



Selected State DOT Cost Reduction Initiatives for the Administration of State Public Transportation Programs

DETAILS

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NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

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Research Results Digest 379

SELECTED STATE DOT COST REDUCTION INITIATIVES FOR THE ADMINISTRATION OF STATE PUBLIC TRANSPORTATION PROGRAMS

This digest describes the results of NCHRP Project 20-65, Task 38, “Estimated Impact of Selected State DOT Cost Reduction Initiatives on the Administration of State Public Transportation Programs,” which was conducted by ICF International, Fairfax, Virginia. The purpose of this research was to identify the effects and costs associated with implementing cost containment initiatives as well as to suggest ways in which state DOTs can make informed decisions regarding the use of these various initiatives. Brian Cronin, ICF International, was the Principal Investigator and Project Director for this study. The other authors of this digest were Stephanie Trainor, Allison Cook, Jeff Horey, and Alex Bond.

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1 INTRODUCTION

1.1 Purpose

Due to the economic recession, many states have experienced a reduction in annual revenue and have undertaken cost containment initiatives to reduce their operating budgets. “Bottom-line” decisions have significantly affected state department of transportation (DOT) workforces across the United States. To enable states to balance their annual budgets, leaders have implemented a number of cost containment initiatives, including employee layoffs, employee furloughs, hiring freezes, and travel freezes. Further, to help minimize the adverse impact of cost containment initiatives, some of these same states have hired consultants to help perform a variety of program administration activities that were previously conducted by state DOT staff. This study serves a critical role in assisting state DOT public transportation divisions to better manage their workforce, including both internal and contractor staff, in an efficient

and cost-effective manner. Specifically, the objectives of the research include:

- **Understanding the potential future impacts of four cost containment initiatives:** employee layoffs, employee furloughs, hiring freezes, and travel freezes on the administration of public transportation programs.
- **Determining the actual cost incurred by state DOTs that use contractors,** rather than state staff, to perform selected public transportation program administration activities.
- **Comparing the cost of DOT staff to actual contractor staff costs,** to assist in determining the most appropriate DOT-to-contractor staff mix.
- **Determining the effects, outcomes, or values of using DOT versus contractor staff,** to provide benefit or value data for establishing cost-benefit tradeoffs.

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- **Suggesting approaches for mitigating negative effects of cost containment initiatives**, which will provide state DOTs with the data to better manage implemented cost containment initiatives.

In this digest, the researchers provide a summary of the project, the background literature review, and the project results. In addition, a Cost Containment Decision Guide was created based on the results of this study. This guide was designed to be a toolkit for state DOT public transportation division leaders and other DOT leaders needing to solve problems and make decisions around cost containment initiatives. The Cost Containment Decision Guide provides information to help state DOT public transportation divisions and their leaders gauge the current status of their division with regard to cost containment initiatives, provide data on cost containment initiatives and lessons learned from industry practices, and make informed decisions on future cost containment initiatives for their division or agency. This guide is published herein.

1.2 Overview of the Project

NCHRP contracted with the researchers to collect data that will help to identify the impact and costs associated with implementing cost containment initiatives as well as to suggest ways in which state DOTs can make informed decisions regarding the use of these initiatives. Various states may choose to implement different cost containment initiatives to manage reduced budgets and decreased funding; however, there is limited information available to states regarding the impact that these initiatives can have on the administration of public transportation programs within state DOTs or the way to determine if an initiative will be cost effective or beneficial to the agency.

To accomplish the previously mentioned objectives, an online survey was developed that was sent to each state DOT public transportation division to collect data regarding the usage and impact of cost containment initiatives. Helpful information was gathered through this effort and was used to inform the next stage of the project, which involved conducting interviews with staff at state DOT public transportation divisions to gather more detailed quantitative and qualitative information.

This digest provides an overview of the work performed to complete this project, including the meth-

odology employed to collect data, as well as analysis of the survey and interview data.

2 BACKGROUND RESEARCH

To prepare for conducting the data collections involved in this study, a preliminary review of the literature was conducted. This section includes summaries of the literature on cost containment identified during this search of the literature.

2.1 Existing Research on Cost Containment Initiatives

Despite the limited information available regarding the use and impact of cost containment initiatives within the transportation industry, it is widely known in the industry that state DOTs are using cost containment initiatives to deal with budgetary shortfalls and reductions. The challenge is that there is not a great deal of research regarding the implementation and outcome of these initiatives.

One cost containment initiative that is often used—and likely most well-known—is employee layoffs. The recent economic downturn in the United States has led to layoffs in federal, state, and local governments. These layoffs occur because of budget shortfalls, with many agencies indicating that a reduction in the workforce is the most common way to respond to these budget shortfalls (Muro and Hoene, 2009). In a recent American Public Transportation Association survey, 27 percent of private sector business members reported that they expected to lay off employees in the upcoming year (APTA, 2011). Similarly, according to the Society for Human Resource Management, in 2008, 48 percent of surveyed organizations had implemented employee layoffs to deal with the financial crisis (SHRM, 2009). Although this latter study is not specific to transportation, it demonstrates the vast amount of layoffs that are occurring in the United States. Layoffs can have varying effects on employees. For example, to avoid a similar fate, work effort may increase for remaining employees, especially those who were close to, or at least acquainted with, employees who were let go (Brandes et al., 2007). On the other hand, work effort may decrease for other employees who do not fear that their job is at risk or who are disillusioned by the surrounding layoffs. Additionally, there are typically increased feelings of job insecurity among employees who remain following layoffs (Brandes et al., 2007).

Another cost containment initiative that is sometimes implemented and less severe than employee layoffs is mandatory furloughs, which are reductions in work hours. A benefit of furloughs is that when trying to contain costs, furloughs are often less expensive than the severance packages that are required when reducing staff numbers (Cascio, 2009). While mandatory furloughs can save a great deal of money—for example, the state of California predicted a reduction of \$2.01 billion in one year by implementing three mandatory furlough days for every employee per month (Jacobs, 2009)—furloughs can also greatly impact the welfare of employees. For example, requiring three furlough days per month is almost a 14 percent reduction in wages earned for an employee (Jacobs, 2009). Research shows that these wage reductions can result in a loss of productivity because of decreases in employee morale and increases in turnover, especially turnover of highly productive workers that are able to find opportunities elsewhere (Jacobs, 2009). Productivity is also affected because employees have less time to complete required tasks, particularly if their workload remains unchanged even as their hours are reduced. Another effect of furloughs to consider is that although they reduce pay in the short term, they may preserve jobs in the long run (Sinclair et al., 2010), which would serve as a positive outcome for both employees and employers. Along these same lines, when furloughs are used rather than terminating employees, there are employees available should workload suddenly increase (Cascio, 2009).

In addition to or in place of layoffs and furloughs, agencies can implement hiring freezes to help manage budgetary shortfalls. In a recent study, 48 percent of surveyed organizations had implemented hiring freezes (SHRM, 2009). Again, although the SHRM 2009 study was not specific to the transportation industry, it helps to show the extent to which hiring freezes are being used in today's economy to deal with financial problems.

In 2006, some state DOTs were implementing hiring freezes to control costs within the DOT (Harder, 2006). This study found that implementing hiring freezes created a backlog of hiring needs that can be very overwhelming for recruiting and hiring new employees. After a hiring freeze, state DOTs typically must seek large numbers of applicants to fill empty positions and hire people necessary to meet agency needs (Harder, 2006). Additionally, hiring freezes often result in increased stress, decreased morale, and a lack of work-life balance for employ-

ees because of the increased responsibilities and work obligations that are often experienced by existing employees when new employees cannot be hired to fill open positions (Cascio, 2009). Additionally, if there are not exceptions made during a hiring freeze, some key positions within the organization may remain unfilled (Cascio, 2009).

Two other cost containment initiatives that have not received a great deal of research but are included in the current study are travel freezes and salary reductions. Salary reductions are sometimes used to reduce labor costs, which can help to avoid layoffs; however, they often also result in lower employee morale and lower productivity (Cascio, 2009).

2.2 Existing Research on Contracting Out Work

In addition to the previously mentioned cost containment initiatives, one initiative that is often used by organizations to help control costs or to help minimize the adverse impact of cost containment initiatives is contracting out work to outside organizations, or outsourcing. Choosing to use outside contractors to conduct agency work can produce various benefits for agencies. For example, it can reduce costs in that a cost is only incurred when services are used and it provides access to specialized skills that may not be held by employees within the agency (Poister and Van Slyke, 2001). Additionally, contracting work to outside organizations can help agencies to deal with a loss of in-house staff, variations in workload, or employee schedule constraints (Persad et al., 2010).

The practice of contracting out state DOT work to other agencies is increasing in use and can be found in most state DOTs (Persad et al., 2010, Science Applications International Corporation, 2003). In state DOTs, most of the outsourcing that is done is for construction projects and design-related services (Poister and Van Slyke, 2001). Some outsourcing occurs because of mandates from state government to implement outsourcing (Warne, 2003). For example, the Texas DOT is required to contract at least 35 percent of its engineering workload to outside firms (Dexheimer, 2009, Radhakrishnan, 2010). Other times, contracting out work is necessary due to declining numbers of employees within state DOTs.

When choosing to contract out work, it is important to follow a structured decision-making process that can help determine whether specific work should

be contracted out rather than performed within the agency (Eger and Samaddar, 2010, Radhakrishnan, 2010). For example, some of the following factors, among others, should be considered in making a decision to outsource work activities (Eger and Samaddar, 2010, Menches, Khwaja, and Chen, 2010, Radhakrishnan, 2010):

- Availability of in-house employees
- Availability of the required resources within the DOT
- Duration of the work to be performed
- Uniqueness or specialty of the work
- Legislative mandate requirements
- Timeframe in which work needs to be completed
- Effect of outsourcing functions
- Cost of outsourcing functions
- Stakeholders' acceptance of outsourcing

The cost effectiveness of contracting out work can be examined by comparing contracted versus in-house costs to complete tasks (Warne, 2003). Within one state DOT, these comparisons have shown mixed results, with some maintenance activities having approximately equal prices for contracted versus in-house work; in other cases, activities can be more difficult to compare (Dlesk and Bell, 2006).

2.3 Effects of Contracting Out Work

When deciding to contract work to other organizations, it is important to consider the effects that this arrangement can have on the agency and current employees. For example, while outsourcing work can help with performing functions for which an agency does not have the necessary capabilities (Anderson and Ankerstjerne, 2011) and can lead to a more competitive product (Hall, 2000), outsourcing can also result in negative outcomes. It has been suggested that contracting work to outside organizations does not develop skills in a workforce that are needed for sustainability of leadership (Hall, 2000). Additionally, it has been suggested that contracting out work can lead to problems in employee loyalty, trust, and commitment to the organization (Hall, 2000).

On the positive side, some research indicates that contracting out work can promote innovation in addition to reducing costs for the organization (Davis-Blake and Broschak, 2009). However, regardless of the positive implications and reasons for choosing to contract out work, it is likely that this outsourc-

ing will affect the work assignments and climate of organizations.

Contracting work to outside organizations can lead to additional challenges that may not otherwise be experienced within an agency. Outsourcing changes the tasks that employees perform and the skills necessary for employees, which may lead to a need for redesigned jobs for agency employees (Davis-Blake and Broschak, 2009). Moreover, turnover and absenteeism often must be managed and there may be legal obligations to consider regarding the contracting (Anderson and Ankerstjerne, 2011). Outsourcing typically requires more administration, for example in coordinating and communicating with external firms (Garaventa and Tellefsen, 2001), which can contribute to increased costs overall.

3 METHODOLOGY

3.1 Task 1—Survey of State DOT Public Transportation Division Staff

The first step in this effort was to develop and implement a nationwide survey of state DOT public transportation divisions to gather basic information about cost containment initiatives utilized within each state. Several steps were taken to develop this survey. First, a review of recent workforce assessment, cost reduction, and staff-ratio surveys, including those created by the researchers for other similar efforts, was conducted to identify potential questions to be included in the current survey as well as to determine an effective format to present the survey. Additionally, an initial literature review was conducted to gather information from workforce data sources related to state DOTs. This literature review also identified potential outcomes of implementing cost containment initiatives.

Based on the information gathered through this initial research as well as the research team's knowledge of state DOT public transportation divisions, a comprehensive survey was developed that addressed all of the primary research issues included in the current project. Specifically, the survey was created to assess the impacts of cost containment initiatives including employee layoffs, employee furloughs, hiring freezing, travel freezes, and salary reductions; the use of contractor staff; and the associated costs of using DOT versus contractor staff. A single comprehensive survey was developed to avoid requiring state DOT representatives to complete multiple sur-

veys over the course of the project. Because voluntary participation was essential to ensure completion of the data collection instrument, the survey was developed to collect useful information with the least amount of effort from participants.

Exhibit 1 provides an overview of various sections of the online survey, sample questions for each of the sections, and the rationale for including each set of questions. The full online survey including

questions administered to the state DOT public transportation divisions can be seen in Appendix A.

Following approval of the online survey, an email providing advanced notice about the survey was sent to an email distribution list that included staff from each state DOT's public transportation division as well as the members of the project panel. The email distribution list drew from members of the AASHTO Standing Committee on Public Transportation, which

Exhibit 1 Content Overview of Online Survey	
Sample Section and Questions	Rationale
1. Basic information about the state DOT public transportation division and its workforce. <ul style="list-style-type: none"> ▪ State ▪ Division or department within agency ▪ Is the state a direct operator of public transportation? ▪ Programs administered 	<ul style="list-style-type: none"> ▪ Provided background information to better understand the situation of the state DOT responding to the survey
2. Cost reduction initiatives: Has your state public transportation division used any of the following cost containment initiatives? <ul style="list-style-type: none"> ▪ Employee layoffs (permanent) ▪ Employee furloughs (temporary) ▪ Hiring freezes ▪ Travel freezes ▪ Use of contractor staff ▪ Salary reductions 	<ul style="list-style-type: none"> ▪ Allowed for a focus on the specific cost reduction steps taken within the participating state DOT
3. Specific questions about each cost reduction initiative: Based on responses to the above question, the user was asked to fill in some more specific information about the impact of each cost containment initiative utilized. <p>Agency outcomes included:</p> <ul style="list-style-type: none"> ▪ Public transportation division costs ▪ Work performance or quality ▪ Employee turnover ▪ Total project completion time ▪ Number of process steps, reviews, or quality assurance tasks ▪ Retention of institutional knowledge <p>Staff outcomes included:</p> <ul style="list-style-type: none"> ▪ Employee absenteeism or sick days ▪ Team effectiveness ▪ Employee satisfaction ▪ Employee trust ▪ Employee commitment ▪ Employee core competencies ▪ Leadership capabilities 	<ul style="list-style-type: none"> ▪ Requesting descriptive and quantitative information regarding the cost-savings initiative allowed for a better understanding of the impact of various cost containment initiatives and provided the opportunity to make comparisons of initiatives across state DOTs
4. Information about public transportation program, funding, and staffing, including: <ul style="list-style-type: none"> ▪ Budget information ▪ Available data sources regarding salaries, or total budget for employee salaries ▪ Number of employees ▪ Number of contractors 	<ul style="list-style-type: none"> ▪ Analysis of financial information was used to assess cost containment initiatives and better understand each responding state DOT's use of cost containment initiatives
5. Follow-up information including: <ul style="list-style-type: none"> ▪ Contact information for survey respondent ▪ Contact information for staff member who could be interviewed ▪ Comments about the survey or the project 	<ul style="list-style-type: none"> ▪ Provided the ability to clarify information that was questionable or incomplete in the survey as well as contact information to create the interview sampling plan for Task 2

includes DOT representatives from the 50 states and the District of Columbia. A total of 69 DOT representatives were invited to take the survey, with one to three representatives per jurisdiction receiving emails from the research team. The researchers asked each jurisdiction to identify which individual(s) in their agency would be best able to complete the survey. Errors in the initial distribution list were corrected based on a search of the state DOT websites to identify the correct email address or another individual within the public transportation division to whom the survey could be sent.

The notification email provided information about the upcoming survey and served as an announcement that a survey requesting input would be sent shortly. It provided a description of the type of information that would need to be gathered to complete the survey so that respondents would be prepared with all necessary information to complete the survey.

Approximately 2 days after the notification email was distributed, an email requesting participation in the survey was sent to the same email distribution list. This email again provided information about the project and included a link to the online version of the survey. Respondents were to choose the correct person from their state DOT public transportation division to complete the survey, to ensure that each state only responded to the survey once, and to prevent bias in the data analysis by including each state's information only once. Responses from representatives of each state DOT public transportation division were collected from July 27, 2011, through September 14, 2011.

Responses were monitored throughout the data collection process to keep track of which states had completed the survey. Approximately 2 weeks after the data request email was sent out, a reminder email was distributed to states that had not yet completed the survey. This email served as a reminder to states that their input into the survey was requested and again provided the link to the survey.

Following the reminder email, some states were contacted individually in order to solicit responses or additional information. Specifically, states that indicated they would complete the survey, but had not yet started the survey, were contacted to request participation and remind them of the closing date for the survey. Additionally, states that started the survey but did not complete it were contacted to attempt to obtain full data for the state. These states were asked if they had questions about the survey or problems

Exhibit 2 Overview of Response Rates	
Survey completed	30 states (59%)
Partially completed survey	8 states (16%)
Survey not taken	13 states (25%)

completing it to facilitate the collection of complete data. Finally, states that completed the survey but did not provide detailed or quantitative data were contacted to ask for additional information to complete their data. The final number of responses collected following this additional contact with the states is provided in Exhibit 2.

At least partial responses were received from 38 state DOTs, totaling a response rate of 75 percent. As can be seen in Exhibit 2, 59 percent of the states completed the survey. Of these states, 14 were contacted by a member of the research team to collect follow-up information regarding survey responses or to encourage the respondents to provide more detail on their survey responses. Three states responded to the research team that they could not complete the survey due to inadequate staffing or a fear of repercussions for providing data of this nature (two of those states started the survey but did not complete it; one was unable to respond at all).

This survey was developed to provide useful information on the range of cost containment initiatives implemented within state DOT public transportation divisions and to gather quantitative data about various outcomes associated with implementing these initiatives. The survey was successfully implemented and data have been collected that provide an overview of the use of cost containment initiatives in state DOT public transportation divisions. Results of the analysis of this survey data can be found in Section 4 of this digest.

In addition to serving as a means to collect data from a wide range of states, the survey also functioned as a screening tool to identify a sample of state DOTs for follow-up interviews and to develop the sampling plan for Task 2 of this project. This sampling plan and the interviews with state DOT participants are discussed further in the next section.

3.2 Task 2—Interview State DOT Staff

The next step in this project involved interviewing public transportation division directors, administrators, or other representatives within 11 state DOTs. The interviews were important to aid in gathering

more detailed information on cost containment initiatives, and to provide a more detailed understanding of the measures implemented, their associated costs, and their effects on the DOT's public transportation activities. The research team assembled a preliminary list of potential interview participants as well as possible alternate state DOTs for participation if members of the preliminary list were not able to participate. Each of the individuals on the preliminary list was contacted via email.

Following the interview recruitment email, potential interview participants were contacted over the telephone to request participation and schedule a specific time to complete the interview. When an interview was scheduled, the participant received a copy of their survey responses for reference, if someone from that state DOT had completed the survey.

All interviews were conducted over the phone, using a conference calling system to allow for flexibility in scheduling and location according to participant needs. Each interview included the state DOT participant, as well as an interviewer and a recorder from the research team. The interviewer was responsible for guiding the interview and ensuring that all relevant topics were covered, whereas the recorder was responsible for taking notes about the interview discussion. A structured protocol was used to facilitate the interviews. The protocol was based upon the information gathered and key issues uncovered in the research team's analysis of related materials obtained in Task 1. Specifically, the protocol was designed to gather deeper and more detailed information about the effects of using cost containment initiatives on public transportation divisions and their employees. During the interviews, participants were asked to provide additional detail regarding costs and cost savings, impacts on departmental procedures and activities, and challenges they have faced in sustaining their department. The full interview protocol can be seen in Appendix C.

Agencies were selected for participation mainly based on their responses to survey questions, particularly those who indicated they had experience with cost reduction initiatives over the past year and/or use of consultants. Most interviews were conducted with individuals who completed the online cost containment initiatives survey. However, interviews were also conducted with states that did not respond to or fully complete the survey if it was known that the state in fact uses cost containment initiatives. This was done to target state DOT public transportation divisions with varied experiences and compositions.

In addition to scheduling interviews with states using varied cost containment initiatives, the researchers also attempted to create a diverse sample of DOTs with regards to the following factors:

- State DOTs that operate transit directly vs. states with all transit provided by local operators
- Large funding divisions (>\$1 billion in total funds) vs. small funding divisions
- Small staff (<5 people) vs. large staff divisions
- Geographic location (Northeast, South, Midwest, West)

Information gathered during the interviews was incorporated into the Task 3 data analysis, which is described in the next section.

3.3 Task 3—Analysis of Qualitative and Quantitative Data

Quantitative data from the survey were analyzed to understand the respondents and their division's activities, the funding and staffing of state DOT public transportation divisions, and the use and outcomes of cost containment initiatives. The outcomes of the cost containment initiatives were analyzed both in terms of the percentage of respondents indicating higher, the same, or lower values for each outcome and the qualitative responses about the magnitude of the effects.

Following the interviews, the results from the Task 1 survey were updated to include the states that participated in interviews but did not complete the online survey. This included adding the cost containment initiatives used by these additional state DOT public transportation divisions to the survey results.

To complete the qualitative analyses of the interview results, responses across the interviews were incorporated into a single document. This document included bulleted responses to each interview item. The combination of all interview responses into one document allowed for the examination of themes across the interviews.

4 RESULTS

The following sections discuss the information gathered through the online survey and the interviews, divided into three sections: (1) background information on the respondents and their state DOT's public transportation division, (2) information about the use of cost containment initiatives within the

public transportation division and their effects, and (3) information about the public transportation division budget and staffing levels.

4.1 Background Participant Information

The researchers received at least partial survey responses from 38 state DOTs; these states are listed in Exhibit 3. Responses were considered “complete” if the respondent provided answers to at least some questions on all relevant portions of the survey, although they did not have to provide answers to every question they were asked. Partial responses refer to those respondents who stopped mid-survey and therefore did not provide data on the full range of cost containment initiatives they may be using. The partial responses are included in the analysis when the respondent provided data for the question being analyzed; questions left unanswered were excluded from the results. Finally, there were two interview-only participants who participated in an interview regarding the use of cost containment initiatives within their state DOT public transportation division. These participants are also listed in Exhibit 3.

In the first section of the survey, the researchers asked respondents for some basic information about their divisions and their agencies. Of the states with representatives responding to the survey, three-quarters (76 percent) work in public transportation divisions. Other areas respondents worked in were planning, executive, transportation performance, multimodal operations, human resources, and local transportation programs. The researchers also inquired about the activities in which the state DOT’s public transportation division engages. All responding states noted that they managed grants, and nearly all provided technical assistance in

some form (95 percent) and collected and reported data (92 percent). A majority of respondents also reported engaging in activities related to planning (79 percent), performance measurement (71 percent), policy leadership (68 percent), and/or service coordination (55 percent). Finally, the researchers asked if the respondent’s DOT directly operated any transit services in their state. Eleven percent of respondents indicated that their DOT directly operates transit services in some form. Exhibit 4 provides a graphic overview of division activities reported by survey participants.

4.2 Use of Cost Containment Initiatives

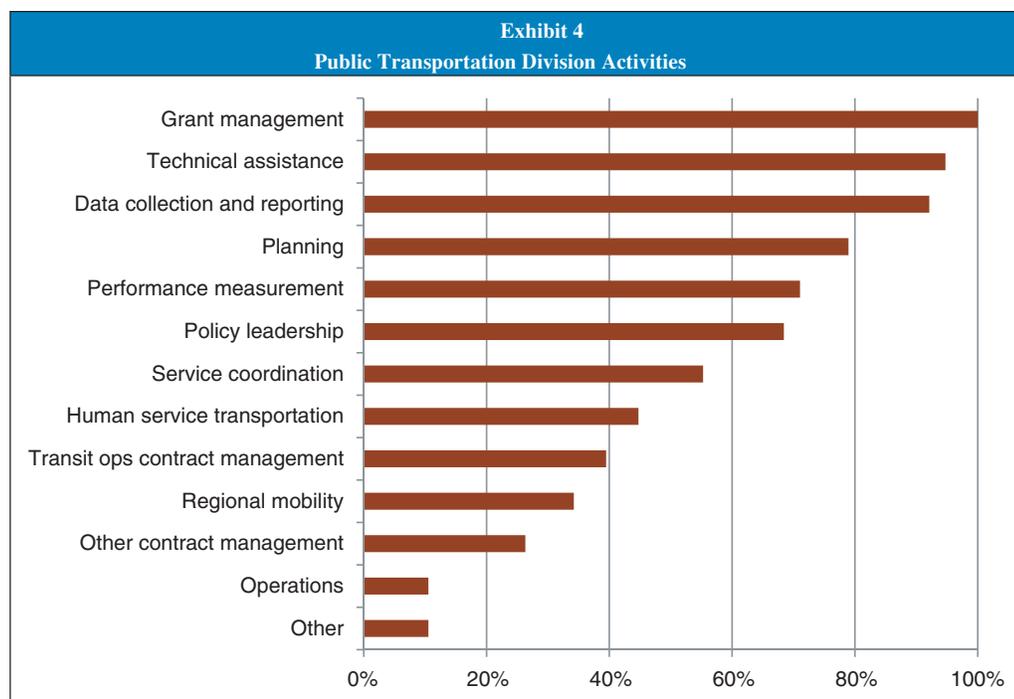
The second section of the survey, which included the majority of the interview questions, inquired about the use of six cost containment initiatives:

- Employee layoffs (permanent)
- Employee furloughs (temporary)
- Hiring freezes
- Travel freezes
- Use of contractor staff
- Salary reductions

The survey employed conditional logic so that respondents were asked more detailed questions about only the specific cost containment initiatives they have used. Respondents were also allowed to provide details about “other” initiatives they have used, besides those listed above. For DOTs that had not used any initiatives, the researchers asked a separate set of broad questions about current and future use of initiatives.

To gather information about cost containment initiatives during the interviews, participants were asked to expand on the information that they pro-

Exhibit 3 States Responding to Survey and Interview			
Survey Completed			
Alabama	Idaho	Nevada	Tennessee
Alaska	Iowa	New Mexico	Texas
Arkansas	Kentucky	New York	Utah
Colorado	Massachusetts	North Dakota	Washington
Delaware	Minnesota	Oklahoma	West Virginia
District of Columbia	Missouri	Oregon	Wyoming
Florida	Montana	Pennsylvania	
Hawaii	Nebraska	South Dakota	
Survey Partially Completed			
Louisiana	Michigan	Ohio	Vermont
Maryland	New Hampshire	South Carolina	Wisconsin
Interview-only Participants			
Connecticut	Illinois		



Note that respondents could select multiple responses, N=38.

vided in the online survey. Interview participants who did not complete the online survey were first given the list of cost containment initiatives and asked which initiatives were utilized by their public transportation division.

4.2.1 DOTs Using Cost Containment Initiatives

Of the survey and interview respondents, 80 percent (32 out of 40) reported that they used some type of cost containment initiatives in the past year in the public transportation division.

Nearly all states that have used any type of cost containment initiative have used at least one of the six cost containment initiatives included in the current study. Exhibit 5 indicates the percentage of respondents who reported using each of the identified cost containment initiatives. Hiring and travel freezes were the most commonly used initiatives; each was used by more than one-half of the respondents. These initiatives were also frequently used together. For example, 87 percent of those DOTs that reported using travel freezes also reported using hiring freezes.

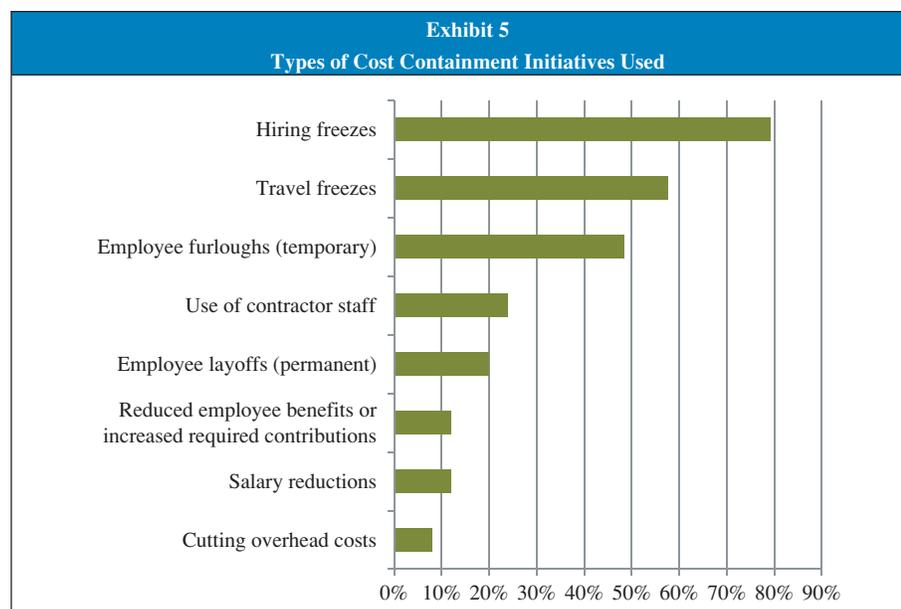
“Other” cost containment initiatives that were reported by respondents included:

- Reduced employee benefits or increased contributions to benefits
- Cutting overhead costs

Of those agencies that have used cost containment initiatives, most respondents reported using between one and three initiatives in the past year, although one respondent reported using four.

For each cost containment initiative, respondents were asked to indicate how long they had been using the initiative. Slightly more than one-half of the initiatives employed (55 percent) have been in use for 2 or more years and over one-quarter (27 percent) have been in use for 3 years or more. For DOTs that used more than one cost containment initiative, most implemented the individual initiatives at different points in time, suggesting that the need for cost containment has been an ongoing issue and that states have not been implementing multiple initiatives all at once.

One aspect of the cost containment initiatives that this survey did not capture was the magnitude of the initiatives employed (e.g., percent reduction in salary or strictness of travel freezes) and whether the severity of the initiatives has changed over time (e.g., several years of increasing salary reductions). However, the interviews conducted in Task 2 were used to help better understand these aspects of cost containment initiatives. The results indicate that the level or severity of the cost containment initiatives varied greatly from state to state. Many states reported previously using cost



Note that respondents could use more than one cost containment initiative. Percentages for each initiative are out of total number of respondents who indicated their use or nonuse of that initiative.

containment measures, but those measures were no longer in effect. Information specific to each of the cost containment initiatives is provided in Section 4.2.2 below.

4.2.2 Cost Containment Initiative Outcomes

Survey respondents and interview participants were asked to report on the effects of each cost containment initiative their state DOT has used. Impacts were divided into those affecting the public transportation division's functioning ("agency outcomes") and those affecting division staff ("staff outcomes"). This section presents the aggregated results of using cost containment initiatives, answering the question "What does the implementation of cost containment initiatives generally mean for the public transportation division?" The next section addresses the outcomes for each cost containment initiative separately, and Appendix D presents the disaggregated results for each cost containment initiative individually.

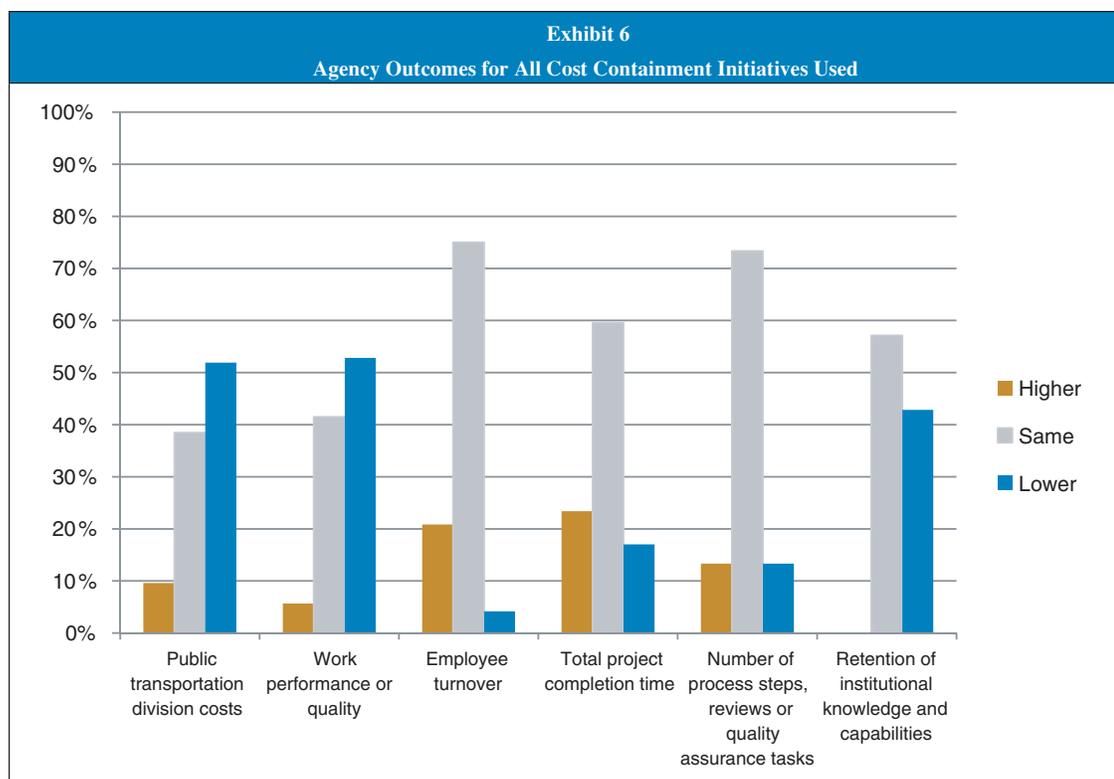
Agency Outcomes. The agency outcomes included in this study were:

- Public transportation division costs
- Work performance or quality
- Employee turnover
- Total project completion time

- Number of process steps, reviews, or quality assurance tasks
- Retention of institutional knowledge and capabilities

Respondents were asked to identify whether the effect of each relevant cost containment initiative was higher, lower, or the same levels for the agency compared to pre-cost containment levels. Depending on the outcome in question, higher and lower will correspond to "better" or "worse" differently. For example, when considering an outcome that is positive for the agency (e.g., Work performance or quality) a response of "higher" would indicate a more positive, or better, outcome for the agency. On the other hand, when considering an outcome that is not positive for the agency (e.g., Employee turnover), a response of "higher" would indicate a more negative, or worse, outcome for the agency.

Exhibit 6 shows the agency outcomes across all cost containment initiatives reported by state DOTs. As shown in this exhibit, the majority of states reported that costs were lower after the implementation of a cost containment initiative, which achieves the goal behind instituting these initiatives. Notably, however, quality also appears to decrease with costs: the majority of respondents also reported that work performance or quality was



NOTE: Percentages are out of total number of responses received for each outcome. Respondents could use more than one cost containment initiative, so any one agency may be included in a particular outcome more than once.

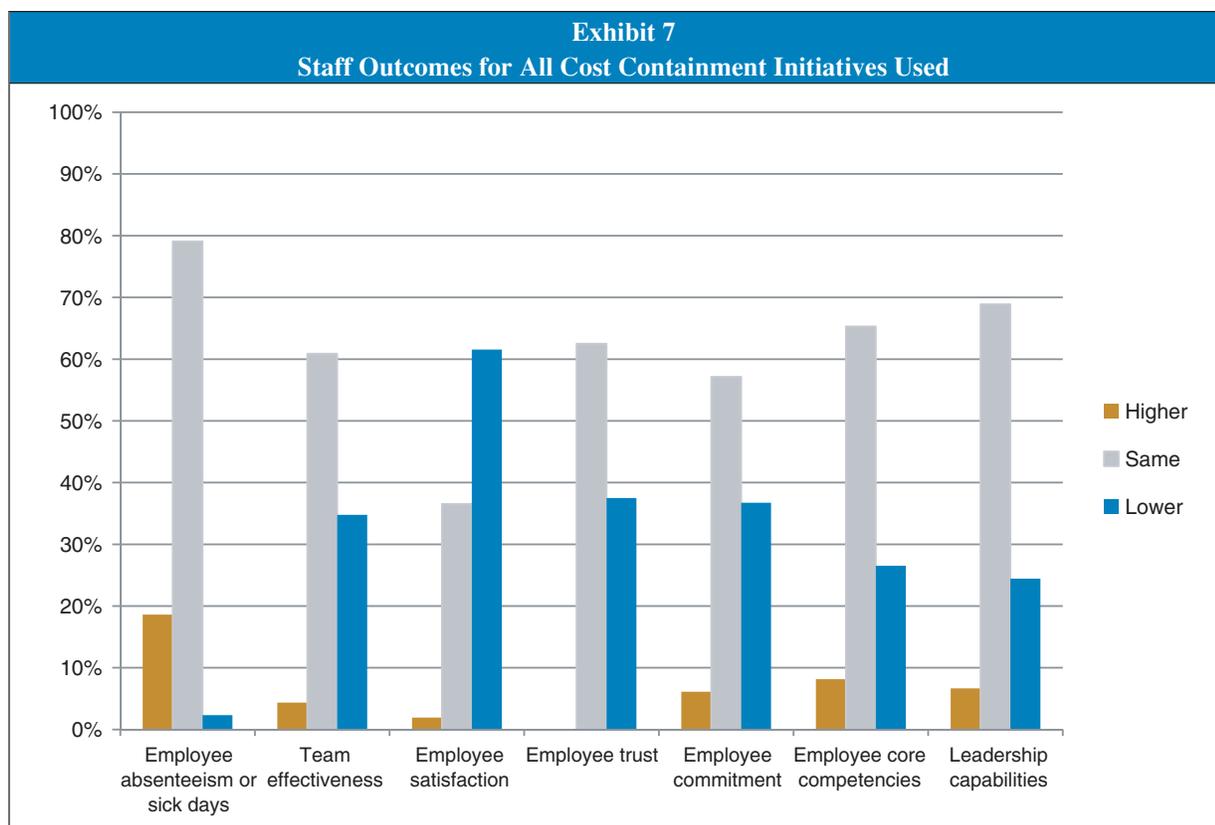
lower after the cost containment initiative was put in place. Retention of institutional knowledge and capabilities also often suffers from cost containment initiatives, with 43 percent of respondents indicating institutional knowledge retention was lower and no respondents indicating that it had improved, although about one-half of respondents said that retention of institutional knowledge had not changed.

Exhibit 6 also shows that cost containment initiatives appear to generally have no significant impact on some of the agency outcomes: a majority of respondents indicated that employee turnover, project completion time, and the number of process and review tasks all were the same after the cost containment initiative was implemented. However, for those respondents indicating a change in outcomes following the implementation of the cost containment initiative, employee turnover and project completion time both had more negative outcomes (higher) than positive outcomes (lower). Changes in the number of process and review steps were evenly split between higher and lower for all initiatives.

Staff Outcomes. In addition to the agency outcomes already discussed, this study also asked about staff outcomes. These staff outcomes included:

- Employee absenteeism or sick days
- Team effectiveness
- Employee satisfaction
- Employee trust
- Employee commitment
- Employee core competencies
- Leadership capabilities

Exhibit 7 shows the responses to questions about these staff outcomes for all cost containment initiatives. The biggest change in staff outcomes is in employee satisfaction, which was perceived to be lower in nearly two-thirds of the reported cost containment initiatives and was only reported to be higher on one occasion. As with the agency outcomes, the majority of respondents indicated that there had been no change in outcomes before and after the institution of the cost containment initiative, with the exception of employee satisfaction. For all outcomes, less than 10 percent of respondents reported a “positive” change (e.g., lower employee



NOTE: Percentages are out of total number of responses received for each outcome. Respondents could use more than one cost containment initiative, so any one agency may be included in a particular outcome more than once.

absenteeism, higher employee trust) following the implementation of the cost containment initiative and more than one-quarter reported “negative” outcomes in all but one case (employee absenteeism).

In addition to these specified agency and staff outcomes, interview participants also suggested additional outcomes of cost containment initiatives in several instances, such as:

- Lower baseline of staffing
- Difficulty in recruiting
- Increasing use of annual leave for employees because overtime is not allowed
- Required changes to the structure of jobs or projects

4.2.3 Specific Cost Containment Initiative Outcomes

In addition to understanding the effects of cost containment initiatives in general, it is also critical to assess the potential positive and negative impacts associated with specific cost containment initiatives. Knowledge of potential outcomes is useful when considering which initiatives to implement, when speak-

ing with decision-makers about initiatives that have already been adopted, and when determining how to modify and reduce risks associated with existing initiatives. To this end, Exhibit 8 and Exhibit 9 provide a summary of the various cost containment initiatives examined and their effects on agency and staff outcomes. These exhibits are designed to provide a starting point for understanding the potential positive and negative outcomes associated with each cost containment initiative investigated as part of this study.

Exhibit 8 and Exhibit 9 provide two indicators of cost containment initiative impact on each outcome: color coding and directional arrows.¹ These two indicators are described below.

1. Color coding is used to provide an indication of the value of the outcome:

Green Positive impact or no change indicated by more than 60 percent of respondents

¹A color version of this digest is available on the TRB website at: <http://www.trb.org/Main/Blurbs/167762.aspx>.

Exhibit 8 Potential Positive and Negative Impacts Associated with Cost Containment Initiatives: Agency Outcomes						
Cost Containment Initiative	Division Costs	Work Performance or Quality	Employee Turnover	Total Project Completion Time	Number of Steps, Reviews	Retention of Institutional Knowledge
Use of contractors/consultants	—	—	—	—	—	↓
Employee layoffs	↓	↓	↑	↑	↑	↓
Employee furloughs	↓	↓	—	—	—	—
Employee hiring freezes	↓	↓	—	↑	—	↓
Employee travel freezes	↓	↓	—	—	—	—
Salary reductions	↓	↓	↑	↓	↑	↓
Reduced employee benefits or increased employee contributions to benefits	↓	—	—	—	—	—
Cutting overhead costs	↓	—	↑	—	↑	↓

- Red** Negative impact or no change indicated by more than 60 percent of respondents
- Gray** Mixed results, no one outcome is reported at above 60 percent

2. Directional arrows are used to indicate the direction of the outcome:

- ↑ **Higher outcome** reported by 50 percent or more of respondents (e.g., increase in work quality)
- ↓ **Lower outcome** reported by 50 percent or more of respondents (e.g., decrease in work quality)
- **No change** reported by 50 percent or more of respondents (e.g., no change in work quality), or equal numbers of respondents reported higher, lower, and no change

Please note that there is an interaction between the study results, the type of outcome, and the type of cost containment initiative. Thus, “higher” is not always better and “no change” does not necessarily indicate whether a change is good or bad. This is why the color coding overlaid with the directional arrows is used. For example, higher turnover would be coded with (↑) and with the color red since it is a negative outcome. Lower turnover would be coded with (↓) and the color green. In another example, with employee turnover, “no change” would be coded as green since no change in turnover can be assumed to be a positive result when cost containment initiatives are implemented. Conversely, in the case of division costs, “no change” would be coded as red since the inability to reduce division costs can be assumed to be a negative outcome after a cost containment

Exhibit 9 Potential Positive and Negative Impacts Associated with Cost Containment Initiatives: Staff Outcomes					
Cost Containment Initiative	Employee Absenteeism	Team Effectiveness	Employee Attitudes	Employee Core Competencies	Leadership Capabilities
Use of contractors/consultants	—	—	—	↓	—
Employee layoffs	—	—	↓	↓	↓
Employee furloughs	—	—	↓	—	—
Employee hiring freezes	—	—	—	—	—
Employee travel freezes	—	—	—	—	—
Salary reductions	↑	↓	↓	↓	↓
Reduced employee benefits or increased employee contributions to benefits	—	—	↓	—	—
Cutting overhead costs	—	↑	—	↑	—

initiative is implemented. Appendix D provides all coding combinations as well as the statistics used to code each cell in Exhibit 8 and Exhibit 9. Please also note that “respondents” include Task 1 survey respondents and Task 2 interview participants.

The following sections provide more detail regarding the responses for each cost containment initiative, focusing on the qualitative responses received for the measures. In addition to the general responses of higher, lower, or the same for each outcome, the survey asked respondents to provide qualitative descriptions to support their responses. This allowed participants to elaborate on the form or magnitude of the impacts, although many states were unable to quantify the outcomes of cost containment measures due to a lack of tracking at the public transportation division level or because this was not an area for which data is generally collected. In several cases, the research team followed up with responses to supplement the original responses. The interviews completed in Task 2 were used to gather additional qualitative information and further allowed participants to provide more detailed explanations of the cost containment initiatives used and their effects.

Permanent Employee Layoffs. Permanent employee layoffs are used by only 18 percent of respondents. Interview respondents indicated that these layoffs were broader than just the public transportation division; they were either DOT- or statewide layoffs. In each of the interviews that discussed implementing employee layoffs, the impetus to do so was in an effort to save money. Layoffs have generally decreased division costs, but also at the same time decreased work performance or quality, retention of institutional knowledge, and employee trust. Employee absenteeism and team effectiveness appear to be the outcomes least affected by layoffs. Interview participants suggested that decreases in work quality and increases in time to complete work following employee layoffs came as a result of remaining employees having an increased workload that is more difficult to complete. One state even mentioned that because of the decrease in the number of staff in their public transportation division, the function of their work changed dramatically to a very heavy focus on administrative tasks rather than planning, which had been more prevalent in the past. This increased workload also seemed to contribute to decreased employee morale and satisfaction.

In one case, the laying off of a key employee meant that the public transportation division had to recreate the payment process. Payment times have increased while the department has had to recreate the process and train other employees to cover this task. Another respondent similarly noted that they are still trying to cover unspecified tasks that laid-off employees used to handle “under the radar.” While the increased workload has decreased employee morale, one respondent also noted that the reshuffling of tasks has resulted in some employees being able to work on more exciting projects or new and more interesting tasks.

Temporary Employee Furloughs. Temporary employee furloughs are used by 41 percent of respondents. However, the manner in which furlough days are implemented varies greatly across public transportation divisions. For example, one division reported that when mandatory furloughs were implemented employees were required to take three furlough days per year. Another division reported all employees having to take 12 furlough days per year (one per month). The number of furlough days required can greatly affect the outcomes associated with this cost containment initiative. Specifically, if few furlough days are required, then implementing this cost containment initiative is not likely to have an impact on agency and employee outcomes. However, with greater numbers of furlough days there is more likely to be a noticeable effect of furloughs on the employees as well as the division as a whole. For example, if employees are required to take one unpaid furlough day per month, that is equal to almost a 5 percent pay cut. This is likely to have a greater effect on employees, beyond simply pay loss, than only being required to take three unpaid furlough days per year. Similar to employee layoffs, required employee furloughs not only affected the public transportation division, but also were reported by the interview participants to be statewide initiatives.

Aside from costs and project completion time, furloughs are reported to have either resulted in no change or in a more “negative” outcome. While the majority of respondents reported lower division costs, several respondents noted that the furloughs resulted in limited savings because funding for some or most staff positions comes from federal funding. Furloughs also impact external relations with the division: one respondent noted that absences caused by furloughs can result in frustration and confusion for grant sub-recipients, who will call everyone in the office looking for help but still end up having to wait until their

usual contact comes back into the office. This takes up time of the other staff who are still in the office.

Hiring Freezes. Hiring freezes were the most widely used cost containment initiative, used by approximately three-quarters (74 percent) of respondents. Additionally, these initiatives have typically been in effect for a long period of time, with some interview participants indicating hiring freezes that had been in effect for 6 to 8 years. However, like with employee furloughs, this cost containment initiative varies greatly across state DOT public transportation divisions, which likely explains the mixed effect of hiring freezes that can be seen in the results, particularly for agency outcomes. With regards to these differences, there are many ways in which states have implemented hiring freezes. Some examples of hiring freeze implementation include:

- A complete hiring freeze where no positions can be filled.
- A system where a request to fill a position can be made and must be approved by high-ranking officials.
 - The ease of getting these hires approved also varied across states, with some states saying they were able to fill any positions they requested and other states indicating a greater difficulty in obtaining approval.
- An external hiring freeze, where no one from outside of the DOT can be hired but individuals can be hired from other divisions within the DOT.
- A “position freeze” where existing positions can be filled but no other positions will be made available.

These variations in the intensity of the hiring freeze can impact the effects of implementing this cost containment initiative. In many of the situations described in interviews, rather than being a hiring freeze, there appears to be more of a “hiring chill,” where positions can be filled with permission from the administration. This may help explain why division costs were reported as unchanged as often as they were reported as lower (43 percent in both cases).

For the staff outcomes, the majority of respondents reported that there had been no change for all outcomes except employee satisfaction, which the majority reported to be lower. Even when there was a vacancy, several respondents noted that other staff had

been able to cover the tasks of that position and the impact had therefore been more on employee satisfaction than on actual work performance. However, one respondent noted that if vacancies were to increase, the currently minimal impacts would be expected to grow and become more negative. Not all respondents have seen such mixed results though. In at least one case, the open position has resulted in greater workloads for salaried staff (hourly staff are held to 40 hours per week) and concerns about burnout due to extra hours. In another state, the hiring freeze had forced the public transportation division to hire a consultant at a higher cost to the division than a regular staff person. In fact, multiple states noted that their inability to hire specialized employees (e.g., planners) has required their divisions to hire consultants to complete work that was previously completed by someone in a full-time position with the public transportation division. Additionally, many states reported increases in employee stress as well as decreases in morale and satisfaction due to the inability to fully staff the public transportation division.

Travel Freezes. Travel freezes are the second most common cost containment measure (used by 56 percent of respondents) and, as noted in the background section, are frequently used in combination with hiring freezes. Again, the implementation of travel freezes varies across states, but most interview participants reported that travel restrictions were only in place for out-of-state travel. In some states, exceptions can be made to the travel freeze if the travel is deemed critical, if another entity will pay for the travel, or if requested and approved by administration. These exceptions vary by state as does the ease of getting possible travel exceptions approved. Most travel freezes were indicated to be part of a statewide travel freeze.

One-half of the respondents that use travel freezes report that division costs are lower, and more than one-half of the respondents report that work performance or quality and employee satisfaction have decreased. Staff outcomes suffer particularly from travel freezes: at least 20 percent of respondents reported more negative outcomes following travel freezes for all staff outcomes except employee absenteeism (which was largely reported as unchanged). Several respondents noted that travel freezes have resulted in staff not keeping up with the latest information and best practices due to reduced ability to attend trainings and to network with other states.

This affects work quality, but respondents generally otherwise considered the agency outcomes to be mostly unaffected.

Use of Contractor Staff. Contractor staff are used relatively infrequently as a means of cost containment among respondents (23 percent of respondents) compared to other cost containment initiatives. Contractors are typically brought into a public transportation division when the employees are unable to meet specific needs or demands that arise or if there are not enough full-time employees to meet current needs. It should be noted that the focus of the survey and interviews was on the use of contractor staff for administrative and managerial activities in which state DOT staff functions are replaced, not the broader range of services contractors and consultants might provide a state DOT, such as conducting special studies.

Cost savings to the public transportation division are less clear with this initiative and respondents reported mixed costs and benefits for using contractors and consultants. One respondent noted that due to the hiring freeze instituted in the DOT, the division was forced to contract out work at a much higher price. On the other hand, another respondent saw lower costs, better quality, and quicker completion times due to contracting. At the same time, that respondent also noted that project knowledge and experience is lost at the end of each project and that access to that knowledge requires sufficient budget to continue to contract out work. Another participant suggested that in the short term, hiring contractors is more expensive because of their higher pay rate but that in the long run using consultants is less expensive because the division does not have to continue to pay these individuals when their service is no longer needed as well as the fact that the division does not have to contribute to their future retirement. Overall, most outcomes were considered to be the same before and after contracting out labor, although this result should be interpreted with caution given the small sample size.

Salary Reductions. The use of salary reductions was the least common cost containment initiative in the research sample, used by only 8 percent of respondents. As a result, data for this measure is very limited. The respondents were nearly unanimous in reporting negative staff outcomes as a result of salary reductions. Agency outcomes showed no improvement except in terms of division costs, which declined in some cases.

One respondent noted that it is harder to motivate employees to work hard for less pay and that there has been increased distrust of management, with a resulting decrease in commitment.

Other Cost Containment Initiatives. Several states (18 percent) reported using other cost containment initiatives besides those included in the survey. As described in the background section, these initiatives included reduced employee benefits or increased contributions to benefits and cutting overhead costs (e.g., reducing printing, saving on janitorial costs). These initiatives succeeded in lowering division costs in nearly all of the cases and most respondents reported no change in other agency and staff outcomes as a result of these initiatives. Most agencies reported more than one activity as part of the “other” category and the outcomes reported may refer to one specific activity or may be the net impact of all the related initiatives.

4.2.4 *Potential Benefits and Drawbacks of Implementing Cost Containment Initiatives*

In addition to the results of the study survey and interviews, Exhibit 10 can be used to help assess potential benefits and drawbacks associated with the use of the cost containment initiatives identified. This information comes from the survey and interview results, as well as from existing literature regarding the use of cost containment initiatives.

4.2.5 *Mitigating Negative Effects of Cost Containment Initiatives*

Based on the identified outcomes of the different cost containment initiatives and insights from the interviews and literature, the research team developed a list of potential methods to mitigate the negative effects of the initiatives. State DOTs may be able to maximize potential positive outcomes and mitigate negative outcomes associated with any cost containment initiatives being considered or those that have already been implemented.

Exhibits 11 and 12 list potential methods for mitigating risks related to agency and staff outcomes associated with the various cost containment initiatives. Public transportation division leaders and other DOT leaders can use Exhibit 10 to identify areas of concern and then use Exhibit 11 and Exhibit 12 to identify solutions that may help mitigate risk. For each outcome, the methods to mitigate risk are

Exhibit 10 Potential Benefits, Drawbacks, and Other Considerations Associated with Cost Containment Initiatives			
Cost Containment Initiative	Potential Benefits	Potential Drawbacks	Other Considerations
Use of Contractors/ Consultants	<ul style="list-style-type: none"> Helps deal with loss of in-house staff and variations in workload Reduced costs due to overhead and employee benefits Increased performance New skills introduced to workforce Can help promote innovation 	<ul style="list-style-type: none"> Increased costs due to more administrative steps required to implement and monitor contractors Employee dissatisfaction Does not develop skills needed to sustain leadership in the workforce 	<ul style="list-style-type: none"> May be hard to find contractors with the right knowledge Work may need to be redesigned for contractors to complete May need to redesign jobs for remaining employees if skills change is needed
Employee Layoffs	<ul style="list-style-type: none"> Reduced payroll costs Potential to retain high performing staff Unnecessary or outdated positions can be eliminated 	<ul style="list-style-type: none"> Employee dissatisfaction Increased workload on remaining employees Decreased quality of work because of lack of qualified employees Potential retraining of staff to take over new tasks/functions Employees may have increased feelings of job insecurity Lower baseline of staffing 	<ul style="list-style-type: none"> If temporary, may not be able to hire back the same employees if desired While work effort may increase for some remaining employees, work effort may decrease for other remaining employees
Employee Furloughs	<ul style="list-style-type: none"> Saves jobs in long run Often times less expensive than severance packages Employees are still available if demand suddenly increases 	<ul style="list-style-type: none"> Employee dissatisfaction and lowered morale Decreased productivity Increased workload when employees return Increased turnover Jobs or projects may need to be restructured to ensure work is completed 	<ul style="list-style-type: none"> Employees most likely to turn over are the highest performers
Employee Hiring Freezes	<ul style="list-style-type: none"> Reduced costs due to lower payroll and lessened recruitment activities Saves existing jobs in agency 	<ul style="list-style-type: none"> Increased workload on existing employees Possible employee dissatisfaction and burnout Key positions may remain unfilled 	<ul style="list-style-type: none"> Can create a backlog for recruiting and hiring new employees following the freeze May be a freeze only on new positions, not on filling existing positions
Employee Travel Freezes	<ul style="list-style-type: none"> Reduced short-term costs Helps to balance agency/division, contributing to saved jobs 	<ul style="list-style-type: none"> Reduced ability to keep up on new trends Reduced opportunities to share information with other public transportation divisions Reduced training opportunities for employees Employee dissatisfaction 	<ul style="list-style-type: none"> Some jobs may require travel to complete necessary work Staff may be willing to pay portion of travel costs for conferences, etc. Some drawbacks could be reduced by implementing video conferencing or using similar technology

(continued on next page)

Exhibit 10 (Continued)

Exhibit 10 Potential Benefits, Drawbacks, and Other Considerations Associated with Cost Containment Initiatives			
Cost Containment Initiative	Potential Benefits	Potential Drawbacks	Other Considerations
Salary Reductions	<ul style="list-style-type: none"> • Saves jobs in long run • May allow agency to hire additional staff to reduce workload of existing staff 	<ul style="list-style-type: none"> • Employee dissatisfaction and lowered morale • Lower employee productivity • Increased turnover 	<ul style="list-style-type: none"> • Should examine effects on benefits, pensions, etc. • Need to ensure that top performers are still making more than lesser-performing colleagues, even after the pay cuts
Reduced Employee Benefits or Increased Employee Contributions to Benefits	<ul style="list-style-type: none"> • Reduced labor-related costs • May help to avoid salary reductions • Saves current jobs in long run 	<ul style="list-style-type: none"> • Employee dissatisfaction • Increased turnover 	<ul style="list-style-type: none"> • May increase difficulty of recruiting highly qualified applicants
Cutting Overhead Costs (e.g., Cleaning, Paper Supplies, Utilities)	<ul style="list-style-type: none"> • Reduced division overhead costs • May help to avoid workforce-related cuts 	<ul style="list-style-type: none"> • Changes to division resources may require adjustments in execution of job tasks • Employee dissatisfaction 	<ul style="list-style-type: none"> • Should be routinely examined for cost savings

provided with codes (in parentheses) representing the type of cost containment initiative for which they are most applicable.

The following coding key provides an explanation of the codes:

- (C/C) – Contractors/consultants
- (Lay) – Employee layoffs
- (Fur) – Furlough
- (Hire) – Hiring freeze
- (Trav) – Travel freeze
- (Sal) – Salary reduction
- (Ben) – Benefits reduction
- (All) – All cost containment initiatives

4.2.6 DOTs Not Using Cost Containment Initiatives

Twenty percent of study participants said their DOT had not used cost containment initiatives in the past year in the public transportation division.

Of these state DOTs, nearly two-thirds (63 percent) are currently using or are considering using cost containment initiatives in other divisions at their agency. Cost containment initiatives used in those other divisions include reduced travel (such as limiting travel to one department representative per

meeting), delays in hiring, and required efficiency reviews to determine where personnel and funding could be shifted to concentrate on critical tasks.

One state noted that cost containment initiatives had not been necessary in Fiscal Year 2010, which was the year the researchers asked about, but that cost containment was now an issue being addressed. In that case, the DOT is currently reducing the DOT workforce and closing facilities used by the highway program. Another state noted that a preventative activity they have employed has been to identify past federal requirements that are no longer in force but that the public has come to expect. The respondent noted these services often no longer fit their program’s mission or objectives and eliminating them was a way to reduce costs with limited negative effects.

4.3 Public Transportation Program, Funding, and Staffing

In the survey, 12 questions asked respondents about the size of the public transportation division of their state DOT. The purpose of these questions was to establish baselines for analysis of cost-cutting activities. Respondents were asked to answer ques-

Exhibit 11 Methods to Mitigate Risk Associated with Negative Agency Outcomes	
Agency Outcomes	Methods to Mitigate Risk Associated with Use of Cost Containment Initiatives
Increased division costs	<ol style="list-style-type: none"> 1. Use multiple means to identify contractors/consultants. (C/C) 2. Benchmark costs with other states/divisions. (C/C) 3. Negotiate lower rates with contractors/consultants. (C/C)
Decreased work performance or quality	<ol style="list-style-type: none"> 1. Review work processes and quality periodically. (Lay, Fur, Hire, Trav, Sal) 2. Examine means to improve efficiency in work processes, thereby mitigating the effects of less worker time on the job (Lay, Fur, Hire) or employee dissatisfaction. (Trav, Sal, Ben) 3. Keep staff informed of reasons for cost containment initiatives and provide information periodically on any effects. (All) 4. Consider allowing employees compensatory time off to improve morale. (Lay, Hire, Sal, Ben) 5. Ensure that employees receive sufficient supervision because of inexperienced or new supervisors. (Lay, Hire)
Higher employee turnover	<ol style="list-style-type: none"> 1. Closely monitor employee satisfaction, trust, and commitment levels. (Fur, Sal, Ben) 2. Keep staff informed of reasons for cost containment initiatives and provide information periodically on any effects. (All) 3. Consider allowing employees compensatory time off to improve morale. (Lay, Hire, Sal, Ben) 4. Conduct exit interviews to identify why employee left. (Fur, Sal, Ben)
Increased total project completion time	<ol style="list-style-type: none"> 1. Establish specific deliverables and milestones and conduct regular progress reviews. (All) 2. Review project completion times and reasons for delays. (All) 3. Find workarounds due to reduced employee time on job. (Lay, Fur, Hire) 4. Utilize technology to lessen burden on employees. (Lay, Hire)
Increased number of process steps, reviews or quality assurance tasks	<ol style="list-style-type: none"> 1. Establish specific deliverables and milestones and conduct regular progress reviews. (All) 2. Examine means to improve efficiency in work processes, thereby mitigating the effects of less worker time on the job. (Lay, Fur, Hire) 3. Utilize technology to lessen burden on employees. (Lay, Hire)
Decreased retention of institutional knowledge and capabilities	<ol style="list-style-type: none"> 1. Improve knowledge management systems and employee training programs. (C/C, Lay, Hire, Fur) 2. Encourage self-development. (All)

tions using information from Fiscal Year 2010. Question sets included:

- Budget of the state DOT public transportation division or office
- Total employee salaries
- Managerial and operational (overhead) costs
- Number of full-time equivalent (FTE) employees
- Part-time employees and costs
- Contractor employees and costs

4.3.1 Total Budget

Respondents were asked about the total budget of their state’s public transportation office or divi-

sion. Responses ranged from \$300,000 to \$4.2 billion. About one-half of the sample—14 states—was grouped in the range of \$5 million to \$30 million. Five respondents reported a public transportation division budget greater than \$100 million, and represent an overwhelmingly large portion of the total public transportation funding expended in the United States. The top two states in the survey account for 89 percent of the total dollars reported by all 29 respondents. The wide variation in budgets—along with narrative responses to other questions—indicates that these states should not be directly compared to other states. This is because these self-reported figures vary based on the organizational structure and budgetary rules from state to state. Additionally, some respondents

Exhibit 12 Methods to Mitigate Risk Associated with Negative Staff Outcomes	
Staff Outcomes	Methods to Mitigate Risk Associated with Use of Cost Containment Initiatives
Increased employee absenteeism or sick days taken	<ol style="list-style-type: none"> 1. Closely monitor employee satisfaction, trust and commitment levels. (All) 2. Keep staff informed of reasons for cost containment initiatives and provide information periodically on any effects. (All) 3. Consider allowing employees compensatory time off to improve morale. (Lay, Hire, Sal, Ben) 4. Consider allowing flexible work arrangements (e.g., flexible scheduling, telework) to provide employees with schedules that meet personal needs. (C/C, Lay, Fur, Hire)
Decreased team effectiveness	<ol style="list-style-type: none"> 1. Review work processes and quality periodically from team perspective and seek ideas to improve effectiveness. (All) 2. Examine means to improve efficiency in work processes, thereby mitigating the effects of less worker time on the job (Fur, Hire) or employee dissatisfaction. (Trav, Sal, Ben)
Decreased employee satisfaction, trust, and commitment	<ol style="list-style-type: none"> 1. Closely monitor employee satisfaction, trust, and commitment levels. (Fur, Sal, Ben) 2. Keep staff informed of reasons for cost containment initiatives and provide information periodically on any effects. (All) 3. Consider allowing employees compensatory time off to improve morale. (Lay, Hire, Sal, Ben) 4. Conduct exit interviews to identify why employee left. (Fur, Sal, Ben) 5. Consider allowing flexible work arrangements (e.g., flexible scheduling, telework) to help improve employee attitudes. (All)
Decreased employee core competencies	<ol style="list-style-type: none"> 1. Improve knowledge management systems and employee training programs. (C/C, Lay, Hire, Fur) 2. Monitor competency levels, determine gaps, and identify training or other solutions to close gaps. (Lay, Hire, Sal)
Decreased leadership capabilities	<ol style="list-style-type: none"> 1. Monitor competency levels, determine gaps, and identify training or other solutions to close gaps. (Lay, Hire, Sal) 2. Encourage self-development. (All) 3. Identify leadership assignments that may help to increase leadership capabilities during times of restricted funding or staffing (e.g., developmental/stretch assignments, engaging with other divisions, chairing committees). (C/C, Lay, Hire)

may have interpreted the question differently from their peers (e.g., some states reported their public transportation division budget was equal or very similar to the salaries, benefits, and office hard costs of the division which may indicate that survey respondent misunderstood the question). Some rate-based measures (for example, percent of budget spent on management and administration) can still be calculated since each state was responsible for submitting all figures needed for the calculation. Answers to other questions in this section do not appear to have caused the same type of confusion, and are of sufficient quality to be compared to one another using descriptive statistics.

A few states are operators of public transportation, meaning they do not pass all funding through

grants to sub-recipients or direct recipient public transportation authorities. Some states may be operators in only a portion of the state, or operate only some modes of public transportation. In all states, there is grant administration, project prioritization, and planning work to be done. Operator states must also hire drivers, purchase vehicles, and operate dispatch. For the purposes of this analysis, no distinction is made between operators and non-operators.

4.3.2 Number of Employees

The survey asked state DOTs how many staff members are assigned to the office or division that administers the public transportation program in their state. The results from this question are shown in

Exhibit 13 Public Transportation Division Staff Size by Population			
Population Category	Survey States	Aggregate Employees	Mean Employees
Large (Over 5 Million)	10	211	21.1
Medium (2-5 Million)	9	81	9
Small (Under 2 Million)	10	50	5
Total	29	342	12.2

Exhibit 13. In general, larger states had more people on staff. Although there is considerable variation, the sample showed on average one employee per 576,000 people in the state. Large states—those with more than 5 million people—had an average of over 21 employees. Meanwhile, small states (those with fewer than 2 million people) had an average of five employees. Three states reported fewer than three FTE employees.

4.3.3 Staffing Costs

Respondents were asked to provide several statistics on the annual managerial and operating expenses of the public transportation division. Exhibit 14 shows staffing and payroll information for all non-operator states.

Respondents were asked to report: (a) the number of full-time employees, (b) the cash salaries paid to full-time employees, and (c) the total expenditure on employees. The 28 states that responded to this question set employed 342 people. Full-time employees

were paid an average of \$62,784 in cash wages and another \$15,932 in other employee-related costs (e.g., fringe benefits, retirement/pension, office administration, and other overhead attributable to a single employee). Based on the difference, state DOTs are paying 25.3 percent indirect charges on top of each employee's base salary. A fully-loaded (cash wages plus indirect charges) employee receives \$78,716 in annual compensation.

4.3.4 Part-Time Staff

Some state DOTs employ part-time staff, although they were encountered infrequently by the survey. Only five respondents reported part-time employees. The highest reported number of part-time employees at an individual state was two. Among state DOTs that had part-time employees, the average number was 1.05. Exhibit 15 shows the descriptive statistics for part-time employees.

Part-time employees earned more compensation than full-time employees, although the small sample

Exhibit 14 Staff and Payroll of Full-Time Employees				
Statistic	Number of States Reporting	Aggregate	Mean per State	Mean per FTE
Number of Full-Time Employees	28	342	12.2 FTE	--
Cash Salary of All Employees	25	\$19,086,590	\$763,463	\$62,784
Total Cost of Employees	27	\$24,166,036	\$895,038	\$78,716

Exhibit 15 Part-Time Employees			
Statistic	Number of States Reporting	Aggregate	Average Cost per FTE
Number of Part-Time Employees	5	5.1	--
Cash Salary of Part-Time Employees	5	\$399,612	\$78,355
Total Cost of Part-Time Employees	5	\$452,831	\$88,790

Exhibit 16 Contractor Staff				
Statistic	Number of States Reporting	Percent of States Reporting	Aggregate	Average
Number of Contractor FTE	6	28	14.25	2.3
Amount Paid to Contractors	4	28	\$1,160,000	\$103,111

size may have impacted the results. When extrapolated into FTEs, the group of part-time employees received a cash salary of \$78,355 and a fully-loaded compensation of \$88,790. However, part-time employees received 13.3 percent in non-cash compensation—a substantially smaller rate than full-time employees. This is likely the result of not providing certain benefits such as health insurance or retirement to part-time employees.

4.3.5 Contractor Staff

Exhibit 16 shows the information collected regarding contractor staff employed by state DOT public transportation divisions. Six states reported using contractor staff, but only three states reported more than one FTE received from contractors. Among states employing contractors, regular employees are still the norm—for every contract employee there are about three regular employees (14.25 contractors vs. 44.5 regular). At \$103,111, a contract employee costs substantially more than a full- or part-time employee. However, contractors do not have an indirect rate because they lack benefits from the state. The sample size for this section is quite small, since only six states had contractors, and only four reported any financial information. In all four states reporting financial information on contractors, the employee(s) were more expensive than full-time employees.

4.3.6 Percent of Budget Spent on Management and Administration

Respondents reported the amount of money spent on management and administrative activities, which can be compared with the public transportation division's total budget. The overhead percent can be seen in Exhibit 17. Taken together, public transportation divisions expended 0.35 percent of their annual budget on management and administration. However, this figure is not indicative of the standard state DOT public transportation division. A dramatic difference can be seen when states are grouped into large, medium, and small categories. Small- and medium-populated states (all states under 5 million in population) spent around 4 percent of their total budget on management and administration. Meanwhile, large states spent 0.2 percent of their total budget on overhead. Even the large category was biased by the very largest of states—the largest spent only 0.03 percent of their total program on overhead. After subtracting the two largest, the remaining sample spent 3.3 percent on management and overhead.

4.3.7 Nationwide Employment and Expenditures at State DOT Public Transportation Divisions

Based on several figures uncovered during this project, the researchers can estimate the number of

Exhibit 17 Overhead Percent			
Population Category	Number of States	Aggregate Program Value	Overhead Percent
Large (Over 5 Million)	10	\$5,759,523,954	0.20%
Medium (2-5 Million)	9	\$140,440,277	4.22%
Small (Under 2 Million)	10	\$80,297,636	3.71%
Total	29	\$5,898,211,867	0.35%
Total Excluding Two Largest	26	\$598,211,867	3.30%

Exhibit 18 Nationwide Totals for Employment and Salary Expenditure		
Type	Total Employees	Total Nationwide Salaries
Full-Time	623	\$48,977,095
Part-Time	6	\$452,829
Contractor	14	\$1,577,598
Total	643	\$51,007,522

people employed by state DOT public transportation divisions and the total salary expenditures. Exhibit 18 shows the calculation of the number of employees working at the average state DOT public transportation division. Based on an average of 12.6 employees, there are approximately 643 people working at public transportation divisions of state DOTs. Nationwide, about \$49,429,924 is spent on public employees, compared with \$1,577,598 for contract staff.

5 SUMMARY

This project was undertaken to help state DOT public transportation divisions understand potential impacts and effects of implementing cost containment initiatives and using contractor staff. The results described in this digest are intended to provide much-needed information about the actual usage of cost containment initiatives in state DOT public transportation divisions and real outcomes that have been experienced when these initiatives have been implemented. Data were gathered using an online survey as well as interviews. The results of this study provide valuable information about the impacts of cost containment initiatives; costs incurred by state DOT public transportation divisions that use consultants; and benefits, drawbacks, and possible methods to mitigate risks associated with using cost containment initiatives.

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ATTACHMENT

Cost Containment Initiative Decision Guide for State DOT Public Transportation Divisions

Introduction

This Cost Containment Decision Guide is designed for state department of transportation (DOT) public transportation division leaders and other DOT leaders to assist them in identifying issues and making decisions involving cost containment initiatives. Due to the economic recession, many states have experienced a reduction in annual revenue and have undertaken cost containment initiatives to reduce their operating budgets. “Bottom-line” decisions have significantly affected state DOT workforces across the United States.

State DOT public transportation divisions and their program administration activities are presented with budget challenges and, often, unforeseen negative consequences result from the implementation of cost containment initiatives. This guide was developed to provide step-by-step guidance to help public transportation division leaders and other DOT leaders understand and evaluate a variety of cost containment initiatives to make informed decisions for their divisions. The purpose of this guide is three-fold:

- **Self-assessment**—To help leaders gauge their division’s or agency’s current status with regard to cost containment initiatives
- **Knowledge-sharing/benchmarking**—To provide public transportation leaders with national DOT data on cost containment initiatives and lessons learned from industry practices
- **Decision-making**—To assist leaders in making informed decisions on future cost containment strategies for their division or agency

Specific cost containment initiatives included in this guide are:

1. Employee layoffs (permanent)
2. Employee furloughs (temporary)
3. Employee salary reductions
4. Travel freezes
5. Hiring freezes
6. The use of contractors and consultants
7. Reduced employee benefits or increased employee contributions to benefits
8. Cutting overhead costs

This guide is organized into the following four sections:

1. **Documenting** the use of cost containment initiatives within your division

2. **Understanding** how your public transportation division compares to other DOT public transportation divisions
3. **Assessing** potential positive and negative outcomes associated with cost containment initiatives
4. **Mitigating** negative outcomes that may be associated with cost containment initiatives

The information contained in this guide leverages survey and interview results collected in 2011 from state DOT public transportation division directors, administrators, or other representatives related to their experience with these cost containment initiatives, as well as research from other fields on the best practices related to implementing cost containment initiatives.

This guide was commissioned by the National Cooperative Highway Research Program (NCHRP) and is published as an Attachment to *NCHRP Research Results Digest 379*. For more details on the study, data collections, and results that led to this guide, please consult the digest.

Section 1. Documenting

Purpose: This section presents a simple self-assessment tool designed to help you quickly determine your division’s needs and current status with regard to cost containment initiatives. Once you fill out this short questionnaire, you can use it to compare your division with other state DOT public transportation divisions that have reported their cost containment initiatives. Using this same set of standards over time will also allow you to reliably track your division’s results and progress on cost containment initiatives from year to year.

How to Use: Print pages 26 to 28 and follow the instructions to complete Subsections 1.1 to 1.3.

1.1 Basic Information

State: _____ Agency/Department: _____

Date: _____ Person completing this guide: _____

1.2 Division Information

Total employees (Full Time Equivalent – FTE): _____

Total unique staff positions (or staff members – if different from FTE): _____

Total State Employees (FTE): _____

Total Contract Employees (FTE): _____

Total Current Year Transportation Division Operating Budget: _____

Total Current Year Travel Budget: _____

Is your division/department a direct operator of public transportation (do you provide transportation services directly to the public)?

- Yes No

1.3 Cost Containment Initiative Information

Exhibit 1 presents potential reasons why a public transportation division would consider implementing cost containment initiatives within their administrative or managerial functions. Please indicate your responses below:

Current Year _____	
Exhibit 1 Baseline Documentation of Cost Containment Initiative Use within Public Transportation Division	
Reason for implementing cost containment initiative:	Is this reason applicable ?
Reduced federal funding	<input type="checkbox"/> Yes <input type="checkbox"/> No
Temporary state budget reduction	<input type="checkbox"/> Yes <input type="checkbox"/> No
Long-term state budget reduction	<input type="checkbox"/> Yes <input type="checkbox"/> No
Order from governor or other executive	<input type="checkbox"/> Yes <input type="checkbox"/> No
Reduced operating budget (due to reduced transportation use)	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other (please specify) _____	<input type="checkbox"/> Yes
Other (please specify) _____	<input type="checkbox"/> Yes
Other (please specify) _____	<input type="checkbox"/> Yes

Exhibit 2 presents types of cost containment initiatives that may have been considered to reduce costs associated with administrative and managerial functions within state DOT public transportation divisions. Please indicate your responses in the exhibit as to whether each initiative has been considered and whether it has been used, is currently implemented, or has been discontinued.

Current Year _____			
Exhibit 2 Baseline Documentation of Cost Containment Initiative Use within Public Transportation Division			
Type of Cost Containment Initiatives	Considered but not used?	Currently Implemented?	Used but discontinued?
Use of contractors/consultants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee layoffs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee furloughs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee hiring freezes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employee travel freezes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Salary reductions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced employee benefits or increased employee contributions to benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cutting overhead costs (e.g., cleaning, paper supplies, utilities)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 2. Understanding

Purpose: This section provides a national overview of cost containment initiatives among state DOT public transportation divisions based on data collected in 2011. The data in this section offer some benchmarks that will allow you to further evaluate your agency's current status and considerations on the use of cost containment initiatives through peer comparisons.

How to Use: To best utilize the summary data presented in this section, review your responses to the self-assessment questions in Section 1 and compare them to the national summary statistics. Here are some questions for you to consider during this process:

- Are the cost containment initiatives your division is currently using or considering using also frequently used by other state DOT public transportation divisions?

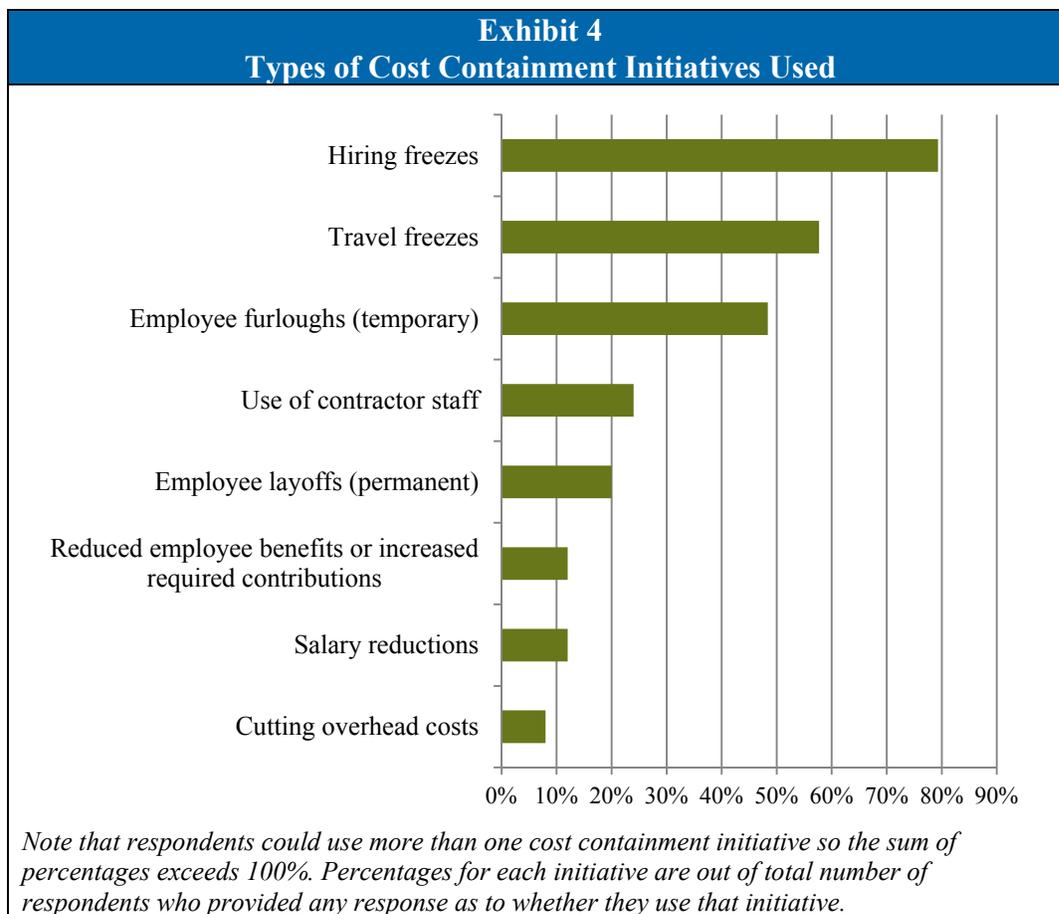
- Are any of the cost containment initiatives frequently used by other state DOT public transportation divisions not being considered by your division?
- After comparing with other state DOT public transportation divisions, will you consider changing your division's cost containment initiatives in the near future? If so, what are some changes you are considering?

2.1 National Sample of State DOT Public Transportation Divisions

In a survey distributed to all 50 states as well as in follow-up interviews with various states, 80 percent (32 of 40) of respondents reported that some type of cost containment initiative was used in the past year within their public transportation division. These states are listed in Exhibit 3.

Exhibit 3 States Reporting Use of Cost Containment Initiatives			
Alabama	Kentucky	Nevada	South Carolina
Colorado	Louisiana	New Hampshire	South Dakota
Connecticut	Maryland	New Mexico	Tennessee
Delaware	Massachusetts	New York	Texas
District of Columbia	Michigan	Ohio	Utah
Hawaii	Minnesota	Oklahoma	Vermont
Idaho	Montana	Oregon	Washington
Illinois	Nebraska	Pennsylvania	Wisconsin

The survey and interviews helped to identify a range of cost containment initiatives being used by state DOT public transportation divisions. Exhibit 4 indicates the percentage of respondents who reported using each of the identified cost containment initiatives. Hiring freezes and travel freezes were the most commonly used initiatives; each was used by more than one-half of the respondents. These initiatives were also frequently used together; 87 percent of those DOTs that reported using travel freezes also reported using hiring freezes.



Respondents were asked to indicate the effects of these cost containment initiatives on agency- and staff-related outcomes. Specifically, respondents were asked about the following agency outcomes:

1. Public transportation division costs
2. Work performance or quality
3. Employee turnover
4. Total project completion time
5. Number of steps, reviews, or quality assurance tasks
6. Retention of institutional (agency) knowledge and capabilities

Staff outcomes included in the survey and interviews were:

1. Employee absenteeism or sick days
2. Team effectiveness
3. Employee satisfaction
4. Employee trust
5. Employee commitment
6. Employee core competencies
7. Leadership capabilities

Respondents also suggested additional outcomes in several instances, such as:

1. Lower baseline of staffing
2. Difficulty in recruiting
3. Increasing annual leave for employees because overtime is not allowed
4. Required changes to the structure of jobs or projects

Both the agency outcomes and staff outcomes are further examined and explained in the next section, which will help you assess these potential outcomes within your division.

Section 3. Assessing

Purpose: This section is designed to help you understand the potential positive and negative impacts associated with cost containment initiatives. Knowledge of potential outcomes is useful when considering which initiatives to implement, when speaking with decision-makers about initiatives that have already been adopted, and when determining how to modify and reduce risks associated with existing initiatives.

How to Use: After reading Sections 1 and 2, you should have a preliminary idea in mind about cost containment initiatives for your division, whether they are currently in use or planned for the near future. You can further evaluate the cost initiatives on your list using information provided in this section. Below are some questions that can help guide your thoughts as you read through this section:

- For the cost containment initiatives your division or agency is currently using or considering using in the near future, what are some potential impacts on agency and staff outcomes as reported by other state DOT public transportation divisions? Are the impacts mostly positive or negative?
- If your division is currently using cost containment initiatives, have you observed any impacts on agency and staff outcomes? How do these compare to the impacts reported by other state DOT public transportation divisions?
- Of all the agency and staff outcomes, which ones are most likely to occur within your division? Will they be impacted positively or negatively by the cost containment initiatives you are considering?
- Based on the information on the potential positive and negative impacts, will you consider changing your division's cost containment initiatives in the near future? If so, what are some changes you are considering? If you do not have control over the initiatives being implemented (such as DOT- or state-wide initiatives), are there changes you would recommend to leadership?
- Is your division currently using or considering using contractors and consultants to perform program administrative functions? If so, complete the worksheet in Subsection 3.3. How do the costs of using state employees versus contractors compare? Will there be any financial gains through the use of contractors?

3.1 Survey and Interview Results

Exhibits 5a and 5b provide a summary of the various cost containment initiatives identified in the state DOT public transportation division survey and interviews, and their reported effects on agency and staff outcomes. These exhibits are designed to provide a starting point for investigating the potential outcomes associated with each cost containment initiative examined as part of this study. Specifically, public transportation divisions should use these exhibits to identify potential negative outcomes and then proactively plan to mitigate their impacts using subsequent sections of this guide. Exhibits 5a and 5b use both color coding and directional arrows to indicate the observed impact of cost containment initiatives on agency and staff outcomes.¹ These two indicators are described in the following section.

1. Color coding is used to provide an indication of the value of the outcome:

Green	Positive impact or no change indicated by more than 60 percent of respondents
Red	Negative impact or no change indicated by more than 60 percent of respondents
Gray	Mixed results, no one outcome is reported at above 60 percent

2. Directional arrows are used to indicate the direction of the outcome:

- ↑ **Higher outcome** reported by 50 percent or more of respondents (e.g., increase in work quality)
- ↓ **Lower outcome** reported by 50 percent or more of respondents (e.g., decrease in work quality)
- **No change** reported by 50 percent or more of respondents (e.g., no change in work quality), or equal numbers of respondents reported higher, lower, and no change

Please note there is an interaction between the study results, the type of outcome, and the type of cost containment initiative. Thus, “higher” is not always better and “no change” is not always good or bad. This is why the color coding overlaid with the directional arrows is used. For example, higher turnover would be coded with (↑) and with the color red since it is a negative outcome. Lower turnover would be coded with (↓) and the color green. In another example, when we look at employee turnover, “no change” would be coded as green since no change in turnover can be assumed to be a positive result when cost containment initiatives are implemented. Conversely, in the case of division costs, “no change” would be coded as red since the inability to reduce division costs can be assumed to be a negative outcome after a containment initiative is implemented.

Appendix D of this digest provides the statistics used to code each cell as well as a legend for all coding combinations in Exhibits 5a and 5b. Please also note that “respondents” include both survey respondents and interview participants.

¹ A color version of this digest is available on the TRB website at: <http://www.trb.org/Main/Blurbs/167762.aspx>.

Exhibit 5a Assess the Potential Positive and Negative Impacts Associated with Cost Containment Initiatives: Agency Outcomes						
Cost Containment Initiative	Division Costs	Work Performance or Quality	Employee Turnover	Total Project Completion Time	Number of Steps, Reviews	Retention of Institutional Knowledge
Use of contractors/consultants	—	—	—	—	—	↓
Employee layoffs	↓	↓	↑	↑	↑	↓
Employee furloughs	↓	↓	—	—	—	—
Employee hiring freezes	↓	↓	—	↑	—	↓
Employee travel freezes	↓	↓	—	—	—	—
Salary reductions	↓	↓	↑	↓	↑	↓
Reduced employee benefits or increased employee contributions to benefits	↓	—	—	—	—	—
Cutting overhead costs	↓	—	↑	—	↑	↓

Exhibit 5b Assess the Potential Positive and Negative Impacts Associated with Cost Containment Initiatives: Staff Outcomes					
Cost Containment Initiative	Employee Absenteeism	Team Effectiveness	Employee Attitudes	Employee Core Comps.	Leadership Capabilities
Use of contractors/consultants	—	—	—	↓	—
Employee layoffs	—	—	↓	↓	↓
Employee furloughs	—	—	↓	—	—
Employee hiring freezes	—	—	—	—	—
Employee travel freezes	—	—	—	—	—
Salary reductions	↑	↓	↓	↓	↓
Reduced employee benefits or increased employee contributions to benefits	—	—	↓	—	—
Cutting overhead costs	—	↑	—	↑	—

3.2 Potential Benefits and Drawbacks Associated with Cost Containment Initiatives

Exhibit 6 lists potential benefits and drawbacks associated with the use of each of the identified cost containment initiatives. This information was derived from the survey and interview results as well as existing literature regarding the use of cost containment initiatives.

Exhibit 6 Potential Benefits, Drawbacks, and Other Considerations Associated with Cost Containment Initiatives			
Cost Containment Initiative	Potential Benefits	Potential Drawbacks	Other Considerations
Use of contractors/consultants	<ul style="list-style-type: none"> • Helps deal with loss of in-house staff and variations in workload • Reduced costs due to overhead and employee benefits • Increased performance • New skills introduced to workforce • Can help promote innovation 	<ul style="list-style-type: none"> • Increased costs due to more administrative steps required to implement and monitor contractors • Employee dissatisfaction • Does not develop skills needed to sustain leadership in the workforce 	<ul style="list-style-type: none"> • May be hard to find contractors with the right knowledge • Work may need to be redesigned for contractors to complete • May need to redesign jobs for remaining employees if skills change is needed
Employee layoffs	<ul style="list-style-type: none"> • Reduced payroll costs • Potential to retain high performing staff • Unnecessary or outdated positions can be eliminated 	<ul style="list-style-type: none"> • Employee dissatisfaction • Increased workload on remaining employees • Decreased quality of work because of lack of qualified employees • Potential retraining of staff to take over new tasks/functions • Employees may have increased feelings of job insecurity • Lower baseline of staffing 	<ul style="list-style-type: none"> • If temporary, may not be able to hire back the same employees if desired • While work effort may increase for some remaining employees, work effort may decrease for other remaining employees
Employee furloughs	<ul style="list-style-type: none"> • Saves jobs in long run • Often times less expensive than severance packages • Employees are still available if demand suddenly increases 	<ul style="list-style-type: none"> • Employee dissatisfaction and lowered morale • Decreased productivity • Increased workload when employees return • Increased turnover • Jobs or projects may need to be restructured to ensure work is completed 	<ul style="list-style-type: none"> • Employees most likely to turn over are the highest performers

Exhibit 6 (Continued)

Exhibit 6			
Potential Benefits, Drawbacks, and Other Considerations Associated with Cost Containment Initiatives			
Cost Containment Initiative	Potential Benefits	Potential Drawbacks	Other Considerations
Employee hiring freezes	<ul style="list-style-type: none"> • Reduced costs due to lower payroll and lessened recruitment activities • Saves existing jobs in agency 	<ul style="list-style-type: none"> • Increased workload on existing employees • Possible employee dissatisfaction and burnout • Key positions may remain unfilled 	<ul style="list-style-type: none"> • Can create a backlog for recruiting and hiring new employees following the freeze • May be a freeze only on new positions, not on filling existing positions
Employee travel freezes	<ul style="list-style-type: none"> • Reduced short-term costs • Helps to balance agency/division, contributing to saved jobs 	<ul style="list-style-type: none"> • Reduced ability to keep up on new trends • Reduced opportunities to share information among other public transportation divisions • Reduced training opportunities for employees • Employee dissatisfaction 	<ul style="list-style-type: none"> • Some jobs may require travel to complete necessary work • Staff may be willing to pay portion of travel costs for conferences, etc. • Some drawbacks could be reduced by implementing video conferencing or using similar technology
Salary reductions	<ul style="list-style-type: none"> • Saves jobs in long run • May allow agency to hire additional staff to reduce workload of existing staff 	<ul style="list-style-type: none"> • Employee dissatisfaction and lowered morale • Lower employee productivity • Increased turnover 	<ul style="list-style-type: none"> • Should examine effects on benefits, pensions, etc. • Need to ensure that top performers are still making more than lesser-performing colleagues, even after the pay cuts
Reduced employee benefits or increased employee contributions to benefits	<ul style="list-style-type: none"> • Reduced labor-related costs • May help to avoid salary reductions • Saves current jobs in long run 	<ul style="list-style-type: none"> • Employee dissatisfaction • Increased turnover 	<ul style="list-style-type: none"> • May increase difficulty of recruiting highly qualified applicants
Cutting overhead costs (e.g., cleaning, paper supplies, utilities)	<ul style="list-style-type: none"> • Reduced division overhead costs • May help to avoid workforce-related cuts 	<ul style="list-style-type: none"> • Changes to division resources may require adjustments in execution of job tasks • Employee dissatisfaction 	<ul style="list-style-type: none"> • Should be routinely examined for cost savings

3.3 Cost Estimation of Use of Contractors/Consultants

Several states have indicated that they use contractors and consultants to perform program administrative functions within their public transportation division as part of their cost containment initiatives. Exhibit 7 can be used specifically when considering the use of contractors and consultants and making comparisons with state employees regarding their full time equivalent (FTE) costs. A number of different factors related to state employee versus contractors/consultants costs should be considered, including what have been identified by others as “hidden costs.” Please complete the following table to examine cost comparisons between utilizing state employees and hiring contractors or consultants.

Exhibit 7 Cost Comparison—Per FTE of State vs. Contractors/Consultants		
Cost Factors	State Employees	Contractors/Consultants
Salary/Contract Fee		
Bonuses		
Benefits		
Pension		
Training		
Facilities (Utilities, Communication System, Rent)		
Supplies		
Hiring/Recruiting		
Contract Administration		
Other _____		
Other _____		
Total Costs		

Section 4. Mitigating

Purpose: It is important to promote positive outcomes and mitigate negative outcomes associated with any cost containment initiatives being considered or that may have already been implemented. In this section, potential methods for mitigating risks related to agency (Exhibit 8)

and staff (Exhibit 9) outcomes associated with the various cost containment initiatives are presented.

How to Use: In Section 3 you identified some areas of concern associated with the cost containment initiatives your division is currently using or considering using in the near future. In this section, you can use Exhibits 8 and 9 below to identify and develop solutions that may help mitigate risk. For each outcome, the methods to mitigate risk are provided with codes (in parentheses) representing the type of cost containment initiative for which they are most applicable. Refer to the coding key below for an explanation of the codes.

- | | |
|---------------------------------|--|
| (C/C) – Contractors/consultants | (Trav) – Travel freeze |
| (Lay) – Employee layoffs | (Sal) – Salary reduction |
| (Fur) – Furlough | (Ben) – Benefits reduction |
| (Hire) – Hiring freeze | (All) – All cost containment initiatives |

4.1 Agency Outcomes

Exhibit 8	
Methods to Mitigate Risk Associated with Negative Agency Outcomes	
Agency Outcomes	Methods to Mitigate Risk Associated with Use of Cost Containment Initiatives
Increased division costs	<ol style="list-style-type: none"> 1. Use multiple means to identify contractors/consultants. (C/C) 2. Benchmark costs with other states/divisions. (C/C) 3. Negotiate lower rates with contractors/consultants. (C/C)
Decreased work performance or quality	<ol style="list-style-type: none"> 1. Review work processes and quality periodically. (Lay, Fur, Hire, Trav, Sal) 2. Examine means to improve efficiency in work processes, thereby mitigating the effects of less worker time on the job (Lay, Fur, Hire) or employee dissatisfaction. (Trav, Sal, Ben) 3. Keep staff informed of reasons for cost containment initiatives and provide information periodically on any effects. (All) 4. Consider allowing employees compensatory time off to improve morale. (Lay, Hire, Sal, Ben) 5. Ensure that employees receive sufficient supervision because of inexperienced or new supervisors. (Lay, Hire)
Higher employee turnover	<ol style="list-style-type: none"> 1. Closely monitor employee satisfaction, trust, and commitment levels. (Fur, Sal, Ben) 2. Keep staff informed of reasons for cost containment initiatives and provide information periodically on any effects. (All) 3. Consider allowing employees compensatory time off to improve morale. (Lay, Hire, Sal, Ben) 4. Conduct exit interviews to identify why employees left. (Fur, Sal, Ben)

Exhibit 8 (Continued)

Exhibit 8	
Methods to Mitigate Risk Associated with Negative Agency Outcomes	
Agency Outcomes	Methods to Mitigate Risk Associated with Use of Cost Containment Initiatives
Increased total project completion time	<ol style="list-style-type: none"> 1. Establish specific deliverables and milestones and conduct regular progress reviews. (All) 2. Review project completion times and reasons for delays. (All) 3. Find workarounds due to reduced employee time on job. (Lay, Fur, Hire) 4. Utilize technology to lessen burden on employees. (Lay, Hire)
Increased number of process steps, reviews, or quality assurance tasks	<ol style="list-style-type: none"> 1. Establish specific deliverables and milestones and conduct regular progress reviews. (All) 2. Examine means to improve efficiency in work processes, thereby mitigating the effects of less worker time on the job. (Lay, Fur, Hire) 3. Utilize technology to lessen burden on employees. (Lay, Hire)
Decreased retention of institutional knowledge and capabilities	<ol style="list-style-type: none"> 1. Improve knowledge management systems and employee training programs. (C/C, Lay, Hire, Fur) 2. Encourage self-development. (All)

4.2 Staff Outcomes

Exhibit 9	
Methods to Mitigate Risk Associated with Negative Staff Outcomes	
Staff Outcomes	Methods to Mitigate Risk Associated with Use of Cost Containment Initiatives
Increased employee absenteeism or sick days taken	<ol style="list-style-type: none"> 1. Closely monitor employee satisfaction, trust, and commitment levels. (All) 2. Keep staff informed of reasons for cost containment initiatives and provide information periodically on any effects. (All) 3. Consider allowing employees compensatory time off to improve morale. (Lay, Hire, Sal, Ben) 4. Consider allowing flexible work arrangements (e.g., flexible scheduling, telework) to provide employees with schedules that meet personal needs. (C/C, Lay, Fur, Hire)
Decreased team effectiveness	<ol style="list-style-type: none"> 1. Review work processes and quality periodically from team perspective and seek ideas to improve effectiveness. (All) 2. Examine means to improve efficiency in work processes, thereby mitigating the effects of less worker time on the job (Fur, Hire) or employee dissatisfaction. (Trav, Sal, Ben)

Exhibit 9 (Continued)

Exhibit 9	
Methods to Mitigate Risk Associated with Negative Staff Outcomes	
Staff Outcomes	Methods to Mitigate Risk Associated with Use of Cost Containment Initiatives
Decreased employee satisfaction, trust, and commitment	<ol style="list-style-type: none"> 1. Closely monitor employee satisfaction, trust, and commitment levels. (Fur, Sal, Ben) 2. Keep staff informed of reasons for cost containment initiatives and provide information periodically on any effects. (All) 3. Consider allowing employees compensatory time off to improve morale. (Lay, Hire, Sal, Ben) 4. Conduct exit interviews to identify why employees left. (Fur, Sal, Ben) 5. Consider allowing flexible work arrangements (e.g., flexible scheduling, telework) to help improve employee attitudes. (All)
Decreased employee core competencies	<ol style="list-style-type: none"> 1. Improve knowledge management systems and employee training programs. (C/C, Lay, Hire, Fur) 2. Monitor competency levels, determine gaps, and identify training or other solutions to close gaps. (Lay, Hire, Sal)
Decreased leadership capabilities	<ol style="list-style-type: none"> 1. Monitor competency levels, determine gaps, and identify training or other solutions to close gaps. (Lay, Hire, Sal) 2. Encourage self-development. (All) 3. Identify leadership assignments that may help to increase leadership capabilities during times of restricted funding or staffing (e.g., developmental/stretch assignments, engaging with other divisions, chairing committees). (C/C, Lay, Hire)

In conclusion, this guide was designed to assist state DOT public transportation divisions in examining cost containment initiatives and their potential effects on agency and staff outcomes as well as identifying strategies to mitigate risks associated with these cost containment initiatives. For further information, please consult the digest published in conjunction with this guide, which can also be accessed on the TRB website at <http://www.trb.org/Main/Blurbs/167762.aspx>.

APPENDIX A.
Online Survey of State DOT Public Transportation Divisions

Appendix A

Appendix A provides the web-based survey that was administered to state DOT public transportation divisions. It is provided here to display the skip logic that was included in the survey as well as to display all response options available to the survey respondents

NCHRP 20-65, Task 38: State DOT Public Transportation Program Cost Reduction Initiatives

Welcome to the NCHRP 20-65, Task 38 Survey.

We are seeking information from State DOTs on their use of cost containment initiatives for public transportation programs in **FY2010**, focusing on **administrative and managerial functions** as opposed to transit service operation functions.

Administrative and managerial functions include program strategy, implementation, and oversight; for example, making workforce decisions. Before responding, please identify and gather any information related to cost containment initiative data, including any measurable outcomes that your agency may have. This information may be maintained by your department's human resource office. If you are not the correct person to respond to this survey, please forward this link to the proper person or kindly provide us with appropriate contact information. We thank you in advance for your participation. This survey should take approximately 30 minutes or less to complete. For your participation, your agency will receive an advanced copy of the report on cost containment initiatives used by State agencies and their effects.

All survey responses must be received by **August 31, 2011**.

This survey is being conducted by ICF International as part of the National Cooperative Highway Research Program (Project 20-65, Task 38). If you have any questions regarding the survey, please contact Stephanie Trainor at 703.225.2865 or strainor@icfi.com.

I. Background

Please select your state: [pull down list of all states]

What division or department of your agency do you work for? (choose all that apply)

- Public Transportation/Transit
- Human Resources
- Executive
- Planning
- Operations
- Other (please specify) _____

Is your State a direct operator of public transportation?

- Yes
- No

Which of the following activities does your public transportation division engage in? (choose all that apply):

- Grant management
- Planning
- Technical assistance
- Regional mobility
- Data collection and reporting

- Human service transportation
- Policy leadership
- Performance measurement
- Service coordination
- Operations (if your division operates a public transportation system)
- Transit operations contract management
- Other contract management
- Other (please specify) _____

II. Public Transportation Program Cost Containment Initiatives

Due to the economic recession, many states have experienced a reduction in annual revenue collected from taxes and fees. To enable states to balance their annual budgets, some states have had to implement 'cost containment' actions to reduce their annual operating expenditures.

The objective of this project is to better understand the potential future impacts of the 'cost containment' actions listed below on the **administration and management** of State public transportation programs. Please respond to each related question as candidly as possible.

Has your State public transportation division used any of following cost containment initiatives?

- Employee layoffs (permanent)
 - Employee furloughs (temporary)
 - Hiring freezes
 - Travel freezes
 - Use of contractor staff
 - Salary reductions
- Yes** [go to [page A.1](#)]
- No, but we have used other cost containment initiatives** [go to page G.2]
- No** [go to [IF NO questions](#)]

[Note: The online survey automatically took participants to the proper page.]

Appendix A

Cost containment initiative – Employee layoffs (permanent)

Page A.1:

Has your State public transportation division used permanent employee layoffs as a cost containment initiative?

- Yes (go to page A.2)
- No (go to [page B.1](#))

Page A.2:

1. How long has your division been using permanent employee layoffs as a cost containment initiative? [Select from drop down box:]
Less than 6 months / 6 months / 1 year / 1.5 years / 2 years / 3 years / More than 3 years
2. AGENCY OUTCOMES
 - A. For each of the following potential AGENCY outcomes, please indicate the actual or perceived effect of permanent employee layoffs. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Public transportation division costs	Higher / Lower / Same / Not Applicable
Work performance or quality	Higher / Lower / Same / Not Applicable
Employee turnover	Higher / Lower / Same / Not Applicable
Total project completion time	Higher / Lower / Same / Not Applicable
Number of process steps, reviews or quality assurance tasks	Higher / Lower / Same / Not Applicable
Retention of institutional knowledge and capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

- B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate an increase of 25% in employee performance, work backlog indicates backlog decrease of 15%).

	[Blanks to fill in with data]
Public transportation division costs	
Work performance or quality	
Employee turnover	
Total project completion time	
Number of process steps, reviews or quality assurance tasks	
Retention of institutional knowledge and capabilities	
Other (please specify) _____	

3. STAFF OUTCOMES

A. For each of the following potential STAFF outcomes, please indicate the actual or perceived effect of permanent employee layoffs. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Employee absenteeism or sick days	Higher / Lower / Same / Not Applicable
Team effectiveness	Higher / Lower / Same / Not Applicable
Employee satisfaction	Higher / Lower / Same / Not Applicable
Employee trust	Higher / Lower / Same / Not Applicable
Employee commitment	Higher / Lower / Same / Not Applicable
Employee core competencies	Higher / Lower / Same / Not Applicable
Leadership capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. The 'other' box can be used to report effects of an outcome not specifically mentioned. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate increase of 25%, work backlog indicates backlog decrease of 15%).

	[Blanks to fill in with data]
Employee absenteeism or sick days	
Team effectiveness	
Employee satisfaction	
Employee trust	
Employee commitment	
Employee core competencies	
Leadership capabilities	
Other (please specify) _____	

[Continue to Page B.1]

Appendix A

Cost containment initiative – Employee furloughs (temporary)

Page B.1:

Has your State public transportation division used temporary employee furloughs as a cost containment initiative?

- Yes (go to page B.2)
- No (go to [page C.1](#))

Page B.2:

1. How long has your division been using temporary employee furloughs as a cost containment initiative?
[Select from drop down box:]
Less than 6 months / 6 months / 1 year / 1.5 years / 2 years / 3 years / More than 3 years
2. AGENCY OUTCOMES
 - A. For each of the following potential AGENCY outcomes, please indicate the actual or perceived effect of temporary employee furloughs. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Public transportation division costs	Higher / Lower / Same / Not Applicable
Work performance or quality	Higher / Lower / Same / Not Applicable
Employee turnover	Higher / Lower / Same / Not Applicable
Total project completion time	Higher / Lower / Same / Not Applicable
Number of process steps, reviews or quality assurance tasks	Higher / Lower / Same / Not Applicable
Retention of institutional knowledge and capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

- B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate an increase of 25% in employee performance, work backlog indicates backlog decrease of 15%).

[Blanks to fill in with data]

Public transportation division costs	
Work performance or quality	
Employee turnover	
Total project completion time	
Number of process steps, reviews or quality assurance tasks	
Retention of institutional knowledge and capabilities	
Other (please specify) _____	

3. STAFF OUTCOMES

A. For each of the following potential STAFF outcomes, please indicate the actual or perceived effect of temporary employee furloughs. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Employee absenteeism or sick days	Higher / Lower / Same / Not Applicable
Team effectiveness	Higher / Lower / Same / Not Applicable
Employee satisfaction	Higher / Lower / Same / Not Applicable
Employee trust	Higher / Lower / Same / Not Applicable
Employee commitment	Higher / Lower / Same / Not Applicable
Employee core competencies	Higher / Lower / Same / Not Applicable
Leadership capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. The 'other' box can be used to report effects of an outcome not specifically mentioned. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate increase of 25%, work backlog indicates backlog decrease of 15%).

	[Blanks to fill in with data]
Employee absenteeism or sick days	
Team effectiveness	
Employee satisfaction	
Employee trust	
Employee commitment	
Employee core competencies	
Leadership capabilities	
Other (please specify) _____	

[Continue to Page C.1]

Appendix A

Cost containment initiative – Hiring freezes

Page C.1:

Has your State public transportation division used hiring freezes as a cost containment initiative?

- Yes (go to page C.2)
- No (go to [page D.1](#))

Page C.2:

1. How long has your division been using hiring freezes as a cost containment initiative?
[Select from drop down box:]
Less than 6 months / 6 months / 1 year / 1.5 years / 2 years / 3 years / More than 3 years
2. AGENCY OUTCOMES
 - A. For each of the following potential AGENCY outcomes, please indicate the actual or perceived effect of hiring freezes. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Public transportation division costs	Higher / Lower / Same / Not Applicable
Work performance or quality	Higher / Lower / Same / Not Applicable
Employee turnover	Higher / Lower / Same / Not Applicable
Total project completion time	Higher / Lower / Same / Not Applicable
Number of process steps, reviews or quality assurance tasks	Higher / Lower / Same / Not Applicable
Retention of institutional knowledge and capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

- B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate an increase of 25% in employee performance, work backlog indicates backlog decrease of 15%).

[Blanks to fill in with data]

Public transportation division costs	
Work performance or quality	
Employee turnover	
Total project completion time	
Number of process steps, reviews or quality assurance tasks	
Retention of institutional knowledge and capabilities	
Other (please specify) _____	

3. STAFF OUTCOMES

A. For each of the following potential STAFF outcomes, please indicate the actual or perceived effect of hiring freezes. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Employee absenteeism or sick days	Higher / Lower / Same / Not Applicable
Team effectiveness	Higher / Lower / Same / Not Applicable
Employee satisfaction	Higher / Lower / Same / Not Applicable
Employee trust	Higher / Lower / Same / Not Applicable
Employee commitment	Higher / Lower / Same / Not Applicable
Employee core competencies	Higher / Lower / Same / Not Applicable
Leadership capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. The 'other' box can be used to report effects of an outcome not specifically mentioned. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate increase of 25%, work backlog indicates backlog decrease of 15%).

	[Blanks to fill in with data]
Employee absenteeism or sick days	
Team effectiveness	
Employee satisfaction	
Employee trust	
Employee commitment	
Employee core competencies	
Leadership capabilities	
Other (please specify) _____	

[Continue to Page D.1]

Appendix A

Cost containment initiative – Travel freezes

Page D.1:

Has your State public transportation division used travel freezes as a cost containment initiative?

- Yes (go to page D.2)
- No (go to page E.1)

Page D.2:

1. How long has your division been using travel freezes as a cost containment initiative?
 [Select from drop down box:]
 Less than 6 months / 6 months / 1 year / 1.5 years / 2 years / 3 years / More than 3 years

2. AGENCY OUTCOMES

A. For each of the following potential AGENCY outcomes, please indicate the actual or perceived effect of travel freezes. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Public transportation division costs	Higher / Lower / Same / Not Applicable
Work performance or quality	Higher / Lower / Same / Not Applicable
Employee turnover	Higher / Lower / Same / Not Applicable
Total project completion time	Higher / Lower / Same / Not Applicable
Number of process steps, reviews or quality assurance tasks	Higher / Lower / Same / Not Applicable
Retention of institutional knowledge and capabilities	Higher / Lower / Same / Not Applicable
Other (please specify) _____	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate an increase of 25% in employee performance, work backlog indicates backlog decrease of 15%).

[Blanks to fill in with data]

Public transportation division costs	
Work performance or quality	
Employee turnover	
Total project completion time	
Number of process steps, reviews or quality assurance tasks	
Retention of institutional knowledge and capabilities	
Other (please specify) _____	

3. STAFF OUTCOMES

A. For each of the following potential STAFF outcomes, please indicate the actual or perceived effect of travel freezes. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Employee absenteeism or sick days	Higher / Lower / Same / Not Applicable
Team effectiveness	Higher / Lower / Same / Not Applicable
Employee satisfaction	Higher / Lower / Same / Not Applicable
Employee trust	Higher / Lower / Same / Not Applicable
Employee commitment	Higher / Lower / Same / Not Applicable
Employee core competencies	Higher / Lower / Same / Not Applicable
Leadership capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. The 'other' box can be used to report effects of an outcome not specifically mentioned. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate increase of 25%, work backlog indicates backlog decrease of 15%).

	[Blanks to fill in with data]
Employee absenteeism or sick days	
Team effectiveness	
Employee satisfaction	
Employee trust	
Employee commitment	
Employee core competencies	
Leadership capabilities	
Other (please specify) _____	

[Continue to Page E.1]

Appendix A

Cost containment initiative – Use of contractor staff

Page E.1:

Has your State public transportation division used contractor staff as a cost containment initiative?

- Yes (go to page E.2)
- No (go to page F.1)

Page E.2:

1. How long has your division been using contractor staff as a cost containment initiative?
[Select from drop down box:]
Less than 6 months / 6 months / 1 year / 1.5 years / 2 years / 3 years / More than 3 years
2. AGENCY OUTCOMES
 - A. For each of the following potential AGENCY outcomes, please indicate the actual or perceived effect of contractor staff. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Public transportation division costs	Higher / Lower / Same / Not Applicable
Work performance or quality	Higher / Lower / Same / Not Applicable
Employee turnover	Higher / Lower / Same / Not Applicable
Total project completion time	Higher / Lower / Same / Not Applicable
Number of process steps, reviews or quality assurance tasks	Higher / Lower / Same / Not Applicable
Retention of institutional knowledge and capabilities	Higher / Lower / Same / Not Applicable
Other (please specify) _____	Higher / Lower / Same / Not Applicable

- B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate an increase of 25% in employee performance, work backlog indicates backlog decrease of 15%).

[Blanks to fill in with data]

Public transportation division costs	
Work performance or quality	
Employee turnover	
Total project completion time	
Number of process steps, reviews or quality assurance tasks	
Retention of institutional knowledge and capabilities	
Other (please specify) _____	

3. STAFF OUTCOMES

A. For each of the following potential STAFF outcomes, please indicate the actual or perceived effect of contractor staff. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Employee absenteeism or sick days	Higher / Lower / Same / Not Applicable
Team effectiveness	Higher / Lower / Same / Not Applicable
Employee satisfaction	Higher / Lower / Same / Not Applicable
Employee trust	Higher / Lower / Same / Not Applicable
Employee commitment	Higher / Lower / Same / Not Applicable
Employee core competencies	Higher / Lower / Same / Not Applicable
Leadership capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. The 'other' box can be used to report effects of an outcome not specifically mentioned. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate increase of 25%, work backlog indicates backlog decrease of 15%).

	[Blanks to fill in with data]
Employee absenteeism or sick days	
Team effectiveness	
Employee satisfaction	
Employee trust	
Employee commitment	
Employee core competencies	
Leadership capabilities	
Other (please specify) _____	

[Continue to Page F.1]

Appendix A

Cost containment initiative – Salary reductions

Page F.1:

Has your State public transportation division used salary reductions as a cost containment initiative?

- Yes (go to page F.2)
- No (go to page G.1)

Page F.2:

1. How long has your division been using salary reductions as a cost containment initiative?
[Select from drop down box:]
Less than 6 months / 6 months / 1 year / 1.5 years / 2 years / 3 years / More than 3 years
2. AGENCY OUTCOMES
 - A. For each of the following potential AGENCY outcomes, please indicate the actual or perceived effect of salary reductions. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Public transportation division costs	Higher / Lower / Same / Not Applicable
Work performance or quality	Higher / Lower / Same / Not Applicable
Employee turnover	Higher / Lower / Same / Not Applicable
Total project completion time	Higher / Lower / Same / Not Applicable
Number of process steps, reviews or quality assurance tasks	Higher / Lower / Same / Not Applicable
Retention of institutional knowledge and capabilities	Higher / Lower / Same / Not Applicable
Other (please specify) _____	Higher / Lower / Same / Not Applicable

- B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate an increase of 25% in employee performance, work backlog indicates backlog decrease of 15%).

[Blanks to fill in with data]

Public transportation division costs	
Work performance or quality	
Employee turnover	
Total project completion time	
Number of process steps, reviews or quality assurance tasks	
Retention of institutional knowledge and capabilities	
Other (please specify) _____	

3. STAFF OUTCOMES

A. For each of the following potential STAFF outcomes, please indicate the actual or perceived effect of contractor staff. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Employee absenteeism or sick days	Higher / Lower / Same / Not Applicable
Team effectiveness	Higher / Lower / Same / Not Applicable
Employee satisfaction	Higher / Lower / Same / Not Applicable
Employee trust	Higher / Lower / Same / Not Applicable
Employee commitment	Higher / Lower / Same / Not Applicable
Employee core competencies	Higher / Lower / Same / Not Applicable
Leadership capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. The 'other' box can be used to report effects of an outcome not specifically mentioned. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate increase of 25%, work backlog indicates backlog decrease of 15%).

	[Blanks to fill in with data]
Employee absenteeism or sick days	
Team effectiveness	
Employee satisfaction	
Employee trust	
Employee commitment	
Employee core competencies	
Leadership capabilities	
Other (please specify) _____	

[Continue to Page G.1]

Appendix A

Cost containment initiative – Other

Page G.1:

Has your State public transportation division used other cost containment initiatives not included in prior questions (employee layoffs, employee furloughs, hiring freezes, travel freezes, use of contractor staff, or salary reductions)?

- Yes (go to page G.2)
- No (go to [Part III](#))

Page G.2:

1. Please describe the other activities employed by your division to contain costs.

--	--

2. How long has your division been using this cost containment initiative?

[Select from drop down box:]

Less than 6 months / 6 months / 1 year / 1.5 years / 2 years / 3 years / More than 3 years

3. AGENCY OUTCOMES

A. For each of the following potential AGENCY outcomes, please indicate the actual or perceived effect of salary reductions. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Public transportation division costs	Higher / Lower / Same / Not Applicable
Work performance or quality	Higher / Lower / Same / Not Applicable
Employee turnover	Higher / Lower / Same / Not Applicable
Total project completion time	Higher / Lower / Same / Not Applicable
Number of process steps, reviews or quality assurance tasks	Higher / Lower / Same / Not Applicable
Retention of institutional knowledge and capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate an increase of 25% in employee performance, work backlog indicates backlog decrease of 15%).

[Blanks to fill in with data]

Public transportation division costs

Work performance or quality

--	--

Employee turnover	
Total project completion time	
Number of process steps, reviews or quality assurance tasks	
Retention of institutional knowledge and capabilities	
Other (please specify) _____	

4. STAFF OUTCOMES

A. For each of the following potential STAFF outcomes, please indicate the actual or perceived effect of contractor staff. [Drop down box next to each outcome]

	Cost Containment Measure Effect on Outcome
Employee absenteeism or sick days	Higher / Lower / Same / Not Applicable
Team effectiveness	Higher / Lower / Same / Not Applicable
Employee satisfaction	Higher / Lower / Same / Not Applicable
Employee trust	Higher / Lower / Same / Not Applicable
Employee commitment	Higher / Lower / Same / Not Applicable
Employee core competencies	Higher / Lower / Same / Not Applicable
Leadership capabilities	Higher / Lower / Same / Not Applicable
Other (please specify)	Higher / Lower / Same / Not Applicable

B. For each of the selected outcomes, provide a written description of other effects and quantification of the effect. The 'other' box can be used to report effects of an outcome not specifically mentioned. In describing any effects, please indicate the source of the data related to quantifying the outcome (e.g., survey, HR data, budget data, employee estimate, etc.).

(Example responses: budget data indicates overall costs have decreased by \$25,000, survey results indicate satisfaction has increased by 10%, performance measurements indicate increase of 25%, work backload indicates backload decrease of 15%).

	[Blanks to fill in with data]
Employee absenteeism or sick days	
Team effectiveness	
Employee satisfaction	
Employee trust	
Employee commitment	
Employee core competencies	
Leadership capabilities	
Other (please specify) _____	

[Continue to [Part III](#)]

Appendix A

IF NO to Question 9:

Is your agency using cost containment initiatives in other divisions?

- Yes
- No
- No, but we are currently considering initiatives in other divisions.

Please describe the activities employed by other divisions to contain costs.

What factors, if any, have prevented your agency from using cost containment initiatives? (Please select all that apply.)

- None
- Division Policies
- State Policies
- Other (please provide a short description) _____

Please elaborate on or describe these factors.

[Continue to Part III]

III. Public Transportation Programs and Staffing

Please provide the following information so we may better understand your State public transportation programs.

1. Total FY2010 public transportation division operating budget (i.e. all funding sources). (in \$)

2. Of your total FY2010 budget, what portion is dedicated to public transportation administration and managerial* activities? (as %) _____
3. Please indicate the approximate percentage of the administrative and managerial functions* that are performed by contractors. (as %) _____
4. Please provide the following information regarding your 2010 State DOT public transportation administrative and managerial* workforce (2010): (Use a consistent methodology or enter N/A if the information is not available or not applicable)
 - a. Number of full time equivalent (FTE) State public transportation administrative and managerial employees _____
 - b. Estimated payroll of full-time State public transportation administrative and managerial employees (in \$) _____
 - c. Total payroll and overhead cost of full-time State public transportation administrative and managerial employees (including retirement benefits, insurance, other benefits, and facilities costs such as IT resources, office locations, parking privileges, and supplies) (in \$) _____
 - d. Number of part-time State public transportation administrative and managerial employees as FTE (e.g., if you have 4 staff working quarter time, this equals 1 FTE) (if applicable) _____
 - e. Payroll of part-time State public transportation administrative and managerial employees (if applicable) (in \$) _____
 - f. Total payroll and overhead cost of part-time State public transportation division employees (including retirement benefits, insurance, other benefits, and facilities costs such as IT resources, office locations, parking privileges, and supplies) (in \$) _____
 - g. Number of contractor, full time equivalent (FTE) administrative and managerial employees (if applicable) _____
 - h. Contract payroll or contract amount for contractor administrative and managerial employees (if applicable) (in \$) _____
 - i. For your contractor staff, do you provide any facilities and materials, (e.g. IT resources, office locations, parking privileges, supplies)? If yes, what is the total cost of these provided facilities and materials? (in \$) _____

*Administrative and managerial responsibilities focus on the direction and strategy of the transportation system, as opposed to transit service operations which focus on the day-to-day function of the system.

Appendix A

IV. Follow-Up Information

If we have questions about your survey responses we would like to be able to follow up with you. Please provide your contact information below (name, email address, and phone number).

If we have questions about your survey responses we would like to be able to follow up with you. Please provide your contact information below (name, email address, and phone number).

If you have any comments to share with the research team regarding this survey or research for this project, please include them in the box below.

[Closing Page]

Thank you for your participation in our survey. We greatly appreciate the information that you have provided. Your responses will help to understand the usage of cost containment initiatives in State DOTs as well as the effects of these initiatives.

APPENDIX B.
Full Text of Recruitment Emails*

*Appendix B as submitted by the research agency is not published herein.

APPENDIX C.
Cost Containment Interview Guide

Appendix C

Appendix C provides the phone-based interview that was administered to state DOT public transportation division representatives. Interview facilitators used this protocol to guide the participants through the interview.

NCHRP 20-65, TASK 38 INTERVIEWER PROTOCOL

Introduction (3 Mins)

1. Thank you for your participation today.
2. The goal of the interview is to provide AASHTO Standing Committee on Public Transportation and State DOTs with information pertaining to the use, outcomes and effectiveness of cost reduction initiatives such as the use of contractors, employee layoffs, furloughs, hiring and travel freezes. This will assist State DOTs in better understanding the utility of various cost reduction initiatives and lessons learned throughout the US.
3. While many responses will be anonymous and reported at the aggregated level, we may also wish to cite specifics from particularly states. Are you willing to provide permission for us to share information from the survey and interview to be associated with your state? If not, are you willing to indicate which information may be acceptable to have identified with your state?
4. We would like to record this interview to ensure the accuracy of the data collected. Is that okay with you?

Background information (5 Mins)

Let's begin with some background information on your agency.

1. State (interviewer should just fill this in): _____
2. Are you a direct operator of public transportation (Select for those states that are, if included in sample): Yes No
3. Describe the administrative location of your division within DOT? (Note: don't get into too much detail here)
4. Is your division geographically centralized or decentralized? (Note: if Texas, don't ask until getting into cost containment activities)
5. What modes of transportation does your State DOT administer?
6. Are you dealing with modes other than public transportation?

Cost Containment Activities – (10 Mins) (All states):

7. Let's start with the use of any cost containment activities. On the survey, you indicated: (identify which cost containment activities were indicated from survey results).
 - a. Is this still accurate? Are any not indicated being used?
 - b. Are there any hybrid techniques such as hiring chills (reductions in normal hiring levels) or other cost containment activities not listed here in use?
 - c. When did your agency decide to use cost containment activities?
 - d. Who made/makes the decisions regarding using or not using cost containment activities?
 - e. Do you know the rationale behind the decisions? What led to the decision to use certain cost containment activities over others?

Branch 1 – States using Contractors/Consultants - (15 Mins) (Utah, Alabama, Idaho, plus any that opt in above):

8. *Let's start with the use of contractors/consultants as a cost containment activity.*
 - a. *Can you tell me a little more about what functions contractors/consultants perform?*
 - b. *Can you describe the structure of the contract and contractor (e.g., IDIQ, fixed fee, tasks, size, contractor organization)?*
 - c. *Who manages the contract?*
 - d. *When did your agency decide to use contractors/consultants to perform agency functions?*
 - e. *Who made/makes the decisions regarding using or not using contractors/consultants?*
 - f. *Do you know the rationale behind the decisions? What led to the decision to use contractors/consultants? (e.g., hiring freezes, furloughs?)*
 - g. *Please describe in detail the results of using contractors and consultants in comparison with state employees with respect to the following (Interviewer will have survey results for each state to identify probes for that specific state):*
 - i. Costs
 - ii. Qualifications
 - iii. Work performance and/or quality
 - iv. Project completion time
 - v. Project tasks and approach to completing the work
 - vi. Any other aspects of difference or similarity between contractors/consultants and state employees?
 - h. *What have been the results of using contractors/consultants to fulfill agency functions and services with respect to any of the following:*
 - i. State employee perceptions and attitudes
 - ii. State employee turnover
 - iii. State employee competence
 - iv. State employee commitment
 - v. State employee trust
 - vi. Retention of institutional knowledge and capabilities
 - vii. Team (state and contractor/consultant) effectiveness
 - viii. Contractor/consultant turnover
 - ix. Leadership capabilities
 - x. Any other state employee, contractor/consultant, or service related effects.
 - i. *What have been some of the challenges in determining the costs and values associated with the use of contractors/consultants?*
 - *Does your division attempt to track costs and values? If not, does another division attempt to track costs and values?*
 - j. *What are the long term implications of using contractors/consultants?*
 - *Does your division intend to continue using contractors/consultants?*
 - k. *Is there any other information related to the use of contractors/consultants you would like to provide?*
 - l. *If you have used contractors/consultants, for what activities have you used them?*
 - *Do you use contractors/consultants because of the inability to hire new employees?*
 - *Has your use of contractors/consultants increased as a means to reduce costs or complete work that was previously conducted by agency personnel?*

**Branch 2 - Cost Containment Activities – Contractors/Consultants (10 Mins)
(All others not using Contractors/Consultants):**

Appendix C

9. *Let's start with the use of contractors/consultants as a cost containment activity*
 - a. *Has your division considered using contractors/consultants as a cost reduction method?*
 - b. *If so, why did you decide against it?*
 - a. *Were there perceived advantages?*
 - b. *Were there perceived disadvantages?*
 - c. *What information did you rely on to make this decision?*
 - c. *If not, is this something your division is likely to consider in the next 5 years?*
 - a. *What information will you rely on to make this decision?*
 - b. *Who will make the decision and how will it be made?*

All Respondents:

For all remaining Cost Containment Activities – Permanent employee layoffs, Temporary employee layoffs, Employee hiring freezes, Furloughs, Salary reductions (pensions?), Other measures (15 mins)

Interviewer will have to weigh the time remaining in the interview with the number of cost containment activities indicated by the survey, and the types of answers for the outcomes/measurement of outcomes of the activities to determine how many additional activities can be discussed in the time remaining.

10. *Let's talk about some of the other cost containment activities. On the survey, it was indicated by your state:*

Examine survey results and start with the first activity, other than contractors/consultants.

- a. *Could you describe the cost containment activity in more detail? (Length, percentage cut or layoff, etc.)*
- b. *Who made/makes the decisions regarding using or not using this cost containment activities?*
- c. *Do you know the rationale behind the decisions? What led to the decision to use one activity over another? (e.g., hiring freezes, furloughs?)*
- d. *Please describe in detail the results of using these activities with respect to the following (Interviewer will have survey results for each state to identify probes for that specific state):*
 - i. *Costs*
 - ii. *Qualifications*
 - iii. *Work performance and/or quality*
 - iv. *Project completion time*
 - v. *Project tasks and approach to completing the work*
 - vi. *Any other aspects of difference or similarity between contractors/consultants and state employees?*
- e. *What have been the results of using these activities with respect to any of the following:*
 - i. *State employee perceptions and attitudes*
 - ii. *State employee turnover*
 - iii. *State employee competence*
 - iv. *State employee commitment*
 - v. *State employee trust*
 - vi. *Retention of institutional knowledge and capabilities*
 - vii. *Team (state and contractor/consultant) effectiveness*
 - viii. *Contractor/consultant turnover*
 - ix. *Leadership capabilities*
 - x. *Any other state employee, contractor/consultant, or service related effects.*

- f. *What have been some of the challenges in determining the costs and values associated with the use of these activities?*
 - *Does your division attempt to track costs and values? If not, does another division attempt to track costs and values?*
- g. *What are the long term implications of using these activities?*
 - *Does your division intend to continue using these activities to contain costs?*
- h. *Are there **other cost containment activities** in use that have significantly affected the ability of the DOT to perform their critical functions?*

Summary Question

- 11. *What would you see as a helpful or beneficial outcome of this research?*
 - a. *Is there a type of product that would be useful to you with regards to cost containment activities?*

That concludes our key questions. Thank you for your time today!

Do you have anything else you would like to share regarding the topics we covered?

We are scheduled to complete this project by April 2012. Soon after, NCHRP will publish our report and results of the study. In the meantime, if you have any questions, feel free to contact me at

_____.

APPENDIX D.
Survey and Interview Responses for Cost Containment Initiatives

Appendix D

Appendix D provides the reported outcomes for each of the cost containment initiatives from the web-based survey and the interviews. Tables D-1 through D-8 provide response frequencies for each staff and agency outcome by cost containment initiative. Table D-9 provides the coding legend for Exhibit 8 and Exhibit 9 of the digest.

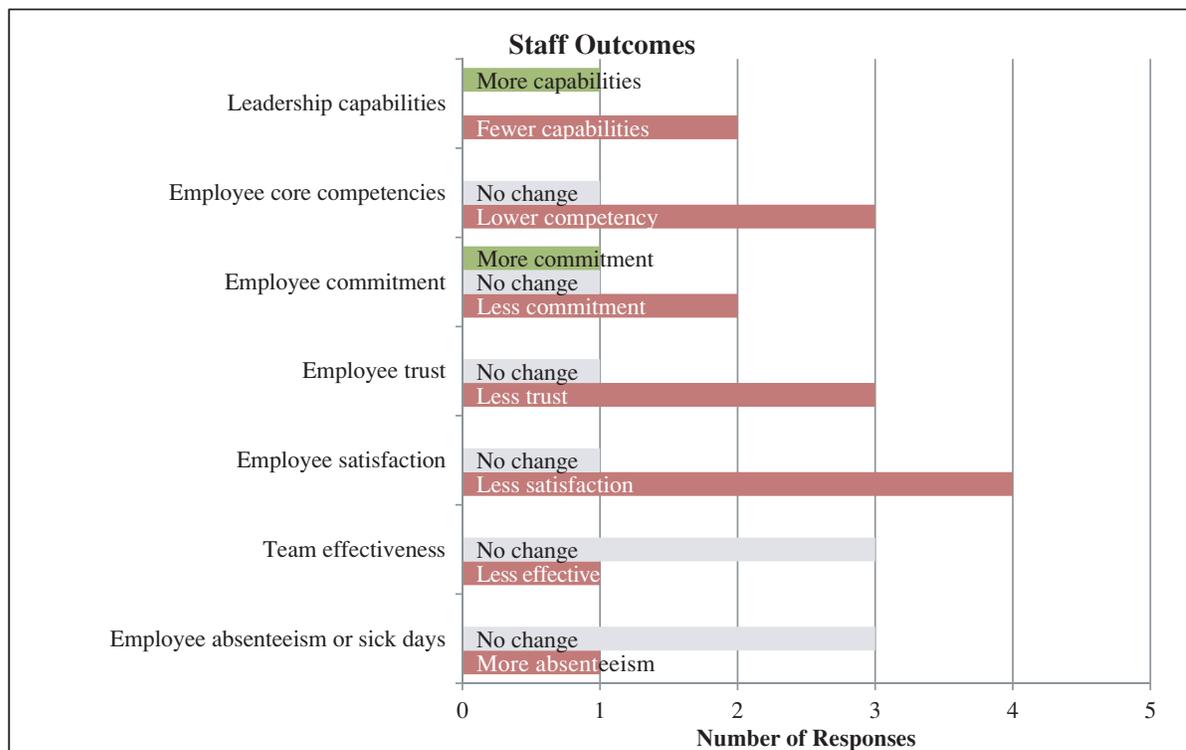
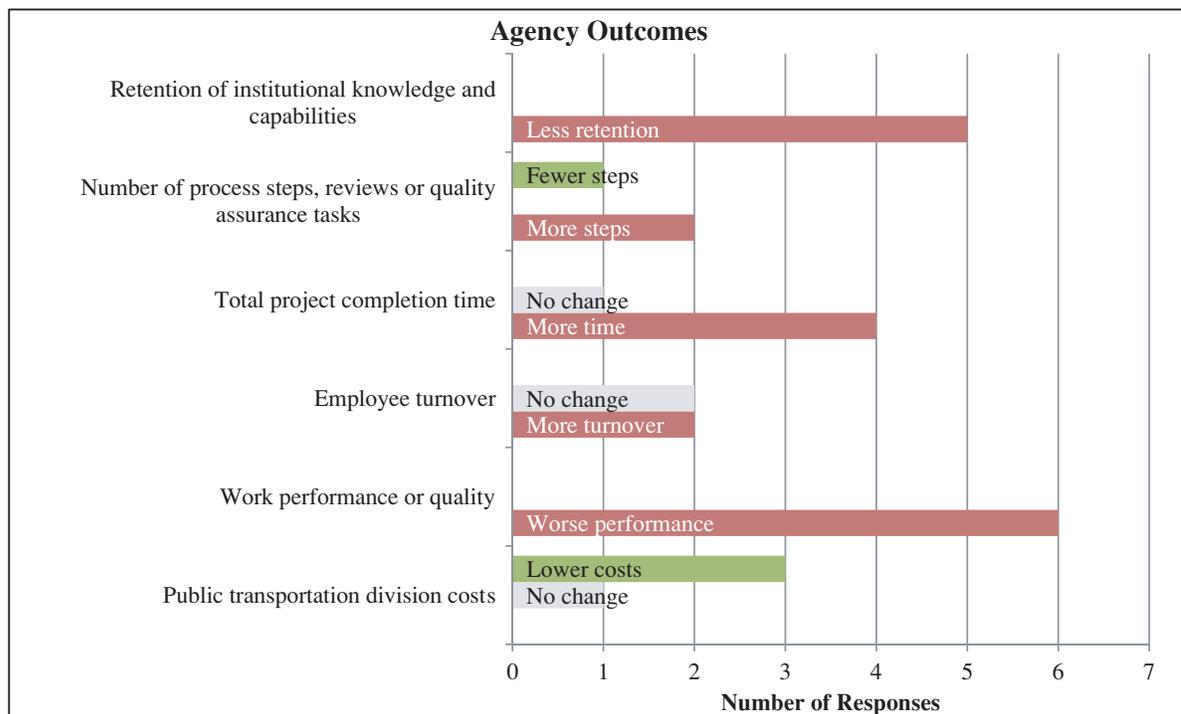
Several of the initiatives have extremely small sample sizes (as few as two responses) and caution should be exercised when drawing conclusions for those initiatives, particularly when interpreting the charts. We recommend focusing on the tables in those cases. However, the reader can draw general trends with more confidence for initiatives with larger sample sizes (e.g., travel freezes with 12 to 15 responses per outcome).

In this appendix, color coding is used to provide an indication of the value of the outcome:

Green	Positive impact
Red	Negative impact
Gray	No change

Note: A color version of this digest is available on the TRB website at: <http://www.trb.org/Main/Blurbs/167762.aspx>.

Table D-1: Permanent employee layoffs.



Appendix D

Table D-2: Temporary employee furloughs.

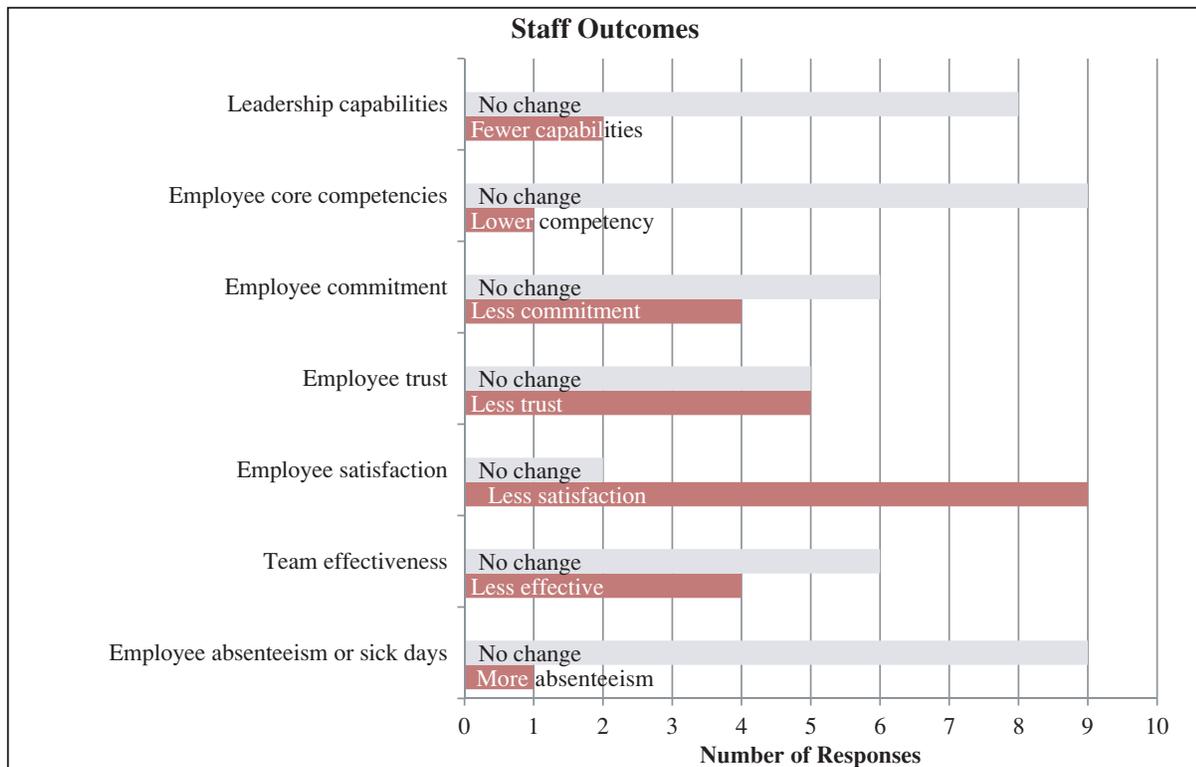
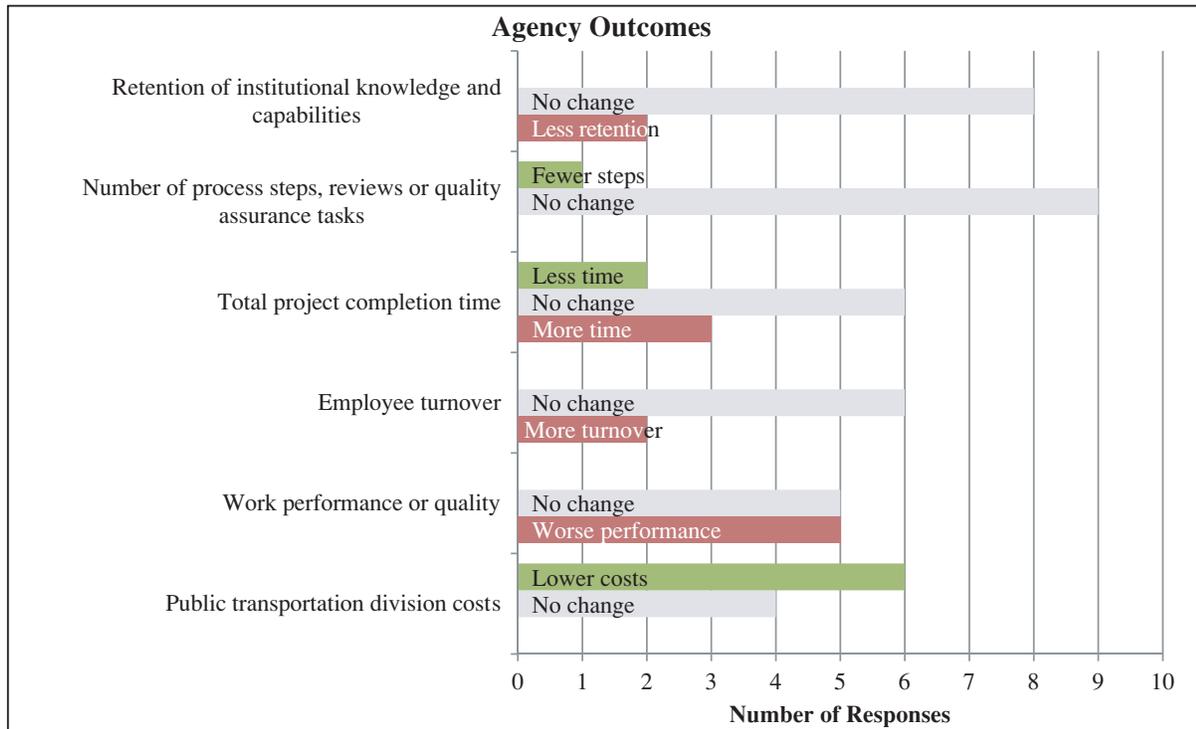
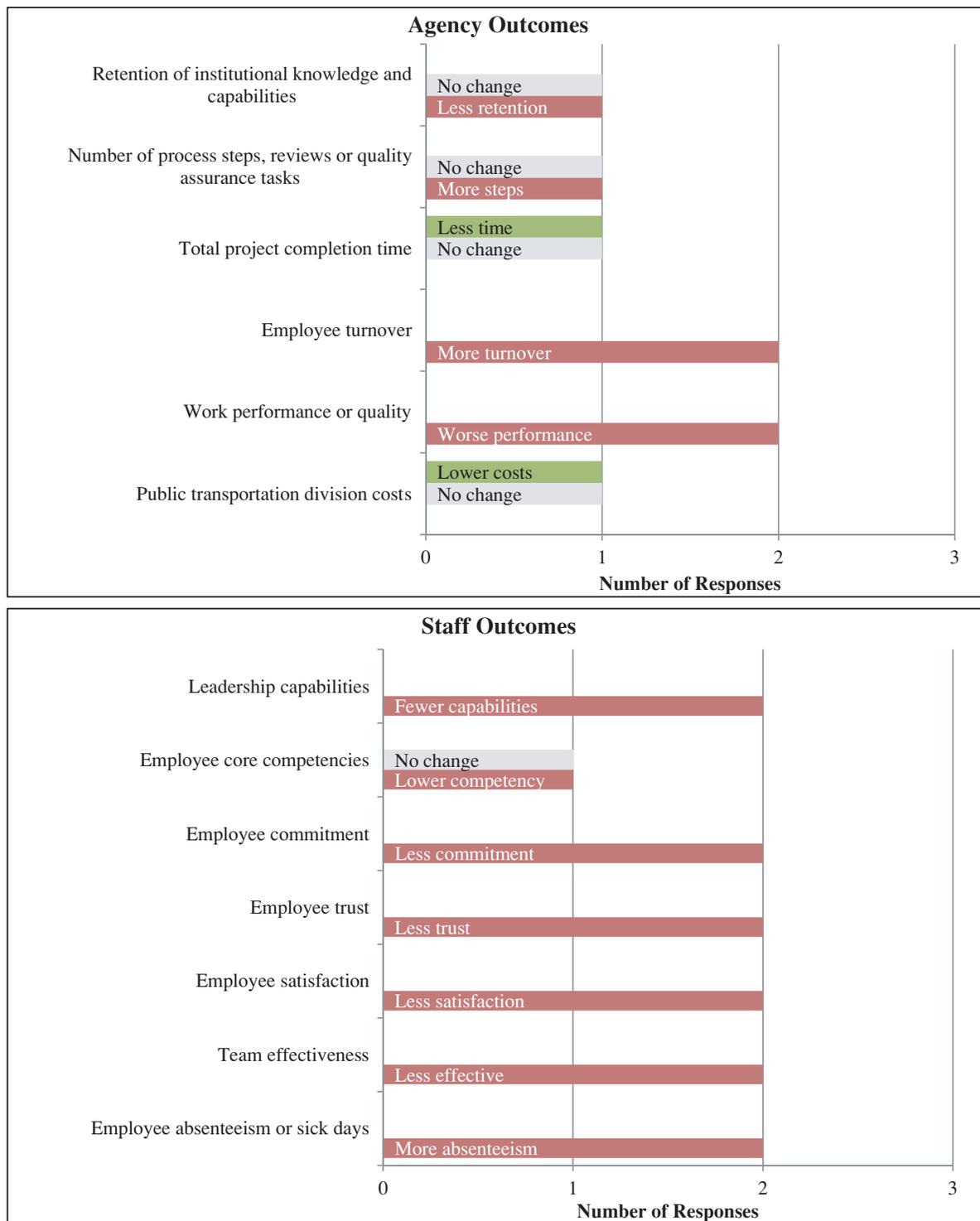


Table D-3: Employee salary reductions.



Appendix D

Table D-4: Travel freezes.

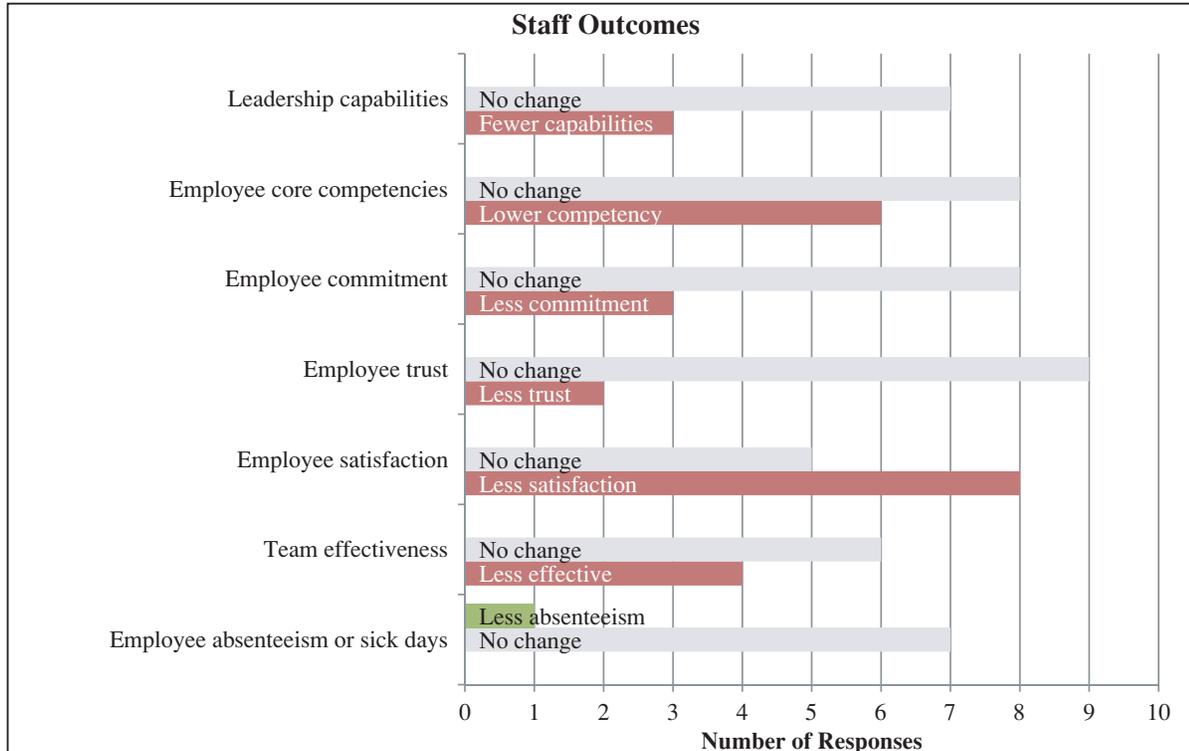
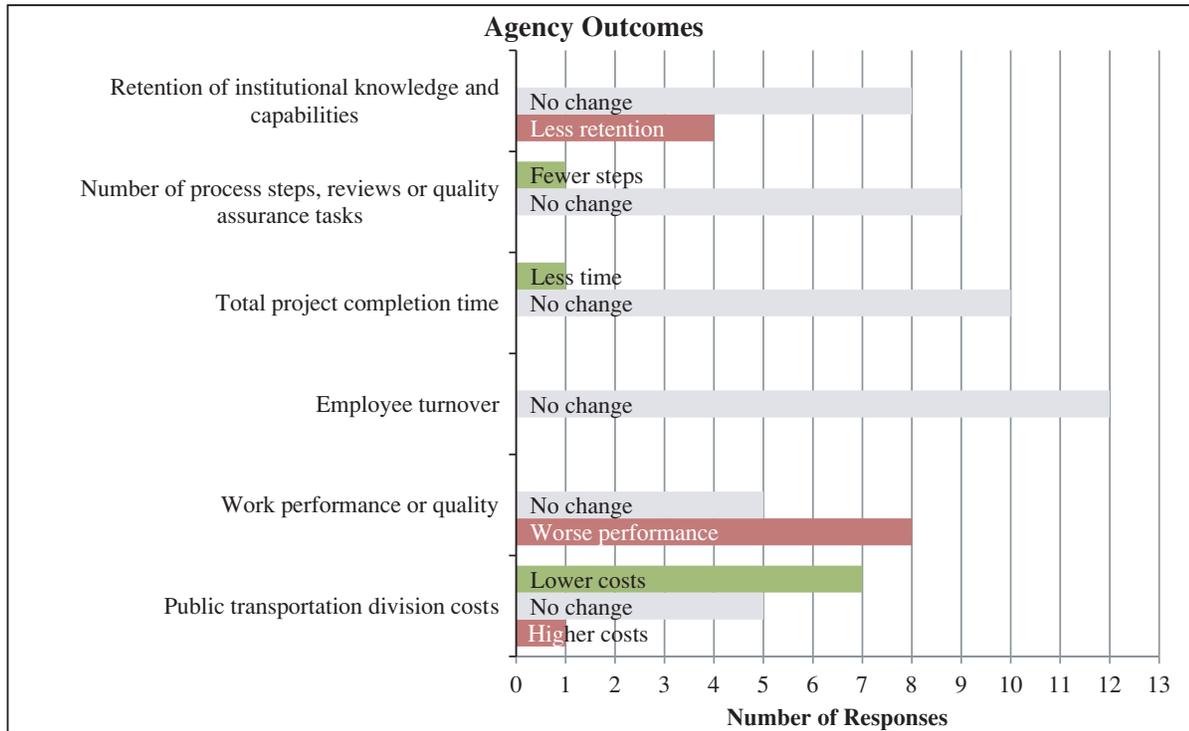
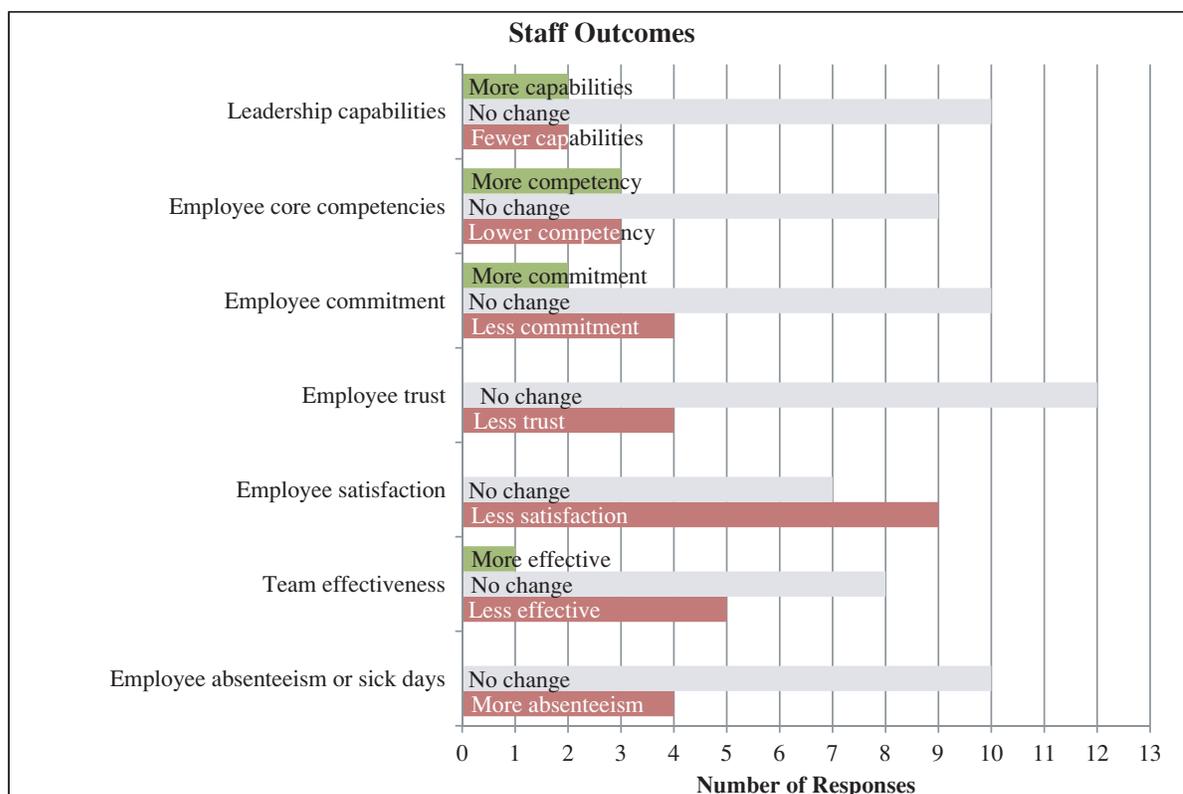
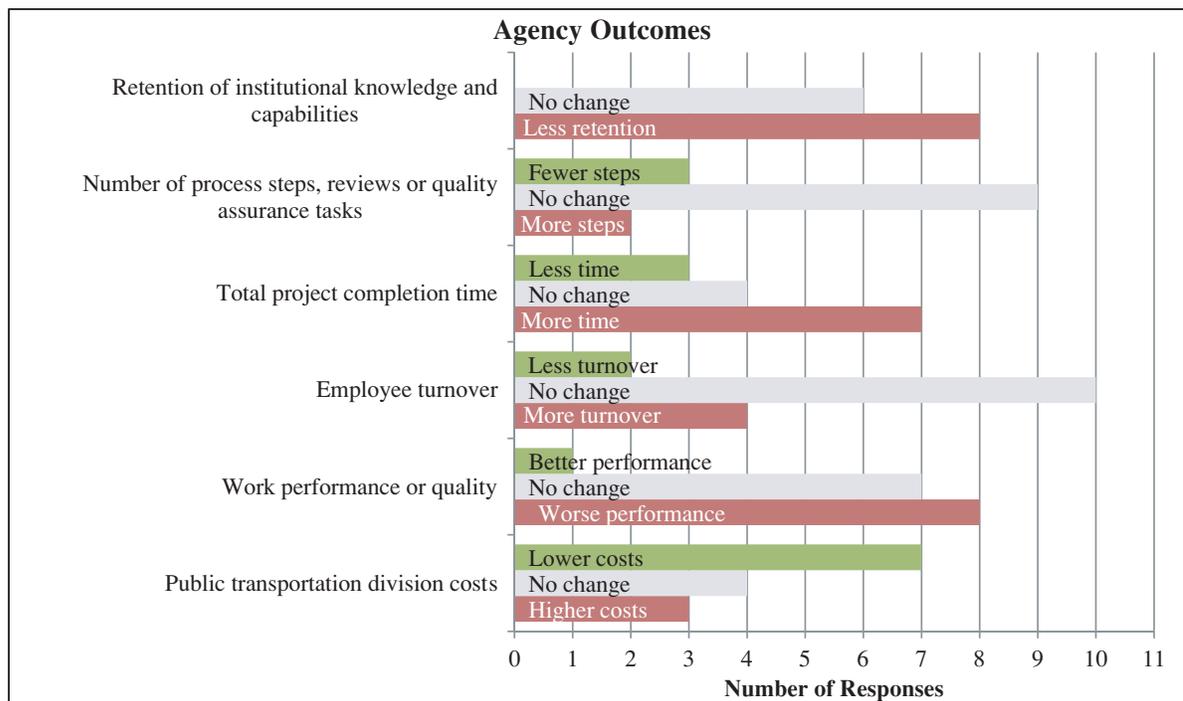


Table D-5: Hiring freezes.



Appendix D

Table D-6: The use of contractors and consultants.

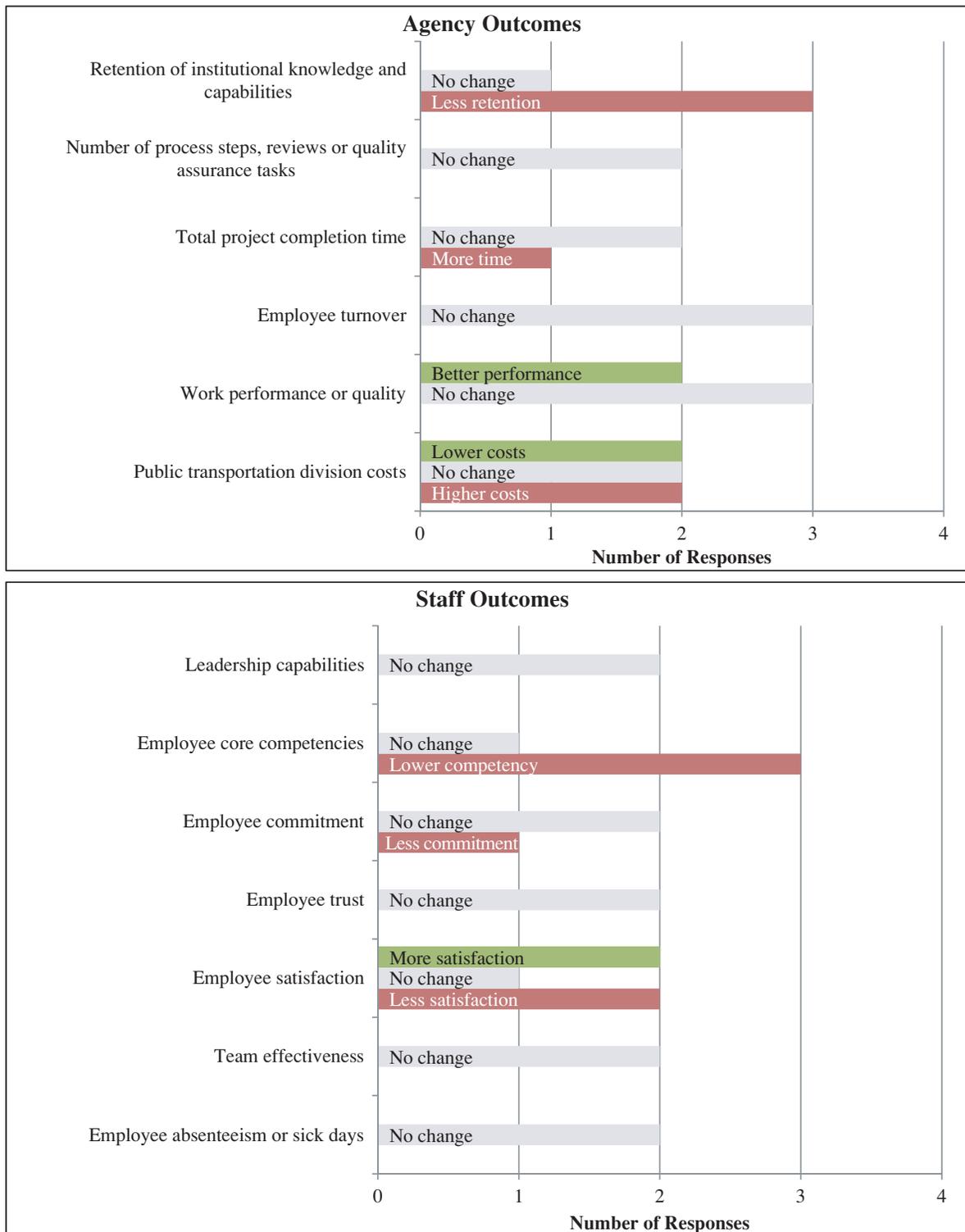
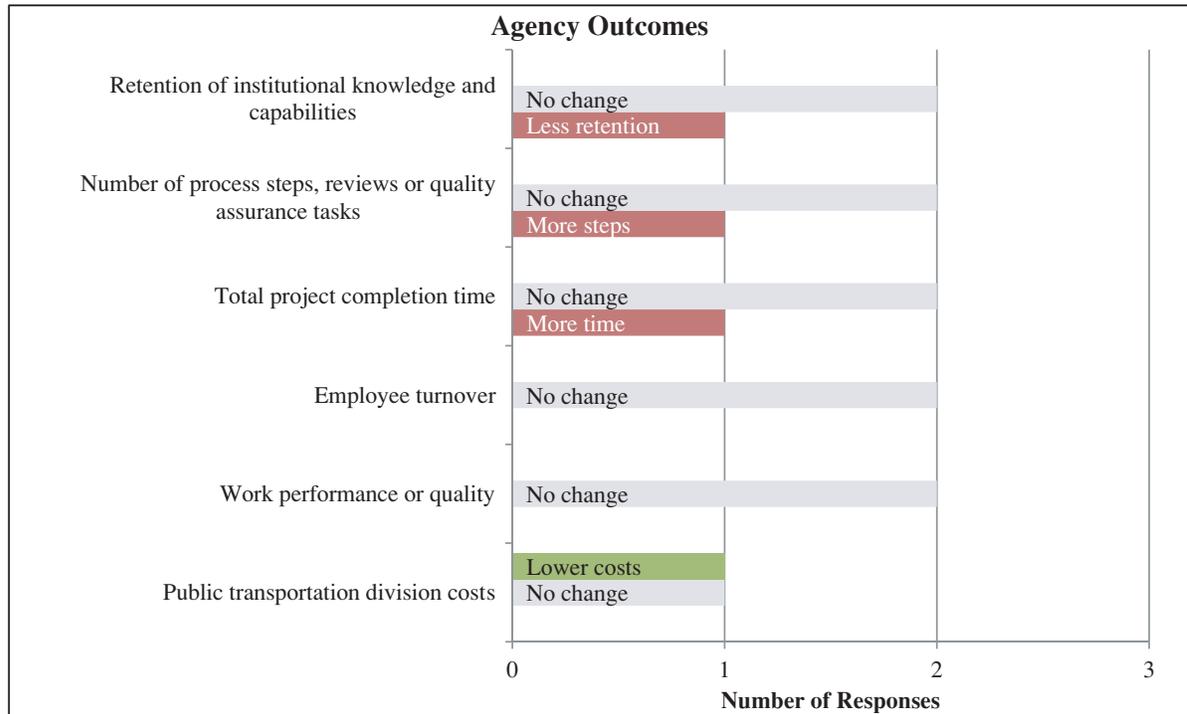


Table D-7: Reduced employee benefits or increased contributions to benefits.



Appendix D

Table D-8: Cutting overhead costs.

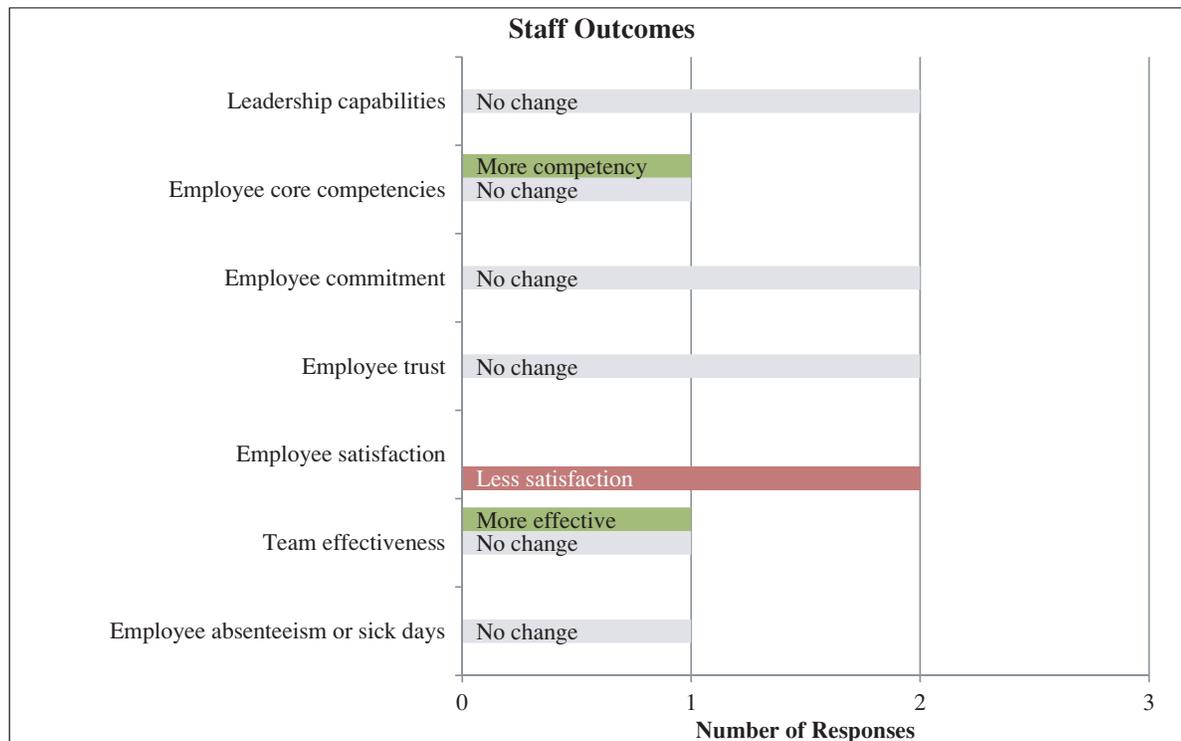
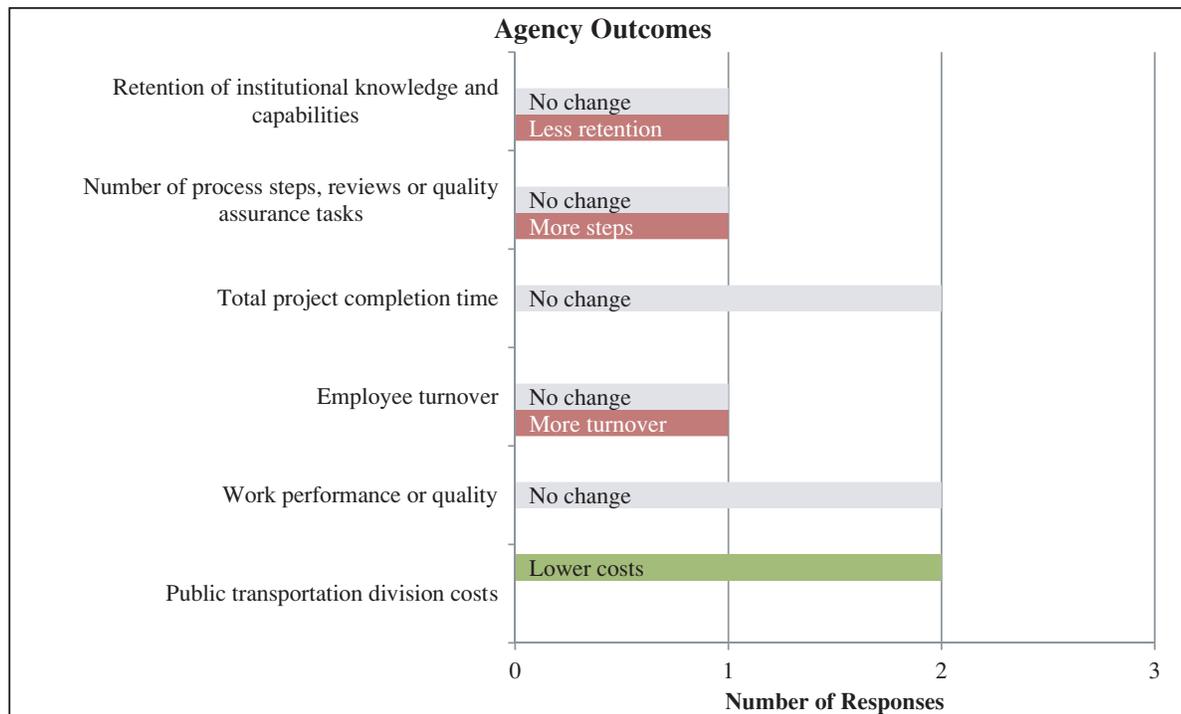


Table D-9: Legend for all coding combinations in Exhibit 8 and Exhibit 9 of the digest.

Code	Meaning	Code	Meaning	Code	Meaning
	60% or more respondents indicate a positive result or no change (green), with higher result being the majority outcome (up arrow). <i>For example, 73% report higher performance or no change as result of contractor staff (42% of respondents specifically indicated higher performance).</i>		No one outcome (higher, lower and/or no change combination) is reported at above 60% (gray), with higher result being the majority outcome (up arrow). <i>For example, 51% report higher performance or no change as result of contractor staff (39% of respondents specifically indicated higher performance).</i>		60% or more respondents indicate a negative result or no change (red), with higher result being the majority outcome (up arrow). <i>For example, 73% report higher costs or no change as result of contractor staff (42% of respondents specifically indicated higher costs).</i>
	60% or more respondents indicate a positive result or no change (green), with lower result being the majority outcome (down arrow). <i>For example, 63% report lower turnover or no change as result of furloughs (41% of respondents specifically indicated lower turnover).</i>		No one outcome (higher, lower and/or no change combination) is reported at above 60% (gray), with lower result being the majority outcome (down arrow). <i>For example, 53% report lower turnover or no change as result of furloughs (41% of respondents specifically indicated lower turnover).</i>		60% or more respondents indicate a negative result or no change (red), with lower result being the majority outcome (down arrow). <i>For example, 63% report lower retention of knowledge as result of layoffs (63% of respondents specifically indicated lower knowledge).</i>
	60% or more respondents indicate a positive result or no change (green), with no change result being the majority outcome (straight line). <i>For example, 64% report lower turnover or no change as result of travel freezes (51% of respondents specifically indicated no change).</i>		No one outcome (higher, lower and/or no change combination) is reported at above 60% (gray), with no change being the majority outcome (down arrow). <i>For example, 54% report lower turnover or no change as result of travel freezes (41% of respondents specifically indicated no change).</i>		60% or more respondents indicate a negative result or no change (red), with no change result being the majority outcome (straight line). <i>For example, 64% report higher costs or no change as result of travel freezes (51% of respondents specifically indicated no change).</i>



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