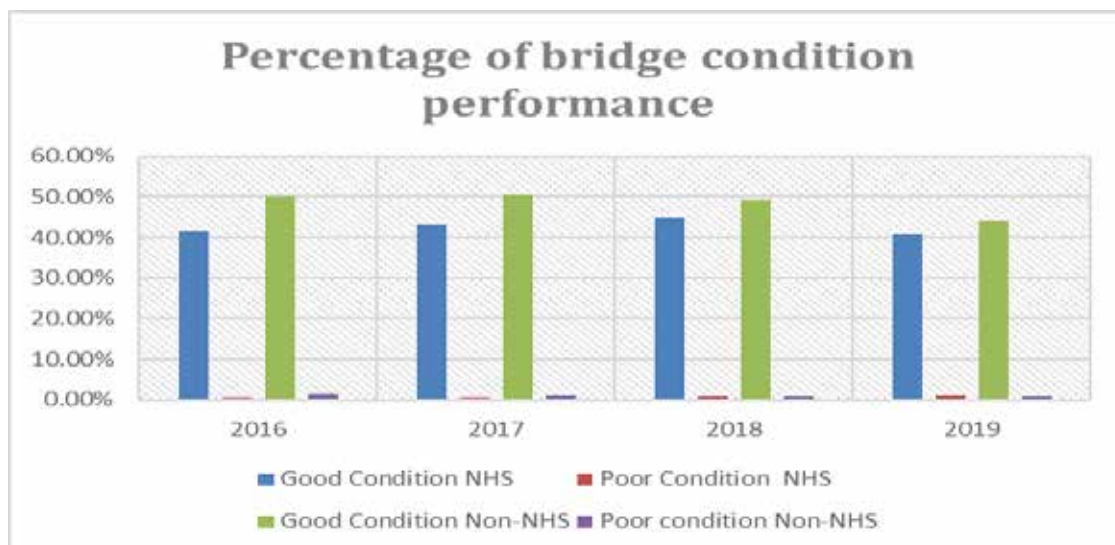
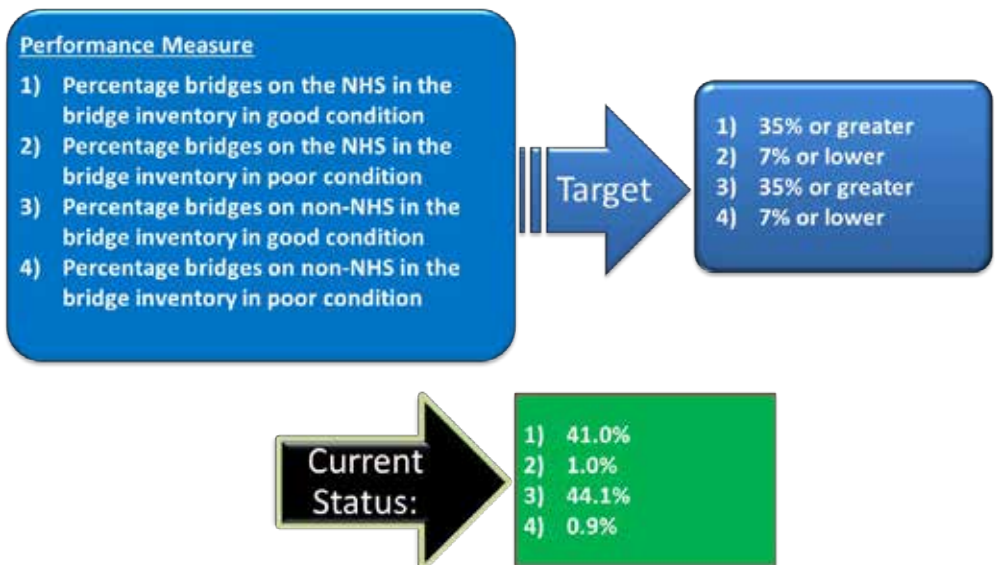
Evaluation of the performance measure included analyzing most of the projects advertised by the Department. Contracts managed through the districts and maintenance sections were not included as they are developed through a separate process than the typical transportation project. Capital improvement projects completed by the Architecture Division were also excluded from evaluation. For detailed information refer to page 83.



14. Maintain State Bridges

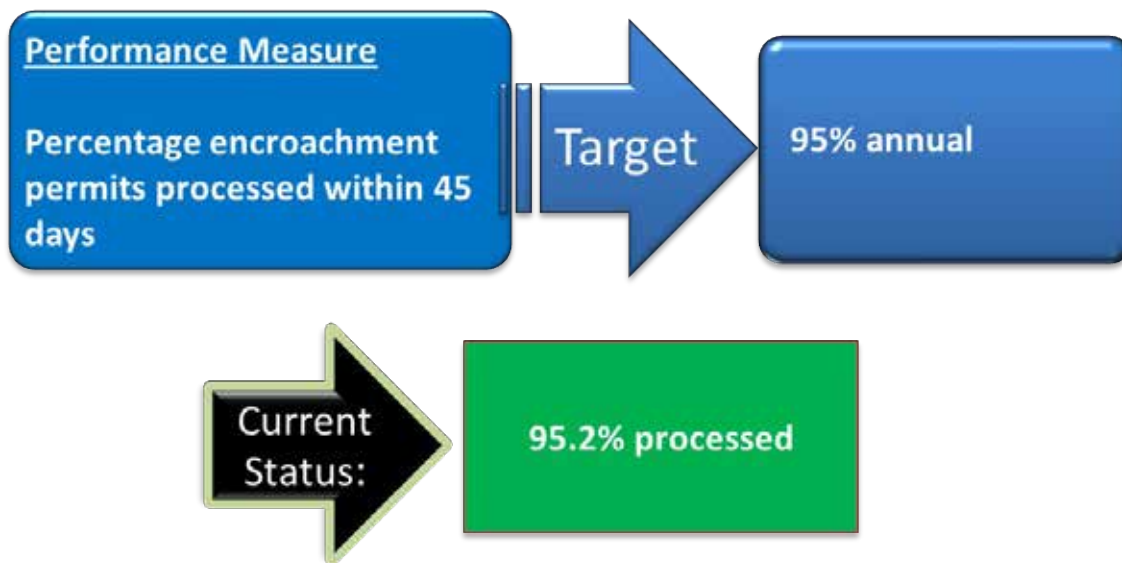
Executive Summary: The Department’s performance measure associated with the maintenance of state bridges includes bridge condition ratings, separated by those assets on the National Highway System (NHS) and those not on the system (non-NHS). In alignment with the established national performance measures, this will include percentages of the inventory considered to be in “good” and “poor” condition.

As part of the NDOT Transportation Asset Management Plan (TAMP), the Department has established performance goals related to the overall condition of the state’s bridge inventory. These performance targets include maintaining an inventory that has greater than thirty five percent of bridges in good condition and less than seven percent in poor condition. These new performance measures and targets were adopted in 2020. All four measures met their established targets. For detailed information refer to page 89.



15. Streamline Permitting Process

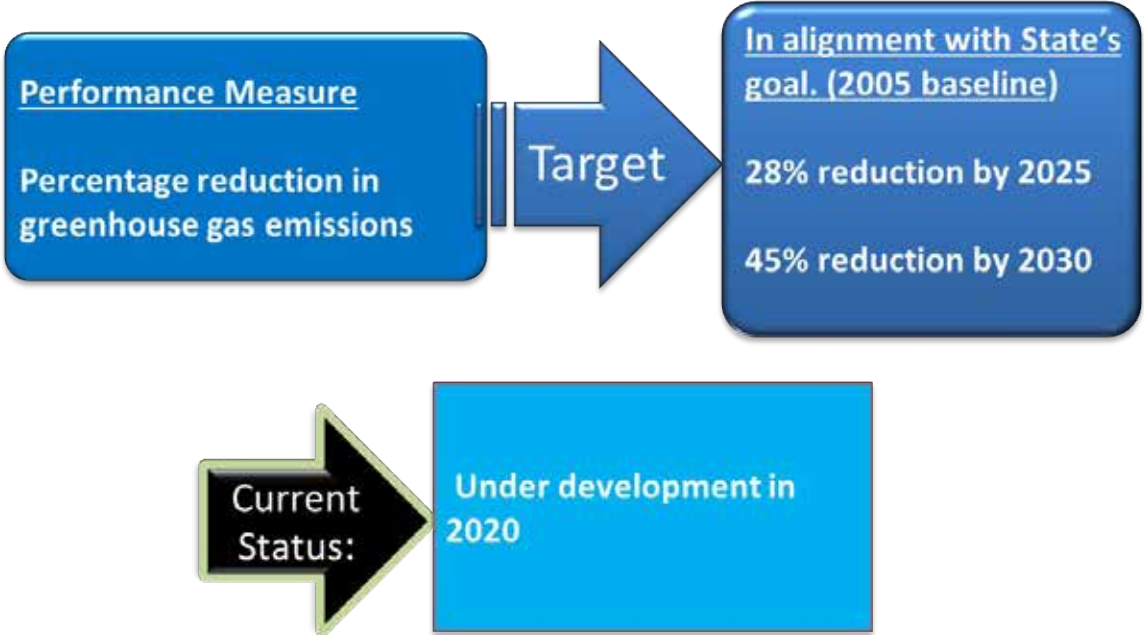
Executive Summary: During state fiscal year 2020, the NDOT Right-Of-Way Division accepted a total of 981 permits of which 881 were processed. Of those 881 permits, 839 were processed within 45 days. This translates to a 95.2% performance rating, which is slightly above the performance target of 95%. For detailed information refer to page 96.



Summary of Status	District 1	District 2	District 3	HQ	Summary
Total Permits Accepted:	616	293	72	0	981
Total Permits in Progress:	119	122	16	0	257
Total Permits Processed through FHWA:	83	14	8	0	105
Total Permits Processed:	586	231	64	0	881
Total Permits Processed more than 45 days:	16	26	0	0	42
Total Permits Processed less than or equal to 45 days:	570	205	64	0	839
Total Permits Processed with Re-Reviews:	149	75	5	0	229
Percentage of Permits Processed more than 45 days:	2.73%	11.26%	0.00%	0.00%	4.77%
Percentage of Permits Processed less than or equal to 45 days:	97.27%	88.74%	100.00%	0.00%	95.23%

16. Reduce Greenhouse Gas Emission

Executive Summary: This performance measure has been established as the percent reduction in Greenhouse Gas (GHG) emissions within the Department’s operations. This measure was added in April 2020 with the goal of supporting the overall GHG reduction from the transportation sector as reported by the Nevada Annual Greenhouse Gas Inventory Report. In alignment with the state’s goal to reduce economywide GHG emissions by 28% by 2025 and 45% by 2030 compared to a 2005 baseline (2019 Senate Bill 254), this reporting will include annual GHG emissions inventory within the Department’s operations beginning with fiscal years 2019 and 2020. For detailed information refer to page 99.



DETAILED PERFORMANCE MANAGEMENT DATA

1. REDUCE WORKPLACE ACCIDENTS

Performance Measure:

The five-year rolling average rate of reported workplace injuries and illnesses, and the claim rate of reported injuries and illnesses per calendar year.

The *injury rate* is the five-year rolling average number of reported workplace injuries and illnesses (i.e. number of C-1 forms filed) per 100 employees. The *claim rate* is number of injuries and illnesses requiring medical attention (i.e. number of C-3 forms filed) per 100 employees annual OSHA 300 Log Reporting data. Data is based on calendar year per federal reporting requirements.

Current year target:

2% Reduction per year (Five-year rolling average)

Ultimate target:

Zero Workplace Injuries and Illnesses

Champion:

Safety and Loss Control Section Manager
Human Resources Manager

Support Divisions:

All

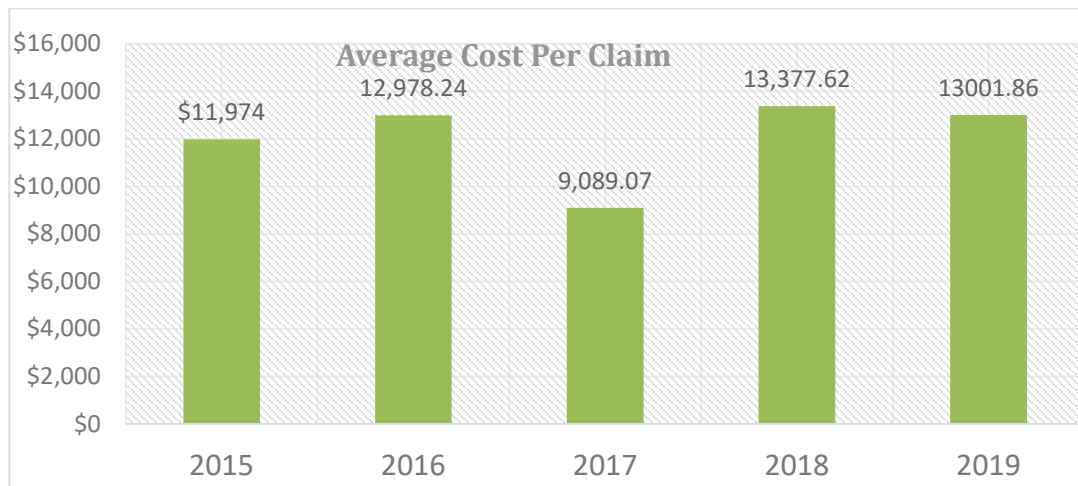
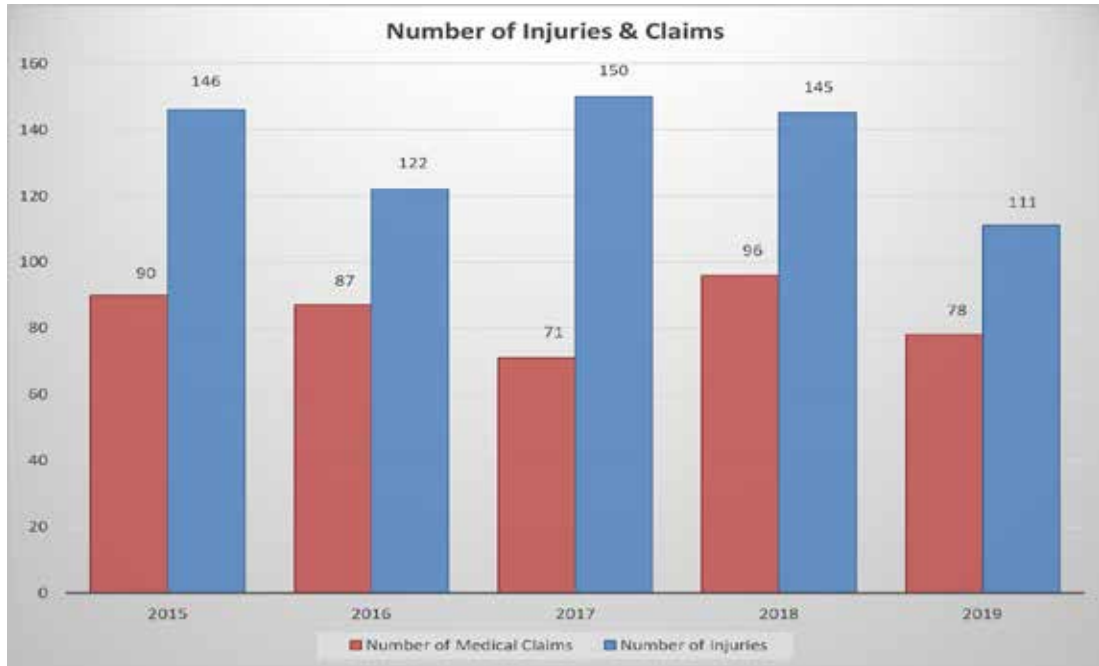
Overview and plan support:

Safety extends to all aspects of the Department from the roadways to the office. Identifying and reducing risk to the Department, employees, and the traveling public is an ongoing endeavor. This performance measure works towards meeting the following Department of Transportation strategic plan goals (1) safety first and (2) enhance organizational and workforce development.

Measurement and supporting data:

Calendar Year	2014	2015	2016	2017	2018	2019
Total # of injuries	187	146	122	150	145	111
Injury rate	10.68%	8.31%	7.10%	8.61%	8.00%	6.40%
Total # of medical claims	95	90	87	71	96	78
Percent of employees w/ claims	5.43%	5.12%	5.00%	4.07%	5.00%	4.50%
Average claim cost	\$7,168.96	\$11,973.92	\$12,978.24	\$9,089.07	\$13,377.62	\$13,001.86
# of Full Time Employees	1751	1757	1717	1743	1762	1746
Total calendar year cost	\$724,064.89	\$1,149,496.09	\$1,329,390.07	\$1,430,173.53	\$1,938,795.93	\$988,141.46

Calendar Year	2014 – 2018 Avg.	2019	2015 – 2019 Avg.
Total # of injuries	150	111	135
Injury rate	9%	6.4%	7.7%
Total # medical claims	88	78	84
Serious injury rate	5%	4.5%	4.7%
Claim cost	\$10,917	\$13,001	\$12,083



The annual baseline is the prior five-year rolling average (2014 through 2018). Data is reported per calendar year pursuant to federal OSHA reporting requirement. State total is the average number of Department employees during any given quarter or year, and it is used to calculate the injury and severity rates.

Claim costs include all medical expenses. In CY 2019, the five-year average claim cost was higher by \$1,166 per claim compared to the baseline. The injury rate in CY 2019 shows a reduction of 1.3% compared to the baseline. The target of reducing the five-year rolling average injury rate by 2% compared to the baseline was not met.

The serious injury rate, which is the rate of injuries/illnesses requiring medical attention per 100 employees also did not meet the 2% reduction target. The rate of the five-year average ending CY 2019 was 4.7% compared to the baseline rate of 5%.

Most of the injuries sustained in CY 2019 were due to strains, sprains, fractures and lacerations. Body parts injured were low back, shoulder, head and hand. Cause of injuries were due to slip, trips, falls, lifting and improper tool use. The number of low back claims increased from 12 in CY 2018 to 13 in CY 2019. Shoulder claims went from 11 in CY 2018 down to 4 in CY 2019

Evaluation of Performance Measure:

Annual target met?

No

Which strategies were in place during the data reporting period?

- Workers' Compensation training.
- Safety and health safety inspections.
- Safety and health training.
- Ergonomic evaluations.
- Active Shooter classes

Which strategies were successful?

All strategies supported the Safety Section efforts to reduce workplace accidents and injuries though the target was not met.

Which strategies were not successful and why?

The strategy of implementing training is a proactive measure to reduce workplace accidents. Staff vacancies limited the number of trainings offered.

Strategies for improvement planned for next reporting period:

Short term strategies

- Continue OSHA safety and health training classes to educate management, supervisors and employees to reduce workplace hazards and injuries.
- Work collectively with the NV OSHA Safety Consultation and Training Section (NV SCATS) to assist with safety and health inspections to reduce workplace hazards and injuries.
- Work collectively with Nevada Risk Management Division to assist with ergonomic evaluations for the agency.

Long term strategies

- Revise and implement the NDOT Safety Plan
- Improve the safety culture of NDOT using the NDOT Strategic Plan as a guideline.

Does this performance measure effectively measure what is desired?

Yes.

Does monitoring and evaluating this performance measure improve your process?

Yes.

Is there a more effective performance measure that should be considered? If so, explain.

No.

Has the COVID-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

Due to the COVID-19 pandemic, the safety/loss control section did not conduct in-person trainings as scheduled or on-site inspections. Safety section team members were affected by school closures, COVID-19 exposure, and related issues resulting in a loss of productivity. The hiring freeze prevented filling a critical vacancy which also resulted in a loss of productivity.

- Lower productivity in the safety section likely increases the risk of unidentified hazards departmentwide impacting the performance measure.

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

Yes, meeting this performance measure will create a positive fiscal impact and save the department money.

2. PROVIDE EMPLOYEE TRAINING

Performance Measure:

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

Current year target: 83% compliance for all required training

Ultimate target: 100% compliance for all required training

Performance Champion/Division

Chief Human Resources Division and Employee Development Manager, Training Division

Support Divisions:

All NDOT Divisions

Overview and plan support:

The classes selected for inclusion in the performance measure apply to the entire Department and are required by Nevada Administrative Code 284, the State Administrative Manual, or a specific NDOT Transportation Policy. All the included classes are either required for all employees or all supervisors.

In 2017, the Department of Human Resource Management, Equal Employment Opportunity Section revised their requirement for supervisors to take both an online portion of EEO and an instructor-led portion and have decided that supervisors only need to take one or the other. As a result, we are only tracking 11 classes.

The compliance number calculated for each class reflects the percentage of employees who were required to take the class and have successfully completed it within the designated time period. The FY 2020 compliance target was exceeded by seven percentage points and was three percentage points higher than the previous year.

Measurement and supporting data:

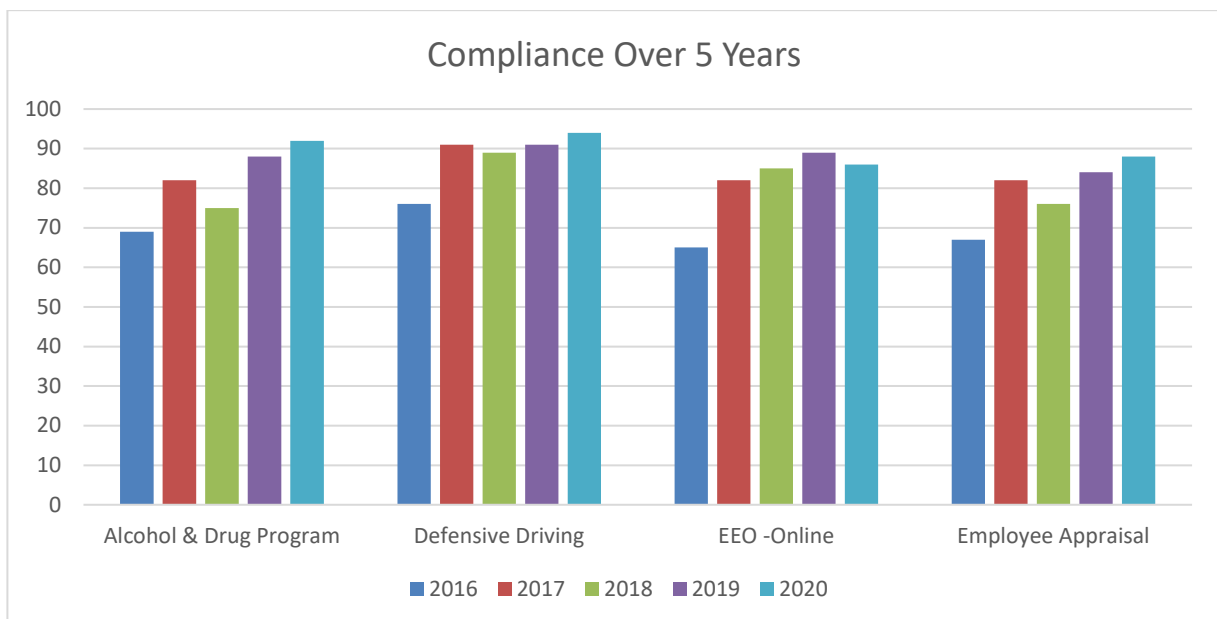
Requirement	% in Compliance for Fiscal Year				% in Compliance	# Trained*	Total Employees Requiring Training**
	2016	2017	2018	2019	FY 2020	FY 2020	FY2020
Alcohol & Drug Program	69	82	75	88	92	215	491
Defensive Driving	76	91	89	91	94	500	1660
EEO**	71	78	N/A	N/A	N/A	N/A	N/A
EEO -Online	65	82	85	89	86	221	491
Employee Appraisal	67	82	76	84	88	243	491

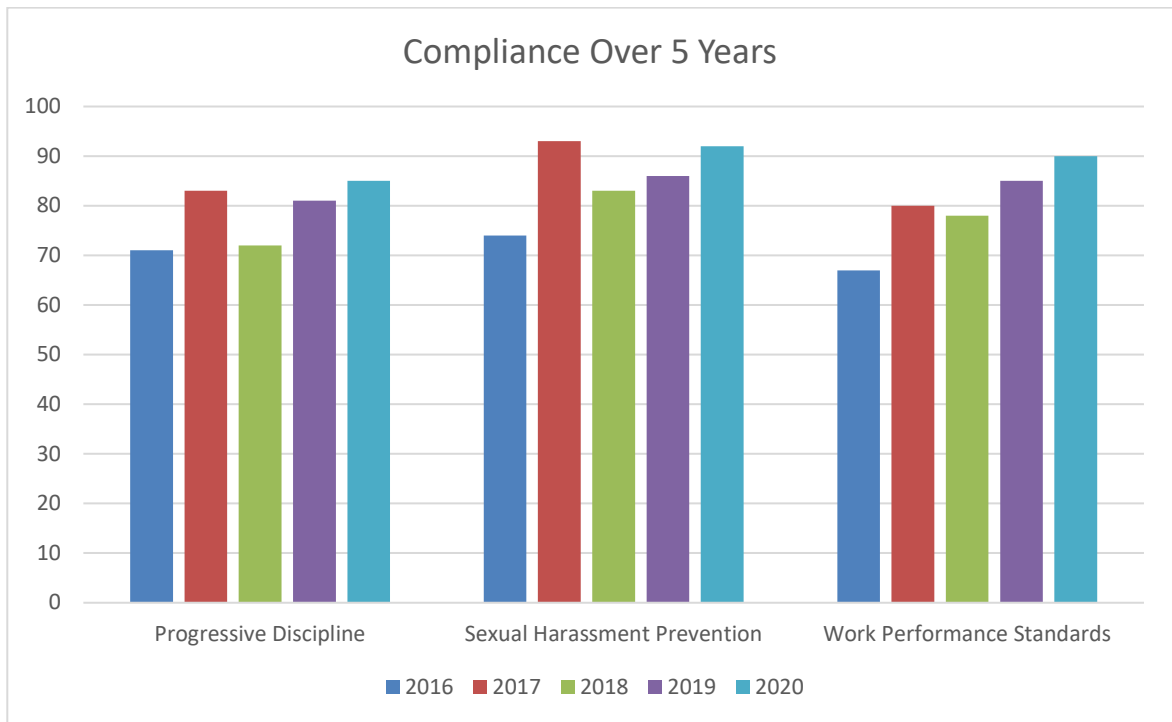
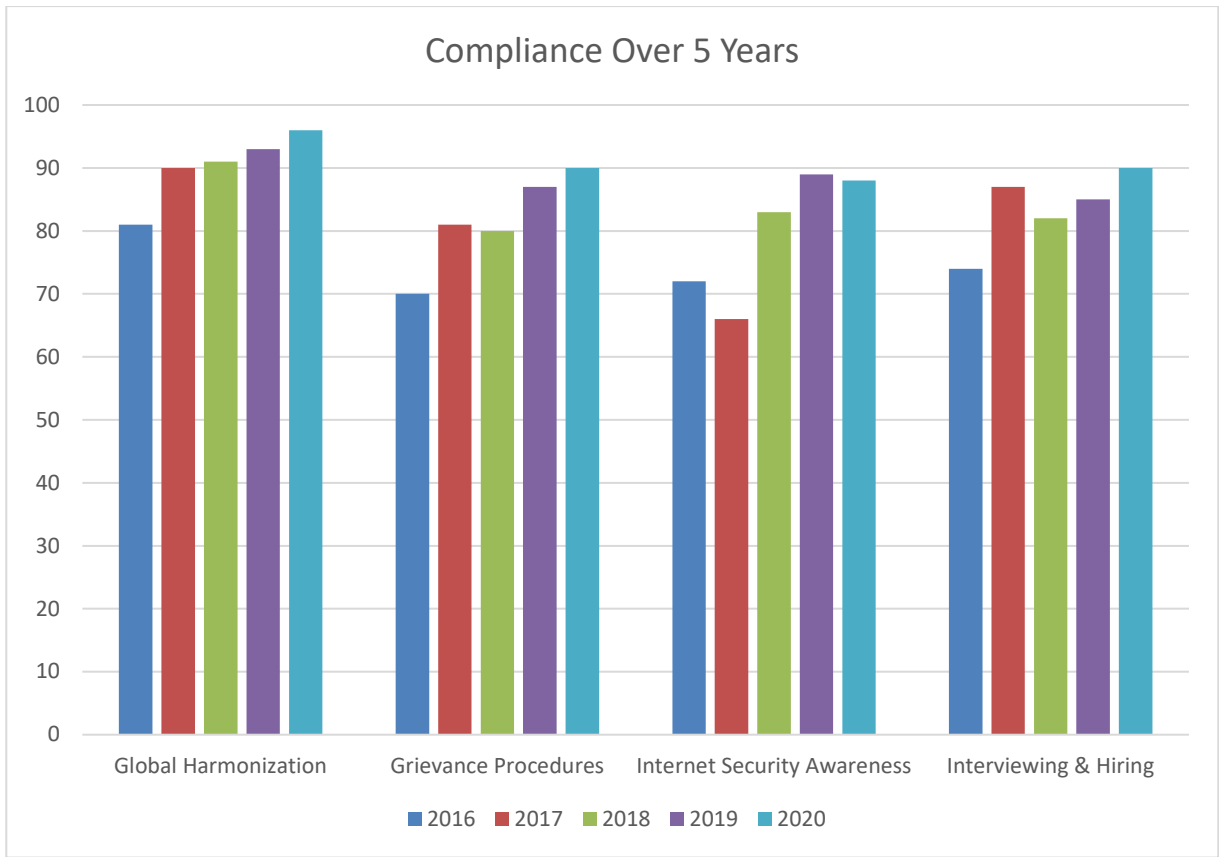
Requirement	% in Compliance for Fiscal Year				% in Compliance	# Trained*	Total Employees Requiring Training**
	2016	2017	2018	2019	FY 2020	FY 2020	FY2020
Global Harmonization	81	90	91	93	96	271	1660
Grievance Procedures	70	81	80	87	90	202	491
Internet Security Awareness	72	66	83	89	88	1528	1660
Interviewing & Hiring	74	87	82	85	90	264	491
Progressive Discipline	71	83	72	81	85	211	491
Sexual Harassment Prevention	74	93	83	86	92	608	1660
Work Performance Standards	67	80	78	85	90	263	491
Averages	71	83	81	87	90		

*Total number of employees attending training on this topic. These attendees may not have been required to attend the training.

**Number of employees or supervisors on 6/30/20

***State training requirements changed in FY18 to drop this class as required training





The annual target for FY20 was 83% and the ultimate target is 100% compliance overall. The average for the 11 required classes was 90% which shows an increase of 3% from last fiscal year's average of 87% and exceeds the FY20 target by seven percentage points.

We saw small improvements in compliance for every class except for EEO and Internet Security Awareness. Our District offices are leading the race for overall compliance. At the time of this report, Winnemucca and Ely each were at 100% compliance for all classes! Elko and Tonopah each were at 99% compliance for all classes.

Evaluation of Performance Measure:

Annual target met

Yes.

Which strategies were in place during the data reporting period?

Short term strategies

- Improve effectiveness of eHR email reminders:
 - Change initial email reminders to be sent 1 month prior to expiration.
 - Separate the Internet Security Awareness from the other classes so that reminders either come directly from KnowBe4 or come with a custom message.
 - Attach the table of which classes meet requirement to the reminder email.
 - Commit to keeping eHR data as current as possible so that employees can rely upon the emails they receive.
- Market classes directly to the employees.
 - Focus our marketing efforts on headquarters' employees because they have a low compliance rate, are close to multiple training rooms and have the most flexibility in their schedules.
 - Highlight the benefits of the training instead of marketing solely on the fact that the class is mandatory.
 - Require instructors to change exercises and scenarios every other year so that employees don't get the exact same training every year.
- Develop blended-learning training to maximize the effectiveness of the Division of Human Resource Management (DHRM) online classes. Provide instructor-led modules that utilize activities and case studies to address application of knowledge and highlight NDOT-specific policies and people.
- Cross-train instructors so we have options if an instructor calls in sick.
- Share successful strategies from Districts with Divisions.

Long term strategies

- Embed leadership principles in all required classes. These principles should reinforce the strategic plan.
- Learn and implement technology like videoconferencing, webinars, and Skype to keep classes when we have low enrollment, and/or air transportation is cancelled or there is a higher priority for the meeting room.
- Send trainers to the Employee Management Committee (EMC) for deeper/broader understanding of state policies. Dedicate time for reading EMC decisions.
- Work with SMART21 project to redesign class evaluations to include more appropriate questions, provide reporting options for programs as well as classes, and provide timely feedback to the instructor.

Which strategies were successful?

- Improve effectiveness of eHR email reminders: We changed the initial email reminders to be sent one month prior to expiration. We were also successful at improving the timeliness of course completion records. We feel this has added to the credibility of the emails and therefore increased compliance.
- Market classes directly to the employees: We started sending out direct marketing to employees who were out of compliance. In addition to stating the employee was out of compliance, we also advertised the content and benefits of taking the class. Most of our classes were scheduled in Carson City, which is where the greatest need was. We believe these changes to marketing increased knowledge of availability of training and therefore increased compliance.
- Learn and implement technology like videoconferencing, webinars, and Skype: HRD Training Section trainers have all learned to effectively use Microsoft Teams to provide virtual training. This allows us to offer training when class size is small, when meeting rooms are not available, and during the social distancing/stay at home protocols which has increased compliance.

Which strategies were not successful and why?

Short term strategies

- Improve effectiveness of eHR email reminders: We were not able to separate the Internet Security Awareness from the other classes or attach the table of which classes meet requirement to the reminder email. As a result, there is still some confusion about how employees can get the training they need, and compliance may be negatively affected.
- Market classes directly to the employees: We are updating all classes to be presented in a virtual format and many of the exercises have been replaced, however a permanent strategy of requiring instructors to change exercises has not been accomplished. As a result, employees may think they have already taken a class and compliance may be negatively affected.
- Develop blended-learning training to maximize the effectiveness of the DHRM online classes: Because of the COVID 19 pandemic, we have been focusing on learning virtual training methods and have not implemented a blended learning strategy. As a result, employees who attend online training may not get the full benefits. This may not be negatively affecting compliance but could improve effectiveness.
- Cross-train instructors so we have options if an instructor calls in sick: We did not cross-train instructors and as a result some mandatory training classes were canceled. This may have had a negative impact on compliance.
- Send trainers to the EMC for deeper/broader understanding of state policies: We were not able to dedicate time for attending EMC meetings and reading EMC decisions. As a result, we are lacking “real-world” exercises and information. This may affect compliance negatively.

Strategies for improvement planned for next reporting period:

Short term strategies

Send the documents “Where to Find the Training You Need,” “How to Enroll in Online Training through NVeLearn” and “How to Enroll in Instructor-led Training through NEATS” to all employees once per quarter. These documents, together, help employees find and enroll in the mandatory classes. By sending the documents quarterly, we can get the information to employees at the time they need it. DHRM’s SMART 21 Team will take over email reminders after the 1/1/21 switchover day. We will do double reports for Q3 and Q4 to see if we get the same data that the new system gets.

Advertise at the end of each quarter on the compliance for each District and HQ. When SMART 21 is released on 1/1/21, we will track smaller units and increase the competition.

Long term strategies

Work with DHRM to review one online class per quarter. Because many of our supervisors are taking their training online, we would like to improve the effectiveness of those classes.

Track promotion and start dates so that we can see which employees are within the one-year grace period for taking supervisory classes.

Does the performance measure effectively measure what is desired?

Yes.

Does monitoring and evaluating this performance measure improve your process?

Yes. Monitoring and evaluating this performance measure help us to direct market our classes to the employees who need the classes. It raises the priority of mandatory classes in our work schedule and requires that we have communication with training coordinators and division heads. We believe that keeping grounded in these numbers helps us improve our processes.

Is there a more effective performance measure that should be considered? If so, explain

This Performance Measure is tied to the goal “Enhance organizational and workforce development.” The connection is based on a belief that supervisors who understand the communication tools provided by the State of Nevada (such as work performance standards, employee appraisals, discipline), fairness tools (equal employment opportunity, interviewing and hiring, and grievances) and safety tools (alcohol and drug testing) will create a healthy working environment where employees become and remain efficient, productive, and satisfied workers.

NDOT is currently working on a strategic plan. One of the strategies for "Organizational and Workforce Development" may become a better measurement, but at this time this is the best measurement.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

The stay at home order has positively affected our compliance. Many employees took the stay at home time to complete their training online.

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

No.

3. IMPROVE EMPLOYEE SATISFACTION

Performance Measure:

Percentage rating obtained from employees' satisfaction surveys.

Current year target: Overall rating 75%

Ultimate target: Overall rating of 80%

Performance Champion/Division:

Human Resources Manager/HRD

Support Divisions:

All.

Overview and 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 team members. A satisfied workforce will excel at their duties, and this benefits the people of Nevada, our visitors, and others traveling through our state. This performance measure works toward meeting NDOT's strategic plan goals including promote a safety-first culture, efficiently operate and maintain the state transportation system, enhance internal and external communication, and enhance organizational and workforce development.

Supporting data:

Overall Employee Satisfaction

2016 FY	57%
2017 FY	67%
2018 FY	69%
2019 FY	66%
2020 FY	75%

Historical Level of Employee Participation (Respondents)

Year of Survey	Launch Date	Closing Date	# of Employee Respondents
2016	April 25	June 20	957
2017	June 28	August 30	929
2018	June 29	August 10	969
2019	April 15	June 21	872
2020	April 13	July 13	823

Employee Satisfaction Survey Results

Key Question Response Comparison From 2019 to 2020			
Survey Category	2019	2020	Increase/Decrease
Satisfaction of workplace safety.	77%	75%	-2%
Satisfaction of workplace physical conditions.	68%	73%	+5%
Satisfaction with ability to express concerns to their immediate supervisor.	78%	76%	-2%
Satisfaction with ability to communicate effectively with their immediate supervisor.	73%	76%	+3%
Satisfaction with their immediate supervisor recognizing when they go above and beyond their normal duties.	69%	72%	+3%
Satisfaction with management applying policy decisions consistently.	54%	56%	+2%
Satisfaction with ability to express concerns to their management.	61%	63%	+2%
Satisfaction with flexibility of employees work hours.	86%	86%	0%
Percentage of employees who would recommend NDOT to a friend	59%	65%	+6%

Evaluation of Performance Measure

Annual target met

Yes, 75% of respondents indicated they were satisfied or very satisfied with NDOT overall.

Which strategies were in place during the data reporting period?

The 2019 performance measure document identified the following strategies for improvement to be implemented in FY2020:

- Continue communications from management to employees including “Donuts with the Director”, All Team Chats, and Senior Leadership Team Member Meetings.
- Promote flexibility in the workplace, job security, training opportunities and a pleasant work environment for employees.
- Evaluate pay inequities through the accelerated salary process.
- Encourage and require supervisory training, in compliance with regulations, that includes communication, management styles, and coaching.
- Communicate to employees that the survey results have been reviewed and how leadership is using the results to improve NDOT.
- Continue conducting and analyzing annual satisfaction surveys and making appropriate recommendations to the Director’s Office for addressing employee satisfaction.

Which strategies were successful?

Communication from management and immediate supervisor strategies were successful. Responses to all items about immediate supervisors indicated high levels of favorability. 79% of employees agreed or strongly agreed their immediate supervisor “promotes two-way communication”, and 76% of respondents agreed or strongly agreed their immediate supervisor “communicates effectively.”

Strategies to promote flexibility and security in the workplace were successful. Respondents were asked to indicate satisfaction regarding general aspects of their job. The most satisfaction was allotted to flexibility of work hours (86% reported being “satisfied” or “very satisfied”), followed by job security (85%).

Strategies to encourage and require supervisory training were successful. Supervisors with adequate training are more likely to conduct themselves ethically and apply policy and procedure consistently. Most respondents agreed or strongly agreed that their immediate supervisor lives up to NDOT’s standard Code of Ethics (80%).

Which strategies were not successful and why?

NDOT was not able to evaluate pay inequities through the accelerated salary process. Although NDOT HR conducted inequity evaluations, NDOT has a limited level of approval authority. Many respondents stated that NDOT provides a great work environment, but lamented the low salary and poor benefits, which employees claimed made NDOT unable to compete with local, city, and county opportunities and were well behind private organizations.

Strategies for improvement planned for next reporting period:

Strategies for improvement are detailed in NDOT’s 2020 Strategic Plan: A Roadmap to the Future. NDOT’s Strategic Plan identifies six goals. One of the many outcomes of successfully implementing strategies to meet the six goals will be improved employee satisfaction. Below are strategies and actions that will directly impact employees with the likely outcome of improved overall satisfaction:

Short term strategies

- Develop and implement NDOT Team Safety Plan
- Develop building and facility maintenance and repair plan
- Improve internal and external customer service
- Build a cohesive state-wide communications program
- Evaluate and update communication structure and policies
- Conduct proactive organizational change process to address emerging trends
- Ensure business and operational continuity
- Administer Department policies and procedures consistently
- Retain and enhance mid-year talent
- Consolidate and transform Department data systems

Long term strategies

The NDOT Executive and Senior Leadership teams’ commitment to supporting and executing the NDOT Strategic Plan will ensure success.

Does the performance measure effectively measure what is desired?

Yes.

Does monitoring and evaluating this performance measure improve your process?

Yes, the detailed breakdown of employee satisfaction provided by the annual survey identifies areas of success and deficiency. Areas of success are replicated, and areas of deficiency are evaluated for improvement. The survey provides support and guidance for the creation of specific goals and programs linked to the NDOT strategic plan.

Is there a more effective performance measure that should be considered? If so, explain

No. Overall employee satisfaction is a critical factor for NDOT to execute the mission, vision, and goals of the Department.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

Yes. The survey was rolled out soon after the “stay-at-home” order was issued. The survey was open to respondents from April 13 to July 13, 2020. The final survey report states that respondents referenced the current COVID-19 situation as a concern regarding wages and benefits. Respondents also commented about the pandemic negatively affecting efficient and effective communication. Comments regarding COVID-19 were negative and may have decreased the overall employee satisfaction rating.

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

No.

4. STREAMLINE AGREEMENT EXECUTION PROCESS

Performance Measure:

Percentage of Agreements executed within 20 days from when division submits agreement with all supporting documents to the date when it is fully executed, excluding time the agreement is with the second party for signature or awaiting Transportation Board approval. The 20-day target was adopted in 2020 after evaluation of the previous 30-day target.

Current year target: 90% within 20 days

Ultimate target: 99% within 5 days

Performance Champion/Division:

Administrative Services Division, Deputy Chief

Support Divisions:

All divisions that procure professional services over \$2,500.00, including Interlocal, Cooperative and Local Public Agency (LPA) agreements.

Overview and plan support:

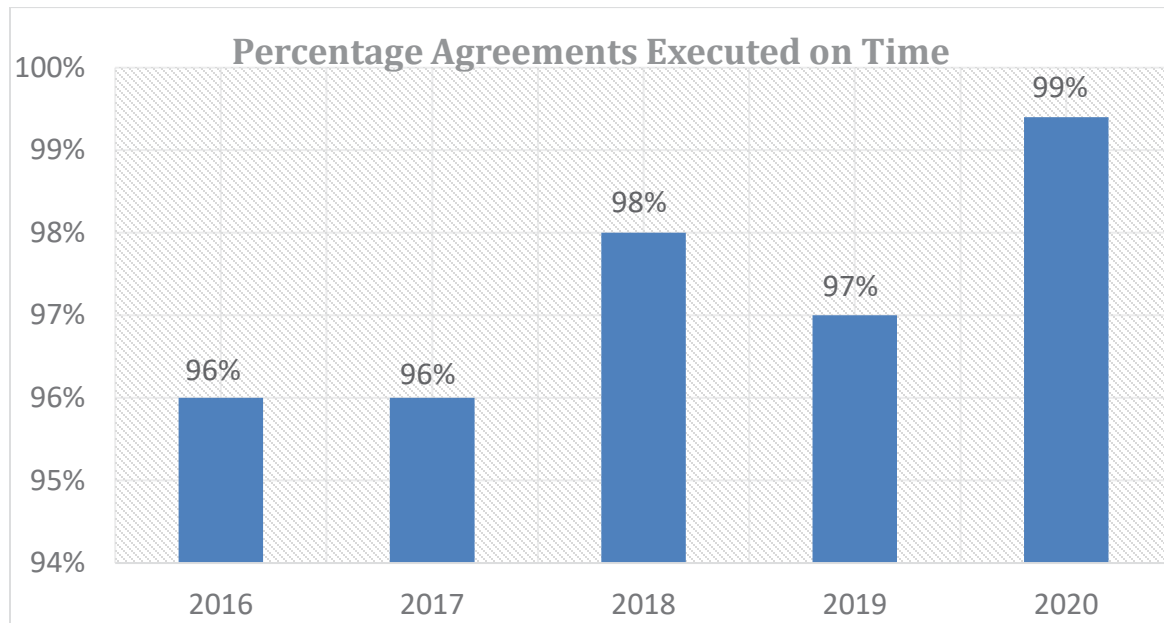
An agreement is the instrument used to procure a variety of services for NDOT. The Agreement Services Section ensures that NDOT procures these services in accordance with established laws, rules and regulations. Delays in executing agreements have a tremendous impact on operations, delaying what can often be critical services, or services that impact the timely delivery of projects. Agreements for services over \$300,000.00 require the approval of the Transportation Board. Agreements less than \$300,000.00 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, and are presented to the Board as informational items.

This performance measure helps meet the Department's mission to provide a better transportation system for the State of 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.

Supporting data:

For fiscal year 2020, the average number of calendar days to execute agreements, measured from the time they were submitted to the Agreement Services Section until the time of agreement execution, but excluding weekends and holidays and time the agreement was with the secondary party or awaiting Transportation Board approval, was six calendar days. During fiscal year 2020, the Department executed 539 agreements, of which 536 were executed in 20 days or less. This translates to 99.44% of all agreements being executed within 20 days, exceeding the target of 90%.

	Number of Agreements Executed	Number Executed Within 30 Days	Percent Executed Within 20 Days	Average Number of Days to Execute
FY 2020	539	536	99.44%	6



Evaluation of Performance Measure:

Annual target met

Yes.

Which strategies were in place during the data reporting period?

All Agreement Services Section staff understands the performance measure, what is measured, and how each stage of processing an agreement affects the measure. The section manager will provide quarterly feedback to staff about the current processing time, tracking and discuss strategies for improving execution of all agreements, including LPA agreements, if applicable.

Which strategies were successful?

All current strategies are working well. Staff understands and takes ownership of their agreements and processes.

Which strategies were not successful and why?

Unaware of any strategies that are not. All strategies appear to be effective.

Strategies for improvement planned for next reporting period

Short term strategies

Reporting will continue to be reported as the number of “workdays”; excluding days with the second party, weekends, holidays, and pending Transportation Board approval. This method of measuring days accurately calculates percentage and average days NDOT took to execute an agreement. With electronic processes in place, Agreement Services has consistently exceeded the 20-day agreement execution with a 96% or higher than the 90% target.

Long term strategies:

Continuing to assess the relevance of performance measure data and revising this measure, as necessary, to accurately reflect the time it takes to process an agreement. Additionally, mandating that all agreements be processed using electronic signature technology is critical to maintaining the success of this performance measure.

Does this performance measure effectively measure what is desired?

Yes

Does monitoring and evaluating this performance measure improve your process?

Yes - All staff is made aware of the goals of a performance measure.

Is there a more effective performance measure that should be considered? If so, explain

No. The efficiencies put into place have been successful in reducing the time to execute an agreement.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

No. With the technology being used, the pandemic has not slowed the time it takes to execute an agreement.

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. Collectively, this will result in overall cost savings.

5. IMPROVE CUSTOMER & PUBLIC OUTREACH

Performance Measure:

Improve customer and public outreach.

Current year target: 75% positive customer satisfaction level Meet goals set forth in NDOT communications plan

Ultimate target: Exceed goals set forth in NDOT communications plan

Performance Champion/Division:

Debbie Binggeli (Customer Service)

Julie Maxey (Public Involvement)

Meg Ragonese (Public Information)

Tony Illia (Public Information)

Supporting Division: All of NDOT

Overview and plan support:

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.

Supporting data:

The Customer Service Department achieved a 75% customer satisfaction rate in FY20. Efforts are being made to standardize the survey process through new Zendesk software.

Previously, NDOT 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 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 public information staff, stresses the need to continue to focus on NDOT's mission of roadway safety and connectivity through a variety of communication channels.

Through the latter half of FY20 and early FY21, a communications consultant will be reevaluating the findings, strategies, and branding from this exercise.

In late 2019, a more robust, 1,000-resident survey through Probolski Research found the following:

- 84% feel safe on our highways and interstates
- 80% are satisfied with our rest areas
- 76% are satisfied with the landscape
- 73% are satisfied with our projects

Evaluation of Performance Measure:

Annual target met

Yes

NDOT public information is happy to report that most of the measurement goals for FY20 were met.

Social Media

- Increased Facebook likes to 14,500 by the end of fiscal year 2020 – Goal met.

Total Facebook likes as of September 18, 2020 = 14,865, and 19,761 people follow NDOT’s page. Facebook likes grew by 14.7% from June 30, 2019 to September 18, 2020.

- On Twitter, maintain two quarters or more with an .4% engagement rate or greater by the end of fiscal year 2020 (an engagement rate between 0.09% and 0.33% is considered high nationally). – Goal met. The engagement rate for April-June 2020 was .8%. The engagement rate for the previous quarter averaged .6%.
- Increase the number of Instagram followers to 2,500 by the end of fiscal year 2020 - Goal met. The total number of Instagram followers as of September 18, 2020 was 2,683. Instagram followers grew by 46.2% from June 30, 2019 to September 18, 2020.

Note: These measures will be revised moving forward to further focus on overall engagement, as opposed to likes/followers. Engagement is composed of numerous metrics and actions, including mentions, shares, views, comments, likes and more. As opposed to a simple follower count, engagement is a better overall indication of how interesting and engaging Department content is with existing and new audiences. Commenting, sharing and other engagement on NDOT social media posts also leads the post to be shared and seen by new audiences, furthering the Department’s message and reach.

Website

- Proactively coordinate with content editors to update/archive and consolidate web site information to reduce the number of current web pages/images by 3% by the end of the fiscal year for a more concise and easier visitor experience. – Goal being implemented.

There were 658 pages/3,057 images in fall 2019, and there are now 598 pages/3,482 images. Currently, web site editors have been trained on ADA document remediation. This is anticipated to result in a continuing consolidation of and reduction in the amount of outdated or unnecessary on-line content.

Media Relations

- Respond to all simple requests from reporters immediately. Provide answers to more complex questions within one business day. – Goal met

Simple questions from reporters were answered immediately and more complex requests were followed up on within one business day.

Public Involvement

- In an effort to better engage our on-line audiences, the Department has a new performance measure to host four or more Virtual Public Involvement (VPI) activities per year. This on-line public information platform will replace the previous performance measure of utilizing social media platforms to allow for participation in public events without physical attendance, such as Facebook Live video. The efficiency of Facebook Live was inconsistent and problematic and Virtual Public Involvement is envisioned to provide more consistently available and easily accessible information to the public.
- Due to COVID 19, all in-person meetings are suspended, as of March 2020. In accordance with Governor Steve Sisolak's emergency directive suspending requirement for a physical meeting location for public meetings while providing alternative methods for remote public participation, public meetings will be available to electronically view and provide public comment as noted in the individual public meeting notices.

Online public meetings scheduled –

- I-11 Tier One EIS – July 31 – August 31, 2020
- Downtown Access Project – August 24 – September 24, 2020.
- I-15 Flamingo to Sahara - Date TBD sometime in September 2020
- Reno Spaghetti Bowl – Date TBD sometime in November 2020

Customer Services

- Achieve 75% positive satisfaction level on NDOT satisfaction survey from all customer service survey participants by end of fiscal year 2020. – **Goal met**

Previously, a “how we did” customer satisfaction survey was sent to citizens who interacted with the NDOT public information office. This survey is temporarily on hold as we unveil the Zendesk customer tracking system this year which will feature on-demand survey functionality.

Strategies for improvement planned for next reporting period:

- We will be aligning our performance measure with the Strategic Plan moving forward by implementing the following:
 - Improving internal and external customer service through full implementation of the Zendesk system and implementing a customer service survey process;
 - Building a cohesive statewide communications program through the development and implementation of an external communications plan, improving social media communications, and modernizing public engagement; and
 - Evaluating and updating communications structures and responsibilities by assessing team roles, fully leveraging PIO and multimedia divisions' capabilities, and creating more predictability in communications.

Does the performance measure effectively measure what is desired?

Yes. However, we need to continuously improve and adapt to modern communications strategies. There are opportunities to improve in terms of efficiency in monitoring, response, and overall cohesion.

Does monitoring and evaluating this performance measure improve your process?

Yes. It holds us accountable along with the detailed goals and strategies set out in the strategic plan.

Is there a more effective performance measure that should be considered? If so, explain.

No.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

No. Our Teams have continued to develop online tools for a meaningful public involvement program and engagement activities to keep our current projects on track. In addition, these online activities follow all federal and state requirements.

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

No.

6. IMPROVE TRAVEL RELIABILITY & REDUCE DELAY

Performance Measures:

- Percentage of Reliable Trips on the Interstate System
- Percentage of Reliable Trips on the National Highway System (NHS)
- Annual Hours of Peak-Hour Excessive Delay (PHED) per Capita
- Percentage of Non-Single Occupancy Vehicle (Non-SOV) Travel
- Freight Trip Reliability Index on the Interstate System

Current and Ultimate Targets:

Performance Goal	Reliable Trips on Interstate (%)	Reliable Trips on NHS (%)	Non-SOV Travel (%)	Freight Trip Reliability on Interstate (Index)	Peak-Hour Excessive Delay (Hour)
2019 Target	86.8	70.0	21.3	1.28	12
Ultimate Target	87.0	87.0	21.6	1.26	10

Performance Measure Champion/Division:

The senior leadership team of the Traffic Operations Division.

Supporting Divisions:

The senior leadership team of the Performance Analysis Division.

Overview and Plan Support:

The Department in coordination with the Federal Highway Administration (FHWA) and the Metropolitan Planning Organizations (MPO's) selected these performance measures to align with the US DOT's Moving Ahead for Progress in the 21st Century (MAP-21) Act passed by Congress on July 6, 2012, the Fixing America's Surface Transportation (FAST) Act passed by Congress on December 4, 2015, and the Department's Transportation System Management and Operations (TSMO) Program Plan executed on May 13, 2020. The performance measures capture most aspects affecting the mobility and reliability of the transportation network, which is an indication of how efficient the system is performing.

The following are simplified definitions of the performance measures that are used to evaluate the mobility and reliability of Nevada's state-maintained roadway system. For more information pertaining to the methodology of the performance metric, please refer to the MAP-21 Fact Sheets on FHWA's website.

- **Percentage of Reliable Trips on the Interstate System**

This metric is an indication of how reliable trip travel times are on the interstate system. For example: if the percentage is 85%, this would indicate that motorists arrived to their destination at the trip's estimated travel time 85% of the time when traveling on the interstate system.

- **Percentage of Reliable Trips on the National Highway System**

This is similar to the metric described above except it only applies to the highway system and excludes the interstate system.

- **Annual Hours of Peak-Hour Excessive Delay per Capita**

This metric indicates the annual number of hours spent per person in excessive delay conditions during peak traffic times. Excessive delay is the extra amount of time each person spent in congested conditions defined by speed thresholds that are lower than a normal delay threshold. Peak traffic times for the purposes of this metric includes 6am-10am and 3pm-7pm on weekdays. This metric also only includes the Las Vegas metropolitan area at this time and will be expanded to include metropolitan areas exceeding populations greater than 200,000 people starting on January 1, 2022.

- **Percentage of Non-Single Occupancy Vehicle Travel**

This metric indicates the percent of the population traveling to work by means of transportation other than in a single occupancy vehicle such as walking, biking, public transportation, carpooling, commuter rail, and telecommuting. This metric also only includes the Las Vegas metropolitan area at this time and will be expanded to include metropolitan areas exceeding populations greater than 200,000 people starting on January 1, 2022.

- **Freight Trip Reliability Index on the Interstate System**

This metric is an indication of how reliable trip travel times are for freight trucks on the interstate system. The index is reported on a scale from 1.0-1.50, where values closer to 1.0 indicate good reliability on the interstate because freight trucks are arriving to their destination at their estimated trip travel time; and 1.5 low reliability because freight trips taking more than one and half times longer than their estimated trip travel time.

The table below is a comparison between the 2019 results and its corresponding targets.

Performance Goal	Reliable Trips on Interstate (%)	Reliable Trips on NHS (%)	Non-SOV Travel (%)	Freight Trip Reliability on Interstate (Index)	Peak-Hour Excessive Delay (Hour)
2019 Target	86.8	70.0	21.3	1.28	12.0
Ultimate Target	87.0	87.0	21.6	1.26	10.0
2019 Results	85.1	86.8	21.4	1.28	7.4

The table below reflects a five-year comparison with previous year data.

Calendar Year	Reliable Trips on Interstate (%)	Reliable Trips on NHS (%)	Non-SOV Travel (%)	Freight Trip Reliability on Interstate (Index)	Peak-Hour Excessive Delay (Hour)
2015	98.8	92.0	n/a	n/a	n/a
2016	88.5	66.0	n/a	n/a	n/a
2017	86.8	86.8	21.5	n/a	11.0
2018	87.0	86.3	21.3	1.27	11.6
2019	85.1	86.8	21.4	1.28	7.4

Supporting Data:

In order to minimize human error and efficiently calculate the complex performance measures, the Department utilizes a software program called the Regional Integrated Transportation Information System (RITIS). This software program analyzes numerous traffic data sources such as information from the FHWA National Performance Management Research Data Set (NPMRDS), as well as INRIX probe data from mobile phones, vehicles, portable navigation devices, and embedded fleet management systems. With the exception of Non-SOV Travel, all of the performance measures were calculated using the RITIS software program for improved accuracy. Since the RITIS software program did not have a feature to calculate Non-SOV Travel, the Department in coordination with the Regional Transportation Commission of Southern Nevada (RTC-SNV) used the U.S. Census American Community Survey (ACS) commuting (journey to work) data to obtain the 2019 target value. Furthermore, the Department's process for measuring the reliability of the transportation system is an evolving process that will be fine-tuned as reliable data becomes available. In mid-2020, the Department expanded its data set, which is expected to allow for further refinement and better accuracy in the 2021 annual performance measure report.

Evaluation of Performance Measure:

Annual Targets Met (yes/no)?

Motorist trip reliability on the interstate system did not meet the annual target. However, 85.1% is still a very good indication of trip reliability and the target did not meet the annual target mainly due to the impacts from project NEON.

Performance Goal	Reliable Trips on Interstate (%)	Reliable Trips on NHS (%)	Non-SOV Travel Per Capita (%)	Freight Trip Reliability on Interstate (Index)	Peak-Hour Excessive Delay (Hour)
2019 Target	86.8	70.0	21.3	1.28	12.0
2019 Results	85.1	86.8	21.4	1.28	7.4
Target Met	No	Yes	Yes	Yes	Yes

Which strategies were in place during the data reporting period?

The Department has several programs which aim to improve system reliability by mitigating recurring and non-recurring congestion, improving traffic safety, and reducing secondary incidents, these programs are:

- The Reno and Las Vegas Freeway Service Patrol (FSP) Program, which improves reliability on the interstate by removing crashed or disabled vehicles from travel lanes during peak traffic times.
- The Statewide Hazmat Emergency Response Program, which improves reliability on all state-maintained roadways by mitigating hazardous material incidents as quickly and efficiently as possible.
- The 511 Traveler Information Program, which improves reliability on all state-maintained roadways by providing relevant traffic and weather conditions to motorists.
- The Traffic Incident Management (TIM) Program, which improves reliability on all state-maintained roadways by providing consistent first responder training and enhancing cross-agency collaboration.
- The Waycare Artificial Intelligence Platform System enhances incident management capabilities, promotes cross-agency collaboration, and provides traffic predictive insights.
- The Transportation System Management and Operations Program improves safety, mobility, and reliability via performance-driven strategies which focus on managing and operating the system more efficiently in order to optimize the existing infrastructure.

Which strategies were successful?

All the strategies listed above were successful. Each strategy is updated and optimized regularly via quarterly coordination meetings between the Department, first responders, and local agencies for the purpose of improving safety, collaboration, and reliability of the transportation system.

Which strategies were not successful and why?

There are no strategies that have been identified as unsuccessful or underperforming. All strategies described above are in alignment with the latest DOT national use cases.

Strategies for improvement planned for next reporting period:

The Department, via the Traffic Incident Management Program, is planning to evaluate the feasibility of implementing a Towing & Recovery Incentive Program (TRIP). TRIP is a quick clearance incentive program that partners DOT with heavy-duty recovery companies and pays a monetary bonus for clearing commercial vehicle wrecks within 90 minutes. TRIP's key objective is to standardize towing response and facilitate the safe and quick clearance of commercial vehicle crashes on the interstate system.

Do the performance measures effectively measure what is desired?

Yes. These metrics effectively measure the reliability of the transportation system and also align with FHWA MAP-21 performance measures, which are consistent throughout the nation.

Does monitoring and evaluating these performance measures improve your process?

Yes. They are an indication of how successful program strategies have been at enhancing the mobility and reliability of the transportation system.

Is there a more effective performance measure that should be considered? If so, explain

Not at this time, but the Department is currently expanding its data set, which may open up new opportunities for refined and/or granular performance measures.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

This report covers 2019 calendar year data; therefore, it does not impact the results in this report. In addition, preliminary analysis for the first six months of 2020 indicate that performance measures are exceeding annual targets, which could mainly be due to reduced traffic volumes resulting from COVID-19. It should be noted that the reduced traffic volumes have resulted in more crashes, which is mainly due to higher traffic speeds. However, due to the strategies listed above and their effectiveness at clearing incidents from travel lanes, together these strategies have maintained the mobility and reliability of the transportation system.

Will meeting the yearly targets have a fiscal impact? If so, explain.

Yes. The targets cannot be met without the aid of the program strategies described above such as: FSP, TIM, Hazmat, 511, Waycare, and TSMO. Each program strategy plays a vital role in meeting the performance target. The Department also needs to continue providing access to software programs such as RITIS for the performance measure calculations; and continue purchasing traffic data for improved accuracy and reliability.

7. STREAMLINE PROJECT DELIVERY: BID OPENING TO CONSTRUCTION COMPLETION

Performance Measure:

Streamline project delivery: schedule and estimate from award opening to construction completion fiscal year 2019 (July 1, 2019 to June 30, 2020)

Current year target:

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

Ultimate target: 80% of projects completed within budget, schedule and change order measures

Performance Champion/Division:

Chief Construction Engineer, Construction Division

Supporting Divisions:

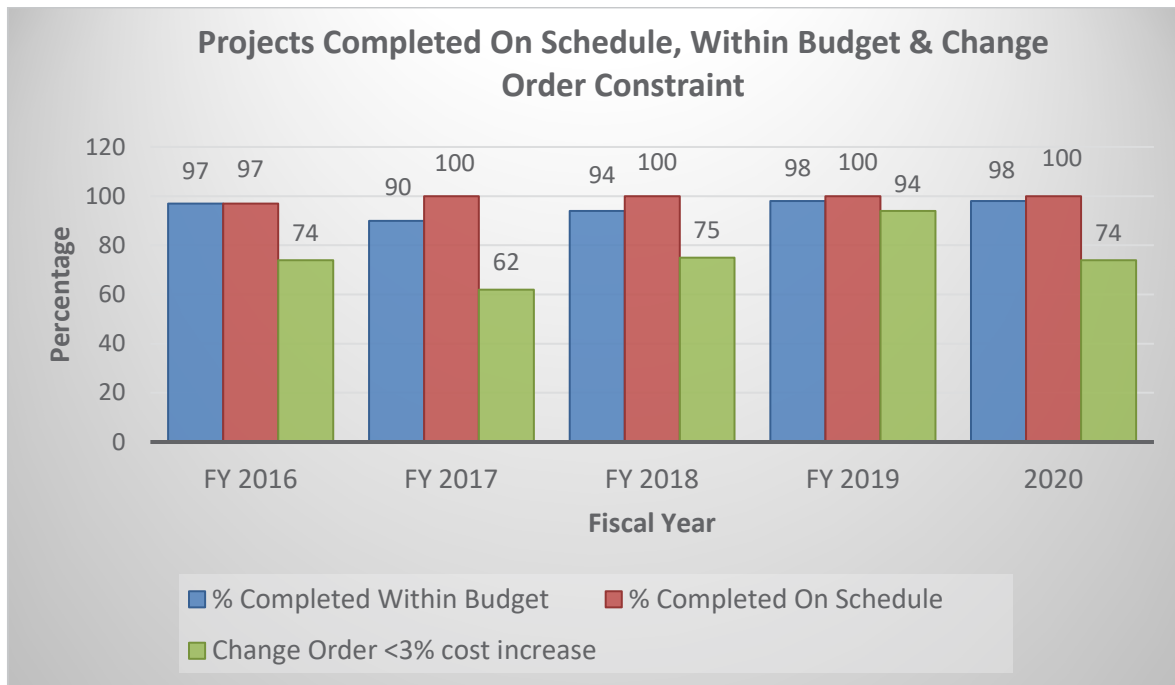
District Construction Crews Statewide, Project Delivery Divisions

Overview and 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.

Supporting data:

Number of Completed Contracts:	51
Number Completed Contracts within Budget:	98%
Number Completed Contract within Schedule:	100%
Number Completed Contracts Change Orders:	74%



Evaluation of Performance Measure:

Annual target met:

Yes, for budget and schedule. No, for change orders.

Which strategies were in place during the data reporting period?

Standard strategies in place during the reporting period includes:

- Thorough plan and specification review process to ensure intent is clear, and contract documents provide for the highest quality possible for each construction project.
- Budgets are developed and tracked closely to ensure fiscal responsibility.
- Contract schedules are developed to complete the contract work with minimal impacts to traffic and public and providing adequate time for the contractor to provide a quality job.
- Bid Review Analysis Team performs an in-depth analysis of every contract bid to identify potential quantity or plan errors and potential vague or conflicting specifications.
- Detailed tracking of quantities during construction for accurate payment.
- Change order review process in place to ensure a detailed analysis and well documented accounting of changes to the contract.

Which strategies were successful?

All of the strategies were successful.

Which strategies were not successful and why?

None

Strategies for improvement planned for next reporting period:

Short term strategies

Continued coordination during project development to ensure quality plans, specifications and accurate quantities for every construction project.

Long term strategies

Change reporting data from a project level approach to a program level approach as discussed below. Continue coordination during project development and to provide program and policy to statewide construction crews for contract administration.

Does the performance measure effectively measure what is desired?

The current performance measures are reporting on the performance of each individual construction contract; however, a more effective measure would be to report on the construction program as a whole. Reporting on individual contracts skews the actual performance of the entire program because the number of contracts which are completed within budget, schedule and change order measures does not account for the value or magnitude of the overall program.

Evaluating the entire construction program, the data shows the following:

Number of Completed Contracts:	51
Completed Contracts within Budget:	93%
Completed Contract within Schedule:	94%
Completed Contracts Change Orders:	3%

This data demonstrates the Department's overall construction program performs at or above performance measures and is a strong indicator of the success of the overall program.

Does monitoring and evaluating this performance measure improve your process?

Yes, it assists in determining ongoing effective and appropriate approach to evaluating data.

Is there a more effective performance measure that should be considered? If so, explain

No.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

No.

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

No.

8. MAINTAIN STATE HIGHWAY PAVEMENT

Performance Measure:

Percentage of state-maintained roadways in fair or better condition.

Current year target:

Category 1: 95% Minimum fair or better condition

Category 2: 90% Minimum fair or better condition

Category 3: 85% Minimum fair or better condition

Category 4: 75% Minimum fair or better condition

Category 5: 50% Minimum fair or better condition

These targets were updated in 2020 to reflect a more realistic picture of current conditions and resource constraints while continuing to focus on preservation and asset condition as a priority for the Department.

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.

Performance Champion/Division: Charlie Pan, Chief Materials Engineer / Materials

Supporting Divisions: Maintenance and Asset Management

Overview and Plan Support:

This performance measure supports the Department's Strategic Plan to effectively preserve and maintain NDOT's pavement assets. 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 beyond 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 5,381 centerline mile (13,708 lane 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. Category 1 is further broken down in to Asphalt and Concrete surfaces for clarity. 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.

Supporting data:

Current Pavement Condition of the State-Maintained Road Network

A separate pavement condition minimum fair or better target has been established for each category of road. These targets represent a reasonable condition in which the road should be maintained. It also represents a balance between condition and expense. Smoother roads in better condition are generally less expensive to maintain and rehabilitate. However, when roads become rough, cracked, or rutted, more money must be spent to bring them back to 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 that have been established for the condition of the roads. For the 2019 data collection period, 5,264 miles of the total 5,381 centerline miles (13,543/13,708 lane miles) of the roadway network were surveyed and are reported on in this table.

TABLE 1. Pavement Condition versus Annual Target by Road Category

Condition	PSI Rating Scale	PSI Condition by Road Prioritization Category Percentage (%) and Number of Miles						
		Road Category 1		Road Category 2	Road Category 3	Road Category 4	Road Category 5	Roadway Network Totals
		A	C					
Very Good	5.00 to 4.00	67.6% 380	3.8% 4	34.0% 315	25.3% 308	4.4% 38	0.7% 11	20.0% 1,054
Good	3.99 to 3.50	26.0% 146	41.4% 41	38.0% 352	47.7% 580	32.2% 277	14.9% 238	31.1% 1,635
Fair	3.49 to 3.00	5.1% 29	34.8% 35	16.3% 151	21.4% 261	38.4% 330	28.8% 461	24.1% 1,267
Mediocre	2.99 to 2.50	1.1% 6	16.6% 16	6.7% 62	4.4% 53	19.8% 171	29.0% 464	14.7% 772
Poor	2.49 to 2.00	0.1% 0.50	3.4% 3.30	3.1% 28.60	0.9% 10.50	4.2% 36.40	16.2% 258.50	6.4% 338
Very Poor	< 2.00	0.0% 0	0.0% 0	2.0% 18.40	0.4% 4.40	0.9% 7.90	10.5% 168.20	3.8% 199
Total Miles:		660		927	1,217	860	1,601	5,265
Condition Goal: <i>Min. Percentage of Roads in Fair or Better Condition</i>		95%		90%	85%	75%	50%	
Current Condition: <i>Percentage of Roads in Fair or Better Condition</i>		96.0%		88.3%	94.4%	75.0%	44.4%	75.1%
Does the current condition meet the condition goal?		YES		NO	YES	YES	NO	---

Pavement Preservation Repair Work for the State-Maintained Road Network

During fiscal year 2020, NDOT advertised approximately \$123.1 million worth of contract maintenance and rehabilitation pavement repair work. These expenditures addressed the preservation needs for approximately 354 centerline miles (793 lane 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 2020 along with the corresponding amount of mileage that was improved.

TABLE 2. Advertised Pavement Repair Work for Fiscal Year 2019

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
2020	\$25,395,088	\$97,750,321	\$123,145,409
	317 Centerline Miles 645 Lane Miles	37 Centerline Miles 148 Lane Miles	354 Centerline Miles 793 Lane 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 backlog is calculated by determining the difference between the percentage of miles below the red line and the established goal percentage, converting the percentage to miles, and then multiplying the number of deficient miles by the estimated cost of rehabilitating those roads. The total backlog cost based on 2019 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	16	0	0	97
Estimated Cost to Rehabilitate Pavement Per Mile	\$1.90M	\$1.6M	\$0.86M	\$0.54M	\$0.30M
Total Cost to Rehabilitate Pavement Per Road Category	\$0M	\$25.3M	\$0M	\$0M	\$29M
Total Backlog of Pavement Rehabilitation Work	\$54.3M				

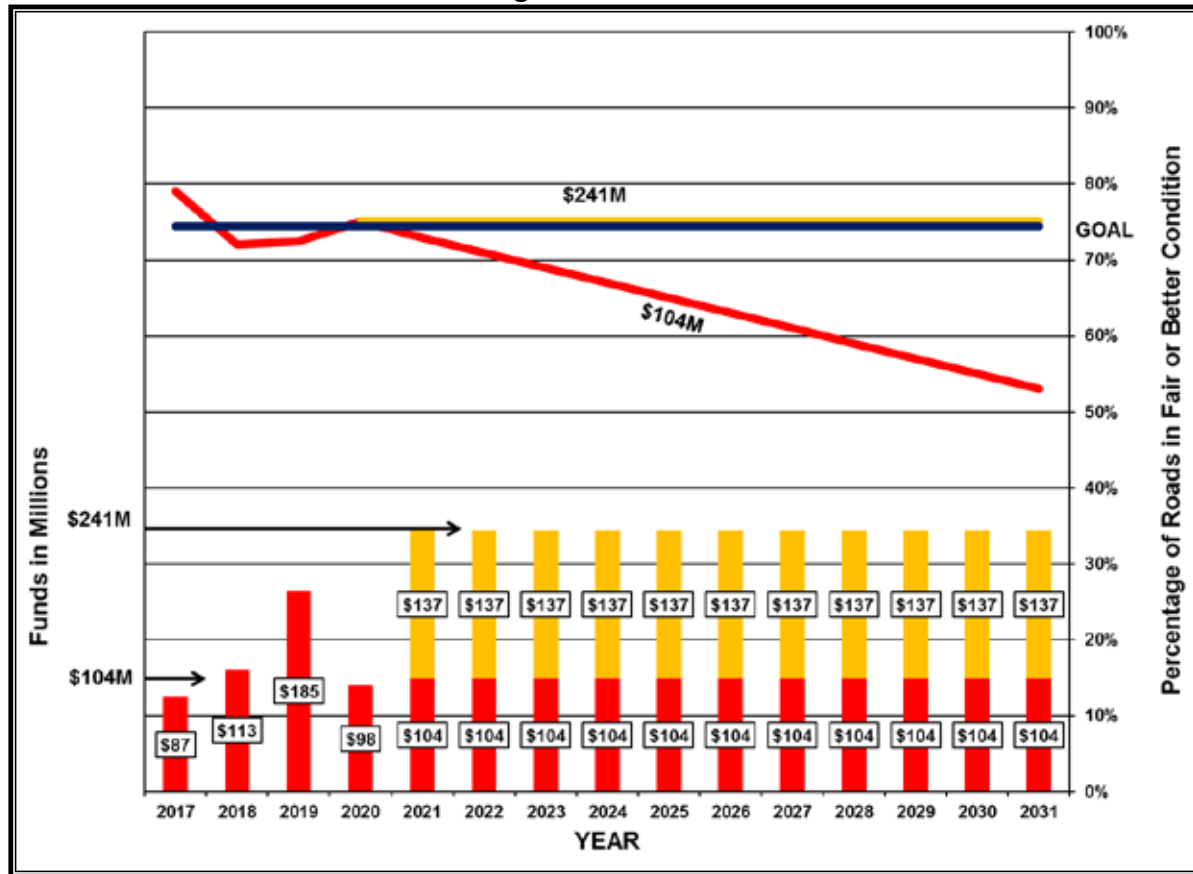
Effects of Future Funding on Backlog and Pavement Condition

The estimated total backlog of pavement preservation work is a product of the funding gap that currently exists in the budget for maintenance and rehabilitation. As illustrated by the red line in Figure 1 below, with the historic average \$104 million spent annually with similar project selection processes, the average condition of the roads will continue to deteriorate.

Currently, on average, 75.1% of the state-owned roadway network is in fair or better condition. It has been estimated that approximately \$241 million is needed each year to maintain the network in this condition, represented by the yellow line. The composite network goal is represented by the blue line and is shown as 74.5% based on the individual condition targets and number of miles for each category. The current average condition is higher than this composite goal, even though several categories are not. This suggests that with appropriate project selection, additional funding beyond that required to maintain current conditions should not be necessary to resolve the backlog.

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

The state-maintained roadway network is classified into five separate road prioritization categories so that the network may be more easily managed. These road 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 similar timing for maintenance and rehabilitation repair 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 Category	¹ Description	Examples
1	Controlled Access Roads	IR015, Clark County IR580, Washoe County IR080, Elko County
2	ESAL > 540 or ADT > 10,000	SR146, St. Rose Parkway, Clark County US050, Lincoln Highway, Carson City SR227, Fifth Street, Elko County
3	$540 \geq \text{ESAL} > 405$ or $1,600 < \text{ADT} \leq 10,000$	SR157, Kyle Canyon Road, Clark County SR028, Lake Tahoe Area, Douglas County SR225, West Urban Limits of Elko, Elko County
4	$405 \geq \text{ESAL} > 270$ or $400 < \text{ADT} \leq 1,600$	SR158, Deer Creek Road, Clark County SR206, Foothill Road/Genoa Lane, Douglas County SR228, Jiggs Road, Elko County
5	$\text{ADT} \leq 400$	SR156, Lee Canyon Road, Clark County SR121, Dixie Valley Road, Churchill County SR229, Secret Pass Road, Elko County

¹ESAL 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.

NDOT uses a pavement condition rating system called the Present Serviceability Index (PSI) to objectively measure important roadway attributes such as travelers’ responses to motion and appearance as demonstrated by a smooth riding surface that is without cracking, rutting, patching, or potholes.

The PSI pavement condition rating system uses a value that is calculated using pavement roughness measurements and mathematical formulas that quantify pavement distresses such as cracking and rutting. These measurements and formulas are combined and standardized into an objective rating scale numbered from zero to five. Pavement rated from four to five is interpreted as pavement in new or very good condition with a smooth surface that is without distress or irregularities. Pavement rated less than two is interpreted as pavement in very poor or failed condition with the roughest of surface conditions and no longer navigable at the posted speed limit. The PSI pavement condition rating system is used to quantify the pavement condition for each road 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. PSI Rating System and Corresponding Pavement Condition

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.

Evaluation of Performance Measure:

Annual target met

The annual target was met for roads in Categories 1, 3, and 4. Category 2 and 5 did not meet the targets.

Which strategies were in place during the data reporting period?

Short term to next reporting:

- Use pavement prediction models to anticipate future pavement condition levels. This will help predict what amount of funding will be required in the future.
- Collect pavement condition data as frequently as possible to provide the most accurate information regarding the state-maintained roadway network.

Long term:

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

- 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.
- 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.

Which strategies were successful?

There is a lag between when projects are chosen for rehabilitation, and when the rehabilitation is performed, so it is not easy to determine effectiveness in the short term. However, these strategies have been in place for some time, we can see that they have resulted in a system that has been degrading slower than anticipated given the available funding.

Which strategies were not successful and why?

As noted, the previous strategies were not specific, and determining the successfulness is difficult as a result. The strategies did provide reasonable results given the constraints, but they did not produce a system that meets the desired measure of effectiveness, and progress was not being made with them in place.

Strategies for improvement planned for next reporting period:

The previous strategies have been in place without update since 2014. These strategies are valid pavement management concepts, but are not properly focused for this purpose, and therefore make determination of effectiveness difficult. As a result, new, more specific strategies have been put in place.

Short term strategies

Focus on projects on Category 2 and 5 roads, especially in Clark County and southern Nevada. These categories are the only ones currently below target and focusing on southern Nevada should help provide maximum benefit to the public.

Long term strategies

- Secure funding at a level more appropriate for these targets. The historical \$104 million average is inadequate. The Department has established an investment goal of \$200 million per year, beginning in fiscal year 2021 in order to meet the pavement conditions targets, but may take several years to show a measured improvement. .
- Work to transfer ownership of roadways that serve a local need and no longer function as a state route . This strategy allows for more productive use of funds relative to the targets.
- Incorporate the expected performance of candidate projects with respect to these measures directly into the project selection process. This will make the impact of decisions more easily understood and help increase the potential benefits.

Does the 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.

Does monitoring and evaluating this performance measure improve your process?

Monitoring and evaluating the pavements with respect to these metrics is necessary to determine the effectiveness of the performed rehabilitation and maintenance. Only through the evaluation can progress be determined.

Is there a more effective performance measure that should be considered? If so, explain

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.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

The data set used to determine performance was collected prior to the pandemic. Also, the funding for the FY2020 projects was secured prior to the pandemic. Because of this, neither the performance measure nor the ability to meet targets for this performance period were impacted. It is unclear what impacts it may have going forward.

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

Yes. The direct project costs of meeting these targets is beyond what has been spent historically and the Department is investing additional funds to preservation starting in FY 2021. While this potentially has an impact to funds available to other types of projects, the Department continues to balance the needs of current assets with enhancements to the system. Ultimately, additional investments now in current assets will reduce the overall burden of those assets later (maintain versus replace).

9. MAINTAIN NDOT FLEET

Performance Measure:

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 has reached the age or mileage that has been established for replacement.

A lower percentage is desired, indicating the fleet is being replaced in a timely manner and expensive rebuilds and breakdown repairs are being avoided.

2. Percentage of fleet that complies with scheduled maintenance requirements.

This measure is the percentage of the fleet that is maintained as per Department preventive maintenance requirements. Preventive maintenance allows the vehicle to perform over expected life without breakdown. As the fleet is maintained per the manufacturer's recommendations based on mileage or accrued hours of operation, compliance is achieved.

A higher percentage is desired, indicating the fleet is being maintained as recommended to gain the maximum performance life.

Current year target:

1. Decrease of 1% per year
2. Increase of 1% per year

Ultimate target:

1. 10% Maximum
2. 95% Minimum

Performance Champion/Division:

Equipment Division

Supporting Divisions:

Districts I, II, and III support the performance measure through the repair facilities that perform scheduled vehicle preventive maintenance.

Overview and plan support:

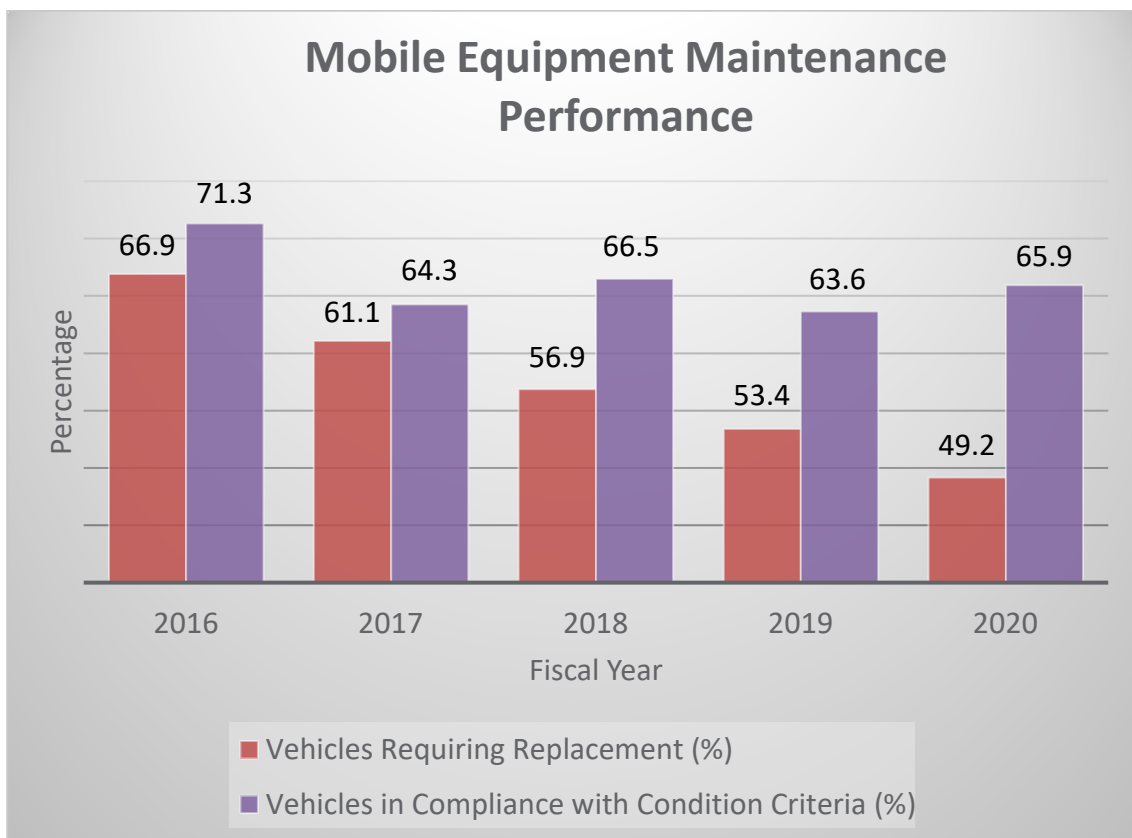
In Fiscal Year 2020 the Equipment Division continued to purchase new replacement equipment because funds continued to be available. The Rebuild Program will be continued on a limited basis for specialty equipment.

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's Mission, Vision, Core Values, and Goals by: Providing, operating, and preserving a transportation system that enhances safety,

quality of life and economic development through innovation, environmental stewardship and a dedicated workforce. The goal is safety first, cultivate environmental stewardship, efficiently operate and maintain the transportation system in Nevada, promote internal and external customer service, and enhance organizational and workforce development.

Supporting data:

Year	1. % of Fleet Requiring Replacement	Change from Previous Year (negative is good)	2. % of Fleet Meeting Maintenance Requirements	Change from Previous Year (positive is good)
FY 2007	38.65	N/A	60.30	N/A
FY 2008	34.96	-3.69	62.55	+2.25
FY 2009	39.18	+4.22	66.30	+3.75
FY 2010	49.01	+9.83	68.84	+2.54
FY 2011	48.88	-0.13	65.42	-3.42
FY 2012	52.86	+3.98	69.86	+4.44
FY 2013	44.00	-8.86	73.41	+3.55
FY 2014	56.99	+12.99	75.28	+1.87
FY 2015	56.29	-0.70	73.11	-2.17
FY 2016	66.91	+10.62	71.31	-1.80
FY 2017	61.07	-5.84	64.26	-7.05
FY 2018	56.86	-4.21	66.50	+2.24
FY 2019	53.41	-3.45	63.63	-2.87
FY 2020	49.17	-4.24	65.94	+2.31



Evaluation of Performance Measure:

Annual target met

Yes, on performance measures 1 and 2.

Which strategies were in place during the data reporting period?

Performance Measure 1

- Revise replacement criteria by increasing usage criteria in selected class codes.
- Removing age criteria in other specified class codes.
- Implement policy controls for equipment replacement. The High Utilization Target Point was changed from 75% to 125% in the Equipment Division Policy & Procedure, 709 – Fleet on August 16, 2016. This allows for greater span of utilization between the low spectrum and high spectrum for all rolling stock.

Performance Measure 2

- Analyze quarterly Preventive Maintenance (PM) due and accomplished on core fleet.
- Develop enforceable policy for non-compliance of PM standards.

Which strategies were successful?

All strategies were successful in that both Annual Targets to produce the desired percentage, indicating the fleet is being maintained as recommended to gain the maximum performance life.

Which strategies were not successful and why?

All strategies were successful.

Strategies for improvement planned for next reporting period:

Short term strategies

Performance Measure 1

- Continue revising replacement criteria by increasing usage criteria in selected class codes.
- Continue to remove age criteria in other specified class codes.

Performance Measure 2

- Continue to analyze quarterly Preventive Maintenance (PM) due and accomplished on core fleet.
- Continue to develop enforceable policy for non-compliance of PM standards.

Long term strategies

Performance Measure 1

- Maintain fleet size by usage assessments.
- Minimize retention of replaced vehicles.

Performance Measure 2

- Perform annual fleet condition audit.

Does the performance measure effectively measure what is desired?

Yes.

Does monitoring and evaluating this performance measure improve your process?

Yes.

Is there a more effective performance measure that should be considered? If so, explain

No. A Predictive Maintenance Program is not financially feasible for NDOT. This type of program would prove to be costly and the fleet does not meet the criteria for such a program

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

COVID has no effect on our performance measure unless funding for replacement equipment is cut.

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

Performance Measure 1. Yes. Meeting the target will require substantial increase in funds allocated for fleet replacement.

10. MAINTAIN NDOT FACILITIES

Performance Measure:

Percent completion of facility assessments, and priority facilities work.

Annual target: Increase by 2% annually

Ultimate target: 100%

Performance Champion/Division:

Chief Maintenance Engineer

Support Divisions:

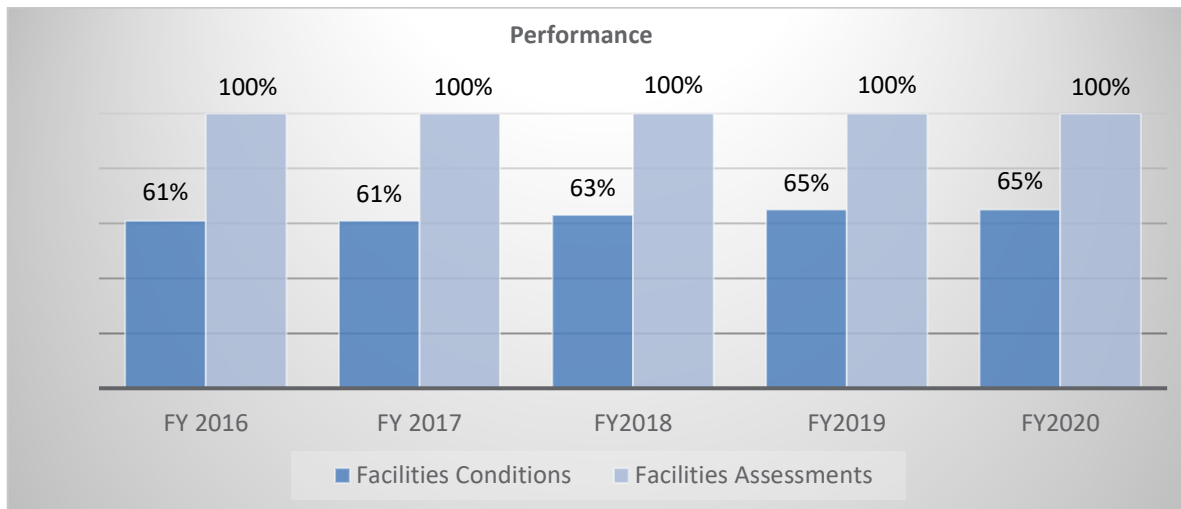
Districts, Administrative Services

Strategy plan support:

Facility Condition Analysis (FCA) reports will ensure NDOT buildings comply with building and safety codes and are properly maintained. Each NDOT-owned and maintained facility will be evaluated on a seven-year cycle. Completion of the priority work items will return the facilities to normal operation, defer deterioration, correct fire/life safety hazards, and correct ADA deficiencies.

Supporting Data:

SFY2015	SFY2016	SFY2017	SFY2018	SFY2019	SFY2020
58%	61%	61%	63%	65%	65%



This performance measure works toward meeting NDOT’s 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.

Evaluation of Performance Measure

Annual target met?

Although we have completed the following projects since the previous annual report, we did not meet our annual target:

- No CIR – Emergency repairs to the Cosgrave Rest Area well.
- No CIR – Testing and repairs to the gas distribution system at Old Hot Springs.
- No CIR – Card access and security cameras at various locations statewide.
- 195 – Install emergency generator and appurtenant improvements at Hot Springs for the alternate emergency operations center.
- 240 – Quinn River new water distribution system.
- 272 – New office furniture in Tonopah administrative building.
- 279 – Replace equipment lift footings at Galletti equipment shop.
- 351 – HVAC system for computer training room at Hot Springs.
- 354 – Renovate office space in Elko independent assurance lab.
- 361 – Replace electrical service at Indian Springs.
- 362 – Furniture in Accounting.
- 377 – Replace buildings controls at FAST.
- 380 – Reconfigure HQ room 205.
- 382 – Replace packaged A/C at NMS Building B.
- 383 – Remodel three cubes in Roadway Design.
- 385 – Cone tank footings at Tonopah and Trento. The Trento location is complete. The Tonopah location is not yet complete.
- 387 – Furniture in Roop Annex.
- 390 – Loft at Hot Springs for the NSRS team.
- 391 – Video wall at NMS Building B.
- 400 – Card access at Reno Safety/Training building.
- 408 – Furniture project in Equipment Division HQ.
- 409 – Security cameras for C926.

PM 10 tracks 12 performance criteria for 442 buildings and sites. By their nature, capital projects often require years to construct, and therefore very few changes occur to the tracking spreadsheet throughout any given year. Further, when projects are completed, they often do not trigger a change to the spreadsheet because of its binary (YES/NO) nature. During FY 2020, PM 10 shows 0% annual increase, though in reality, significant progress was made throughout the year in some important ways. For these reasons, we plan to explore various possible performance measures to simplify and better represent what we do.

Which strategies were successful?

Digitizing and cataloging all of our building plans was almost entirely completed during state fiscal year 2020. This should prove valuable, particularly when the digitized plans become available on the GIS system.

Evolution of the database the data analytics continue as we migrate to ArcMap (for databasing) and Assetic Predictor (for data analytics).

Which strategies were not successful and why?

Previous reports have addressed a desire to implement statewide programs, such as a statewide roofing replacement program. Limitations on resources continue to drive a mostly reactive work program, making implementation of targeted statewide programs impractical at this time.

Implementation of the informal consultant process has continued to prove unsuccessful. However, some progress was made late in the year and we will continue to support all efforts to implement the informal selection process.

Strategies for Improvement:

Short term strategies:

We will continue to incorporate data from the previous building assessments into the performance measure. This will require continued cooperation with IT to implement the new ArcMap database. The ArcMap database will replace the database originally provided through the 2019 facilities assessment. The ArcMap database will also include links to plan sets for each location where they are available, and the data will be readily available on the GIS system throughout NDOT in order to increase accessibility to the data for all NDOT divisions.

We are also adding our buildings into ShakeCast. The ShakeCast system will provide automatic notifications in the minutes and hours following an earthquake and it enables effective use of limited staff resources by identifying regions where concentrations of building damage are possible.

Long term strategies:

We are working to produce detailed reports to prioritize rehabilitation/replacement for the following:

- Statewide maintenance stations
- Statewide rest areas
- Carson administrative complex
- Old Hot Springs administrative location (Carson City)
- Las Vegas administration and Washington Street maintenance station

Detailed reports which quantify and prioritize the needs of these facilities will assist the Department in setting long-range goals and planning for the achievement of those goals.

Strategies for improvement planned for next reporting period

Short term strategies:

We will refine how we track progress on our work so that we can more clearly show improvement that occurs as we complete projects.

We will continue working with other NDOT divisions to implement the informal consultant selection process of NAC 341.141.

Long term strategies:

Upon completion of the planning documents mentioned in the long-range strategies section above, we will begin modeling long-term plans using analysis software. We have two software solutions available: Decision Lens to set priorities and Assetic Predictor, to predict the overall condition of our facilities over time based on different capital planning strategies.

Does this performance measure effectively measure what is desired?

Yes. However, as discussed elsewhere, we plan to reevaluate how we track and report this performance measure to simplify it and more accurately show progress.

Does monitoring and evaluating this performance measure improve your process?

Yes. We continuously reevaluate our current processes and make changes to increase our efficiency.

Is there a better performance measure that should be considered?

No. We are exploring options to continue to refine the existing performance measure.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

Yes. A project manager vacancy opened the same day as the state hiring freeze and has subsequently been approved to fill.

Several projects that were already on our approved work program have been cancelled, deferred, due to COVID related statewide and Department budget cuts.

Architecture Section projects are statewide, but all Architecture staff are based in Carson City. Travel restrictions have a significant impact upon our ability to deliver projects. Particularly with the difficulty in renting rooms, trips become longer as project managers try to make a day trip out of a visit that would ordinarily entail a stay of one or several nights.

The current policy is that any travel outside of one's home area, even essential business travel, generally requires a 14-day quarantine. We are working with HR to avoid quarantines for essential work travel wherever possible; however, the possibility remains that project managers might only be able to visit one project once every two weeks. This has the possibility to disrupt high-priority projects such as the rehabilitation of the Las Vegas maintenance station on Washington Street.

Our office relies on two temporary staffing positions that are paid from our operating budget. Due to the budget cuts, we needed to reduce their 40-hour work week by two hours per week and ask each of them to take 12 furlough days throughout state fiscal year 2021.

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

No

11. EMERGENCY MANAGEMENT, SECURITY AND CONTINUITY OF OPERATIONS

Performance Measure:

This Performance Measure involves tracking the percentage of emergency plans that have been completed; training and education that has been provided to appropriate personnel; and emergency plans that have been tested, exercised and updated to accommodate changes in Departmental processes and policies and to reflect any changes to federal and state guidelines.

Training and updates are to be completed within a 4-year period. The Performance Measure 11 plans include:

- Nevada Department of Transportation (NDOT) Emergency Operations Plan
- NDOT Physical Security Plan

Current year target: 100%

Ultimate target: 100%

Performance Champion/Division:

Chief Maintenance and Asset Management Engineer/Maintenance and Asset Management

Supporting Divisions:

All

Overview and 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. The NDOT Emergency Operations Plan (EOP) provides a structure, processes and procedures for the Department to continue operations in support of the state during catastrophic emergencies, including those effecting the Department directly. The Physical Security Plan (PSP) provides guidance for handling physical security threats to the Department directly as well as the Department providing support to others during homeland security type events.

Being prepared and ready for an emergency is paramount to keeping systems operating during such times, as well as to respond to health and safety issues. Completing the Performance Measure 11 tasks helps NDOT meet our Strategic Plan goals to:

- Safety first
- Cultivate environmental stewardship
- Efficiently operate and maintain the transportation system in Nevada
- Promote internal and external customer service
- Enhance organizational and workforce development

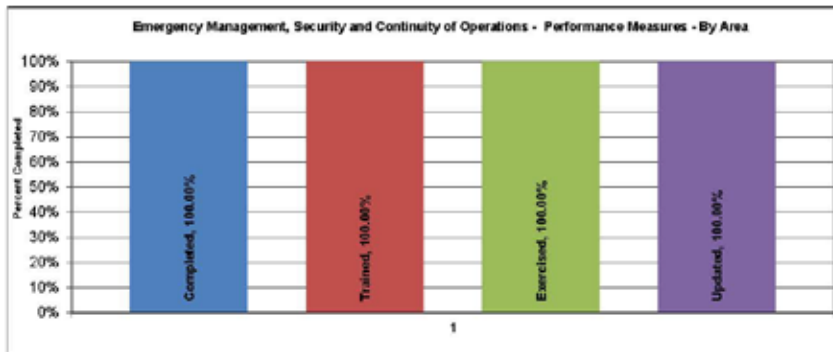
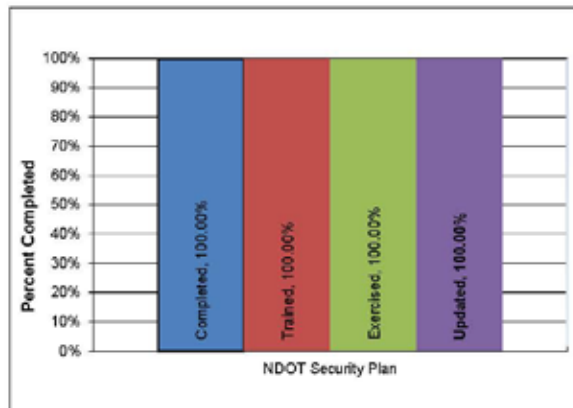
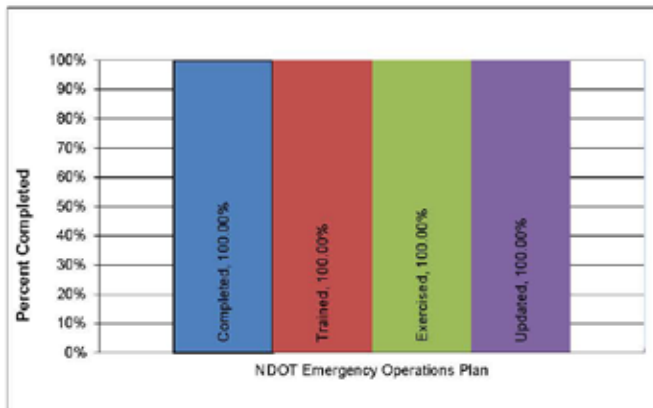
Supporting Data:

Maintenance & Asset Management PM-11

FY 2020

7/1/2019 through 6/30/2020

	Were PM requirements met by providing Training within last 4 Years	Date of Last Training	Were PM requirements met by providing Exercises within last 4 Years	Date of Last Exercise	Were PM requirements met by Updating Plans within last 4 Years	Date of Last Update
NDOT Emergency Operations Plan (EOP)	Y	06/24/2020	Y	06/24/2020	Y	03/12/2020
NDOT Physical Security Plan (PSP)	Y	05/31/2020	Y	05/31/2020	Y	11/20/2016



Evaluation of Performance Measure:

Annual target met?

Yes

Which Strategies Were in Place During the Data Reporting Period?

- Tracking the percentage of emergency plans that have been completed.
- Conducting, participating in and tracking training and education that has been provided to appropriate personnel.
- Conducting, participating in and tracking emergency plan testing, exercising and updating.
- Conducting “hotwashes” following real events to determine successful practices and challenges in NDOT’s emergency plans.

Which Strategies Were Successful?

All strategies have been successful. Due to the number of real events this year, including the Storm Area 51 event, the COVID-19 pandemic, the March 2020 earthquake near Tonopah, a June 2020 Wildfire in Washoe County, and June 2020 mudslides in northern Nevada near the Oregon border, the most successful strategy has been to conduct “hotwashes” following real emergency events.

Which Strategies Were Not Successful and Why?

None

Strategies for improvement planned for next reporting period:

Short Term Strategy:

The chart below outlines the proposed schedule for maintaining compliance with this performance measure. Regular exercises and training will remain a fundamental part of this section’s strategy.

EOP Compliance Projection for Next Fiscal Year

	Training	Exercises	Updates
Date Due	06/24/2024	06/24/2024	11/07/2020
FY21 Q1 Jul 20 - Sep 20	Senior Management Training	HQ Virtual	Contact List Update
FY21 Q2 Oct 20 - Dec 20	District 1 Training	District 1 Virtual	Full EOP Update
FY21 Q3 Jan 21 - Mar 21	District 2 Training	District 2 Virtual Exercise	Contact List Update
FY21 Q4 Apr 21 - Jun 12	District 3 Training	District 3 Virtual Exercise	Contact List Update

The NDOT security audit was completed at the end of this fiscal year. Pertinent security issues raised in the security audit report will be incorporated into the PSP. The chart below outlines the proposed schedule for maintaining compliance with this performance measure.

PSP Compliance Projection for Next Fiscal Year

	Training	Exercises	Updates
Date Due	5/31/2024	5/31/2024	11/19/2020
FY21 Q1 Jul 20 - Sep 20	Senior Management Training	HQ Virtual	Draft PSP Update
FY21 Q2 Oct 20 - Dec 20	District 1 Training	District 1 Virtual	None
FY21 Q3 Jan 21 - Mar 21	District 2 Training	District 2 Virtual Exercise	Critical Infrastructure List Update
FY21 Q4 Apr 21 - Jun 12	District 3 Training	District 3 Virtual Exercise	Full PSP Update

Long Term Strategy:

The Emergency Management Section plans to continue to provide quarterly training each year and to continue working with District and HQ personnel to enhance the NDOT EOP and the NDOT PSP over time. With the pandemic ensuing, training and exercises may need to be conducted virtually.

Does the performance measure effectively measure what is desired?

Yes.

Does monitoring and evaluating this performance measure improve your process?

Yes. Monitoring and evaluating this performance measure ensure that, at least quarterly, we inspect existing processes. Adjustments are made, if necessary, to improve these processes.

Is there a more effective performance measure that should be considered? If so, explain

No.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

Yes. Although the Emergency Management section has been able to meet the performance measure targets, training and exercises have been conducted virtually in place of traditional tabletop style events. This has caused difficulties in the quality of communications during the events as the moderator of the events has not been able to always see the participants, and therefore do not have the same ability to recognize body language indicating confusion, disagreement or further interests in a particular topic.

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

No fiscal impact is anticipated.

12. REDUCE FATAL & SERIOUS INJURY CRASHES

Performance Measure:

Number of fatalities, fatality rate, number of serious injuries, serious injury rate, and the number of non-motorized fatalities and serious injuries on Nevada's streets and highways.

Current year target:

The methodology used to calculate safety performance measures for 2019 reflected the upward trend on most of the safety performance measures. For each performance measure the trend for the last five years of data was evaluated and the statistically significant trend was used to project forward to the end of 2019. Recognizing that before we can start reducing the number of annual fatalities, that number will first hit an upward plateau. As such, we have set the 2019 target to be one less than the projected number for the five-year moving average projected for 2019. After this target is reached the downward trend will continue towards the goal of zero.

Ultimate Target: Zero

Performance Champion/Division:

Traffic Safety Engineering

Supporting Divisions:

All

Overview and 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 – safety first, enhance internal and external communications, efficiently operate and maintain the state transportation system, and, cultivate environmental stewardship.

Supporting data:

These measurements are in line with the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA) reporting requirements. The evaluation of performance for 2019 includes preliminary crash data for 2019.

Evaluation of Performance Measure:

Annual target met?

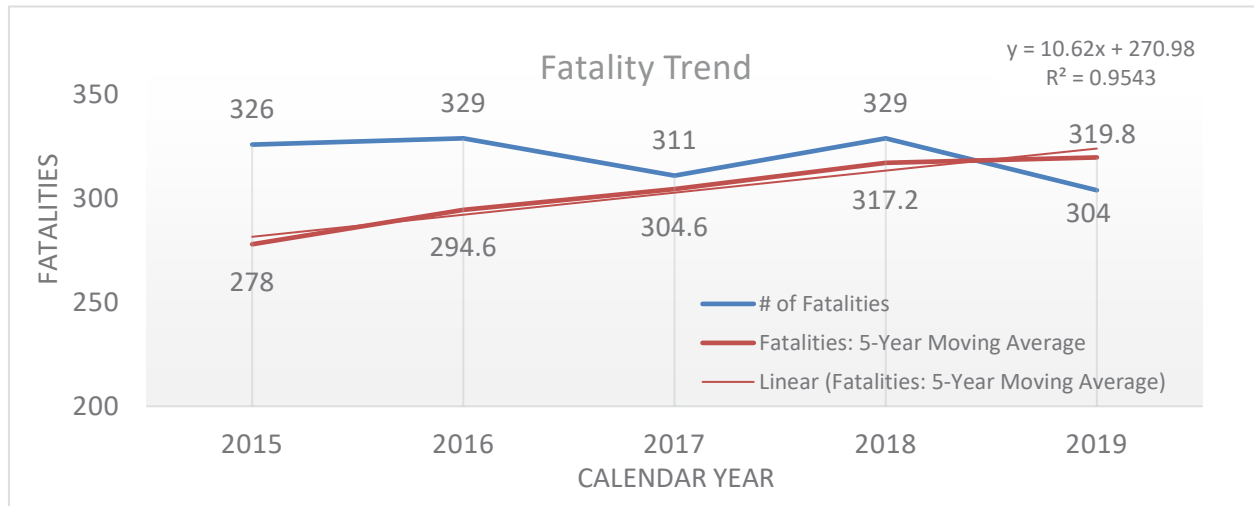
See individual targets below

Measure 1: Number of Fatalities – Target Met

Decrease the upward trend so that the 2012-2016 five-year moving average of 294.4 traffic fatalities is 319.2, which is less than the projected 330.4 fatalities by December 31, 2019.

Target – 319.2

Actual – 304



Measure 2: Number of Serious Injuries – Target Met

Decrease the upward trend so that the 2012-2016 five-year moving average of 1240.4 serious injuries is 1,186.4, which is less than the projected 1,214.4 serious injuries by December 31, 2019.

Target – 1186.4

Actual – 978

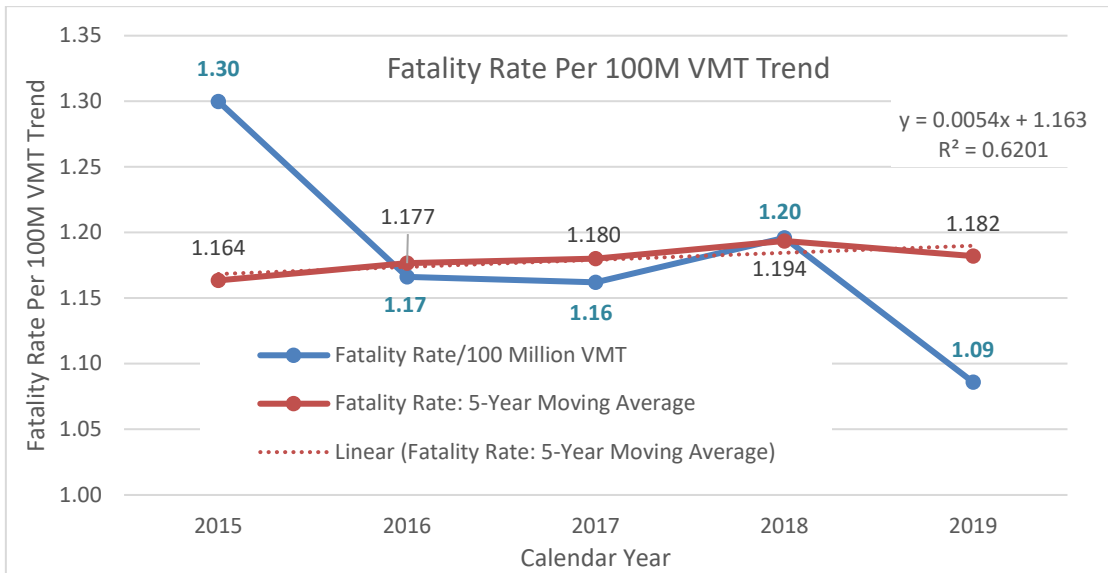


Measure 3: Number of fatalities per 100M Vehicle Miles Traveled (VMP) – Target Met

Decrease the upward trend so that the 2012-2016 five-year moving average of 1.147 fatalities per 100M VMT is 1.209, which is less than the projected 1.236 fatality rate by December 31, 2019.

Target 1.209

Actual 1.09

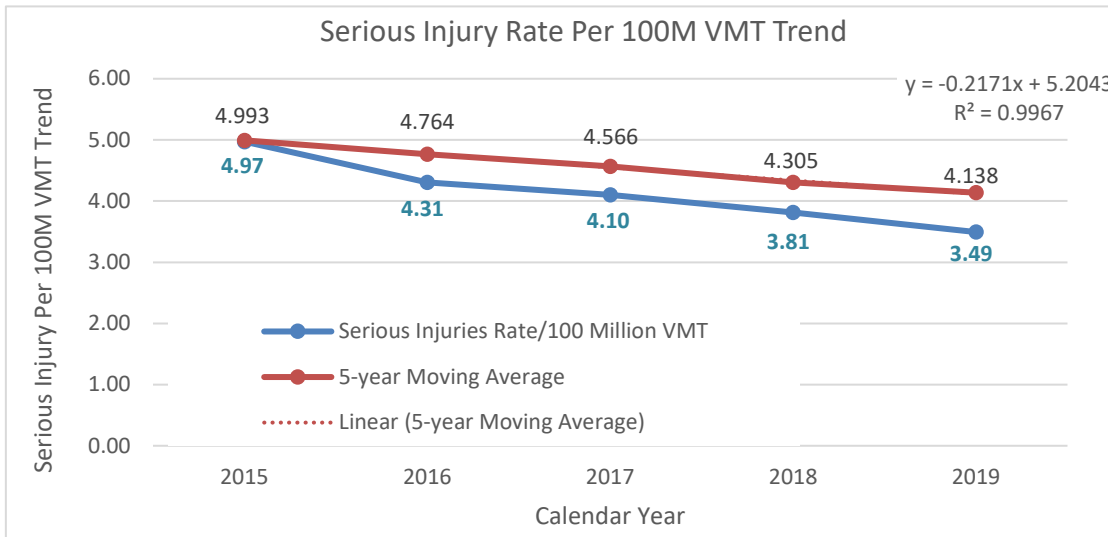


Measure 4: Number of serious injuries per 100M Vehicle Miles Traveled (VMT) – Target Met

Decrease the 2012-2016 five-year moving average of 4.97 serious injuries per 100M VMT to 4.51 by December 31, 2019.

Target 4.970

Actual 3.49

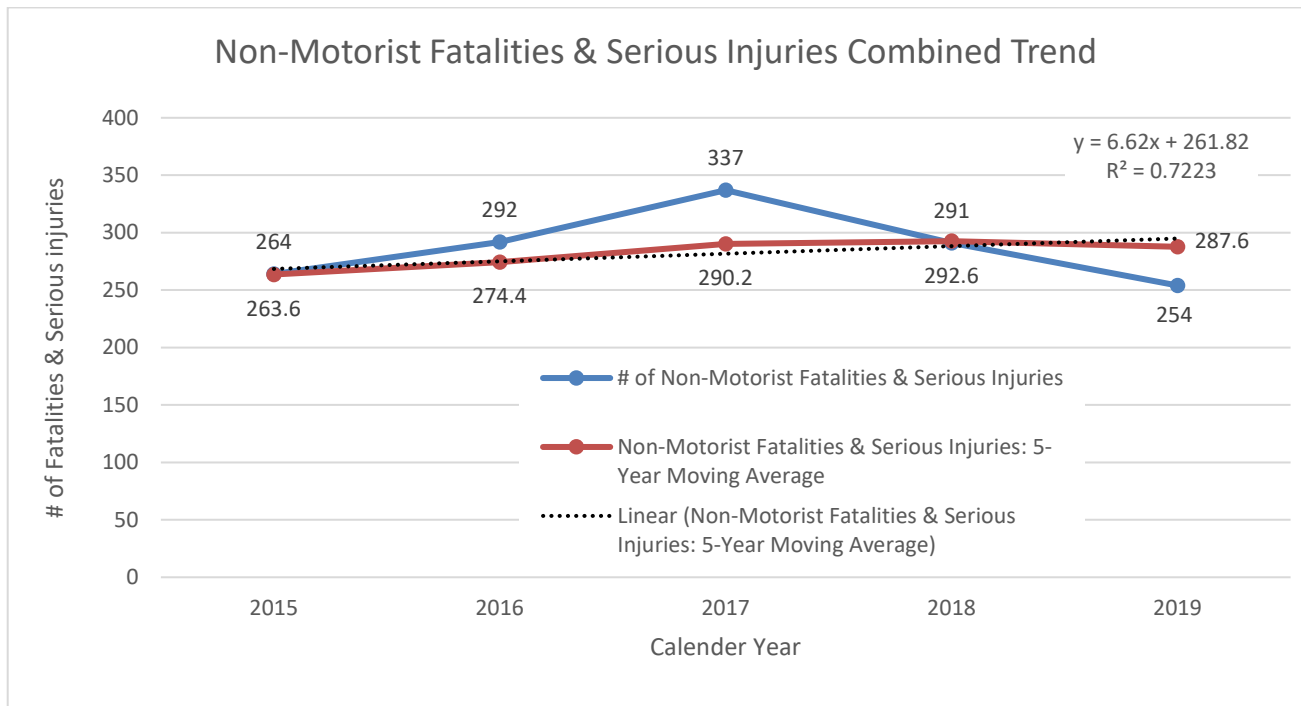


Measure 5: Number of Non-Motorized Fatalities and Serious Injuries

Decrease the upward trend so that the 2012-2016 five-year moving average of 271.5 non-motorized fatalities and serious injuries is 299.1, which is less than the projected 312.2 fatalities by December 31, 2019.

Target 299.1

Actual 254



Which strategies were in place during the data reporting period?

All strategies for Performance Measure 12 are identified in the Nevada Strategic Highway Safety Plan (SHSP). The SHSP is a data-drive, multi-year comprehensive plan that identifies and analyzes highway safety problems and opportunities on all public roads with cooperation from public and private stakeholders.

SHSP strategies include are as follows:

- Implement cost effective improvements to keep vehicles in their lane.
- Analyze crash data to locate high crash locations at intersections and along corridors.
- Systemic safety improvements as recommended by the FHWA Proven Safety Countermeasures.
- Develop Safety Management Plans (SMP) to analyze select corridors for the safety of all users.

Maintain the road Safety Assessment (RSA) program.

Which strategies were successful?

NDOT has been targeting run-off-the-road crashes and found success in coordinating safety improvements by initiating a rural roadway curve enhancement program, identifying slope flattening locations for future projects and identify safety improvements in the planning process through NDOT's Road Safety Assessment Program. The Department is continuing the Traffic Incident Management (TIM) program in cooperation with stakeholders including locals, Nevada Highway Patrol and emergency responders.

Which strategies were not successful and why?

Due to the systemic nature of current safety strategies it's difficult to measure effectiveness (or ineffectiveness) of strategies. Additional data and analysis are being considered for more detailed analysis of effectiveness of specific strategies.

Strategies for improvement planned for next reporting period:

Short term strategies

Implement the updated SHSP starting in early 2021. The updated SHSP will be a 5-year comprehensive plan to help us continue to decrease all five measures and reach the ultimate target of zero fatalities.

Continue to invest Nevada's federal safety funds on strategies identified in the SHSP and continue cooperation with the Nevada Office of Traffic Safety Behavioral Campaign in public education programs.

Continue to implement and evaluate Wrong Way Driver strategies on Nevada's freeway off-ramps and the Traffic Incident Management System to prevent secondary crashes.

Develop a data driven strategy to install climbing and passing lanes on Nevada's rural highways.

Develop a pedestrian focus process to screen intersections for safety countermeasures for unsignalized and signalized intersections.

Identify high risk curves on rural roads process for application of multiple countermeasures.

Develop and implement a Speed Management Action plan.

Long term strategies

Engage local agencies and work with to develop Local Road Safety Programs (LRSP) that identify local concerns. LRSP's have been identified as proven countermeasures by the FHWA.

Continually update RSA procedure manual to reflect a virtual RSA option and current best practices.

Participate in the expansion of the Traffic Incident Management program to efficiently manager traffic crashes.

Does the performance measure effectively measure what is desired?

Yes

Does monitoring and evaluating this performance measure improve your process?

These performance measures match our SHSP performance measures. They are integral to the process.

Is there a more effective performance measure that should be considered? If so, explain

No, but we are working on simplifying and improving the communication on the targets.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

Crash data is not fully available until the end of the following calendar year. The 2020 Performance Measures report uses 2019 crash data. The Covid-19 pandemic is expected to impact the 2020 crash data and impacts will be reported in the 2021 Performance Measure report. Preliminary data does indicate that driving behavior was impacted by COVID-19 and while traffic volumes were down for several months, fatal and injury crashes appear to have increased. This data is preliminary and will be analyzed and included in the 2021 Performance Measures Report.

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

No – While the Department continues to prioritize safety on the roadways and make the best use of available funds, this measure includes data on all Nevada public roads, not just those maintained by NDOT. Factors such as driver behavior and enforcement are not entirely within the control of the Department, but play a critical role in reducing fatalities and injuries on the transportation system.

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 majority of the projects advertised by the Department. This includes all contracts administered through electronic bidding. Capital improvement projects completed by the Architecture Division were excluded from this performance measure as they are developed through a separate process from typical transportation projects.

The list of scheduled projects was established at the beginning of 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 us to spend more federal funds and therefore produce more projects for the state. For example; the Department was able to spend an additional \$48 million in federal funds this reporting year.

2020 Annual Target: 80%

Ultimate Target: 80%

Performance Champion/Division:

Roadway Design

Supporting Divisions:

Bridge/Structures, Project Management, Safety Engineering, Traffic Operations, Hydraulics, Stormwater, Landscape and Aesthetics, ADA, District Betterment, and Transportation Multimodal Planning.

Overview and Plan Support:

This performance measure works towards meeting the Department of Transportation Strategic Plan goals of putting safety first and efficiently operating and maintaining the transportation system in Nevada. The Department can better optimize project resources by providing timely project delivery and effectively planning project costs.

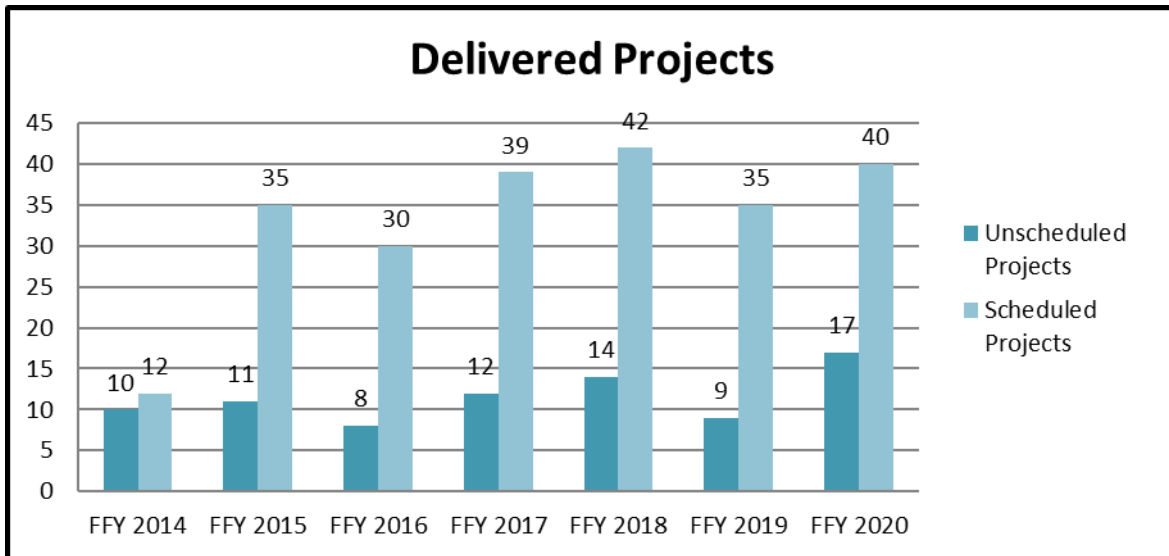
Supporting Data:

Project Delivery Data:

At the beginning of the reporting period, 63 projects were scheduled for delivery, of which 40 were delivered.

Over the course of the reporting period, a total of 57 (scheduled & unscheduled) projects were delivered, of which:

- 40 were scheduled
- 17 were unscheduled



Project Estimate Data:

Over the course of the reporting period, 38 delivered projects out of the 63* scheduled projects were measured for performance within the established construction cost estimate range between the October estimate and the awarded estimate, of which:

- 21 project award costs were within the +/- 15% range
- 17 project award costs were **not** within the +/- 15% range
- 2 projects did not have award costs
 - 1 project changed to a design build delivery
 - 1 project was not awarded due to conflicts with a major private/developer project

*The 17 unscheduled 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, 55 projects out of the 57 total projects delivered, were measured for performance within the established construction cost estimate range between the engineer's estimate at the time of bid and the award costs, of which:

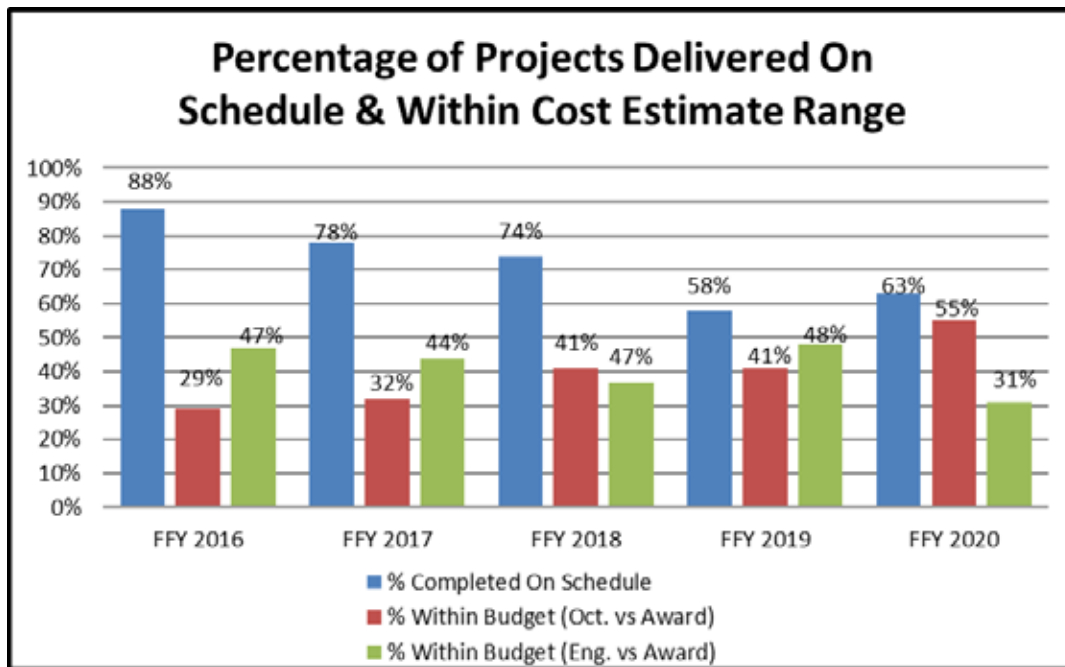
- 17 project award costs were within the +/- 10% range
- 38 project award costs were **not** within the +/- 10% range
- 2 projects did not have award costs
 - 1 project changed to a design build delivery
 - 1 project was not awarded due to conflicts with a major private/developer project

Evaluation of Performance Measure:

The established baseline list of scheduled projects included 63 projects. Of the 63 scheduled projects, 40 (63%) were delivered/advertised within the reporting year.

Of the 40 projects that were scheduled and delivered for this reporting year, 38 have been awarded or had an apparent low bid at the time of reporting where 21 (55%) of the project's award costs fell within +/- 15% of the October baseline cost estimate and 14 (37%) of the project's award costs fell within +/- 10% of the engineer's estimate at time of bid.

Of the 55 total delivered projects, which includes the unscheduled projects, 17 (31%) of the project's award costs fell within +/- 10% of the engineer's estimate at time of bid.



The delivery target of 80% of scheduled projects was not met this year with a performance of 63%.

The awarded construction cost estimate target of 80% of delivered projects within +/- 15% of the October cost estimate was not met this year with a performance of 55%.

The awarded construction cost estimate target of 80% of delivered projects within +/- 10% of the engineer's estimate at bid was not met this year with a performance of 31%.

The projects that didn't reach the performance metric for delivery were delayed for multiple reasons such as scope changes/additions, project bundling with a future project, unforeseen delays due to lengthy processes from outside agencies (R/W, Environmental, Railroad, Utilities), and Department resource priorities due to Covid-19 pandemic impacts.

The projects that didn't reach the performance metric for construction cost estimates showed a consistent resulting trend with majority of the awarded construction cost estimates coming in an average 12% below the engineer's estimate at bid.

Multiple strategies were implemented during the reporting period to continue improving processes and move towards achieving our performance measure targets. We continued to work with the supporting divisions and program champions to solicit each program's projects for the upcoming reporting period. Although this process allows for each program to include their project priorities, we have discovered there is inconsistency and varying levels of project scope development when projects are scheduled. This results in having projects included in our October baseline when they have not been thoroughly evaluated for scope, cost, and risks to ensure the feasibility of delivering the project for the reporting year.

We implemented another strategy by revising the scoping process for preservation projects to include a comprehensive multidiscipline evaluation of scope needs, cost and risks. The new process was executed during this reporting period for the review of the 2022/2023 preservation projects, therefore we should see the benefits starting in federal fiscal year 2022 reporting, the earliest those projects will be scheduled and ready for delivery.

Strategies for improvement planned for next reporting period:

In federal fiscal year (FFY) 2020 we were unsuccessful in meeting the goal of delivering 80% of our scheduled projects. Since we did not reach our target this year, we must look at new strategies to increase our percentage of scheduled projects delivered within the federal fiscal year to successfully meet our goal of 80%. Our focus for this next year will include strategies that continue to improve our methods and processes for defining project readiness.

Short term strategies:

- Document reporting criteria and establish clear definitions for the criteria to improve on reporting consistency
- Educate the supporting divisions on their role in establishing the annual baseline of projects
- Coordinate early with the supporting divisions to establish the list of projects to be measured
- Work closely with the supporting divisions on establishing the October baseline list:
 - Identify projects earlier
 - Further document project scope elements, project unknowns, and project risks that may affect the project cost estimates and schedules
 - Prioritize projects for resource management
 - Prioritize projects to meet funding levels
 - Evaluate project bundling to optimize construction costs and resources
- Monitor project progress through monthly status meetings to identify and address risks to schedule
- Coordinate with all supporting divisions to have PSAMS data updated
- Evaluate the performance measure target levels for both the construction cost estimate and project delivery schedule performance
- Monitor and revise preservation scoping process to include multi-discipline scoping to better define scope, cost & risk
- Synchronize October baseline development with the OneNV Planning process and the AWP/STIP annual approval

Long term strategies:

- 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
- Expand the use of Project Scoping across more programs (Freight, ADA, Safety, L&A, Bridge, etc.) to assure project scope, cost, risk and delivery timeline is evaluated and developed to an acceptable level before being scheduled.
- 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
- Establish a process to set baseline projects for each reporting year based on the Annual Work Program

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.

Does monitoring and evaluating this performance measure improve your process?

Yes, monitoring and evaluating this performance measure has resulted in process improvements. There are many processes and stakeholders involved with project development and delivery and we continue to work with those stakeholders to make additional process improvements and move towards achieving our performance metrics.

Is there a more effective 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.

A supplemental measure for project delivery to consider would be to measure project delivery based on percentage of program funding obligated per the Department’s transportation goals for the year. If we were unable to deliver a scheduled project, did we have a comparable (similar program/location/funding/scope) project that was delivered as a replacement.

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

The FHWA Stewardship Performance indicators were 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.

Has the Covid-19 pandemic effected your performance measure and the ability to meet your targets?

A total of 5 projects were impacted by the Covid-19 pandemic, where the projects were put on hold for delivery due to budget cuts, of which:

- 1 project was scheduled and delayed due to Covid-19
- 4 projects were ready for delivery but not scheduled due to Covid-19, therefore these projects were not included in this performance reporting

During the Covid-19 Pandemic we have observed a trend with the award estimates consistently coming in 10-15% lower than the engineer's estimate. The average percentage difference between the engineers estimate and the awarded estimate is 12% under the engineer's estimate. This trend is outside our target performance measure of 10% and has contributed to not meeting our estimate performance measures.

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:

The Department's performance measure associated with the maintenance of state bridges includes bridge condition ratings, separated by those assets on the National Highway System (NHS) and those not on the system (non-NHS). In alignment with the established national performance measures, this will include percentages of the inventory considered to be in "good" and "poor" condition.

Previous performance measures tracked the number of Department owned bridges which were categorized as Structurally Deficient (SD) or Functionally Obsolete (FO). The base figure was 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). 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 criterion; 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. Specifically, this is a reference to the Structures Division budget, which is primarily utilized for replacing SD bridges, seismic retrofits, and scour mitigations projects. However, NDOT does often replace/widen/modify FO structures as part of our large capital projects to bring them up to current design standards.

Data in the NDOT bridge inventory is collected in accordance with the National Bridge Inspection Standards (NBIS) and is reported to the National Bridge Inventory (NBI). For each bridge, the condition rating is determined for three primary elements: deck, superstructure and substructure. Bridge-sized culverts have a single, independent rating. NBI general condition ratings are assessed on a scale that ranges from 0 (failed condition) to 9 (excellent condition). The lowest of the three ratings for bridges, or the single rating for culverts, is used to represent the overall condition of the structure. Ratings of 7 or better, represent a bridge that is in Good condition and ratings of 5 or 6 represent a bridge in fair condition. If any of the condition ratings are 4 or below, the bridge is in Poor condition. A structure deemed to be in "Poor" condition is classified as structurally deficient (SD). Percentage of the overall inventory in each category is determined by square foot area of the bridge deck.

Bridge data referenced in the report is based on the annual federal reporting snapshot taken at the end of March every year. In years past, a snapshot of the inventory was taken at the time data was requested for the various reports the Department produces (facts book, preservation report, performance management report). However, this created confusion because the inventory changes continuously throughout the year, so that each report included different data. The data in the performance management report reflects all changes to the inventory from the previous calendar year. The data provided in the report is for calendar year 2019.

Current year target:

As part of the NDOT Transportation Asset Management Plan (TAMP), the Department has established performance goals related to the overall condition of the State’s bridge inventory. These performance targets include maintaining an inventory that has greater than 35% of bridges in good condition and less than 7% in poor condition. Maintaining an inventory with less than 10% of bridges classified as structurally deficient is a federally mandated performance requirement. NDOT has established these goals as part of the annual and long-term targets.

Previous performance measures considered the number of structurally deficient bridges that were replaced or rehabilitated annually. While this is no longer a direct performance measure, it contributes to the overall goal of minimizing the percentage of bridges in poor condition and will continue to be listed annually to help provide some context for the bridge condition ratings.

Tables have been included to allow for ease of tracking. The tables do not include structures that are subject to routine preservation and maintenance activities (such as expansion joint replacement, repair of deck cracking, etc.) included in 3R or District Betterment projects.

Table 1 includes the condition ratings of all state-maintained bridges in the inventory. A small percentage of structures owned by other entities have been included in this data because they are part of the NHS. Data from 2016 was included as part of the Federal Highway Administration (FHWA) approved TAMP and has been included in this report as the base year. While the FHWA’s emphasis is primarily on the NHS, the Department’s long-term goal is to meet the established performance measures for both the NHS and non-NHS state-owned structures.

Table 2 lists all projects that have rehabilitated or replaced a structurally deficient bridge. Table 3 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 directly contribute to the established performance measures.

As shown in Table 3, 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 deficiencies alone do not relate to a structurally deficient classification and do not meet the performance criteria. The table also includes the replacement of 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.

Table 4 includes a historic listing of structurally deficient bridges.

Ultimate target:

The ultimate target is to eliminate structurally deficient bridges from the inventory, and to extend the service life of the Department's bridges.

As part of the TAMP, the Department has committed to the established performance goals for the next 10 years.

TABLE 1: BRIDGE CONDITION RATINGS

	Good Condition		Poor Condition	
	NHS	Non-NHS	NHS	Non-NHS
2016	41.4%	50.0%	0.6%	1.3%
2017	43.3%	50.5%	0.5%	1.0%
2018	44.9%	49.2%	0.9%	0.9%
2019	41.0%	44.1%	1.0%	0.9%
TARGET	>35%	>35%	<7.0%	<7.0%

TABLE 2: STRUCTURALLY DEFICIENT BRIDGE REHABILITATION/REPLACEMENT

Calendar Year	Number of Bridges	Structure #'s	County	Contract #/Award Date	Description of Work/Comments
2015	1	B-100	CH	3608	Replace SD bridge on SR115
2016	0	-	-	-	-
2017	0	-	-	-	-
2018	5	B-474	DO	3707-2/12/18	Replace SD bridge on SR757
		B-1392E	PE	3725-7/11/18	Replace SD bridge on I-80
		I-1899	CL	3755-11/19/18	Replace SD bridge on SR582
		B-425	MI	3735-9/6/18	Replace SD bridge on SR361
		B-242	CH	3738-10/9/18	Replace SD bridge on Maine St, Fallon
2019	2	B-639	EL	3758-2/7/19	Replace SD bridge on SR226
2020	3 projected	I-1306	WA	3819-4/13/20	Replace SD bridge on US395
		B-28	PE	-	Replace SD bridge on SR396
		B-3226	CH	3842	Repair SD bridge on US95

TABLE 3: ADDITIONAL BRIDGE IMPROVEMENT PROJECTS

Calendar Year	# of Bridges	Owner	Structure #'s	County	Contract #/Award Date	Description of Work/Comments
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	-	-	-	-	-	-
2018	1	HU	B-1658	HU	3713-3/30/18	Replace 1 SD bridge
2019	1	LY	B-1615	LY	-	Replace 1 SD bridge

TABLE 4: HISTORIC LISTING OF STRUCTURALLY DEFICIENT BRIDGES

Calendar Year	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.
2018	1208	15	2019 Report.
2020	1221	12	2021 Report.

NOTES:

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 2019 Nevada State Highway Preservation Report is included below for information.

A bridge is considered Structurally Deficient (SD) if significant load-carrying elements are found to be in poor or worse condition due to deterioration and/or damage, or the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing intolerable traffic interruptions.

Because 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.

Performance Champion/Division:

The Structures Division is the performance champion for this performance measure.

Supporting Divisions:

The maintenance of state bridges is supported by those divisions involved with the Department’s preservation program – the Design and Materials divisions - as well as the Department’s three districts. Along with the Structures Division, these groups plan and execute bridge maintenance and preservations activities state-wide.

Overview and plan support:

These performance measures work towards meeting the Department of Transportation Strategic Plan goals of putting safety first and efficiently operating and maintaining the transportation system in Nevada. 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 to efficiently preserve and manage Department assets.

Supporting data:

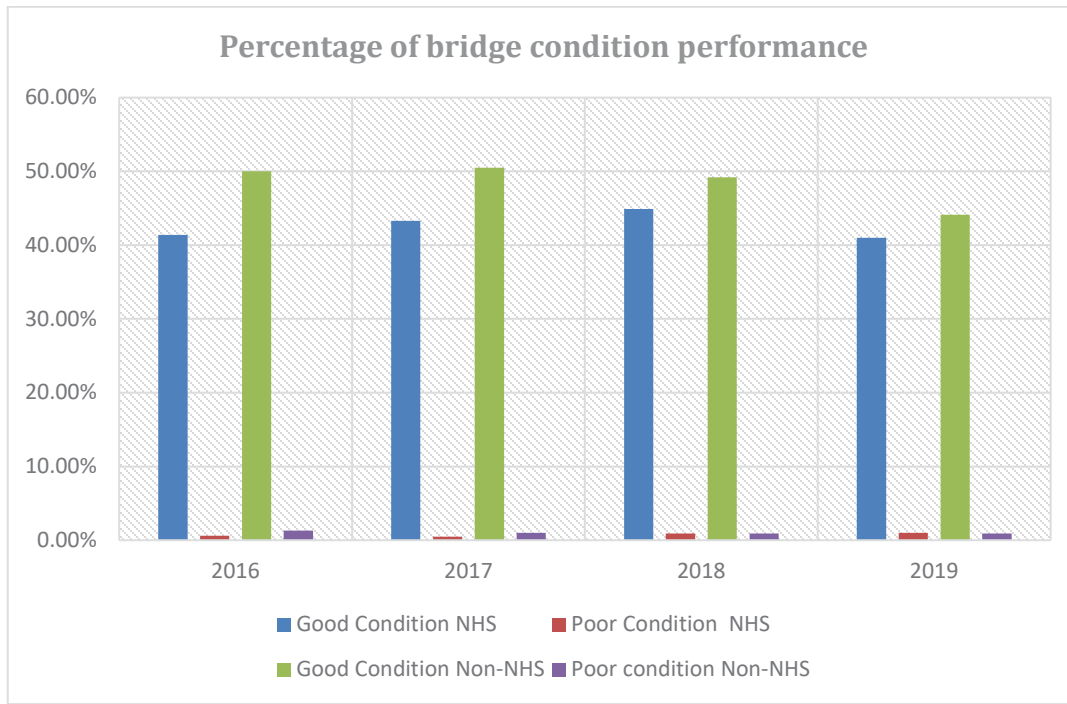
All supporting data is extracted from the Department’s annual reporting to the National Bridge Inventory. Inspections are performed in accordance with established federal guidelines, and the Department is responsible for performing these inspections state-wide. While this data is constantly changing, as required inspections of our infrastructure occur, and new bridges are added to the inventory, an annual “snapshot” is taken every year in March and submitted to and approved by the FHWA.

Evaluation of Performance Measure

Annual Target Met

Yes

The Department met the performance goals established in the Transportation Asset Management Plan.



Which strategies were in place during the data reporting period?

In consistency with the annual expected investment strategies in the TAMP, the Department continues to deliver projects associated with the maintenance, preservation, rehabilitation and reconstruction of bridges state-wide.

Which strategies were successful?

Bridge condition trends are consistent with expectations of the current investment strategies.

Which strategies were not successful and why?

Not applicable. The Department met and exceeded the performance goals established in the Transportation Asset Management Plan.

STRATEGIES FOR IMPROVEMENT PLANNED FOR NEXT REPORTING PERIOD

Short Term Strategies:

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 to cooperate with and assist them.

Long Term Strategies:

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.

Does the performance measure effectively measure what is desired?

Yes. The performance measure does allow us to track the overall condition of our bridge inventory and comply with current federal requirements.

Is there a more effective performance measure that should be considered? If so, explain.

In compliance with federal regulations, bridge conditions in the TAMP are based on the four primary component ratings. To aid in the preservation of our bridge assets, it may be valuable to evaluate the element condition rating of structural components that are critical to extending the service life of a structure and maintaining a state of good repair. An evaluation of components such as bridge decks could provide a more detailed look at where to focus future preservation efforts.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

To date, the Covid-19 pandemic has had little impact on meeting our performance measures. However, it is unclear how potential budget shortfalls will affect future bridge preservation and replacement efforts.

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

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 in accordance with Transportation Policy (TP) 1-10-3 Encroachment Permit Processing Time Schedule.

Current year target: 95%

Ultimate target: 95%

Performance Champion/Division:

The Right-of-Way Division

Supporting Divisions:

District Permitting Offices and Permit Reviewers from:

- Roadway Design
- Environmental Services
- Traffic Operations
- Structures
- FHWA
- Planning
- Hydraulics
- Materials
- Project Management
- Safety Engineering
- Construction
- Stormwater

Overview and plan support:

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) 1-10-3 Encroachment Permit Processing Time Schedule set a 45-working day process for all accepted encroachment permit applications.

Supporting data:

Encroachment permits are processed using the Integrated Right-of-Way Information Network (IRWIN). The measurement and data for this reporting is generated from the IRWIN program based on information input and dates of work from District Permits staff during the processing of encroachments permits.

The measurement and supporting data effectively provide adequate information to show improvements may be necessary to achieve the target goal. Delays in permit processing may have potential impacts to Department projects scheduling Statewide.

Evaluation of Performance Measure:

Was the annual target met?

Yes. All three Districts annual reporting reflects a 95.23% of all permits processed were done within 45 days or less. The annual performance measure for each district is as follows: District 1 achieved 97.27%, processing 586 permits, District 2 achieved 88.74% while processing 231 permits, and District 3 achieved 100% while processing 64 permits. District 1 accepted 616 permits, District 2 accepted 293 permits, and District 3 accepted 72 permits.

Which strategies were in place during the data reporting period?

Permit review status meetings with District Permitting offices to ensure consistency with processing of permits.

Which strategies were successful?

The ongoing district level permit review meeting have been affective in identifying areas of improvement and establish better communication between headquarters and the district offices.

Which strategies were not successful and why? None.

The implemented strategies have been successful.

Strategies for improvement planned for next reporting period:

Short Term Strategies:

Short range plan includes maintaining regularly scheduled permit review status meetings with the District Permitting offices to ensure consistency in processing permits Statewide.

Long Term Strategies:

The implementation of new software for the Department is being considered that will include a permit processing workflow to enhance staff productivity among the various Department divisions that review and approve permits.

Does the performance measure effectively measure what is desired?

Yes. The established 95% is reasonable and effectively evaluates the desired goal of issuing encroachment permits within 45 days. Several factors can negatively impact our ability to meet the performance measure. Including attrition of experienced permitting staff and reviewers. The number of permits is solely driven by the public and high numbers of permit applications require more staff time to meet demands.

Does monitoring and evaluating this performance measure improve your process?

Yes. The performance measure keeps the permitting process accountable and clearly identifies any deficiencies that would require further investigation.

Is there a more effective performance measure that should be considered? If so, explain

No. 95% has proven to be a high and reasonable standard, which is sometimes unattainable due to increased permit applications from the public sector and current staffing levels.

Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

Yes. Since the work from home order was given, Division reviews have taken a little bit longer to get back. Otherwise the electronic permitting system (IRWIN) has been up and running allowing effective telework permitting processes to occur.

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

There is no anticipated direct fiscal impact for next year.

It has been requested to report on the percentage of permits that were processed within 30 days to see if NDOT should revise TP 1-10-3 and adopt a 30-working day permit processing timeframe. This quarter 88.14% of all 233 statewide permits were processed within 30-working days or less.

Targets for next three fiscal Years:

FY21, FY22, & FY 23 set at 95%

16. Reduce Greenhouse Gas Emissions

Performance Measure:

Percent reduction in Greenhouse Gas (GHG) emissions within the Department's operations

This measure was added to this annual reporting cycle in April 2020 with the goal of supporting the overall GHG reduction from transportation sector as reported by the Nevada Annual Greenhouse Gas Inventory Report. In alignment with the State's goal to reduce economywide GHG emissions by 28% by 2025 and 45% by 2030 compared to a 2005 baseline (SB 254), this reporting will include annual GHG emissions inventory within the Department's operations beginning with fiscal years 2019 and 2020. The Department is also working with the Department of Conservation and Natural Resources (DCNR) and the Nevada Governor's Office of Energy (NGOE) to develop strategies and measures for transportation sector GHG reduction.

Current year Target:

Fiscal years (FY) 2019 and 2020 are being evaluated to establish a baseline inventory to measure and assess future GHG reductions.

Ultimate Target:

Support statewide GHG reduction initiatives to achieve 45% economywide reduction goal by 2030.

Performance Champion/Division:

The Environmental and Planning Divisions' management teams.

Supporting Divisions:

All Divisions and District offices.

Overview and Plan Support:

GHG emissions are the result of fossil fuel combustion. Fuel combustion and other transportation-related by-products contribute air pollutants that can impact public health and the environment. In 2016, the transportation sector contributed 35% of the State's total GHG emissions, and it is projected to remain the leading GHG emitter in Nevada through 2030 and beyond (see the Nevada Division of Environmental Protection's 2019 report "Nevada Statewide Greenhouse Gas Emissions Inventory and Projections, 1990-2039") if no additional mitigation measures are implemented to reduce GHG emissions. The Department is committed to provide leadership in reducing GHG emissions within the transportation sector and to achieve GHG emission reductions through the implementation of a combination strategies in our operations, planning, design, construction and maintenance of existing and future transport systems. The areas in which the Department has the most influence to reduce GHG emissions are in system efficiency, reduction of carbon-intensive travel modes, and reduction in emissions associated with construction, maintenance, and operations. The goals of NDOT's GHG Reduction Strategy are:

- Reduce GHG emissions from the agency's daily operations. Examples of GHG considerations under this goal include agency electricity procurement, energy efficiency of installed appliances (heating, ventilation, and air conditioning (HVAC) and lighting), employee travel for work related purposes, employee commuting, emissions from agency owned vehicles, equipment, and facilities (buildings),

work zone traffic delay and detours, recycling, reuse of deconstructed materials, and operational efficiencies through use of updated maintenance management systems, asset management, life-cycle planning, and road weather information systems.

- Reduce GHG emissions on NDOT administered transportation facilities. Examples of GHG considerations under this goal include a quantitative GHG emissions analysis of NDOT's Transportation Program and how the results of the analysis provide progress toward meeting state mandated GHG reduction goals by adoption of the Statewide Transportation Improvement Program (STIP) or Transportation Improvement Program (TIP), an assessment of each project on the STIP or TIP with a quantitative or qualitative reporting of each project's impact on GHG emissions as part of the listing of information for each project on the STIP or TIP, selection of GHG reducing project design alternatives, selection of high recycled content or less carbon intensive materials and processes for the chosen alternative, reuse of deconstructed materials, buying offsets to mitigate emissions.
- Reduce GHG emissions in NDOT's funded programs. An example of a GHG consideration under this goal includes preference for grant funding or other third-party financial support for projects or activities that reduce GHG emissions.

Through pursuit of the above goals, the Department seeks to reduce GHG emissions from its operations.

Supporting Data:

Between July and August of 2020, concerted effort was made to conduct a baseline inventory of GHG emission sources within the Department's administrative operations. The scope of the inventory was established based on guidance from the National Cooperative Highway Research Program's (NCHRP) Transportation Research Board, Project 25-25 Task 65: *Greenhouse Gas Emission Inventory Methodologies for State Transportation Departments* (July 2011). They include:

- Direct emissions from stationary sources (e.g., facilities that burn fuels on-site), mobile sources (e.g., vehicles and equipment owned or leased by the Department), and fugitive emissions from refrigeration and air conditioning (AC) equipment.
Energy purchased to support the Department at head quarter and District facilities include natural gas, propane, and heating oil. Fuels purchased for the Department vehicles and equipment include conventional gasoline, ethanol (E85), compressed natural gas (CNG), diesel, biodiesel (B5, B20), and jet fuel. Refrigerant and AC equipment inventoried for the Department's central facilities included the use of hydrofluorocarbons (HFCs), R-134a and R410A, and a hydrochlorofluorocarbon (HCFC), R-22. According to the US EPA, these refrigerant gases have very high global warming potential (GWP) compared to carbon dioxide (CO₂).
- Indirect emissions from purchased electricity that are consumed within the Department's facilities. Electricity was inventoried based on energy bills compiled from Administrative Services in Carson City facilities, District offices, and radio towers and fiber huts.
- Other indirect emissions that are a consequence of the Department activities. Examples for these include business travel, employee commute, waste generated in the Department's operations.

Business travel miles were estimated using data from:

- In-state travel expenses through Southwest Airlines and motor pool rental.
- Out-of-state air travel and vehicle travel miles based on destination.

Employee commuting

Miles were estimated based on the number of employees on payroll during the year, the average daily commute for Nevada workers, and the number annual workdays as shown in Table 1 below.

Table 1. Data used to estimate employee commuting mileage for FY 2019 and 2020

Parameters	FY 2019	FY 2020 ^b
Employees on Roster	1943	1667
Number of commute days/year	230 ^a	-
Average daily commute, miles	40.9 ^c	40.9 ^c

Notes: ^aRegular annual workdays: use Default value per *Federal GHG Guidance* is 230 days/year 230 days.

^bCOVID-19 impact: 74 telework days (March 18 – June 30) for an estimated 50% of the Department staff.

^cNevada average daily commute data is derived from customers who purchased auto insurance in 2016 from www.answerfinancial.com.

Waste generation from the Department operations were inventoried based on bills from contracted waste management vendors. They include municipal solid waste, mixed recyclables, recycled office paper, construction wastes, and cycled and landfilled tires.

Using the *EPA Simplified Greenhouse Gas Emission Calculator, Version 6* (August 2020) released by the EPA Center for Corporate Climate Leadership, the estimated GHG emissions for the Department’s operations are presented for FY 2019 and 2020 in Table 2 below. Figure 1 presents the percentage contributed by different emissions sources.

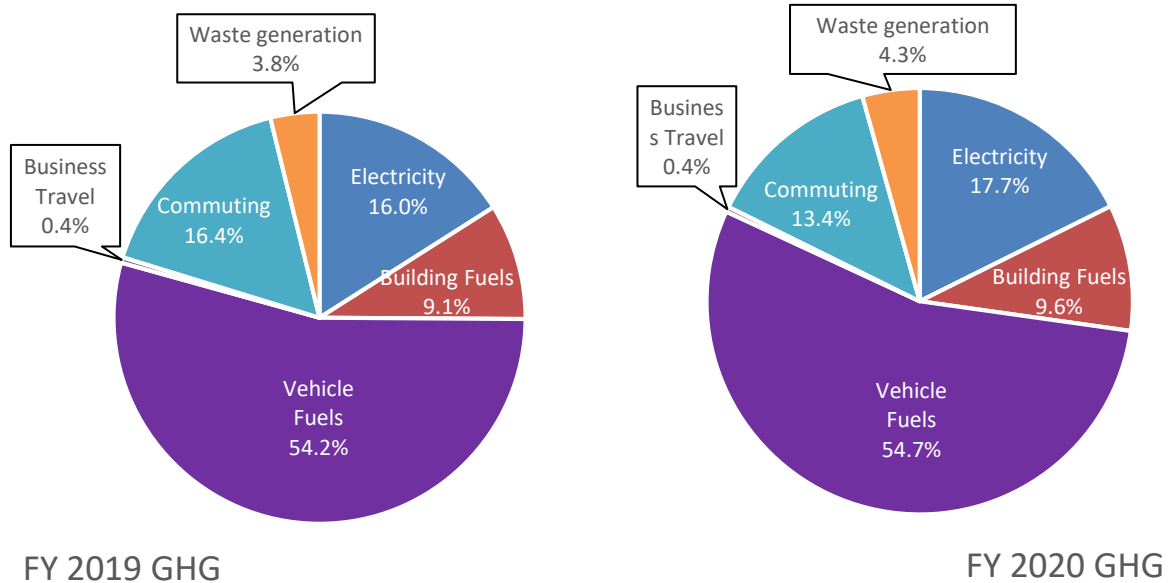
Table 2. GHG emissions baseline for FY 2019 and 2020 in metric tons of CO2 equivalent

Parameters	FY 2019	FY 2020	Change, %
Stationary source	3,036.9	2,776.2	-8.6%
Mobile source	20,385.9	18,183.6	-10.8%
Biofuel ^a	287.3	245.4	-14.6%
Refrigeration/AC ^b	389.7	389.7	-
Electricity purchase	6,011.4	5,870.0	-2.4%
Business travel	163.3	130.7	-20.0%
Commuting	6,170.8	4,442.5	-28.0%
Waste generation	1,445.3	1,445.3	-
Total	37,603.3	33,238.0	-11.6%

Notes: ^aEmissions from biofuel fractions (E85, B5 and B20) are quantified but not are included in the total GHG.

^bInventory for refrigeration and AC equipment is an on-going effort for District facilities.

Figure 1. GHG emission sources from Administrative Operations in FY 2019 and 2020



Evaluation of Performance Measure:

Annual Target Met

Not applicable. This is the initial year for the GHG reduction initiative. An inventory approach was developed to establish a baseline to measure future performance against.

Which strategies were in place during the data reporting period?

Not applicable. The Department has formed an internal workgroup in July 2020 to identify and prioritize strategies to reduce GHG emissions within our operations. The workgroup is represented by multiple divisions and programs, including Administration, Communications, Operations, Planning, Design, Materials, Constructions, Maintenance, Environmental, and District offices. The Department’s GHG Reduction Strategic Plan is anticipated to be completed by the end of October 2020.

Which strategies were successful?

Not applicable. GHG reduction strategies to be formally implemented and tracked by the Department are being developed. It is anticipated that official implementation of GHG reduction strategies will be in place for the second half of FY 2021.

Which strategies were not successful and why?

Not applicable. GHG reduction strategies formally implemented by the Department will be tracked and monitored for effectiveness in reducing GHG emissions and modified as needed. The implementation, tracking and monitoring of GHG reduction strategies will be identified the Department’s GHG Reduction Strategic Plan expected to be completed by the end of October 2020.

Strategies for improvement planned for next reporting period:

GHG reduction strategies officially implemented have been identified in the Department’s GHG Reduction Strategic Plan drafted in October 2020. These are some of the strategies included in that plan.

Short Term Strategies

- **Asset Management:** switching light fixtures to LED and the recent window replacement project at HQ and other facilities are being implemented. Improved record keeping will help to better document energy savings and resulting GHG reduction.
- **Traffic Operations:** LED lighting replacement and the increased use of solar power are current and upcoming practices being implemented within Traffic Operations. The team will continue to track and updates inventory of lighting fixtures and solar panel installations in order to document energy savings and resulting GHG reduction.
- **Reduction of travel for in-person meetings** has and will continue to be a practice that supports GHG reduction. The use of virtual meetings by Department staff (both public and contractor) will be implemented where applicable post-COVID to continue GHG reduction benefits realized in FY 2020.
- **Promote and incentivize alternative commuting** for Department staff such as carpooling, public transit and telecommuting, would provide meaning opportunities to reduce GHG emissions. This is evidenced based on telework for the Department staff during COVID-19.
- **Use of recycled materials in construction** has significant impact to offset GHG emissions. Reusing and recycling construction materials includes reclaimed asphalt pavement (RAP), Portland cement concrete pavement (PCCP) and fly ash. Materials and Design Divisions will continue promote and implement recycled materials to improve function and durability and reduce the carbon footprint for our Department's operations.

Long Term Strategies

- **Planning:** Develop new transportation projects with GHG reduction and sustainability as key components. Recent board approval of the One Nevada Plan and STIP which includes priorities directly related to GHG reduction is an important initial step towards incorporating GHG reduction into the Department's planning process.
- **Planning:** Develop transportation planning documents to address GHG reduction. For example, the rail plan is aimed at reducing the number of semi-trucks traveling on our roadways.
- **Planning:** Include quantitative GHG assessment of major projects for consideration in planning studies.
- **Planning:** Include quantitative GHG assessment of project modal types for consideration in planning studies and decisions.
- **Planning:** Consider GHG emissions in transportation network design.
- **Planning:** An emphasis on bike and pedestrian connectivity and implementing Complete Streets projects will help reduce vehicle emissions.
- **Roadway Design:** Incorporating landscape vegetation in roadway design would help off-set GHG emissions.

Does the performance measure effectively measure what is desired?

It is anticipated the performance measure will allow the Department to track the measure as desired and help meet statewide GHG goals. Department tracking and monitoring of GHG reduction strategies will assess the effectiveness of the performance measure and modifications will be made to ensure accurate and effective measurement.

Does monitoring and evaluating this performance measure improve your process?

Currently, the Department is developing a baseline measure to compare. We expect, with continued monitoring and refinements, to achieve sufficient accuracy in emission estimates to make meaningful process improvements.

Is there a more effective performance measure that should be considered? If so, explain

Not applicable. Currently, the Department is in the process of evaluating baseline GHG emissions and assess reduction strategies.

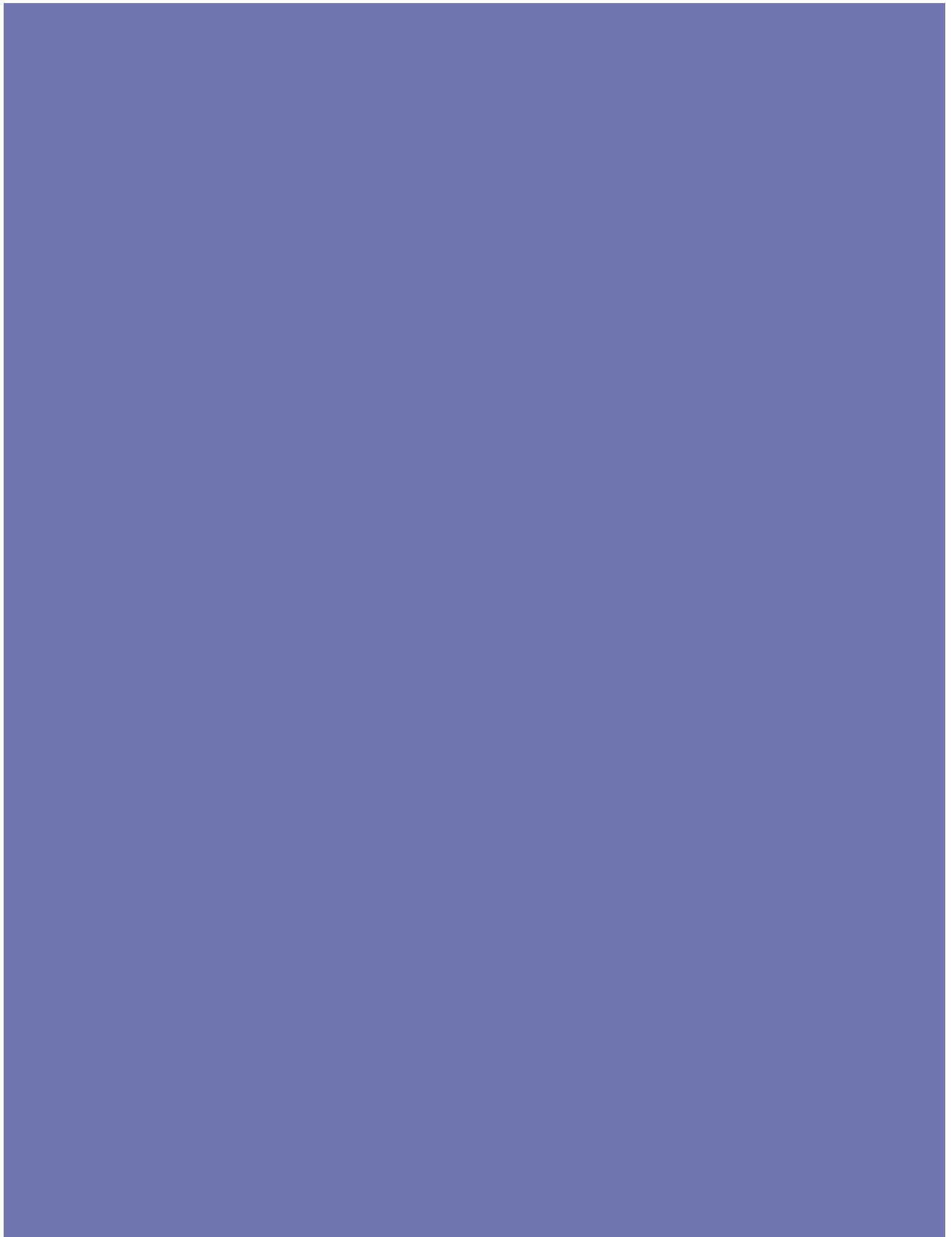
Has the Covid-19 pandemic effected your performance measure or the ability to meet your targets? If so, explain.

Reduced work travel and staff commuting directly related to COVID-19 in the last quarter of FY2020 have resulted in reduced GHG emissions in these categories and overall GHG in FY 2020 compared to FY 2019. This is a positive outcome for the GHG reduction initiative.

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

Modifications to construction and maintenance practices or materials may incur higher costs by the Department and our construction contractors and consultants. Quantitative tracking of Department GHG emissions will attempt to utilize existing personnel, processes and systems where applicable. Additional staff resource may be needed to support coordination, tracking and implementation. The Department is continuing work on specific strategies and establish yearly target as well as fiscal implications.

**APPLICABLE DIRECTIVES
FROM THE
TRANSPORTATION
BOARD/LEGISLATURE**



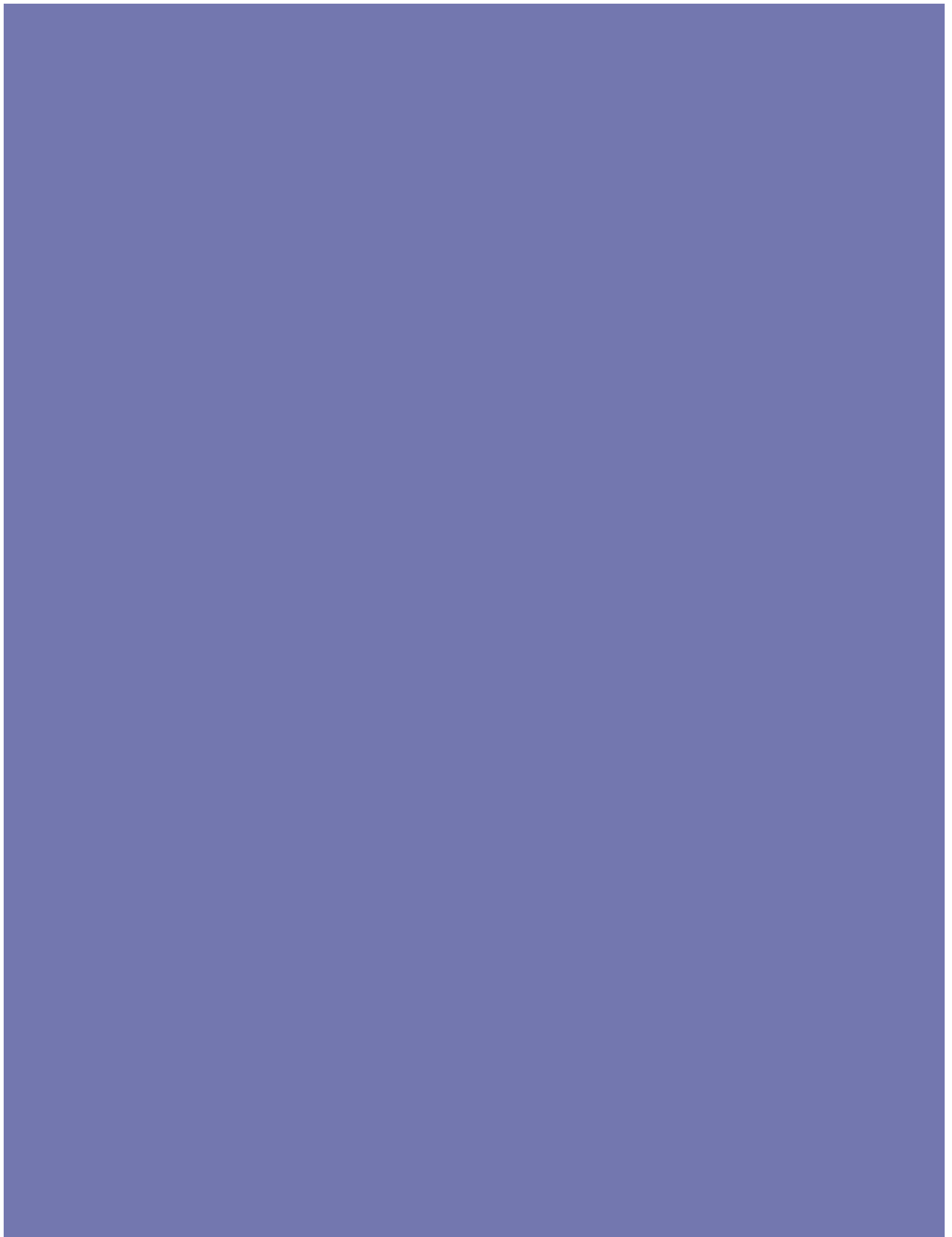
APPLICABLE DIRECTIVES FROM THE TRANSPORTATION BOARD/LEGISLATURE

The 2019 Legislature passed SB 254, which requires the Department of Conservation and Natural Resources (DCNR) to create a report including an inventory of greenhouse gas emissions and a projection of annual greenhouse gas emissions in the state for 20 years. The inventory for transportation and electricity must be updated annually and other industries are updated every four years. The bill also requires that the report include a set of potential policies to achieve identified GHG emission reduction targets.

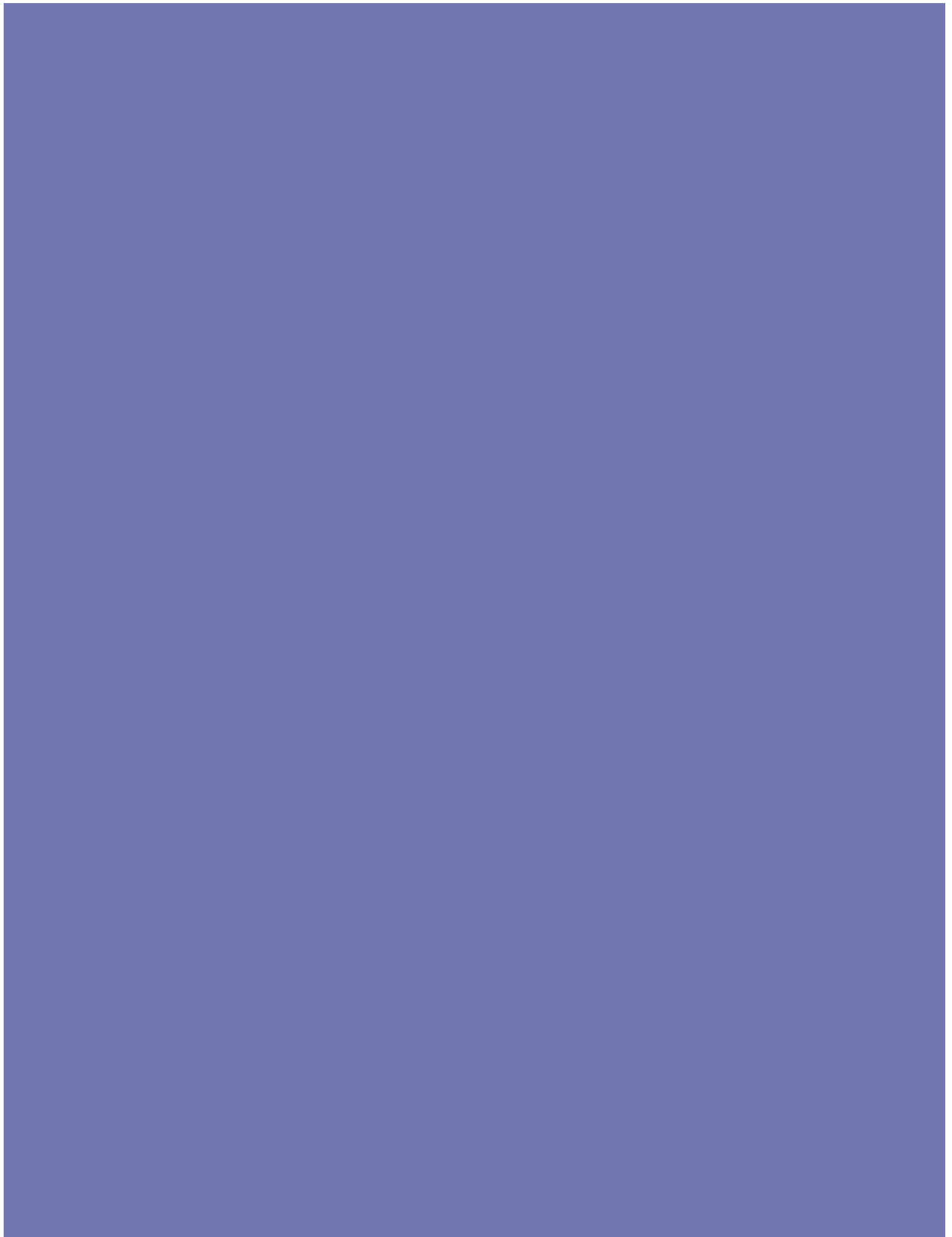
In November 2019, Governor Sisolak signed Executive Order 2019-22, tasking DCNR and the Governor's Office of Energy (GOE) were tasked with establishing interagency coordination to address climate issues. Further, a delivery date of December 1st, 2020 was set for the first iteration of a new State Climate Strategy to set the framework for the state to meet the GHG emission reduction targets.

While not the primary responsible agency, NDOT was noted in both of these actions as a required collaborating agency. The Department has taken that role seriously and has actively participated by evaluating agency operations for potential GHG emission reduction, the identification and evaluation of policies and strategies for transportation GHG reductions, and actively participated in multiple working groups to assist with the drafting of the first State Climate Strategy. These initiatives were not included in the 2019 Performance Management Report because the NDOT role was still being determined at that time as a "collaborating agency" rather than a directive to the Department. Over the past year, NDOT has worked closely with DCNR and NGOE to collaborate and better define the NDOT role in this effort.

In addition to the partnership on the state strategies, NDOT has included a new Performance Measure to track transportation related GHG emissions to this annual report (Measure 16). As the efforts evolve, strategies and policies are refined, this measure may be further refined as well.



**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).

The following three tables provide the required information:

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

The first table reports that total FY 2020 revenues into the State Highway Fund were approximately \$1.12 billion while the second table contains the total FY 2020 actual expenditures of approximately \$1.08 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 \$432,363,510 at 2019 fiscal year-end. This balance is approximately \$79 million lower than the 2018 year-end balance of \$511,457,073. Please note that the 2020 fiscal year-end balance will be available when the State of Nevada 2020 Comprehensive Annual Financial Report has been completed.

State of Nevada
Highway Special Revenue Fund
Schedule Of Revenues And Receipts - Budgetary Basis
For The Years Ended June 30, 2020 and 2019
(In thousands)

	2020	2019
State user taxes		
Gasoline taxes	\$ 206,219	\$ 220,450
Motor vehicle fees and taxes		
Vehicle registration & bicycle safety fees	116,296	125,969
Basic Government Service Tax	63,924	64,467
Motor carrier fees	40,316	46,773
Drivers license fees	17,154	22,526
Special fuel taxes	102,138	100,059
Total motor vehicle fees and taxes	339,828	359,794
Total state revenue	546,047	580,244
Federal Aid reimbursement		
Department of Interior	-	-
Federal Aviation Administration	16	124
Federal Emergency Management Administration	1,662	-
Federal Highway Administration	330,377	357,799
Federal Rail Administration	-	-
Federal Transit Administration	14,275	3,568
Total Federal Aid	346,330	361,491
Miscellaneous receipts		
Departments of Motor Vehicles & Public		
Safety authorized revenue	123,161	112,907
Appropriations from other funds	221	5,293
Proceeds from sale of bonds	-	-
Agreement income	41,462	27,368
Interest	10,436	12,409
Sale of surplus property	-	705
AB595 property tax	26,020	23,987
AB595 bond revenue	-	-
Other sales & reimbursements	28,871	21,772
Total miscellaneous receipts	230,171	204,441
Total revenue and receipts - budgetary basis	\$ 1,122,548	\$ 1,146,176

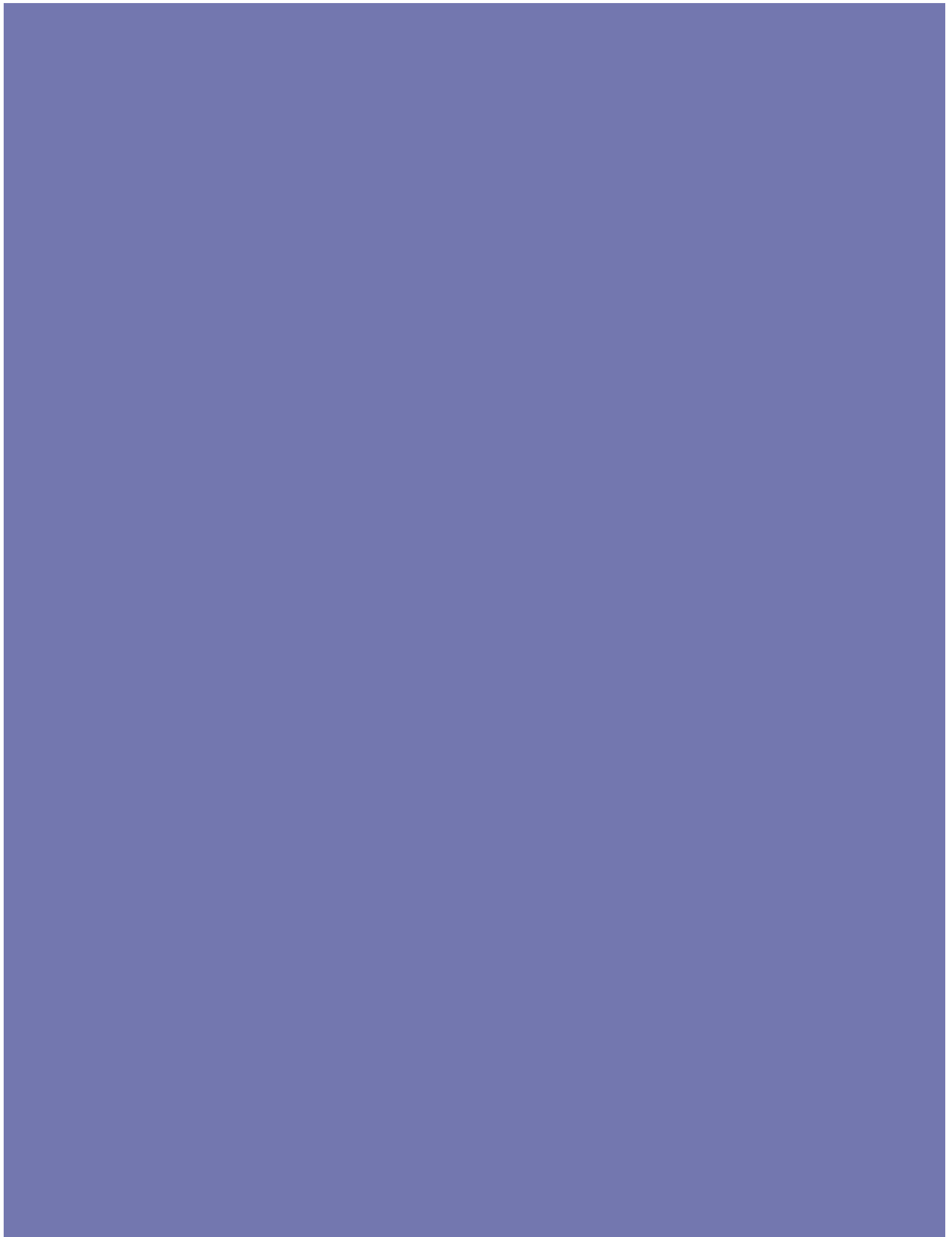
State of Nevada
Highway Special Revenue Fund
Comparative Schedule of Expenditures and Disbursements - Budgetary Basis
For the Fiscal Year Ending June 30, 2020 and 2019
(In thousands)

	2020			2019
	Budgeted	Actual Using Budgetary Basis	Variance Favorable (Unfavorable)	Actual Using Budgetary Basis
Department of Transportation				
Labor	\$ 164,139	\$ 152,787	\$ 11,352	\$ 146,530
Travel	2,527	1,862	\$ 665	2,212
Operating	84,703	80,514	\$ 4,189	70,437
Equipment	48,031	32,145	\$ 15,886	14,898
Capital improvements	692,636	494,191	\$ 198,445	570,703
Bond expenditures	161,601	1	\$ 161,600	112,464
Other programs	28,735	9,891	18,844	9,470
Total operations	<u>1,182,372</u>	<u>771,391</u>	<u>410,981</u>	<u>926,714</u>
Cost of fuel sold to other agencies	<u>2,303</u>	<u>2,101</u>	<u>202</u>	<u>2,477</u>
Total Department of Transportation	<u>1,184,675</u>	<u>773,492</u>	<u>411,183</u>	<u>929,191</u>
Department of Motor Vehicles (see Note 2)	174,800	121,483	53,317	119,160
Department of Public Safety (see Note 2)	120,734	103,519	17,215	81,709
	<u>295,534</u>	<u>225,002</u>	<u>70,532</u>	<u>200,869</u>
Appropriations to other funds				
Board of Examiners	-	-	-	-
Department of Administration	-	-	-	-
Transportation Services Authority	2,601	2,601	-	2,309
Public Works Board	1,616	1,616	-	1,798
Traffic Safety	-	-	-	-
Investigations	418	418	-	360
DPS HWY SAFETY PLAN & ADMIN	424	424	-	-
DPS TRAINING DIVISION	1,214	1,214	-	-
Transfer to Treasurer	4,148	4,148	-	2,475
Govs Office of Finance IT Proj	456	456	-	7,734
Fleet Services Capital Purchase	-	-	-	-
Legislative Counsel Bureau	5	5	-	-
Dept of Information Technology	-	-	-	-
Total appropriations to other funds	<u>10,881</u>	<u>10,882</u>	<u>-</u>	<u>14,676</u>
Other disbursements				
Transfer to bond fund	84,000	74,606	9,394	74,884
Total other disbursements	<u>84,000</u>	<u>74,606</u>	<u>9,394</u>	<u>74,884</u>
Total expenditures & disbursements - Budgetary basis	<u>\$ 1,575,091</u>	<u>\$ 1,083,982</u>	<u>\$ 491,109</u>	<u>\$ 1,219,620</u>

STATE HIGHWAY FUND BALANCE (BUDGETARY BASIS)
STATE FISCAL YEARS 2017 - 2019

	ACTUAL FY 2017	ACTUAL FY 2018	ACTUAL FY 2019
BEGINNING FUND BALANCE:			
GENERAL OBLIGATION BONDS	\$189,188,225	\$195,172,512	\$111,015,911
RESTRICTED FUNDS	\$34,949,101	\$67,612,447	\$41,897,438
OTHER HIGHWAY FUND	\$294,481,446	\$265,688,049	\$358,543,723
TOTAL BEGINNING FUND BALANCE:	\$518,618,773	\$528,473,009	\$511,457,073
ADD:			
REVENUES	\$1,072,487,605	\$1,134,382,823	\$1,144,728,498
BOND PROCEEDS	\$185,750,314	\$136,839,036	\$1,447,658
TOTAL ADDITIONS:	\$1,258,237,919	\$1,271,221,859	\$1,146,176,156
DEDUCT:			
DEPT OF TRANS. NON-BOND EXPENDITURES	\$775,446,692	\$775,583,924	\$816,395,194
DEPT OF TRANS. BOND EXPENDITURES	\$179,766,027	\$220,995,637	\$112,463,572
EXP. & APPROP TO OTHER AGENCIES	\$298,740,675	\$283,574,981	\$292,171,905
TOTAL DEDUCTIONS:	\$1,253,953,394	\$1,280,154,542	\$1,221,030,671
ADJUSTING ENTRIES:			
CONTROLLERS OFFICE CAFR ADJUSTMENTS	\$5,569,711	-\$8,083,253	-\$4,239,047
TOTAL ADJUSTING ENTRIES:	\$5,569,711	-\$8,083,253	-\$4,239,047
ENDING FUND BALANCE:			
GENERAL OBLIGATION BONDS	\$195,172,512	\$111,015,911	\$0
RESTRICTED FUNDS	\$67,612,447	\$41,897,438	\$91,781,507
OTHER HIGHWAY FUND	\$265,688,049	\$358,543,723	\$340,582,003
TOTAL ENDING FUND BALANCE:	\$528,473,009	\$511,457,073	\$432,363,510

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 can be selected from among 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. After this phase, major projects are divided into smaller construction segments to address the 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, utility relocations are 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 later in the process. Appendix B Dealing with Project Risks, provides more details concerning the time ranges.

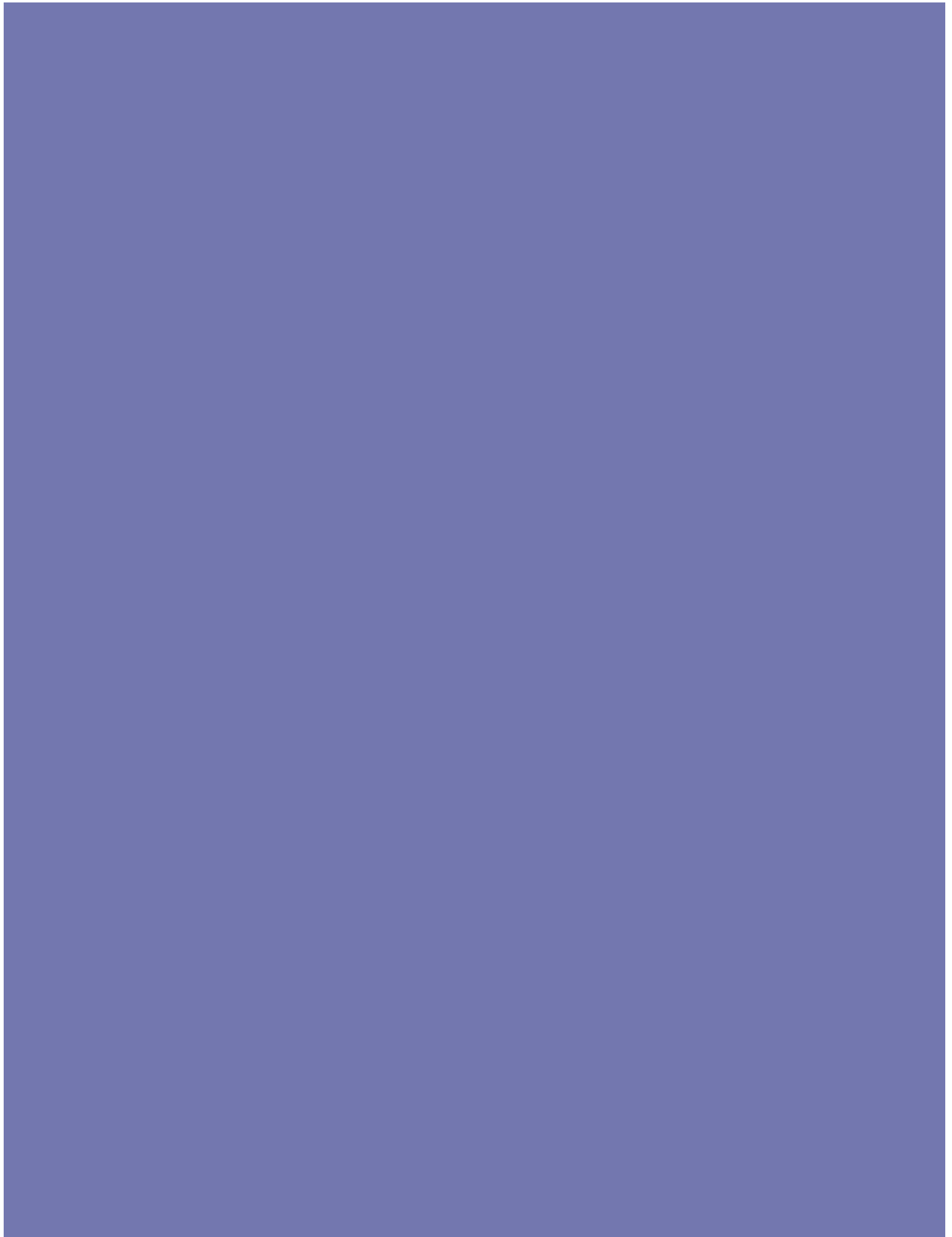
Project Costs: Project cost ranges are provided by activity: 1) engineering activities that include planning, environmental clearance and final design costs, 2) right-of-way acquisition, and 3) construction. Costs are adjusted for inflation to the anticipated mid-point of completing a phase. Appendix 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 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

Southern Nevada Projects

I-15 Projects

- I-15 North Phase 3 – Speedway Boulevard to Garnet Interchange
- I-15 North Phase 4 – I-15/CC-215 Northern Beltway Interchange
- I-15 NEON Design-Build
- I-15 Central Corridor
- I-15 Tropicana Interchange Reconstruction
- I-15 South Bermuda Road Via Nobila Interchange
- I-15 South Pebble Road Overpass
- I-15 South Phase 2 Widening
- I-15 South Sloan Road (Via Inspirada Interchange)

I-515 Projects

- Downtown Access Project
- Henderson Interchange: I-515/CC-215 System Connection

US-95 Northwest Projects

- US-95 Northwest Phase 3C – CC 215 Beltway Interchange
- US-95 Northwest Phase 3D – CC 215 Beltway Interchange

Northern Nevada Projects

- Reno Spaghetti Bowl (SBX)
- I-80 East: Vista Boulevard to USA Parkway
- Pyramid Highway /US 395 Connection
- US-395 North Valleys Phase 1A: Parr-Dandini Bridge Replacement
- US-395 North Valleys Phase 1B: Widening
- US-395 Carson City Freeway Phase 2B: S. Carson St. to Fairview Dr.

I 15 North - Phase 3

Speedway Boulevard to Garnet Interchange

Project Sponsor: NDOT

Project Manager: Dwayne Wilkinson, P.E.

(702) 671-8879



Project Description:

- Last phase of improvements associated with the I-15 North Corridor Environmental Assessment. Original project limits were from Speedway Boulevard to Apex Interchange (May 2007 Environmental Assessment). Project limits were extended 6.1 miles to the north from the Apex Interchange to the Garnet Interchange (US 93)
- Widen I-15 from four to six lanes from Speedway Boulevard Interchange to the Garnet Interchange, approximately 10.7 miles
- Project also includes: weigh station, enforcement improvements, truck parking, and a new interchange between Speedway and Apex
- The first construction package will include roadway widening, bridge rehabilitation and widening, truck parking, enforcement elements (excluding the weigh station in the southbound direction), drainage improvements, a highway maintenance facility and landscape enhancements
- The second construction package will include a new weigh station in the southbound direction and additional improvements to the truck parking lots
- A proposed new interchange between Speedway and Apex is currently not included in any construction package. The interchange is being included in the environmental process so it may be constructed in the future if desired

Schedule:

Planning:

Complete

Environmental Phase:

2019 -2021

Final Design:

2020- 2021 (First Construction Package)

Construction:

See Financial Fine Points Below



Project Benefits:

- Improve safety
- Improve travel time reliability
- Improve access to areas planned for development in North Las Vegas
- Improve operations

Project Cost Range:

Engineering:

\$5.6 - \$5.9 million

Right-of-Way:

\$0.8 - \$0.9 million

Construction:

\$81.2 - \$85.2 million

Total Project Cost:

\$87.6 - \$92.0 million

What's Changed Since Last Update?

- Scope - No Change
- Schedule - No Change
- Cost - No Change. The cost southbound weigh station are excluded

Project risks:

- Timely completion of environmental
- Timely completion of design
- Availability of construction funds

Financial Fine Points(Key Assumptions):

- Total funding expended for phase 3: \$ 1,055,000 (design and environmental)
- Total funding expended for original Environmental phase: \$214,000
- As per the Regional Transportation Plan, this project will be funded for construction between FY2021 and FY2025.



September
2020



I 15 North - Phase 4

I 15 / CC 215 Northern Beltway Interchange

Project Sponsor: NDOT

Project Manager: Dwayne Wilkinson, P. E.

(702)-671-8879



Project Description:

- This is one of four phases of improvements to the I-15 North Corridor between US 95 and Apex Interchange (15 miles)
- Construct new direct connect ramps to upgrade the I-15 and CC 215 (Las Vegas Beltway) Interchange
- Construct I-15 SB ramps and reconstruct I-15 NB ramps for the I-15 and Tropical Parkway Interchange
- Reconstruct local streets to match interchange re-configurations
- Provide landscape and aesthetic enhancements in accordance with the I-15 Landscape and Aesthetics Corridor Plan
- Improvements will be constructed within the existing I-15 and CC-215 rights-of-way to the extent possible. However, a total of approximately 3.8 acres has been acquired for these improvements

Schedule:

Planning:

Complete

Environmental:

Complete

Final Design:

Complete

Construction:

2020 - 2022



Project Cost Range:

Engineering:

\$10.5 - \$10.9 million

Right-of-Way:

\$1.7 - \$3.7 million

Construction:

\$112.9 - \$117.9 million

Total Project Cost:

\$125.1 - \$132.5 million

Project Benefits:

- Improve safety
- Improve travel time reliability
- Improve access to areas planned for development in North Las Vegas
- Improve operations with full freeway-to-freeway connectivity

What's Changed Since Last Update?

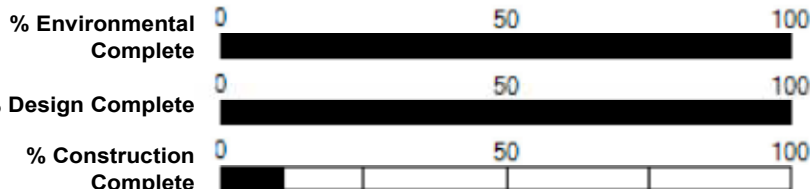
- Scope - No Change
- Schedule - Updated
- Cost - Updated

Project risks:

- Timely completion of utility relocations
- Timely completion of UPRR construction reviews

Financial Fine Points(Key Assumptions):

- Total funding expended for construction: \$ 3,347,000
- Total funding expended for construction engineering: \$ 1,026,000
- Total funding expended for engineering: \$10,604,000
- Total funding expended for right of way: \$1,586,000
- Total funding expended for I-15 North environmental phase: \$875,000
- NDOT Average Escalation Rates applied
- Awarded 01/13/2020 to Fisher Sand & Gravel. Bid \$98,989,898.98



September
2020



Project NEON Design-Build

I-15 Sahara to Spaghetti Bowl

Project Sponsor: NDOT

Project Manager: Nick Johnson, P.E.

(775) 888-7318



Project Description:

- HOV direct connect flyover between US 95 and I-15; I-15 widening improvements from Spaghetti Bowl to south of Sahara; construction of collector-distributor from southbound US 95 to southbound I-15; HOV direct access ramp to and from Neon Gateway; ramp access between Charleston and grade separated MLK Boulevard; and landscape and aesthetic enhancements
- Local access improvements to Las Vegas Downtown Redevelopment
- New northbound direct access ramp to Alta/Bonneville; new southbound I-15 on ramp from MLK Boulevard at Pinto Lane
- Reconstruct the I-15/Charleston Interchange to provide improved operations and accessibility
- Project Length: 4.83 miles

Schedule:

Planning:

Complete

Environmental:

Complete

Begin Construction:

November 2016

Substantial Completion:

May 2019



Project Benefits:

- Improved travel time reliability
- New access to Downtown Redevelopment
- Reduce congestion along local streets and I-15
- Extends HOV System

Project Cost Range:

Engineering:

\$50 - \$60 Million

Right-of-Way and Utilities:

\$225 - \$250 Million

Construction:

\$550 - \$610 Million

Construction Engineering:

\$40 - \$50 Million

Total Project Cost:

\$865 - \$970 Million

What's Changed Since Last Update?

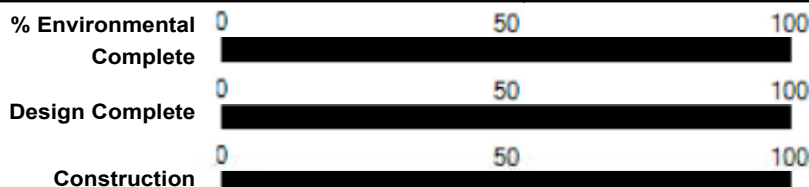
- The project reached substantial completion in May 2019

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: \$986,374,000
- Transportation Board approved the authority to bond for the Project.



September
2020



I 15 Central Corridor

Project Sponsor: NDOT

Project Manager: Jeff Lerud, PE

(702) 671-8865



Project Description:

- Feasibility study along I-15 from Flamingo Road to Sahara Avenue.
- Enhance access and mobility within the I-15 corridor.
- Define needs and examine potential improvements to the I-15 within the resort corridor area.
- Engage stakeholders in a feasibility study and alternative analysis that meets project goals.
- Create a phased implementation strategy and prioritization for future construction.

Schedule:

Feasibility Study:

2019 - 2020

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 operations, safety, access and mobility.
- Support economic development.
- Improve travel time reliability.

What's Changed Since Last Update?

- Planning Phase (Feasibility Study) - Began February, 2019
- Scope - No Change
- Schedule - No Change
- Cost - No Change

Project risks:

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

Financial Fine Points(Key Assumptions):

- Total funding: TBD

Planning (Feasibility Study) 0 50 100

September 2020



I 15 Tropicana Interchange Reconstruction

Project Sponsor: NDOT

Project Manager: Jeff Lerud, PE

(702) 671-8865



Project Description:

- Demolish and reconstruct the Tropicana Avenue interchange at I-15
- Grade separate the intersection of Tropicana Avenue and Dean Martin Drive
- Construct HOV ramps at Harmon Avenue

Schedule:

Environmental:
FONSI - February 6, 2020

RFQ :
September 2020

RFP :
January 2021

Design Build Contractor award :
August/ September 2021

Construction 2022 :
2024



Project Cost Range:

Engineering:
\$8,000,000.00 to \$12,000,000.00

Right of Way:
\$26,000,000.00

Construction:
\$162,000,000.00 to \$187,000,000.00

Project Benefits:

- Improve operations, safety, and mobility
- Provide for future expansion of I-15
- Improve travel time reliability.

What's Changed Since Last Update?

- FONSI - February 6, 2020
- Scope - No changes
- Schedule - See Project Schedule
- Budget - No changes

Project risks:

- Timing of funding
- Stakeholder buy-in
- Right of Way

Financial Fine Points(Key Assumptions):

- N/A



September 2020

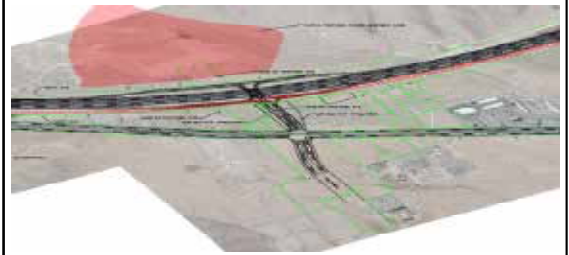


I 15 South - Bermuda Road (Via Nobila) Interchange

Project Sponsor: City of Henderson

Project Manager: Jenica Keller, P.E.

(775) 888-7592



Project Description:

- The I-15 South Corridor Environmental Assessment from Sloan to Tropicana was completed in 2008 and broke the corridor into nine (9) project elements to address funding and constructability opportunities.
- Construction of a new interchange at Bermuda Road (name recently changed to Via Nobila) was one of the project elements identified in the original Environmental Assessment.
- Because of the length of time since the original Environmental Assessment was completed, the corridor is being re-evaluated to address any changes that may have occurred and determine how those changes impact the future of the corridor.

Schedule:

Planning:

Complete

Environmental:

Re-evaluation of 2008

EA to be complete 2nd Quarter SY 2021

Final Design:

TBD

Construction:

TBD



Project Cost Range:

(Estimates per January 2019 CRA)

Engineering:

\$11 million - \$15 million

Right-of-Way:

\$8 million - \$25 million

Construction:

\$73 million - \$106 million

Total Project Cost:

\$92 million - \$146 million

Project Benefits:

- Improves travel time reliability
- Improves access
- Improves safety

What's Changed Since Last Update?

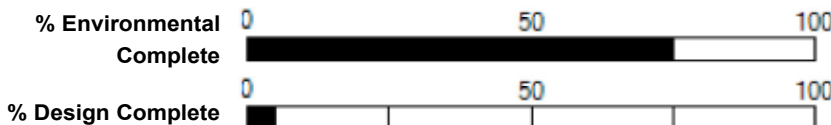
- Scope - No change
- Schedule - More analysis needed for Re-Eval
- Cost - No change

Project risks:

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

Financial Fine Points(Key Assumptions):

- Escalation due to project funding not being available until 2040 per CRA
- Total funding expended for I-15 South Environmental Studies (all phases): \$3.5 million



September
2020



I 15 South - Pebble Road Overpass

Project Sponsor: Clark County

Project Manager: Jenica Keller, P.E.

(775) 888-7592



Project Description:

- The I-15 South Corridor Environmental Assessment from Sloan to Tropicana was completed in 2008 and broke the corridor into nine (9) project elements to address funding and constructability opportunities.
- Construction of an overpass at Pebble Road and I-15 was one of the project elements identified in the original Environmental Assessment.
- Because of the length of time since the original Environmental Assessment was completed, the corridor is being re-evaluated to address any changes that may have occurred and determine how those changes impact the future of the corridor.

Schedule:

Planning:

Complete

Environmental:

Re-evaluation of 2008

EA to be complete 2nd Quarter SY 2021

Final Design:

TBD

Construction:

TBD



Project Cost Range:

(Estimates per January 2019 CRA)

Engineering:

\$5 million - \$6 million

Right-of-Way:

\$0

Construction:

\$33 million - \$43 million

Total Project Cost:

\$38 million - \$49 million

Project Benefits:

- Improves access to local community
- No connections to I-15, so interstate traffic will not be negatively impacted

What's Changed Since Last Update?

- Scope - No change
- Schedule - More analysis needed for Re-Eval
- 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
- Total funding expended for I-15 South Environmental Studies (all phases): \$3.5 million
- Funding Source (2019 EA Update): Clark County Fuel Revenue Index Funding



September
2020



<p>I 15 South - Phase 2</p> <p>Sloan Road to Blue Diamond (SR-160)</p> <p>Project Sponsor: NDOT</p> <p>Project Manager: Jenica Keller, P.E.</p> <p>(775) 888-7592</p>	
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Project Description:

- The I-15 South Corridor Environmental Assessment from Sloan to Tropicana was completed in 2008 and broke the corridor into nine (9) project elements to address funding and constructability opportunities.
- This is one project element identified in the original Environmental Assessment.
- Because of the length of time since the original Environmental Assessment was completed, the corridor is being re-evaluated to address any changes that may have occurred and determine how those changes impact the future of the corridor.
- The original project identified widening on I-15 between Sloan Road and Blue Diamond Road from 6 to 10 lanes for a total length of 8.2 miles.

Schedule:

Planning:
Complete

Environmental:
Re-evaluation of 2008 EA to be complete 2nd Quarter SY 2021

Final Design:
TBD

Construction:
TBD



Project Cost Range:
(Estimates per January 2019 CRA)

Engineering:
\$22 - \$25 million

Right-of-Way:
\$0

Construction:
\$138 million - \$284 million

Total Project Cost:
\$160 million - \$309 million

Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Improves origin-destination travel time

What's Changed Since Last Update?

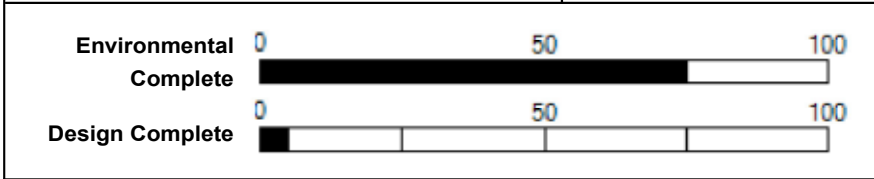
- Scope - No change
- Schedule - No change
- Cost - No change

Project risks:

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

Financial Fine Points(Key Assumptions):

- Funding not available until 2045
- Total funding expended for I-15 South Environmental Studies (all phases): \$3.5 million



September 2020



I 15 South - Sloan Road (Via Inspirada) Interchange

Project Sponsor: City of Henderson

Project Manager: Jenica Keller, P.E.

(775) 888-7592



Project Description:

- The I-15 South Corridor Environmental Assessment from Sloan to Tropicana was completed in 2008 and broke the corridor into nine (9) project elements to address funding and constructability opportunities.
- Construction of a new interchange at Sloan Road (name recently changed to Via Inspirada) was one of the project elements identified in the original Environmental Assessment.
- Because of the length of time since the original Environmental Assessment was completed, the corridor is being re-evaluated to address any changes that may have occurred and determine how those changes impact the future of the corridor.

Schedule:

Planning:

Complete

Environmental:

Re-evaluation of 2008

EA to be complete 2nd Quarter SY 2021

Final Design:

TBD

Construction:

TBD



Project Cost Range:

(Estimates per January 2019 CRA)

Engineering:

\$10 million - \$12 million

Right-of-Way:

\$13 million - \$22 million

Construction:

\$54 million to \$73 million

Total Project Cost:

\$77 million - \$107 million

Project Benefits:

- Improves access to local community
- Improves origin-destination travel time
- Improves safety

What's Changed Since Last Update?

- Scope - No change
- Schedule - More analysis needed for Re-Eval
- Cost - No change

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 2022 per current Financial Plan
- Total funding expended for I-15 South Environmental Studies (all phases): \$3.5 million



September
2020



Downtown Access Project

I-515/US-95 from Rancho Blvd Interchange to 28th Street

Project Sponsor: NDOT

Project Manager: Ryan Wheeler, P.E.

(702) 278-3391



Project Description:

- This project proposes to improve freeway capacity by adding more lanes and fixing ramp spacing by braiding ramps connecting I-15 and I-515. The project will also add additional access to downtown with two new HOV interchanges at City Parkway and Maryland Parkway.
- This current scope of work on the project is to implement the necessary studies, documentation, and outreach to meet NEPA requirements; and to develop up to fifteen percent (15%) level designs for each of three alternatives under consideration
- The construction alternatives being considered include replacing the existing viaduct with a similar structure OR recessing the highway into a trench below grade
- Each construction alternative will include similar proposed improvements: remove or replace the 1.6 mile viaduct; add freeway capacity; fix ramp spacing by adding ramp braiding to/from I-15 and I-515; add HOV lanes on I-515/US-95; and new HOV interchanges at City Parkway and Maryland Parkway
- *** This project was originally the I-515 alternatives development study with project limits from the Wyoming grade separation to the MLK interchange. The alternatives development study had 5 separate task orders to perform general environmental work, develop lists of potential projects and pursue project development. Task Orders 1-4 have been completed. Task order 5 is the pursuit of the Downtown Access Project.

Schedule:

The project is currently estimated to be 10-13 years in total:

Environmental (3-4 years):

In progress

Final Design (3-4 years):

TBD

Right-of-way (concurrent with final design, 3-4 years):

TBD

Construction (4-5 years):

TBD



Project Cost Range:

Environmental:

\$6.0 million

Engineering:

TBD

Right-of-Way:

TBD

Construction:

TBD

Total Project Costs:

TBD

Project Benefits:

- Improved safety, operations, and air quality through the I-515/US-95 corridor
- Remedy aging infrastructure by replacing or removing the 1.6 mile viaduct
- Improve operations by adding freeway capacity and braiding ramps to/from I-15 and I-515
- Extend HOV network to downtown along I-515/US-95 freeway, including new HOV interchanges at Maryland Parkway and City Parkway
- Improved landscaping and aesthetics

What's Changed Since Last Update?

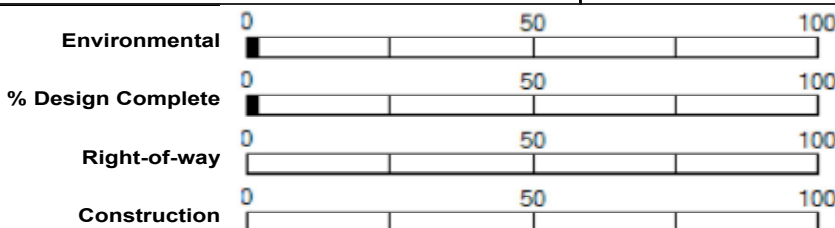
- This project page has been modified to represent the Downtown Access Project which was developed and pursued from the I-515 alternatives development study.

Project risks:

- Funding availability to move project forward into design and construction
- Utility relocation, groundwater, right-of-way acquisitions, crossing the UPRR, and maintenance of traffic through the construction phase
- The project team will manage risks through project development.

Financial Fine Points(Key Assumptions):

- \$9.9 million programmed for planning/environmental effort (\$4.0 million is from the previous task orders 1-4)



September 2020



Henderson Interchange NEPA Study

Project Sponsor; NDOT

Project Manager; David Bowers, P.E., P.T.O.E.

702-671-6672



Project Description:

- This NEPA Study for the Henderson Interchange will determine the preferred alternative and system wide improvements.
- The project limits extend south along I-11 to Horizon Drive, north along I-515 to Galleria Drive, west along I-215 to Valley Verde Drive, and east along Lake Mead Parkway to Van Wagenen Street.

Schedule:

Planning (Henderson Feasibility Study):

Complete

Environmental; 2022



Project Cost Range:

Environmental:

\$4 million

Engineering:

TBD

Right-Of-Way:

TBD

Construction:

TBD

Project Benefits:

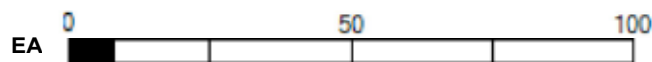
- Improved operations
- Improved travel time reliability
- Improved safety

What's Changed Since Last Update?

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

Project risks:

- Negative environmental impacts
- High project cost



September
2020



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 3 subparts (A, C and D)
- Phase 3C: Ramps providing north to west, south to east and south to west movements

Schedule:

Planning:

Complete

Environmental:

Complete

Final Design:

Complete

Advertise:

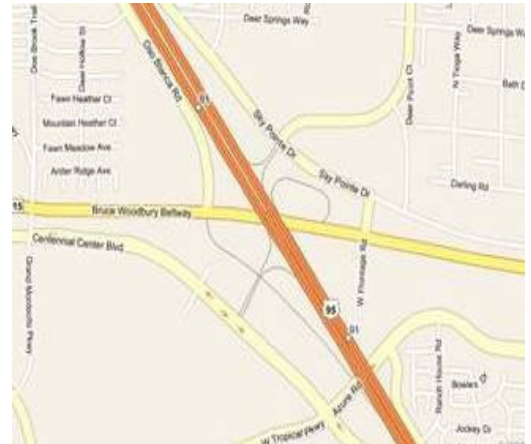
Complete

Construction:

Start January 2019

Construction:

End December 2020



Project Cost Range:

(Final Design Phase Estimates):

Engineering (All Phases):

\$14 - \$15 million

Right of Way (All Phases):

\$0 - \$1 million

Construction (All Phases):

\$204 - \$268 million

Construction (3C):

\$61 - \$73 million

Total Project Cost (All Phases):

\$218 - \$284 million

Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Improve travel time reliability

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: \$124.75 million
- Total funding expended for US 95 Northwest Environmental Studies (all phases): \$5 million
- 3C: inflation escalation (2.30%) to midpoint of construction 2019
- Funding source:
 - - Federal: \$19 million
 - - State: \$54 million



September
2020



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 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 3 subparts (A, C and D)
- Phase 3D: Ramps providing west to north, south to west and east to north movements; local interchange; upgrade CC215; and construct Multi-Use Path

Schedule:

Planning:

Complete

Environmental:

Complete

Final Design:

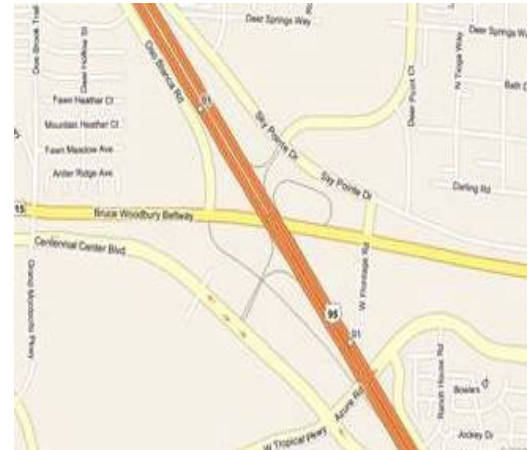
Complete 2020

Construction:

Start January 4, 2021

Construction:

End 2nd Quarter SY 2024



Project Benefits:

- Increase capacity
- Improve safety
- Improve access
- Improve travel time reliability

Project Cost Range:

(Design Phase Estimates):

Engineering (All Phases):

\$14 - \$15 million

Right of Way (All Phases):

\$0 - \$1 million

Construction (All Phases):

\$204 - \$268 million

Construction (3D):

\$134 - \$185 million

Total Project Cost (All Phases):

\$218 - \$284 million

What's Changed Since Last Update?

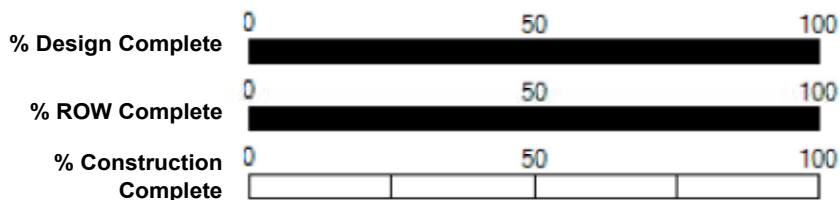
- Scope - No change
- Schedule - No change
- Cost - No change

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: \$124.75 million
- Total funding expended for US 95 Northwest Environmental Studies (all phases): \$5 million
- 3D: inflation escalation (2.27%) to midpoint of construction 2021
- Funding source: TBD



September
2020



The Reno Spaghetti Bowl (SBX)

180/ I580/ US 395 System Interchange

Project Sponsor: NDOT

Project Manager: Pedro Rodriguez, PE / Sajid Sulahria, PE

775-888-7320 / 775-888-7742



Project Description:

- Freeway capacity, safety, and operational improvements to and surrounding the Spaghetti Bowl Interchange
- Freeway access management improvements
- Modify service interchanges
- I-80 limits: Virginia/Sierra/Center Street Interchange to Pyramid Highway Interchange
- I-580/US 395 limits: McCarran/Clear Acre Interchange to Virginia/Kietzke Interchange

Schedule:

Environmental:

Complete

SBX Phase 1 Design and Construction:

2019 - 2023

SBX Phase 1 Design-Build:

2020 - 2023

Future Construction Phases:

2025 and Later



Project Cost Range:

Engineering:

\$107 - \$153 million

Right of Way:

\$342 - \$495 million

Construction:

\$1.5 - \$2.2 billion

Total Project Cost (All Phases):

\$1.9 - 2.8 billion

Project Benefits:

- Improve freeway safety and operations
- Improve travel time reliability
- Accommodate current and future travel demands
- Improved freeway maintenance

What's Changed Since Last Update?

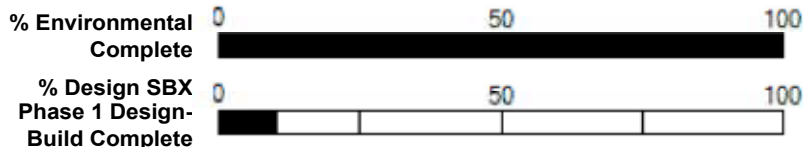
- Scope - No changes
- Schedule - Environmental Phase Complete
- Budget - Updated based on Cost Risk Assessment

Project risks:

- Complex access management strategies
- Railroad
- Truckee River
- Socio-economic environment
- Fragmented Local Network
- Right of Way
- Historical and cultural impacts
- 4f and 6f impacts

Financial Fine Points(Key Assumptions):

- Total funding expended for Environmental Phase: \$11.6 Million



September 2020



I-80 East

Vista Blvd. to USA Parkway (SR 439)

Project Sponsor : NDOT

Project Manager: Amanda Callegari, P.E.

(775) 888-7603



Project Description:

- This project consists of corridor improvements on 13.1 miles of I-80 between Vista Blvd. and USA Parkway
- Freeway capacity improvements include widening I-80 in each direction from two to three lanes
- Freeway safety improvements include widening shoulders for emergency access
- Interchange improvements will enhance acceleration lanes/merging distances and freeway access management
- The current scope of work on the project is to implement the necessary studies, outreach, and documentation to fulfill the NEPA requirements as well as to develop preliminary design alternatives

Schedule:

Planning:

Anticipated scoping completion 2021

Milestones / Deliverables:

Environmental:
2021 - 2023

Intermediate Design:
2023

Final Design and Right-of-way :
2023 - 2025

Construction:
2025



Project Cost Range:

Engineering:

TBD

Right-of-Way:

TBD

Estimated Construction Costs:

\$300-\$400M

Project Benefits:

- Improve Safety
- Improve Travel Time Reliability
- Improve Freeway Operations
- Accommodate Future Planned Growth

What's Changed Since Last Update?

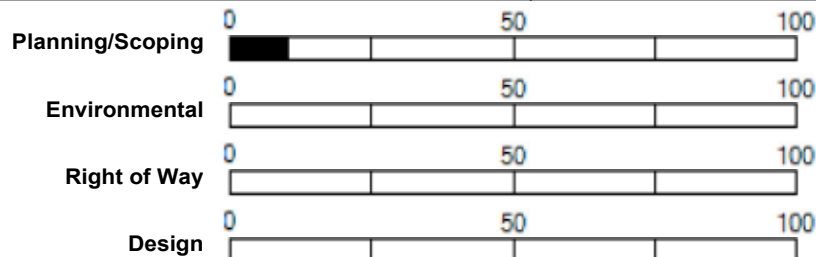
- Scope: Scope development in progress
- Schedule: No change
- Cost: No change

Project risks:

- Funding uncertainty for project construction
- Environmental study outcomes could impact schedule
- Challenging topography between steep rock slopes, the Truckee River and the UPRR adjacent to I80
- Significant utilities located laterally to I80 could impact schedule and budget

Financial Fine Points(Key Assumptions):

- Environmental effort programmed to use state funds
- Preliminary Engineering Anticipated to use state funds
- Funding for Construction not yet identified



September
2020



Pyramid Highway/US 395 Connection

Project Sponsor: Washoe County RTC and NDOT

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

NDOT Project Manager: Sajid Sulahria, P.E.

Phone: (775) 888-7742



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 Disc 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.
- NEPA completed by Washoe RTC.
- This project will be delivered in 6 phases.
- Phase 1 from Queen Way to Golden View Drive is currently in the design process.

Schedule:

Planning:

Complete

Environmental:

2010 - 2018

Final Environmental Impact Statement (FEIS):

Winter 2014-2017

Record of Decision (ROD):

2018

Final Design:

Phase 1 - currently in design

Phases 2 through 6 design TBD

Construction:

Phases 1 through 6 - 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 travel time reliability and safety along the Pyramid Highway and McCarran Blvd. corridors.
- Provide alternative access to freeway system.
- Improve safety.

What's Changed Since Last Update?

- The Record of Decision has been received.
- Phase 1 - Queen Way to Golden View Drive is currently in the design process.

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
- Construction funding for all phases: TBD



September 2020



US 395 North Valleys Phase 1A: Parr-Dandini Bridge Replacement

Highway Project Manager: Jae Pullen, P.E., PTOE

Phone: (775) 888-7589

E-mail: jpullen@dot.nv.gov



Project Description:

- US 395 is the major connection between Reno/Sparks and the north valleys: Golden Valley, Lemmon Valley, and Cold Springs. This route also serves as the main connection to northeastern California.
- This is the first phase of the future widening of US 395 in the North Valleys
- This phase includes the removal of the aging and structurally deficient Parr-Dandini Bridge structure (I-1306) and construction of a new bridge that will be longer and wider to accommodate future phases of widening through this area

Schedule:

- Final Design Submittal:**
December 2019
- Advertise Project:**
February 2020
- Construction Awarded:**
April 2020
- Anticipated Construction Completion:**
December 2020



Project Cost Range:

- Engineering:**
\$500k to \$700k
- Construction:**
\$8 to \$9 million
- Total Project Cost**
\$8.5 to \$10 million

Project Benefits:

- Improved safety
- Decreased structure maintenance
- Multimodal design

What's Changed Since Last Update?

- Scope: No change
- Schedule: No change
- Budget: No change

Project risks:

- Existing transmission line poses constructability challenges
- Weather could delay construction completion

Financial Fine Points(Key Assumptions):

- Total funding expended: \$6 million



September
2020



US 395 North Valleys - Phase 1B

Highway Project Manager: Jae Pullen, P.E., PTOE

Phone: (775) 888-7589

E-mail: jpullen@dot.nv.gov



Project Description:

- US 395 is the major connection between Reno/Sparks and Golden Valley, Lemmon Valley, and Cold Springs areas. This route serves as the main connection to northeastern California.
- This is the second phase of US 395 North Valleys Project, Phase 1B
- This phase will include a third southbound travel lane, auxiliary lanes between the interchanges in both the northbound and southbound directions, new braided ramp at Panther Valley and the rehabilitation of the existing roadway.

Schedule:

Planning:

Complete

Intermediate Design Submittal:

March 2021

Advertise:

December 2022



Project Cost Range:

Engineering:

\$4 to \$6 million

Right-of-Way:

\$100,000 to \$150,000

Construction:

\$75 to \$100 million

Total Project Cost:

\$80 to \$106 million

Project Benefits:

- Increase capacity to accommodate projected traffic
- Improve travel time reliability
- Improve safety

What's Changed Since Last Update?

- Pavement design strategy change for construction savings and long term maintenance costs

Project risks:

- Bridge widening within UPRR right-of-way

Financial Fine Points(Key Assumptions):

- Total preliminary engineering funding expended for Phase 1A/1B: \$3,180,000.00



September
2020



US 395 Carson City Freeway - Phase 2B

South Carson Street to Fairview Drive

Project Sponsor: NDOT

Senior Project Manager: Sajid Sulahria, P.E.

(775) 888-7742



Project Description:

- This project will be delivered in four packages. Construction is complete for Phase 2B Packages 1, 2 & 3.
- Phase 2B Package 4 will construct the South Carson Interchange and complete the remainder of the project.

Schedule:

Planning:

Complete

Environmental:

Complete

Final Design:

Phase 2B Packages 1, 2 & 3 are Complete - Package 4 - TBD

Construction:

Phase 2B Packages 1, 2 & 3 are Complete - Package 4 - 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:

\$150 - \$200 million not including Package 4

Project Benefits:

- Improve travel time and reliability on Carson Street through Carson City and local streets along the freeway corridor.
- Provide flood control protection.
- Improve opportunities for economic development along the corridor and downtown.

What's Changed Since Last Update?

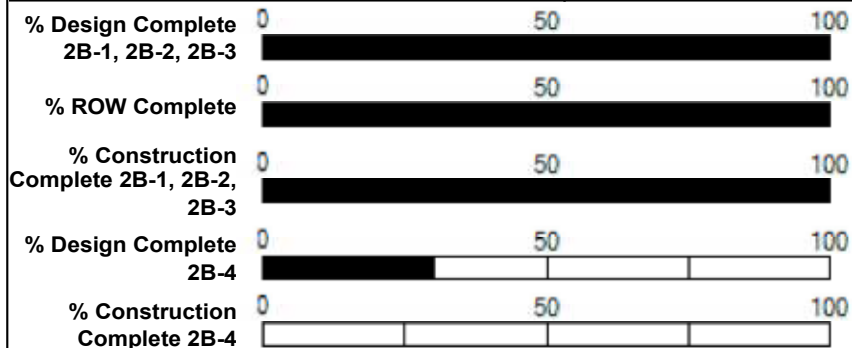
- Scope - Package 4 will complete the remainder of the Freeway.
- Schedule - TBD
- Cost - No change

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: \$200 million
- Construction funding source for Phase 2B-4: TBD

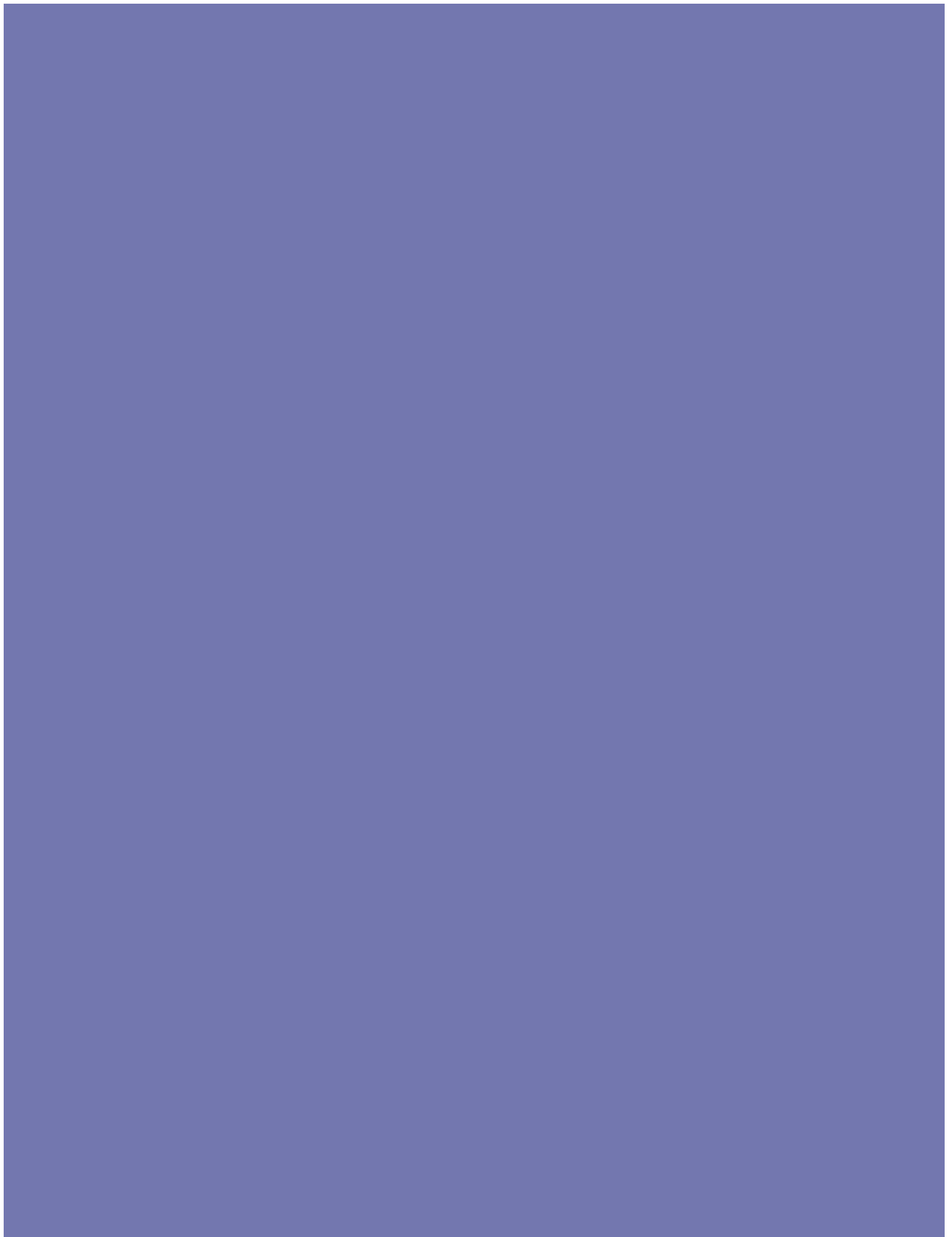


September
2020



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 is done and 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 is done for some projects that do not meet the minimum dollar threshold, but the information is 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 2014 to present. The following table reports the B/C ratio results of a total of 28 projects. Attempt has been made to include B/C ratios for entire projects and not the ratios of individual phases except in cases that are appropriate.

Major Projects	B/C Ratio	Fiscal Year
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
US 95 North-Phase 2A (Ann Road to Durango Drive)	4.2	2014
SR 593 Tropicana Avenue: Dean Martin Drive to Boulder Highway (The project starts at Dean Martin Drive and ends at SR 582 Boulder)	2.5	2014
I-15 North-Part 2 Package D (Capacity Improvements): Craig Rd. to Speedway Blvd	7.1	2014
I-15 North Phase 4 – I-15/CC-215 Interchange – Alternative 1	1.37	2015
I-15 North Phase 4 – I-15/CC-215 Interchange – Alternative 2	1.66	2015
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
US95/CC215 Interchange and Associated Improvements (Phases 3C, 3D/E)	3.36	2017

Major Projects	B/C Ratio	Fiscal Year
I-15/US 93 Interchange (Garnet Interchange) Reconstruction and US 93 Capacity Improvements	2.64	2017
I-515 Alternatives Development Study Project 1	2.9	2017
I-515 Alternatives Development Study Project 2	0.4	2017
I-515 Alternatives Development Study Project 3	2.8	2017
I-515 Alternatives Development Study Project 4	6.8	2017
I-515 Alternatives Development Study Project 5	0.3	2017
I-515 Alternatives Development Study Project 6	1.2	2017
I-15 South Phase 2A/2B Widening	0.2	2018
I-15 South Bermuda Road Interchange	-0.1	2018
I-15 South Sloan Road Interchange	-0.1	2018
Reno Sparks Freeway Traffic Study (Total US 395 Improvements)	8.8	2018
I-15 North Corridor Improvement Phase 3 Project from Speedway Boulevard to Garnet Interchange	3.8	2019
I-15 Tropicana EA project	10.31	2019
Pyramid Highway Improvement Project (Phase 1)	1.57	2019
I-515 Charleston Blvd Interchange Project	1.98	2020

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 public 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 cost benefits, motor vehicle emission cost benefits, vehicle operating cost benefits, and capital cost. In addition, the limitation of the B/C analysis is presented.

Benefit-Cost Analysis Assumptions and Parameters

The typical project life was assumed to be 20 years, i.e., benefits and costs accrued during a period of 20 years after the opening of the project are accounted for in the benefit/cost analysis. However, when the cost of the structural components of a project was a significant portion (greater than 25 percent) of the total project costs, a 40-year project life was assumed.

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 mean wage while business travel by truck/bus drivers was 100% of local mean wage plus fringe benefits. The wage values came from the occupational employment statistics survey for Nevada conducted by the Research and Analysis Bureau of Department of Employment, Training, and Rehabilitation in 2018. A 50% fringe was used because it was an average of several labor groups. Table E-1 lists the travel costs at different areas including Metropolitan Statistical Areas (MSA).

Table E-1 Travel Costs (2019 USD)

Statistical Area	Mean Wage (\$/hour)	Personal Travel (\$/hour)	Business Travel (\$/hour)
Nevada	\$22.60	\$11.30	\$33.90
Las Vegas – Paradise MSA	\$22.32	\$11.16	\$33.48
Reno – Sparks MSA	\$23.19	\$11.60	\$34.79
Carson City MSA	\$24.88	\$12.44	\$37.32

Source: Occupational Employment Statistics (OES) survey for Nevada conducted by the Research and Analysis Bureau of Department of Employment, Training, and Rehabilitation in 2018, <http://nevadaworkforce.com/OES#last>.

Note: 1.0181 is used to convert from 2018 dollars to 2019 dollars.

Average vehicle occupancy factors and rates are shown in Table E-2.

Table E-2 Average Vehicle Occupancy Factors and Rates

Statistical Area	Average Vehicle Occupancy Factors*			Vehicle Occupancy Rate**
	Cars	Trucks	Buses	
Las Vegas – Paradise MSA	1.7	1.0	14.5	1.51
Reno – Sparks MSA	1.7	1.0	10.7	1.45
Other Areas	1.7	1.0	10.7	

* Source: Average Vehicle Occupancy Factors for Computing Travel Time Reliability Measures and Total Peak Hour Excessive Delay metrics (April 2018), FHWA.

** Vehicle occupancy rates are provided by RTC Washoe and RTC SNV.

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 Tables E-3 and E-4.

Table E-3 Nevada Crash Severity Numbers of the Larger Counties (FY 2019)

Location	Traffic Crashes Percentage	Number of Crashes	PDO*	INJURY	FATAL
Clark County	77.43%	39,835	22,128	17,516	191
Washoe County	13.75%	7,072	4,445	2,588	39
Carson City / Douglas County	2.78%	1,431	1,066	359	6

* Property Damage Only.

Source: NDOT Traffic Safety Division.

Table E-4 FY 2019 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	851	1.65%	427,234,180	1.53%	56,823	199.19
CHURCHILL	324	0.63%	350,672,879	1.25%	26,345	92.39
CLARK	39,835	77.43%	19,087,604,696	68.19%	2,145,354	208.70
DOUGLAS	580	1.13%	495,915,995	1.77%	48,190	116.96
ELKO	778	1.51%	838,984,213	3.00%	55,922	92.73
ESMERALDA	51	0.10%	116,650,208	0.42%	1,069	43.72
EUREKA	76	0.15%	150,119,921	0.54%	1,950	50.63
HUMBOLDT	256	0.50%	374,187,378	1.34%	18,350	68.41
LANDER	73	0.14%	140,166,712	0.50%	6,748	52.08
LINCOLN	158	0.31%	166,961,091	0.60%	5,115	94.63
LYON	484	0.94%	537,303,892	1.92%	56,768	90.08
MINERAL	63	0.12%	138,424,763	0.49%	4,345	45.51

COUNTY	TOTAL CRASHES	% OF TOTAL CRASHES	TOTAL AVM	% OF TOTAL AVM	POPULATION	CRASH RATE
NYE	513	1.00%	652,714,238	2.33%	46,225	78.59
PERSHING	58	0.11%	279,559,748	1.00%	6,853	20.75
STOREY	174	0.34%	74,714,823	0.27%	4,033	232.89
WASHOE	7,072	13.75%	3,967,390,667	14.17%	467,417	178.25
WHITE PINE	100	0.19%	195,210,803	0.70%	10,235	51.23
TOTAL	51,446	100.00%	27,993,816,207	100.00%	2,961,742	183.78

1. Source: NDOT Traffic Safety Division updated on December 1, 2020.
2. Crash rates expressed in crashes per 100,000,000 vehicles miles traveled.
3. NV St Demographer Pop. Projections 2015-2019.
4. July 1, 2018 - June 30, 2019.

The crash costs per event (i.e., cost per fatality, cost per serious injury A, and others) 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 (BLS). The crash costs per event then were converted and rounded into 2019 dollars using BLS CPI data. The crash costs per event were converted to costs per crash to correspond with the data on crash reduction. Costs per crash are higher than costs per event because, for example, a fatal crash can involve multiple injuries; therefore, the cost of a single crash is likely higher than one event. Table E-5 shows the crash cost assumptions.

Table E-5 Crash Cost Assumptions (2019 USD)

Crash Severity	Crash Cost per Event ¹	Crash Cost per Crash ²
Fatal (K)	\$6,200,000	\$9,800,000
Suspected Serious (A)	\$330,600	\$467,400
Suspected Minor (B)	\$120,700	\$127,300
Possibly/Claimed (C)	\$67,900	\$65,100
Property Damage Only (PDO)	\$11,000	\$4,500

1. Source: Highway Safety Manual’s Crash Cost Estimates converted into 2019 dollars using BLS CPI data.
2. Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs, USDOT, January 2020.

Table E-6 lists crash costs by the Abbreviated Injury Scale (AIS) levels from the Benefit-Cost Analyses Guidance for transportation investment grant applicants.

Table E-6 Crash Cost Assumptions (2019 USD)

MAIS Level	Severity	Unit value
MAIS 1	Minor	\$29,300
MAIS 2	Moderate	\$459,300
MAIS 3	Serious	\$1,026,200
MAIS 4	Severe	\$2,599,800
MAIS 5	Critical	\$5,795,800
MAIS 6	Not survivable	\$9,773,700

1. Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs, USDOT, January 2020.
2. Use Table E-6 for TIGER, BUILD, FASTLANE, or INFRA grant applications.

Motor Vehicle Emissions and Costs:

The most common local air pollutants generated by transportation activities are Sulfur Dioxide (SO₂), Nitrogen Oxides (NO_x), Fine Particulate Matter (PM), and Volatile Organic Compounds (VOC). The recommended economic values for reducing emissions of various pollutants are shown in Table E-7.

USDOT does not currently have recommended unit values for reductions in other greenhouse gases. Any such estimates provided in a BCA, however, should be discounted at the same rate as costs and other benefits quantified in the BCA, and should be based on the domestic damages of such emissions, rather than using global values.

Table E-7 Damage Costs for Pollutant Emissions (2019 USD)

Emission Type	\$ / short ton*
Carbon Dioxide (CO ₂)	\$0.93**
Fine Particular Matter (PM)	\$394,300
Nitrogen Oxides (NO _x)	\$8,800
Sulfur Dioxide (SO ₂)	\$51,000
Volatile Organic Compounds (VOC)	\$2,140

1. Source: Benefit-Cost Analysis Guidance for Discretionary Grant Programs, USDOT, January 2020.
2. * A metric ton is equal to 1.1015 short tons.
3. **Cost of CO₂ is assumed to grow by 2.1 percent annually.

Vehicle Operating Costs Parameters:

Local data is encouraged to use on vehicle operating costs where available, appropriately documenting sources and assumptions. For analyses where such data is not available, the non-fuel costs for light duty vehicles can be estimated by the American Automobile Association (AAA)'s "Your Driving Costs" based on the average of three sedan categories (small, medium, and large). The non-fuel costs for trucks can be estimated by values from the American Transportation Research Institute (ATRI), the research arm of the American Trucking Associations Federation. ATRI has conducted several analyses of the operational costs of trucking. These studies use costs derived directly from the trucking industry motor vehicle fleet operations. The operating costs reported include categories associated with travel time and fuel operating costs in addition to non-fuel operating costs. These values include operating costs that vary with vehicle miles traveled such as fuel, maintenance and repair, tires, depreciation, and additionally, in the case of trucks, truck/trailer lease or purchase payments, insurance premiums, and permits and licenses. The values exclude other ownership costs that are generally fixed or that would be considered transfer payments, such as tolls, taxes, annual insurance, license, financing charges, and registration fees. For commercial trucks, the values also exclude driver wages and benefits which are already included in the value of travel time savings. Vehicle non-fuel operating cost assumptions are summarized in Table E-8.

Table E-8 Vehicle Non-Fuel Operating Costs (2019 USD)

Vehicle Non-Fuel Operating Costs	Cost Per Mile (\$)
Light Duty Vehicle ¹	0.31
Commercial Truck ²	0.59

1. Source: American Automobile Association, Your Driving Costs – 2019 Edition.
2. Source: American Transportation Research Institute, An Analysis of the Operational Costs of Trucking: 2018 Update.

Fuel consumption rates are suggested to be estimated from the California Air Resources Board Emission Factors 2014 (EMFAC2014) model. On December 30, 2014, the California Air Resources Board updated EMFAC from the previous version, EMFAC2011. EMFAC2014 also improves upon EMFAC2011's modeling structure.

Fuel costs used in the BCA model represent the out-of-pocket fuel costs paid by consumers. The American Automobile Association (AAA) Daily Fuel Gauge Report can be used as the source for fuel data (<http://gasprices.aaa.com/?state=NV>). It is suggested the price of mid-grade fuel for automobile fuel costs and the price of diesel fuel for truck fuel costs. The fuel cost calculation excludes federal, state, and local taxes. These taxes are transfer payments and user fees for funding transportation improvements. Fuel taxes can be broken into three components: Federal fuel excise taxes, State fuel excise taxes, and State and local sales taxes. Federal and state motor fuel taxes can be found from the U.S. Energy Information Administration (<https://www.eia.gov/petroleum/>). Nevada state local taxes can be found from the Facts & Figures book published annually by NDOT.

Capital Expenditures:

The capital cost of a project is the sum of the monetary resources needed to build the project (or program of projects). Capital costs generally include the cost of land, labor, material and equipment rentals used in the project's construction. In addition to direct construction costs, capital costs may include costs for project planning and design, environmental reviews, land acquisition, utility relocation, or transaction costs for securing financing. Costs should be recorded in the year in which they are expected to be incurred, regardless of when payment is made for those expenses.

Operating and Maintenance Expenditures:

Operating and maintenance (O&M) costs cover a wide array of costs required on a continuing basis to support core transportation functions. The ongoing O&M costs of the project throughout the entire analysis period should be included in the BCA and should be directly related to the proposed service plans for the project. O&M costs should be projected for both the no-build baseline and with proposed improvement project. For projects involving the construction of new infrastructure, total O&M costs will generally be positive, reflecting the ongoing expenditures needed to maintain the new asset over its lifecycle. For projects intended to replace, reconstruct, or rehabilitate existing infrastructure, however, the net change in O&M costs under the proposed project will often be negative, as newer infrastructure requires less frequent and less costly maintenance to keep it in service than would an aging, deteriorating asset. Note also that more frequent maintenance under the baseline could also involve work zone impacts that could be reflected in projected user cost savings associated with the project.

Residual Value and Remaining Service Life:

The analysis period used in the BCA should be tied to the expected useful life of the infrastructure asset constructed or improved by the project. Where some or all project assets have several years of useful service life remaining at the end of the analysis period, a "residual value" may be calculated for the project at that point in time. This could apply to both assets with expected service lives longer than the analysis period, and shorter-lived assets that might be assumed to have been replaced within the analysis period. A simple approach to estimating the residual value of an asset is to assume that its original value depreciates in a linear manner over its service life. Those residual values would then be discounted to their present value using the discount rate

applied elsewhere in the analysis. The projected residual value of a project should be added to the numerator when calculating a benefit-cost ratio for a project.

Discussions and 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 deal 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 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.

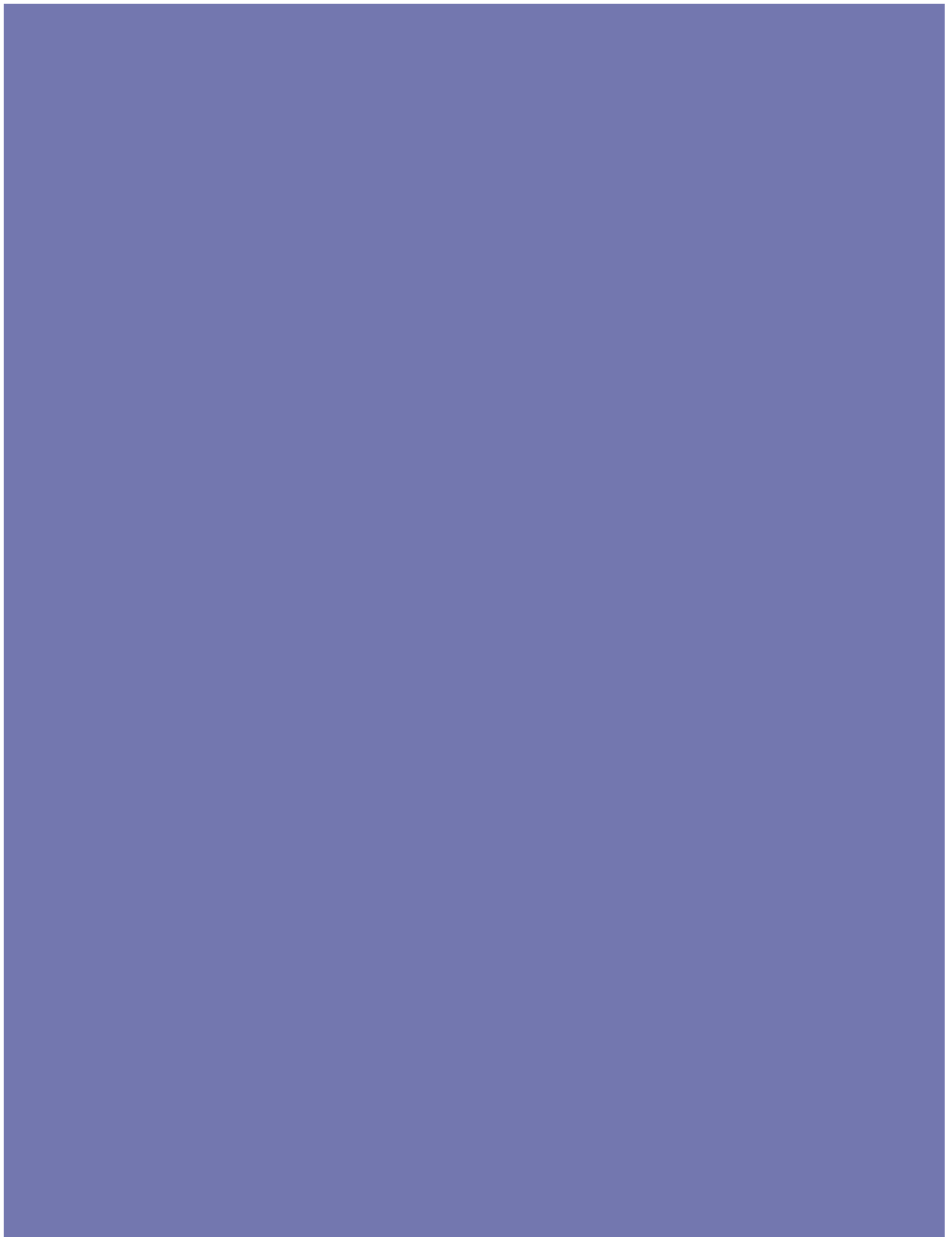
Consequently, at least one area wide factor is needed to address the system wide impacts. One of the Department's new performance measures is: percent of daily vehicle miles of travel at Level of Service E or worse. This measure is called the 'system congestion index'.

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.

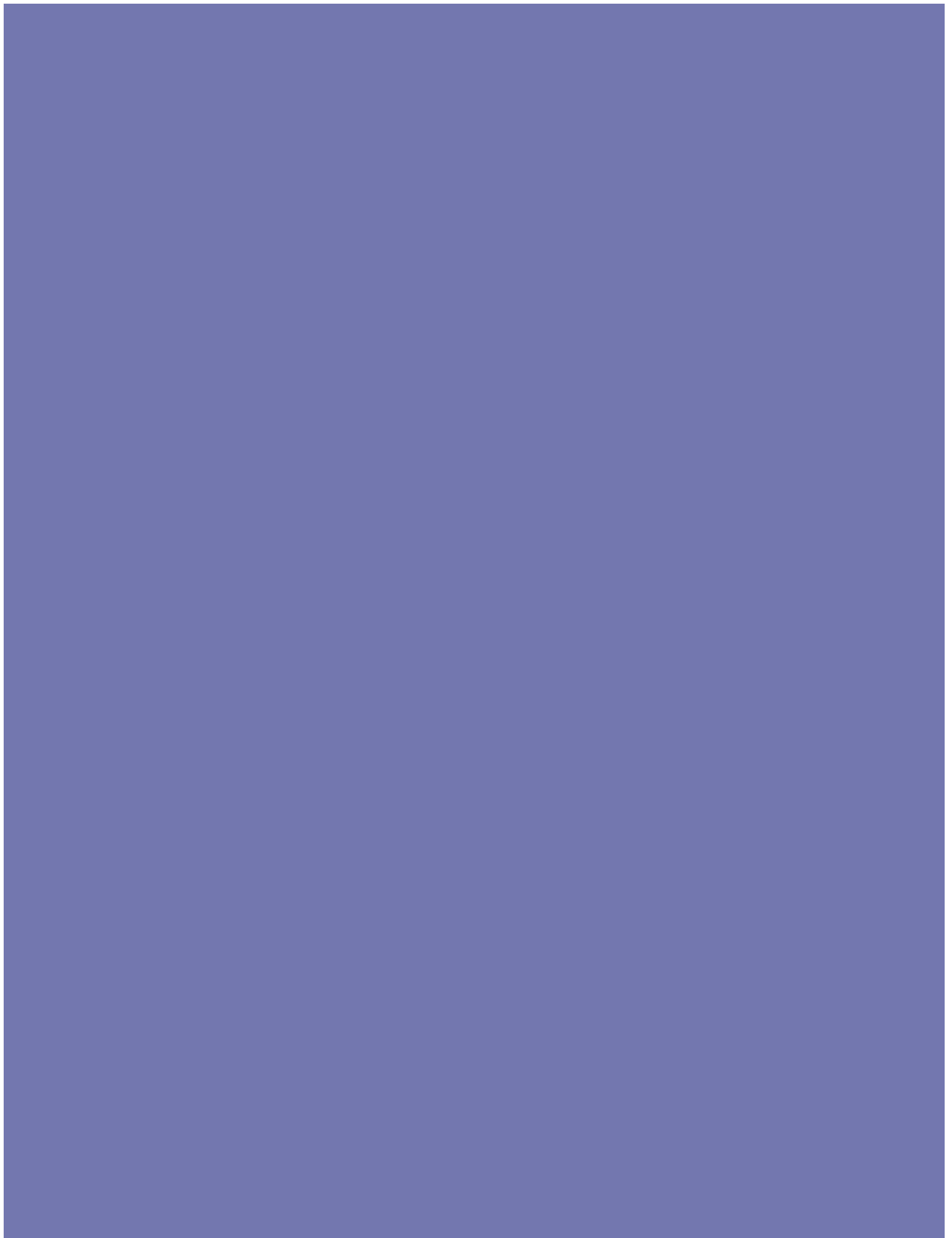
Nationally, discount rates vary from zero to 7% and sometimes higher. The baseline discount rate of 7% is used because of OMB (Office of Management and Budget) Circular A-94 and is applied to all benefit/cost analyses. A three percent discount rate is recommended for performing sensitivity analyses to determine the impact of changes in the discount rate on the B/C ratio. All monetized values used in a BCA should be expressed in a common base year, with the effects of inflation netted out. OMB Circular A-94 and OMB Circular A-4 recommend using the Gross Domestic Product (GDP) Deflator as a general method of converting nominal dollars into real dollars. The GDP Deflator captures the changes in the value of a dollar over time by considering changes in the prices of all goods and services in the U.S. economy. If the method of Consumer Price Index is used as the deflator, it should be explicitly indicated, and the index values used to make the adjustments should be provided in the BCA.

The final limitation is the level of favorable public opinion toward a project. If there is a negative public perception toward a 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 Transportation Board provides oversight on the project selection process. The Board approves the Annual Work Program, and Short and Long-Range Elements. This board also accepts, as approved by the Federal Highway Administration, the Statewide Transportation Improvement Program.

The Department's future transportation project priority rationale will be guided by the *One Nevada Transportation Plan* which is NDOT's Long-Range Transportation Plan. The One Nevada Plan is NDOT's performance-based long-range plan, which will provide a framework for establishing project prioritization practices throughout NDOT. The plan identifies future transportation needs and helps guide future decision-making. The One Nevada Plan includes an overarching vision and is the foundation for the continuous transportation planning process.



The above graphic represents how the One Nevada Plan will be used to guide NDOT's transportation investments. This transparent process will help validate transportation investment decisions by demonstrating how specific projects support the goals for the state's transportation network as established within the One Nevada Plan.

The following subsections describes some of the federal funding programs available to the Department and partner agencies. The programs include: Bridge, State Highway Preservation, Highway Safety Improvement, and Transportation Alternatives Program (TAP).

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 2,107 bridges in the Nevada DOT bridge inventory. Of these, 1,221 are owned and maintained by the Department, 815 bridges are maintained by Nevada Counties and Cities, 48 are maintained by other local agencies. Private entities maintain 11 bridges, Railroads maintain 6, and 6 bridges are maintained by other state agencies.

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 number of vehicles using a bridge, the availability of alternative routes, and rate of deterioration are also considered when selecting replacement and rehabilitation projects.

STATE HIGHWAY PRESERVATION PROGRAM

The Department maintains 5,356 centerline 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 49 percent of Nevada's traffic and 68 percent of the heavy trucks. The Department is responsible for protecting highway assets and preserving existing highways. The Pavement Management System provides an inventory of existing assets, their condition, needed repairs, and repair priorities. The basic principle of pavement preservation is that timely lower-cost improvements 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 \$241 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:

- Apply timely overlays on Interstate and other Principal Arterials, Minor Arterials, and other moderate to high volume roads.
- Further develop economical repair strategies for our low-volume roads.
- 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.
- 2) Analyzing data files to determine high crash sites
- 3) Conducting Safety engineering studies 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 Public Safety/Office of Traffic Safety
- Department of Motor Vehicles
- Federal Highway Administration
- Federal Motor Carrier Safety Administration
- Nevada Sheriffs' and Chiefs' Association
- Nevada Association of Counties
- RTC of Southern Nevada
- RTC of Washoe County
- Department of Health/Bureau of Family Health Services

This cooperation is essential to accomplish "the 5 E's of Traffic Safety" – Engineering, Enforcement, Emergency Response, Education, and Everyone. Programs and projects are developed and prioritized based on data collected on crashes as well as proven countermeasures and expected effectiveness in six emphasis areas: Intersections, Pedestrians, Lane Departure, Impaired Driving, Motorcycle, Occupant Protection, and Young Drivers.

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

The TAP is a competitive, 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.

Federal funding covers up to 95% of project costs with 5% of costs provided by local proponents.

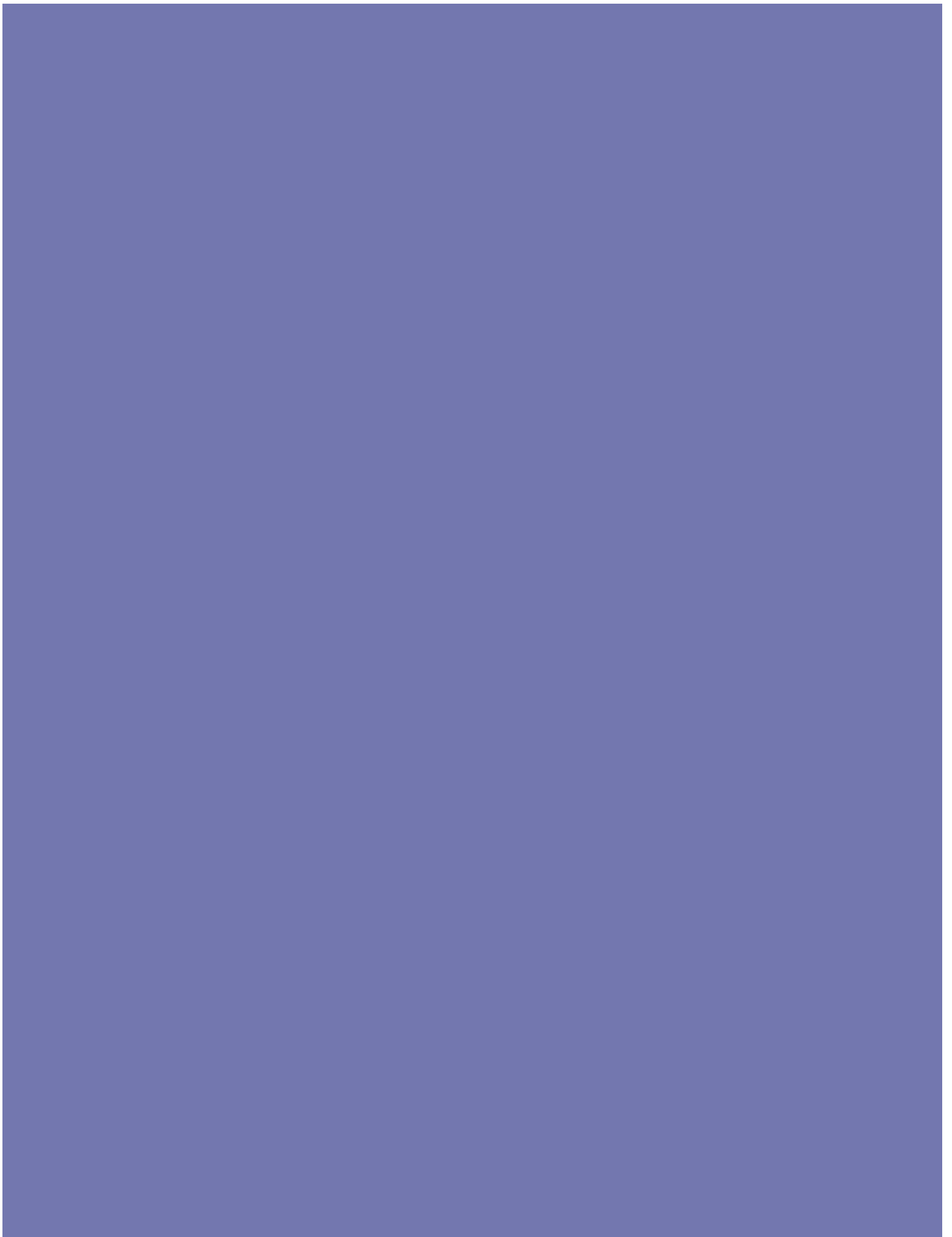
To be eligible, activities must fall within two broad categories: 1) Transportation infrastructure (constructed improvements); and, 2) Non-infrastructure projects (efforts related to education, Encouragement, and Enforcement for students' grades K-8).

Eligible project sponsors include entities such as: Tribal Governments, School Districts, Private and Tribal Schools, and local government agencies. Other organizations, such as non-profits, may apply when partnered with an eligible sponsor.

Proposed TAP projects are solicited through a competitive process facilitated by the NDOT and are ranked by a TAP Evaluation Committee. Members of this committee represent a wide range of interests, including active transportation, regional tourism, economic development, health, and state and local agencies. TAP funding is also made available through regional competitive solicitations conducted by Regional Transportation Commission of Washoe County (Washoe RTC), the Regional Transportation Commission of Southern Nevada (RTCSN), and the Tahoe Regional Planning Organization (TRPA).

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 for the four major divisions to facilitate the accomplishment of the Department's mission and achieve its strategic plan goals. These goals are as follows:

- 1) Safety first
- 2) Cultivate environmental stewardship
- 3) Efficiently operate and maintain the state transportation system
- 4) Enhance internal and external communications
- 5) Enhance organizational and workforce development
- 6) Consistent and effective data management

These performance measures are designed to quantify progress in achieving those goals, as well as assist divisions improve on their business processes. The sixteen performance areas are listed below. The following performance measures plan includes the actual performance measures, annual and ultimate targets, the performance measure champions, a brief discussion of strategy and 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 (PM 1)
- Provide Employee Training (PM 2)
- Improve Employee Satisfaction (PM 3)
- Streamline Agreement Execution Process (PM 4)
- Improve Customer and Public Outreach (PM 5)

OPERATIONS DIVISION

- Reduce and Maintain Traffic Congestion (PM 6)
- Streamline Project Delivery: Bid Opening to Construction Completion (PM 7)
- Maintain State Highway Pavement (PM 8)
- Maintain NDOT Fleet (PM 9)
- Maintain NDOT Facilities (PM 10)
- Emergency Management, Security, and Continuity of Operations (PM 11)

PLANNING DIVISION

- Reduce Fatal & Serious Injury Crashes (PM 12)

ENGINEERING DIVISION

- Streamline Project Delivery: Schedule and Estimate for Bid Advertisement (PM 13)
- Maintain State Bridges (PM 14)
- Streamline Permitting Process (PM 15)

1. REDUCE WORK-PLACE ACCIDENTS

Performance Measure:

- 1) Reduce the rate of work-place injuries/illnesses per 100 employees by at least 2% per year.
- 2) Reduce the rate of medical claims per 100 employees by at least 2% per year.

The rate of injuries is reported as the number of work-place injuries and illnesses per 100 employees. The severity rate of illnesses/injuries which is the level at which a medical claim is filed is the 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: 2% Reduction

Ultimate Target: 100% Reduction

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, employees, and the public is a continuous process. This performance measure works towards meeting the Department of Transportation's Strategic Plan goals: safety first, and, efficiently operate and maintain the state transportation system.

2. PROVIDE EMPLOYEE TRAINING

Performance Measure:

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

Annual Target: 83%

Ultimate Target: 100%

Division(s) Responsible:

Administrative Services – Chief Human Resources Division and Employee Development 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 knowledge to enable employees to achieve higher job performance. This benefits the Department and the citizens of Nevada by providing a high-quality and safe transportation system. This performance measure aligns with Department of Transportation's Strategic Plan

goals: safety first, efficiently operate and maintain the state transportation system, enhance internal and external communications, and enhance organizational and workforce development. Both the Nevada Administrative Code (NAC), and the Division Matrix training are addressed by the training section's 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 quality staff. A satisfied workforce will excel at their duties. This benefits the Department and the public. This performance measure works towards meeting the Department of Transportation's Strategic Plan goals: safety first, cultivate environmental stewardship, efficiently operate and maintain the state transportation system, enhance internal and external communications, and, enhance organizational and workforce development.

4. STREAMLINE THE AGREEMENT EXECUTION PROCESS

Performance Measure:

Percentage of Agreements executed within 20 days from when a division submits an agreement with all supporting documents 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% within 20 days

Ultimate Target: 99% within 5 days

Division(s) Responsible:

Administrative Services Division – Deputy Chief

Support Divisions:

All divisions that procure professional services over \$2,500.00, including Interlocal, Cooperative and Local Public Agency (LPA) agreements.

Strategy Plan Support:

Agreements are at the core of the Department's business practices and must be completed prior to any action being taken. It is the instrument used to procure a variety of services for NDOT. Delays have a significant impact on the operations of the Department. This performance measure works toward meeting the Department of

Transportation Strategic Plan goals: efficiently operate and maintain the state transportation system, and, enhance internal and external communications.

5. IMPROVE CUSTOMER SATISFACTION

Performance Measure:

Improve Customer and Public Outreach.

Annual Target:

Meet goals set forth in NDOT communications plan

Ultimate Target:

Exceeds goals set forth in NDOT communications plan

Division(s) Responsible:

Communications Office - Debbie Binggeli (Customer Service)

Julie Maxey (Public Involvement)

Meg Ragonese (Public Information)

Tony Illia (Public Information)

Strategy Plan Support:

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. 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 because it signals that the Department is doing the right things to be transparent, accountable, and efficient. This performance measure works toward meeting the Department of Transportation Strategic Plan goals to enhance internal and external communications.

6. IMPROVE TRAVEL RELIABILITY AND REDUCE DELAY

Performance Measure:

- 1) Percentage of reliable trips on the Interstate system
- 2) Percentage of reliable trips on the National Highway System (NHS)
- 3) Annual hours of peak hour excessive delay (PHED) per capita
- 4) Percentage of Non-Single Occupancy Vehicle (Non-SOV) travel
- 5) Freight Trip Reliability Index on the interstate system

Performance Goal	Reliable Trips on Interstate (%)	Reliable Trips on NHS (%)	Non-SOV Travel (%)	Freight Trip Reliability on Interstate (Index)	Peak-Hour Excessive Delay (Hour)
2019 Target	86.8	70.0	21.3	1.28	12
Ultimate Target	87.0	87.0	21.6	1.26	10

Division(s) Responsible:

Traffic Operations Division - The senior leadership team of the Traffic Operations Division

Support Divisions:

Roadway Systems, Traffic Information, and Performance Analysis Division

Strategy Plan Support:

This performance measure is one of the most significant indicators of how well the NDOT is operating the state highway system based on the available resources. 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. Applying operation strategies and tracking the related metrics will help improve travel reliability and reduce delay on the NDOT maintained roadway system. This performance measure works towards meeting the Department of Transportation's Strategic Plan goals to efficiently operate and maintain the state transportation system, consistent and effective data management, and cultivate environmental stewardship.

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

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

Ultimate target: 80% of projects completed within budget, schedule and change order measures

Division(s) Responsible:

Sharon Foerschler, Chief Construction Engineer, Construction Division

Support Divisions:

All

Strategy Plan Support:

Effort is made to ensure that at least 80% of completed projects are within 10% of the original programmed budget, are within 10% of the original schedule (assigned working days), and change orders are less than 3% cost.

This performance measure works towards meeting the Department of Transportation Strategic Plan goals to efficiently operate and maintain the state transportation system, and, enhance internal and external communications. It is critical as to how effective and efficient the Department is in implementing highway projects.

8. MAINTAIN STATE HIGHWAY PAVEMENT

Performance Measure:

Percentage of state-maintained roadways in fair or better condition.

Current year Target:

- Category 1: 95% Minimum fair or better condition
- Category 2: 90% Minimum fair or better condition
- Category 3: 85% Minimum fair or better condition
- Category 4: 75% Minimum fair or better condition
- Category 5: 50% Minimum 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.

Performance Champion/Division: Charlie Pan, Chief Materials Engineer / Materials

Supporting Divisions: Maintenance and Asset Management

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: safety first, efficiently operate and maintain the state transportation system. To effectively preserve and manage our assets is the corner stone to the Department’s pavement preservation program.

9. MAINTAIN NDOT FLEET**Performance Measures:**

- 1) Reduce the yearly percentage of fleet requiring replacement by at least 1% – this measure is the percentage of the fleet that have reached the age or mileage that requires replacement.
- 2) Increase the yearly percentage of fleet in compliance with condition criteria by at least 1% – this measure is the percentage of the fleet that is maintained as per Department preventive maintenance requirements so that the expected life span of Department vehicles is not compromised.

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

Division(s) Responsible:

Equipment Division - Equipment Superintendent

Support Divisions:

Districts, Divisions

Strategy Plan Support:

In Fiscal Year 2020 the Equipment Division continued to purchase new replacement equipment because funds continue to be available. The Rebuild Program will be continued on a limited basis for specialty equipment.

The vehicles in the fleet are important to deliver projects and maintain a safe highway system. Equipment in good condition ensures the ability for NDOT personnel to perform the Department's business and provide safety to the public and staff. These performance measures work towards meeting the Department of Transportation Strategic Plan goals: safety first, efficiently operate and maintain the state transportation system, enhance internal and external communication, and, cultivate environmental stewardship.

10. MAINTAIN NDOT FACILITIES

Performance Measure:

Increase percent of yearly facilities assessments completed and percent of facilities conditions and priority needs by 2%.

Annual Target: Increase by 2%

Ultimate Target: 100%

Division(s) Responsible:

Maintenance and Operations - Chief Maintenance and Operations Engineer

Support Divisions:

Districts, Administrative Services

Strategy Plan Support:

Facility Condition Analysis (FCA) reports will ensure Department buildings comply with building and safety codes and 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's Strategic Plan goals to put safety first, enhance internal and external communication, and efficiently operate and maintain the state 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, plans have been tested, exercised, and updated to accommodate changes in Departmental processes and federal guidelines. Training and updates should be completed on a four-year 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

All

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 able to respond to health and safety issues. This performance measure works towards meeting the Department of Transportation's Strategic Plan goals - safety first, cultivate environmental stewardship, efficiently operate and maintain the state transportation system, enhance internal and external communication, and enhance organizational and workforce development.

12. REDUCE FATAL & SERIOUS INJURY CRASHES**Performance Measure:**

Measure 1. Number of traffic fatalities

Measure 2. Number of serious traffic injuries

Measure 3. Number of fatalities per 100M Vehicle Miles Traveled (VMT)

Measure 4. Number of serious Injuries per 100M Vehicle Miles Traveled (VMT)

Measure 5. Number of Non-Motorized Fatalities (And Non-Motorized Serious Injuries)

The methodology used to calculate safety performance measures for 2019 reflected the upward trend on most of the safety performance measures. For each performance measure the trend for the last five years of data was evaluated and the statistically significant trend was used to project forward to the end of 2019. Recognizing that before we can start reducing the number of annual fatalities, that number will first hit an upward plateau. As such, we have set the 2019 target to be one less than the projected number for the five-year moving average projected for 2019. After this target is reached the downward trend will continue towards the goal of zero.

Annual Target:

1. Reduce the number of traffic fatalities compared to the trend value of 330.4 fatalities
2. Reduce the number of serious injuries compared to the trend value of 1,214 serious injuries
3. Reduce the number of traffic fatalities per 100M VMT compared to the trend value of 1.24
4. Reduce the number of serious traffic injuries per 100M VMT compared to the trend value of 4.97
5. Reduce the number of non-motorized traffic fatalities and serious injuries compared to the trend value of 312.2

Ultimate target:

Zero

Division(s) Responsible:

Safety Division- Chief Traffic/Safety Engineer

Support Divisions:

All

Strategy Plan Support:

All drivers and highway system users expect a safe highway system. Through efforts of engineering, enforcement, education, emergency response and the will of the highway users, fatal crashes can be reduced and even eliminated. The strategies for this performance measure are based on the Nevada Strategic Highway Safety Plan. This performance measure aligns with the Department of Transportation's Strategic Plan goals - put safety first, and efficiently operate and maintain the state 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: 80%

Ultimate Target: 80%

Division(s) Responsible:

Roadway Design Division - Chief Roadway Design Engineer

Support Divisions:

Bridge/Structures, Project Management, Safety Engineering, Traffic Operations, Hydraulics, Stormwater, Landscape and Aesthetics, ADA, District Betterment, and Transportation Multimodal Planning.

Strategy Plan Support:

This performance measure works towards meeting the Department of Transportation Strategic Plan goals: enhance internal and external communications, put safety first, cultivate environmental stewardship, and efficiently operate and maintain the state transportation system. Goals are met by:

- Keeping NDOT customers apprised 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 the environment, NDOT's assets, improves safety and relieves congestion.

14. MAINTAIN STATE BRIDGES

Performance Measure:

The Department's performance measure associated with the maintenance of state bridges includes bridge condition ratings, separated by those assets on the National Highway System (NHS) and those not on the system (non-NHS). In alignment with the established national performance measures, this will include percentages of the inventory considered to be in "good" and "poor" condition.

1. Percentage of bridges on the NHS road system in the bridge inventory in good condition
2. Percentage of bridges on the NHS road system in the bridge inventory in poor condition
3. Percentage of bridges on the Non-NHS road system in the bridge inventory in good condition
4. Percentage of bridges on the Non-NHS road system in the bridge inventory in poor condition

Annual Target:

1. 35% or greater
2. 7% or lower
3. 35% or greater
4. 7% or lower

Ultimate Target:

The ultimate target is to eliminate structurally deficient bridges from the inventory, and to extend the service life of the Department's bridges.

Division(s) Responsible:

Structures Division - Chief Structures Engineer

Support Divisions:

Design, Project Management, Materials and the Districts

Strategy Plan Support:

This performance measure works towards meeting the Department of Transportation Strategic Plan goals: Safety first, cultivate environmental stewardship, and efficiently operate and maintain the state transportation system. These goals can be met in the following ways: safety for the motoring public is put first by replacing structurally deficient bridges. The Structures Division will seek and implement innovative solutions to the challenges faced by the Bridge Program. The Division will deliver and maintain bridges as well as bridge projects and programs efficiently. Meeting this performance measure will help preserve and maintain 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:

Roadway Design, Environmental Services, Traffic Operations, Structures, FHWA, Planning, Hydraulics, Materials, Project Management, Safety Engineering, Construction, and Stormwater.

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 does not compromise safety and does not negatively affect the system. However, we must meet the customer's needs for a timely response for their economic development. Most permits are relatively simple, but some are very complicated and require extended technical reviews, thus the reason for the target being less than 100%. This performance measure

works towards meeting the Department of Transportation’s Strategic Plan goals to put safety first, enhance internal and external communication, and efficiently operate and maintain the state transportation system.

16. REDUCE GREENHOUSE GAS EMISSIONS

Performance Measure:

Percent reduction in Greenhouse Gas (GHG) emissions within the Department’s operations

Current year Target:

Fiscal years (FY) 2019 and 2020 are being evaluated to establish a baseline to measure and assess future GHG reductions.

Ultimate Target:

Support statewide GHG reduction initiatives to achieve 45% economywide reduction goal by 2030.

Performance Champion/Division:

The Environmental and Planning Divisions’ management teams.

Supporting Divisions:

All Divisions and District offices.

Strategy Plan Support:

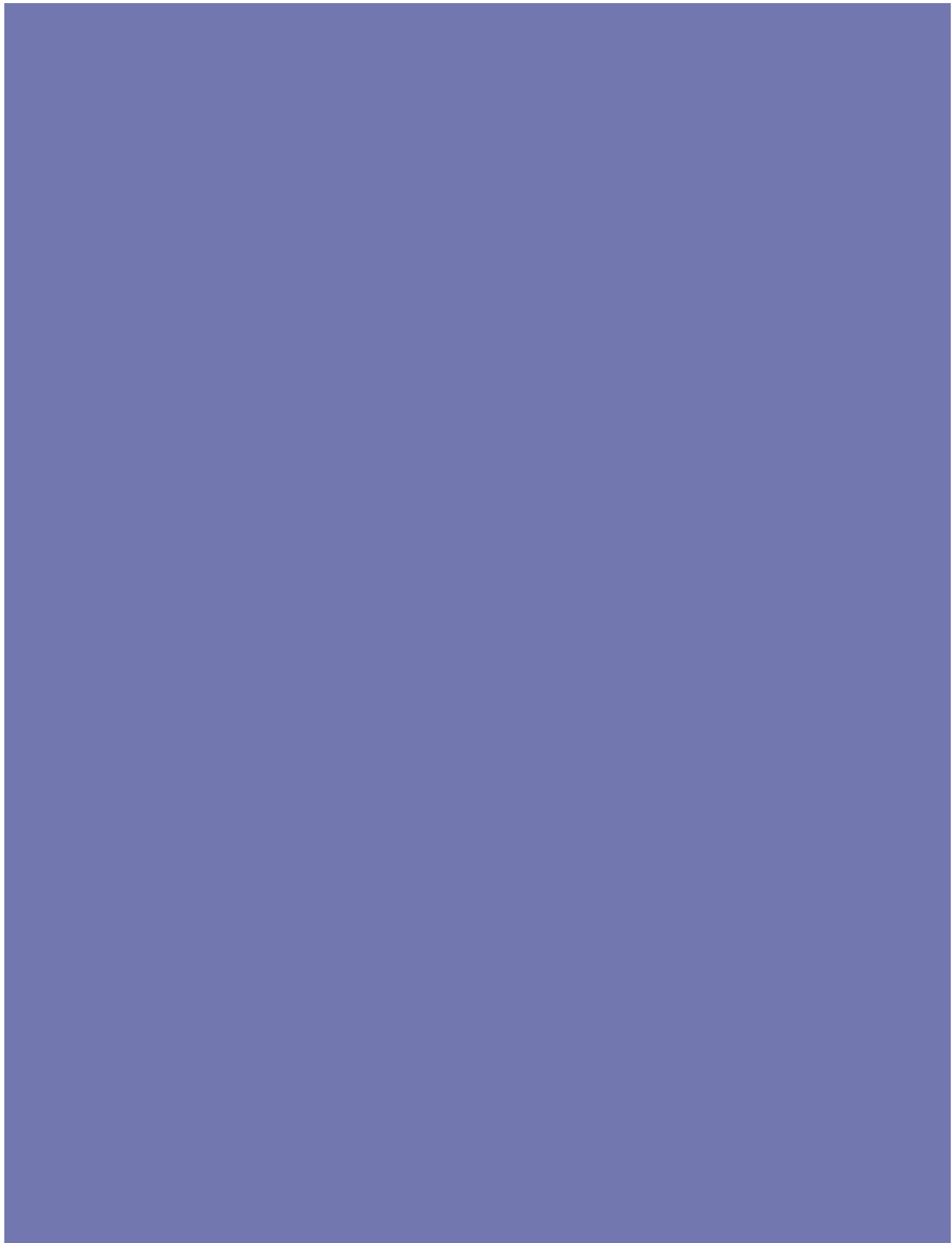
GHG emissions are the result of fossil fuel combustion. Fuel combustion and other transportation-related by-products contribute air pollutants that can impact public health and the environment. In 2016, the transportation sector contributed 35% of the State’s total GHG emissions, and it is projected to remain the leading GHG emitter in Nevada through 2030 and beyond (see the Nevada Division of Environmental Protection’s 2019 report “Nevada Statewide Greenhouse Gas Emissions Inventory and Projections, 1990-2039”) if no additional mitigation measures are implemented to reduce GHG emissions. The Department is committed to provide leadership in reducing GHG emissions within the transportation sector and to achieve GHG emission reductions through the implementation of a combination strategies in our operations, planning, design, construction and maintenance of existing and future transport systems. The areas in which the Department has the most influence to reduce GHG emissions are in system efficiency, reduction of carbon-intensive travel modes, and reduction in emissions associated with construction, maintenance, and operations. The goals of NDOT’s GHG Reduction Strategy are:

- Reduce GHG emissions from the agency’s daily operations. Examples of GHG considerations under this goal include agency electricity procurement, energy efficiency of installed appliances (heating, ventilation, and air conditioning (HVAC) and lighting), employee travel for work related purposes, employee commuting, emissions from agency owned vehicles, equipment, and facilities (buildings), work zone traffic delay and detours, recycling, reuse of deconstructed materials, and operational efficiencies through use of updated maintenance management systems, asset management, life-cycle planning, and road weather information systems.
- Reduce GHG emissions on NDOT administered transportation facilities. Examples of GHG considerations under this goal include a quantitative GHG emissions analysis of NDOT’s Transportation Program and how the results of the analysis provide progress toward meeting state mandated GHG reduction goals by adoption of the Statewide Transportation Improvement Program (STIP) or Transportation Improvement Program (TIP), an assessment of each project on the STIP or TIP with a quantitative or

qualitative reporting of each project's impact on GHG emissions as part of the listing of information for each project on the STIP or TIP, selection of GHG reducing project design alternatives, selection of high recycled content or less carbon intensive materials and processes for the chosen alternative, reuse of deconstructed materials, buying offsets to mitigate emissions.

- Reduce GHG emissions in NDOT's funded programs. An example of a GHG consideration under this goal includes preference for grant funding or other third-party financial support for projects or activities that reduce GHG emissions.

Through pursuit of the above goals, the Department seeks to reduce GHG emissions from its operations.





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