

State Traffic Records Assessment, State Highway Safety Plan, and Strategic Plan Review

Executive Summary

December 16, 2009

NHTSA wanted to examine the continuity between the recommendations in the most recent Traffic Records Assessments (TRA) to the Strategic Plan, Section 408 applications, and the activities in the State Highway Safety Plan. The purpose of the analysis was to determine if there were gaps. Were there any recommendations in the TRA that were not addressed in the strategic plan, 408, or HSP as well were there projects that were not part of the recommendations in the TRA?

This document covers how the comparisons were performed, a description of the basis of how a State's strategic plan should be aligned with the traffic records assessment, what was observed when conducting the comparison, and the successes and failures found in the six States included in the study.

How Traffic Records Assessment, State Highway Safety Plan, and Strategic Plan Reviews Were Performed

A template (Figure 1) was provided that specified exactly what the NHTSA Region requested, accompanied by the request that the reports be able to answer the following questions:

- How were the recommendations from the assessment incorporated in each the strategic plan submitted for Section 408 funding, and the SHSP?
- How do each of the documents relate to each other? Are there things in the strategic plan not in the SHSP or vice-versa?
- Are there projects or initiatives in either the SHSP or strategic plan not mentioned as problems in the assessment?

The following documents were provided by the Region and included in each analysis:

- The most recent Traffic Records Assessment conducted by a NHTSA technical assessment team or a private contractor;
- The most recent Section 408 Application and Strategic Plan;
- The current State Highway Safety Plan; and
- Any other State Traffic Safety System planning documents deemed appropriate.

For each State, the template was populated with all recommendations in the traffic records assessment, with the exception of the major recommendations, as those are repeated later in the body of the report. An individual read each of the resource documents for the State to become familiar with the situation of what was going on in the State. Each recommendation was focused on and the reviewer searched the resource documents to find projects and performance measures that were related to a

recommendations. Some States may have linked deficiencies to projects and performance measures in their strategic plan; if this was the case the reviewer may have used these in the analysis.

Figure 1: Analysis Template

<p>Traffic Record System (Example – Crash)</p>
<p>I. Recommendation: Source: Traffic Records Assessment (<i>Example: Establish a formal implementation plan for the rollout of the new crash report form and all associated changes to the instruction manual and software and for creation and delivery of necessary training</i>)</p>
<p>II. Strategy: Source: Strategic Plan (If none is shown state none)</p>
<p>III. Performance Measure: Source Strategic Plan (If none is shown state none)</p>
<p>IV. Quality Metric Effected: Source Strategic Plan (If none is shown state none)</p>
<ul style="list-style-type: none">1. Projects/Tasks/Activities – Source SHSP or TRIPRS2. Projects/Tasks/Activities – Source SHSP or TRIPRS3. Projects/Tasks/Activities – Source SHSP or TRIPRS4. or None
<p>Analysis</p>
<p>NOTE: There should be one recommendation per page.</p>

Using the Traffic Records Assessment for Planning

It has been observed that States do not usually have complete lists of deficiencies in their Section 408 Strategic Plan with assessment documents named as the source of the deficiencies. Without having the basis of a system deficiency, it is not always clear how the State aims to address existing system deficiencies. This may also indicate that projects are being conducted because a party in the State wants to do them and may not necessarily be the best and most efficient use of funding. The logical flow of planning safety data projects should be as follow (as outlined in the Strategic Planning Guidance documents, distributed by NHTSA at the beginning of the Section 408 program):

1. An assessment is conducted to evaluate strengths and weaknesses of one or more traffic safety data systems. This typically is a Traffic Records Assessment conducted by a NHTSA team or a private contractor following the NHTSA Traffic Records Assessment Guidelines, an internal State assessment or program audit, or an alcohol or Emergency Medical Systems assessment.

2. A State Traffic Records Coordinating Committee (TRCC) includes policy-level representatives from each major system owner (crash, roadway, citation/adjudication, driver licensing, vehicle registration, injury surveillance system/emergency medical system) at minimum, and plans and coordinates the best use of available funds to address systemwide deficiencies and leverage funds. The TRCC prioritizes deficiencies and how they will be addressed.
3. The TRCC creates projects that will best address deficiencies. Projects should be prioritized using an accepted method, such as the 4-box analysis. In this method, low cost–high payoff projects should receive the highest priority, followed by high payoff–high cost and low payoff–low cost projects, and last, low payoff–high cost projects.

Figure 2: 4-Box Analysis

High Payoff–Low Risk or Cost Good Opportunity–High Priority	High Payoff–High Risk or Cost Moderate Opportunity–Middle Priority
Low Payoff–Low Risk or Cost Moderate Opportunity–Middle Priority	Low Payoff–High Risk or Cost Poor Opportunity–Low Priority

4. Performance measures are created on the systemic level; this is especially important if a State has more than one project addressing the performance metrics (timeliness, accuracy, uniformity, accessibility, completeness, integration) of a system. It may be impossible to determine which project was responsible for a change in data quality on the project level. Devise measures may be easily calculated so reporting and monitoring are not overly cumbersome and progress is monitored on a regular interval.

What Has Been Observed in Analyses Thus Far

It was observed that many of the recommendations addressed macro issues such as expanding the use of an electronic data collection program, using comprehensive and consistent data edit checks to improve quality, or using a single-location method such as graphical information systems (GIS). Specific data metrics were not provided, and the recommendations generally did not specifically say to improve timeliness, or to improve quality to a specific measure.

Among the six reviews that have been completed, a range of continuity between assessment deficiencies and projects in the 408 Strategic Plan and the Traffic Records Assessment were observed. Although a low number of deficiencies were listed in one particular State, it did well by listing 65 percent of their recommendations from their traffic records assessment and explaining whether they felt they

addressed the recommendation and how. The majority of these were either major recommendations or related to a data system, and omitted the programmatic recommendations. Conversely, another State listed only a few deficiencies and then did not list more than several active projects to address them. Other States fell somewhere in between. Out of the six States studied, 72 total deficiencies were listed in the strategic plans, for an average of 12 measures per State. The average number of recommendations for the States was 62 per State, bringing the States' average reporting of traffic records assessment deficiencies in the strategic plan to 20 percent.

Figure 3: Recommendations in Traffic Records Assessment Versus Strategic Plan

	State 1	State 2	State 3	State 4	State 5	State 6
# TR Recommendations in TRA	80	58	48	77	54	53
# Deficiencies in Strategic Plan	14	11	14	12	14	7
% listed in SP	18%	19%	29%	16%	26%	13%

There was limited continuity between the 408 Strategic Plan and the State Highway Safety Plan among States. Typically, the SHSP contained less detail and fewer projects than the strategic plan. States varied on how well projects could be matched; one State included by project name and number 7 of 9 of projects in the strategic plan in the SHSP. Another matched 12 of 14 projects; however, the match was loose in the sense that the project in the SHSP contained no detail on any of the specific projects contained in the strategic plan. Similar to the Traffic Records Assessment, the States' HSP was not always congruent with the strategic plan.

Figure 4: Traffic Records Projects in the SHSP Versus Number Matched in the Strategic Plan

	State 1	State 2	State 3	State 4	State 5	State 6
# Projects in SP	14	4	23	9	8	14
# TR Projects in SHSP	9	3	5	8	18	10
# Project Matched	5	3	7	7	5	12
% of projects in SP matched	36%	75%	30%	78%	63%	86%

Successes and Failures of Planning

A number of States have projects that will reduce the backlog of paper crash reports to be entered into the State crash database, usually achieved by hiring additional staff and purchasing equipment to input the data. This will achieve the goal of reducing the backlog of crashes, but hiring additional staff will not address the root of the problem that manually entering data is time-consuming and error-prone. Also, many States do not key 100 percent of the data from the crash form into the database, meaning that data is lost and not available for analysis. In other States, electronic data collection programs have been created but there is no electronic interface between the officer or police barracks to the State file. This

means that crash reports are collected in the field electronically and then printed out and mailed to the State crash repository agency for manual keying, thereby negating all of the benefits of timely collection and some data accuracy and completeness. In cases such as this, a State should not lose sight of the real problem. Creation and expansion of an electronic collection program and upload to the State database is generally accepted as the solution to seamless crash data processing.

States may not always follow recommendations from the assessment, but are making improvements anyhow. For example, one State is implementing an electronic crash system when its paper system is abnormally efficient with about a 12-day lag time for reporting.

One State used the online Traffic Records Improvement Program Reporting System (TRIPRS) to maintain its strategic plan and created linkages from deficiencies to projects and performance measures. That State used the same names to reference items in the SHSP and included performance measures, goals, and benchmarks. A cost summary and current expenditures were included in the SHSP. This State was particularly good about identifying projects that addressed the true problems of data quality by updating an outdated system to a relational database and deploying electronic records systems.

Similar to other attempts to classify how States are planning, reporting, and using funds, this paper finds that the six States that have thus far been reviewed range from good to far less than that. Priorities in each State are different and how they choose to address problems varies as well; most States and some short-term, easier projects that help but do not fix the problem, but at the same time had costly, long-term projects that would likely eventually remedy the ills of their data system. But likely the greatest benefit of this effort was to the NHTSA Region, so it could approach the State with a comprehensive document that highlighted what was being done to address recommendations in the Traffic Records Assessment to make real systemic improvements.