

**REPORT BY THE STATE AUDITOR
OF CALIFORNIA**

**A REVIEW OF CALTRANS' MANAGEMENT OF THE
CONTRACT WITH MORRISON KNUDSEN CORPORATION
FOR THE DESIGN AND CONSTRUCTION OF RAILCARS**

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A Review of Caltrans' Management of the
Contract with Morrison Knudsen Corporation
for the Design and Construction of Railcars

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Summary

Results in Brief In June 1990, the voters of California approved Proposition 108 and Proposition 116 authorizing the sale of nearly \$3 billion in general obligation bonds. The purpose of these propositions was to provide funds for the acquisition of rights-of-way, capital expenditures and improvements, and the acquisition of passenger railcars and locomotives for intercity rail, commuter rail, and urban rail transit systems.

According to Proposition 116, the state Department of Transportation (Caltrans) will be allocated \$100 million to fund a competitive proposal program for the acquisition of standardized state-of-the-art intercity and commuter railcars. As of January 1, 1994, Caltrans had committed approximately \$214 million of the funds raised from bond sales authorized by both propositions to fund a contract for the purchase of 113 railcars. Of these, 66 are intercity cars and 47 are commuter cars.

The focus of this audit was to review and evaluate specific aspects of the contract that Caltrans entered into with Morrison Knudsen Corporation (M-K) for the purchase of the 113 railcars. (Throughout this report, we refer to this project as the California Car project.)

During our review we noted the following conditions:

- Through the California Car project, Caltrans sought, among other goals, to create jobs in California by accomplishing some part of the production of the railcars here in the State. Because of previous court decisions and an Attorney General opinion on the subject of preference for California or American companies which had found requiring such preferences unenforceable, Caltrans determined it could not include a provision in the contract for the California Car Project that would have required the contractor to maximize the amount of work on the California Car to be accomplished in California. Rather, Caltrans "encouraged" the proposers on the project to commit to maximizing the amount of work to be done in the State. Consequently, in its initial proposal to Caltrans, M-K did not indicate a commitment concerning the creation of jobs in California. During the negotiation of the original contract, (January 1992), M-K eventually informed Caltrans that it intended to maximize California content. But it was not until November 1993 when Caltrans exercised an option to have M-K produce an additional 25 railcars that Caltrans and M-K

agreed to more specific and enforceable provisions regarding California content. The change order that outlines M-K's responsibility to produce the 25 additional cars also defines the amount of California content that Caltrans expects M-K to provide, both for the 25 additional cars as well as for the 88 cars to be provided under the original contract. The change order requires that M-K create the equivalent of about 580 full-time jobs at its Pittsburg, California facility doing the assembly and final testing on 66 cars, 45 from the original order and 21 from the additional order.

- Caltrans originally contracted with M-K for the production of 88 California cars for an amount totaling \$153.7 million. The first cars were to be delivered by August 1993. However, Caltrans and M-K have agreed to changes to the original contract that have increased M-K's contract to \$214 million and have delayed the delivery date of the first railcars by 12 months to August 1994. One of the changes to the contract added 25 railcars to the original order, at a cost of \$54.6 million. The remainder of the change orders, which mostly dealt with design changes and optional features to the railcars, added \$6.1 million to the cost of this contract. (This amount includes two change orders totaling approximately \$1.1 million that are pending approval.)
- Several factors contributed to the changes on this contract that have added to the cost and delivery time of the railcars. First, as is typical in the railcar building industry, Caltrans and M-K entered a contract that only spelled out in general terms the design characteristics of the California Car. After first obtaining input from the Rolling Stock Advisory Committee, which was established to provide input to the design of the railcars in accordance with Proposition 116, Caltrans developed a Request for Proposals (RFP) based on general parameters or "performance specifications" rather than detailed design specifications. According to the chief of the Office of Rail Equipment for Caltrans, it is not surprising that there were change orders on this type of contract, since not all of the design characteristics of the California Car were spelled out in detail in the performance specifications. So, as the design characteristics of the California Car became more detailed, change orders became necessary. A second factor that has added cost and time to this contract is that Caltrans exercised a contract option to have M-K produce an added 25 cars to the original 88-car order. By exercising this option, Caltrans added \$54.6 million to the contract cost and extended the delivery schedule two months. A third factor that has contributed to the added cost and extended delivery is that in overseeing the design of the railcars, Caltrans has had to be responsive to the input of local

transportation agencies and railroad operators. One of the change orders that we discuss in this report was the result of negotiations between local transportation agencies and Caltrans about the internal configuration of the commuter car. These negotiations led to a five-month delay in the original delivery schedule.

- By the time that the contract for designing and producing the railcars was awarded to M-K, Caltrans had substituted the less rigorous federal goals for the statewide goals for the participation of disadvantaged businesses in the project. This substitution took place because of the involvement of \$5 million of federal dollars on this project. Then, eight months after the contract had been awarded to M-K, Caltrans was in the midst of negotiating a change order with M-K. As part of an agreement reached on this change order, Caltrans reiterated that the federal goals were to apply for this contract, although Caltrans also required that M-K make a good faith effort to attain the State's goals throughout this contract. However, the change order does not outline M-K's responsibilities in making "a good faith effort" in seeking the participation of disadvantaged businesses in the event it is unsuccessful at attaining the statewide participation goals.
- We recommend that Caltrans clearly specify M-K's responsibilities to make a good faith effort in seeking the participation of disadvantaged businesses in the event it is unsuccessful at meeting the statewide goals.
- The Legislature asked us to determine whether Caltrans could have entered an agreement with a contractor other than M-K to build the 25 railcars beyond the 88 railcars called for in M-K's original contract. Caltrans chose not to do this, instead exercising an option in its contract with M-K to have M-K build the 25 cars. However, in the opinion of the Legislative Counsel, if Caltrans had decided to seek a contractor other than M-K for the additional 25 cars, Caltrans would have been free to use the design drawings developed by M-K to solicit proposals from other contractors.
- One of the other issues we were asked to address was whether it would have been less costly for Caltrans to use a contractor other than M-K to build the 25 additional railcars. However, we cannot conclude on whether the State would have saved money using other contractors without actually going through the process of advertising for this work and receiving and evaluating proposals from competing firms. According to the consultant for Caltrans, the design drawings are refined over the life of the contract. However, the closer the plans are to the as-built phase, the more

value the plans have to other contractors who might bid on the production of additional railcars.

- Another purpose of this audit was to assess the reasonableness and propriety of the overhead costs associated with managing the California Car Project. Over the life of the contract with M-K, an estimated \$8.2 million, or 3.8 percent of the total cost, will be spent on managing the contract. This includes the costs of both the Office of Rail Equipment (part of Caltrans) and the consultant, Booz-Allen & Hamilton, Inc. (Booz-Allen). To assess the reasonableness of the \$8.2 million expenditure, we contacted three public entities other than Caltrans that manage contracts of comparable size and scope. However, these entities were either unable or unwilling to share information with us on the costs of managing their respective contracts. Caltrans' Division of Rail informed us that the costs associated with managing contracts of this size and scope usually range from 5 percent to 8 percent of the contract total.
- To gauge the propriety of the amounts charged by Booz-Allen for overseeing the M-K contract, we reviewed a sample of the supporting documentation for all billings received to date by Caltrans. We ensured that the amounts being charged were allowable costs according to the terms of Booz-Allen's contract with Caltrans. We found no improper expenditures among the items we tested.

Introduction

Passenger rail transportation in California includes intercity rail, commuter rail, and urban rail services. Intercity rail primarily serves business or recreational travelers between cities in California and other parts of the country. An example of this service is the San Diegans, which runs from San Diego to Santa Barbara. Intercity rail service is typically operated by Amtrak. Commuter rail service generally offers frequent service during commute hours to serve commuters, with limited service during other periods of the day. The Peninsula Commute Rail Service (Caltrain) from San Francisco to San Jose is an example of this type of service. Urban rail service provides regular service throughout the day, generally within an urban or metropolitan area. Examples of this service include the Sacramento Light Rail System, the San Diego Trolley System, and the San Francisco Bay Area Rapid Transit (BART) System.

Under current law, the California Transportation Commission (CTC) reviews highway, rail, and other transportation projects proposed for state funding. The CTC decides which projects are a priority for funding. The projects considered include those proposed by the state Department of Transportation (Caltrans) and by local and regional transportation agencies. The projects selected are scheduled in a seven-year funding plan adopted by the CTC.

In June 1990, the voters of California approved Proposition 108 and Proposition 116, authorizing the sale of nearly \$3 billion in general obligation bonds. The purpose of these propositions was to provide funds for the acquisition of rights-of-way, capital expenditures and improvements, and the acquisition of passenger railcars and locomotives for intercity rail, commuter rail, and urban rail transit systems.

The CTC allocates the money raised through the bond sales authorized by Proposition 116 to state, local, and regional agencies according to a grant process established by the proposition. According to the proposition, Caltrans will be allocated \$100 million to fund a competitive proposal program for the acquisition of standardized state-of-the-art intercity and commuter railcars.

In general, the CTC allocates the funds raised through the bond sales authorized by Proposition 108 to Caltrans. Caltrans, in turn, spends the funds on approved transportation projects, including the acquisition of railcars.

As of January 1, 1994, Caltrans had committed approximately \$214 million of the funds raised from the bond sales authorized by the two propositions to fund a contract for the purchase of 113 railcars. Of these, 66 are intercity cars and 47 are commuter cars.

Scope and Methodology

The focus of this audit was to review and evaluate various aspects of the contract that Caltrans entered into with Morrison Knudsen Corporation (M-K) for the purchase of standard design intercity and commuter railcars. (Throughout the rest of this report we will refer to this project as the California Car Project.)

Through the award of this contract, Caltrans hoped, among other goals, to create jobs here in California by accomplishing some or all of the design and assembly of the cars in California. To determine what obligations the contractor has for creating jobs in California, we reviewed the terms of the Request for Proposals (RFP) developed by Caltrans and sent to prospective proposers for the California Car contract. We also reviewed the provisions of the contract awarded to M-K and all the changes to the contract. All changes made to the contract are formalized into "change orders" that specify the work to be done in connection with the change made. In addition, we interviewed the project manager for M-K regarding the planned use of resources such as labor and materials originating from California during the life of the contract. Throughout this report, we refer to these resources as "California content."

Because the cost of this project has increased beyond the original estimate and because there have been delays in the projected delivery of the completed railcars, some concern has been expressed over how effective Caltrans has been in managing the contract with M-K. To determine what rights Caltrans has in controlling contract costs and requiring specific performance by the contractor when significant change orders are made to the original contract, we assessed the effect that change orders had in terms of price increases or time delays.

Originally, the funding for the design and construction of the railcars was to be exclusively from state funds. However, Caltrans now projects that \$5 million of federal funds will also be part of the funding for the railcars. To determine what effect the use of federal funds had on the contractor's participation goals for businesses of minorities,

women, and disabled veterans, we researched both the state and federal laws about this issue. We also interviewed Caltrans staff and reviewed various documents to determine why federal funds were used as part of the funding source for the contract with M-K.

During the course of this contract, Caltrans decided to acquire additional railcars beyond the 88 cars specified in the original contract. Caltrans could have contracted with M-K or solicited proposals from other contractors to produce the additional cars, using the standardized designs developed under the original contract. To determine what rights Caltrans has regarding the design plans and technical specifications developed for the manufacture of the California Car, we reviewed the terms of the RFP and the executed contract. In addition, we interviewed consultants and staff from Caltrans involved in the negotiation and administration of the M-K contract.

We were also asked to determine whether it would be more economical for the State if, instead of exercising the option contained in the original California Car contract to purchase additional railcars at a negotiated price from M-K, Caltrans were to seek competitive proposals from other contractors for the additional railcar purchase. However, without actually conducting a competitive process, we cannot accurately evaluate a prospective outcome such as this.

Another of the purposes of this audit was to determine the propriety and reasonableness of the overhead costs for the M-K contract. Overhead includes the cost of approving and inspecting each of the deliverables produced by M-K, such as the designs, plans, and railcars. Overhead also includes the costs of administering the M-K contract. To do this, we reviewed the terms of a contract between Caltrans and a consultant hired to administer the M-K contract and to inspect the quality of the finished product. We also reviewed the consultant's billings sent to Caltrans. In addition, we assessed the amount of overhead Caltrans is allocating to the M-K contract. We also reviewed the amounts spent from Proposition 116 bond sales to determine if the purposes of such expenditures conformed with the law. Finally, we contacted other entities to assess what is a reasonable cost for inspections and administration of other contracts of a similar size and scope.

Also, as part of this audit we sought a Legislative Counsel opinion on several issues related to the California Car project. These issues included the enforceability of certain provisions of Caltrans' contract with M-K. Legislative Counsel provided us their analysis of the liquidated damages provisions of the contract, the contractual provisions on producing some portion of the railcars in California, the

process for negotiating change orders with M-K, and the ownership rights of Caltrans of the design drawings produced by M-K during this contract. Legislative Counsel also analyzed for us the matter of whether federal or state requirements for the participation of disadvantaged businesses should apply to the M-K contract.

Chapter 1 Responsibilities of the Contractor for Creating Jobs in California

Chapter Summary

In February 1992, the state Department of Transportation (Caltrans) awarded a contract for the acquisition of standard passenger railcars to Morrison Knudsen Corporation (M-K). (Throughout this report, we refer to this project as the California Car Project.) Since then, the Legislature has requested information about what obligations M-K is under to create jobs in California by having some part of the manufacture and assembly of the railcars take place in the State. (We use the term "California content" to refer to the planned use of resources such as materials and labor that are used to manufacture the railcars in California.) In this chapter, we provide information on this issue.

To summarize, Caltrans sought to create jobs in California through the California Car project by having some part of the railcar production occur in California. In its Request for Proposals (RFP), Caltrans encouraged potential proposers to maximize the California content of the railcars in their proposals. Because of previous court decisions and an Attorney General opinion on the matter of preference for California or American companies that had found requiring such preferences unenforceable, Caltrans "encouraged," but did not "require" that proposers maximize California content in their proposals for the California Car.

In its initial proposal to Caltrans, M-K did not indicate any commitment concerning California content, and, consequently, Caltrans sought assurances from M-K of M-K's intent to maximize California content. During the negotiation of the original contract in January 1992, M-K informed Caltrans that it intended to maximize California content. But it was not until November 1993, when Caltrans exercised an option to have M-K produce an additional 25 railcars, that Caltrans and M-K agreed to more specific and enforceable provisions regarding California content. The change order that outlines M-K's responsibility to produce the 25 additional cars also defines the amount of California content that Caltrans expects M-K to provide, both for the 25 additional railcars as well as for the 88 railcars to be provided under the original contract. Among the provisions of this change order is a requirement that M-K create the equivalent of about 580 full-time jobs at its Pittsburg, California facility doing the assembly and final testing on 66 railcars, 45 from the original order and 21 from the additional order.

Background

Caltrans issued an RFP in August 1991 to all parties interested in proposing on a contract to furnish standard passenger railcars for intercity and commuter service throughout the State. The RFP requested that proposers include per car and total prices for a base purchase of from 48 to 60 commuter cars as well as per car prices for options to purchase up to 40 additional commuter cars in each of the two years following the contract award. In addition, proposers were asked to include per car and total prices for a base purchase of from 24 to 40 intercity cars and per car prices for options to purchase up to 40 additional intercity cars in each of the two years following the contract award. Among the provisions included in the RFP was a clause encouraging interested proposers to maximize the California content of the end product supplied under the contract.

Caltrans determined that M-K submitted the only responsive proposal, and awarded the contract for the acquisition of California Cars to M-K in February 1992. The contract's production schedule called for the delivery of the first car in August 1993. However, because of a variety of causes (see Chapter 2 for a discussion of these), delivery of the first car is now scheduled for August 1994.

California Content Provisions in the Request for Proposals

The RFP for the California Car contained a provision encouraging interested proposers to maximize the California content of the end product supplied under the contract terms. However, the RFP did not contain any provision for awarding preference points based on proposers' inclusion of California content in their proposals. According to the deputy director for rail and transit, Caltrans based its decision not to include preference points on its understanding of an opinion from the Attorney General.

By encouraging proposers to maximize California content in the production of railcars, Caltrans believed it was not in a position to require the winning proposer, M-K, to manufacture some or all of the railcars in California. Or, stated another way, the original contract between Caltrans and M-K included no provisions that Caltrans could have enforced to require M-K to manufacture some or all of the railcars in California.

We reviewed a copy of the Attorney General's opinion that Caltrans relied on in making its decision. This opinion, dated February 11, 1970, was originally sought by the Department of General Services (DGS) on whether the California Buy American Act and the California Preference Law were constitutional, and if unconstitutional, what effect that would have on contracts previously executed by the State. The

Attorney General concluded that both the act and the law were unconstitutional.

The California Buy American Act generally provided that any public officer or entity authorized to enter into a contract for the construction, alteration, or repair of public works or for the purchase of materials for public use award such contracts only to persons who agreed to use or supply materials produced in the United States or who manufactured articles from materials produced substantially in the United States. The California Court of Appeal held that the California Buy American Act, in effectively placing an embargo on foreign products, usurped the power of the federal government to conduct foreign trade policy, and was therefore, unconstitutional as an intrusion into an exclusively federal domain.

The California Preference Law, as it pertained to contracts, permitted public officers and entities responsible for awarding contracts for public work, the construction of public bridges, buildings and other structures, and the purchase of supplies intended for public use to award such contracts to California manufacturers or suppliers under certain conditions. These conditions were (1) that the bids received from California manufacturers or suppliers not exceed by more than 5 percent the lowest bids of out-of-state manufacturers or suppliers, (2) that the majority of any manufacturing occur within the State, and (3) that, in the opinion of the person or entity awarding the contract, the public good would be served.

The Attorney General concluded that, since the California Court of Appeal found the California Buy American Act unconstitutional and the California Preference Law was similar in its effect on foreign commerce, the preference law was also unconstitutional. The Attorney General contended, therefore, that all calls for bids and contracts entered into by public agencies after the date of the Court of Appeal's decision must be devoid of any requirement for compliance with either the California Buy American Act or the California Preference Law.

We asked the Legislative Counsel to review the constitutional implications of a California content requirement contained in the RFP for this contract. In contrast to the Attorney General's opinion, the Legislative Counsel concludes that a contractual provision requiring California content would not have been unconstitutional. The Legislative Counsel focused his analysis on two clauses contained in the United States Constitution. The first clause, known as the Commerce Clause, gives Congress the power to "regulate commerce with foreign nations and among the several states..." The second

clause, called the Privileges and Immunities Clause, provides that "the citizens of each State shall be entitled to all the privileges and immunities of citizens in the several states." It was the Legislative Counsel's conclusion, based on the case law precedents he reviewed centering on both the clauses, that Caltrans would not have violated either of these clauses of the United States Constitution had it included a requirement that railcars be assembled in California.

**Other
Correspondence
Between Caltrans
and Morrison
Knudsen
Regarding
California
Content**

As M-K's original proposal did not indicate any commitment concerning California content, Caltrans instructed Booz-Allen & Hamilton, Inc. (Booz-Allen), the consultant that Caltrans hired to administer the California Car contract, to contact M-K and request assurances of M-K's intent to maximize California content. Before Caltrans awarded the contract to M-K, Booz-Allen sent a letter to M-K dated January 23, 1992, indicating that Caltrans required an assurance that if substantial subsequent orders of California Cars were exercised under the option provisions of the contract, that M-K would pursue every reasonable means to maximize the California content of the cars and perhaps assemble them in California. Caltrans required this assurance as part of M-K's final proposal.

In a cover letter accompanying M-K's final proposal to Caltrans dated January 27, 1992, the M-K's president stated that the company was committed to establishing a car assembly facility in California for the California Cars. The letter went on to say that initial production of the first 72 cars would be performed at the company's New York facility to meet the schedule to deliver the first cars 18 months after the date Caltrans notified M-K to proceed with the contract. The president further advised that "some final assembly of the cars would be phased in" for the original cars ordered, and if an option for additional cars followed, M-K would maximize the California content on those cars.

Apparently, Caltrans needed further clarification regarding the phasing in of final assembly work discussed in M-K's January 27, 1992, cover letter because M-K's president sent another letter on January 29, 1992, clarifying the company's position. The president stated that, because of the short initial delivery requirement, the first 10 cars had to be entirely assembled at the company's New York facility. However, for the remainder of the order, the president stated that M-K would perform up to 25 percent of the final assembly at the newly established facility in California. Additionally, the president stated that, if Caltrans were to

award substantial follow-on contracts for similar cars, M-K would further increase the California content of final assembly labor to a 50 to 75 percent range.

California Content Provisions in the Contract Change Orders

On November 30, 1993, Caltrans executed a contract change order with M-K to provide 25 additional California Cars under the option provision contained in Caltrans' RFP. Section III of this contract change order specifies the amount of California content that Caltrans expects M-K to provide, both for the 25 additional cars as well as for the 88 cars to be provided under the original contract.

Specifically, Section III of the change order requires M-K to create the equivalent of approximately 580 person-year (PY) jobs at its assembly facility in Pittsburg, California. These jobs would be for assembly and final testing on 66 cars, 45 cars from the original order and 21 from the additional order. A person-year equates to approximately 2,088 hours of work a year, less any vacation, holidays, sick leave, or other time taken off.

To ensure adherence by M-K with Section III of the change order, the change order also stipulates that liquidated damages in the amount of \$20,000 per car will be assessed if M-K fails to use California labor in the assembly and final testing of at least 66 cars.

We sought an opinion from the Legislative Counsel regarding Caltrans' ability to enforce the California content provisions contained in the RFP, contract, and change orders to the contract. It was the Legislative Counsel's opinion that, until Caltrans executed the November 1993 change order for the purchase of the additional railcars, there were no enforceable provisions for California content. However, once the contract change order containing the more explicit provision for the inclusion of California content was executed and became part of the contract, the additional provisions are enforceable. In other words, the amended contract between Caltrans and M-K now requires M-K to create the equivalent of about 580 jobs in California for the assembly and final testing on 66 of the railcars.

According to M-K's program manager for the California Car contract, as of December 1993, 60 employees had been hired at M-K's Pittsburg assembly facility. The program manager stated that these employees are currently working on or supporting a contract that M-K has with the Bay Area Rapid Transit (BART) to assemble 80 cars. M-K's program manager estimates that by July 1995, M-K will employ approximately 300 California workers during peak production in assembling the BART cars and the 66 California Cars. Furthermore, according to the

M-K project manager, M-K will use approximately 618 California person-years associated exclusively with the California Cars during the contract's life.

Changes Imposed Through Contract Change Orders Have Affected the Overall Cost and Delivery Time of the Railcars

Chapter 2

Chapter Summary

After the Morrison Knudsen Corporation (M-K) was awarded the contract in February 1992, the state Department of Transportation (Caltrans) issued the Notice To Proceed authorization to begin the California Car Project on March 2, 1992. The contract called for the production of 88 railcars at a total cost of \$153.7 million. The delivery schedule established for the production of the 88 railcars called for the delivery of the first car by August 1993. However, because of the impact of added costs and schedule delays imposed by individual change orders, the original cost of the contract has increased to \$214 million and the scheduled delivery dates of the first railcars have been delayed from August 1993 to August 1994.

Several factors contributed to the changes in this contract that have added to the cost and delivery time of the railcars. First, as is typical in the railcar building industry, Caltrans and M-K entered into a contract that only spelled out in general terms the design characteristics of the California Car. After first obtaining input from the Rolling Stock Advisory Committee (RSAC), which was established to provide input to the design of the railcars in accordance with Proposition 116, Caltrans developed a Request for Proposals (RFP) based on general parameters or "performance specifications" rather than detailed design specifications. According to the chief of the Office of Rail Equipment for Caltrans, it is not surprising that there were change orders on this type of contract, since not all of the design characteristics of the California Car were spelled out in detail in the performance specifications. So, as the design characteristics of the California Car became more detailed, change orders became necessary.

A second factor that has added cost and time to this contract is that Caltrans exercised a contract option to have M-K produce an added

25 cars to the original 88-car order. By exercising this option, Caltrans added \$54.6 million to the contract cost and extended the delivery schedule two months. A third factor that has contributed to the added cost and extended delivery is that in overseeing the design of the railcars, Caltrans has had to be responsive to the input of local transportation agencies and railroad operators. One of the change orders that we discuss in this chapter was the result of negotiations between local transportation agencies and Caltrans about the internal configuration of the commuter car. These negotiations led to a five-month delay in the original delivery schedule.

As of January 1, 1994, the contract total has increased by approximately \$60.7 million. Change orders also affected the scheduled delivery of the California Cars. The first railcar had been scheduled for delivery in August 1993. Because of changes and modifications brought on by a variety of factors, the delivery date of the first car has been delayed by a total of 12 months and is currently scheduled for delivery in August 1994. The final car of the original 88-car order originally scheduled for delivery October 1994 is now scheduled for delivery by December 1995. The last car of the additional 25-car order is scheduled for delivery in April 1996.

Background

Caltrans issued an RFP to procure the California Cars based on general performance specifications rather than detailed design specifications. When issuing an RFP for the design and assembly of complicated machinery or equipment, the procuring entity can require that potential contractors submit proposals based on either detailed specifications or performance specifications. Detailed specification contracts are used when the procuring entity's objective is essentially to reproduce an existing product, with design elements, drawings, and specifications being available to bidding contractors at the time of bid. In contrast, performance specification contracts are used when the awarding entity intends to produce a new product and existing designs are not available. Performance specification contracts provide proposers with the general parameters of the project to be constructed, leaving the actual design details to the winning proposer.

Provisions in Proposition 116 required Caltrans to establish an advisory committee to assist Caltrans in developing specifications for standardized California commuter and intercity railcars and locomotives. The committee was to consist of one consumer representative and representatives from all affected local transportation agencies, as well as the department's Division of Mass Transportation. To meet this requirement, Caltrans established the RSAC, which included representatives from the Legislature, Amtrak, and a variety of

regional transportation agencies throughout the State. The RSAC provided information for the specific criteria the California Car needed to meet. Caltrans used this input to develop the performance specifications that the RSAC eventually approved and that were included in the RFP.

According to the chief of the Office of Rail Equipment for Caltrans, a contract based on performance specifications typically leads to modifications after the award of the original contract. Since only general parameters are established at the beginning of the process, modifications become necessary as the specifications and designs are developed in more detail. While some change orders are merely technical in nature, such as clarifying design wording, a change order can also have an effect on the overall cost of the work done, the initially agreed upon product delivery schedule, or both.

Although changes can result from normal design modifications agreed to by the purchaser and contractor, external influences may also contribute to contract changes. For the California Car project, Caltrans is in the unique position of not being the actual operator of the completed railcars, but rather is acting as a purchasing agent for other California transportation agencies. Because of this arrangement, these other transportation agencies can influence changes that are to be adopted. For instance, Caltrans has an agreement with the Southern California Regional Rail Authority (SCRRA) and the Peninsula Commute Rail Service (Caltrain) to procure 47 California Cars for use by these local commuter service providers. Therefore, Caltrans, acting as a purchasing agent, had to be responsive to the needs of these two entities. One change order we reviewed resulted from discussions with these two transportation agencies as to the type of railcars that best served their needs. This change order led to a delay in the delivery schedule. (We discuss this change order further on pages 20 through 22 of this report.)

**Effect of
Change Orders
on Overall Cost**

Since February 1992, when M-K was awarded the California Car contract, various design modifications and associated changes have been implemented. Caltrans has approved and executed the change orders that it determined were necessary for the proper completion of the project. Caltrans originally contracted with M-K for the production of 88 California Cars for an amount totaling approximately \$153.7 million. Since the signing of the original contract, dated February 20, 1992, Caltrans has executed a total of 19 separate change orders and has 2 more change orders that are currently pending approval. Of the 19 executed and 2 pending change orders, 11 have or will affect the overall cost of the contract, increasing it by a net total of

approximately \$60.7 million. However, one of these change orders in the amount of approximately \$54.6 million, added 25 cars to the order, increasing the number of cars purchased from M-K from the original 88 to 113 cars. The remaining 10 change orders have or will increase the original contract amount by a net total of approximately \$6.1 million, or 4 percent of the original \$153.7 million contract total. Thus, the total amount that Caltrans has currently committed to the M-K contract for the production of 113 railcars is approximately \$214 million including two change orders totaling approximately \$1.1 million that are pending approval. (Figure 1 on page 15 shows the cost changes to the California Car contract.)

The Negotiation of Contract Change Orders

Insert Figure 1

Provisions in the California Car contract allow Caltrans to make such alterations or additions to the contract and to require any extra work that the Caltrans engineer considers necessary or advisable for the proper construction or completion of the contracted work. The engineer is Caltrans' designated representative in deciding all questions that may arise as to the acceptability of materials furnished, work performed, compensation made, and requirements met. In addition, the contract also allows Caltrans to negotiate any price changes resulting from legislation or regulations that become effective between the time of the contractor's original proposal and the date of manufacture of the railcars.

All changes are formalized into a contract change order that specifies the work to be done in connection with the change made. A change order will also specify the basis of compensation for such work.

If the engineer for Caltrans determines that new or unforeseen work is necessary and that such work is not covered under the specifications of the contract, it is classified as extra work and compensated accordingly. Contract provisions reserve the right of Caltrans to "make such alterations or additions to, or deviations and omissions from, contract documents as its engineer considers necessary or advisable." The contract limits the compensation to be paid to the contractor for any extra work performed to actual costs plus an agreed upon overhead rate.

Occasions may arise when the contractor and Caltrans disagree as to what constitutes extra work. On these occasions, the contract stipulates that if a change order specifies work to be done that the contractor considers extra work, the contractor must agree to the work within the change order and serve written notice to the engineer within 72 hours. The written notice must state why the contractor considers the work specified in the change order to be extra work, and the contractor must furnish all time slips and other memoranda as may be required by the engineer during the performance of such work. This enables Caltrans to cancel or modify the change order or take other appropriate action to reach agreement with M-K.

Based on the contract provisions, it is our opinion that for significant change orders occurring after the award of the contract, Caltrans has no discretionary authority under the contract to unilaterally determine M-K's compensation for complying with those change orders. However, Caltrans does have authority under the contract to negotiate price adjustments for other types of change orders, such as those mandated by legislation or regulations that take effect between the date

Caltrans opened M-K's technical proposal and the date the railcars are manufactured. In addition, Caltrans has the authority to modify, disapprove, or cancel a change order.

Examples of Change Orders

Individual change orders resulted in price increases to the contract ranging from a low of \$33,600 to a high of \$54.6 million. Although not all change orders affected the contract's cost, the types of changes that occurred included major changes, such as exercising a contract option to purchase an additional 25 railcars to a relatively minor change for the purpose of adjusting the production ratio of intercity to commuter cars. In another change order, Caltrans exercised an option to include an interlocking system between the door control and the propulsion and traction system to prevent any train motion when the doors of the cars are opened for all 88 of the railcars included in the original contract. The inclusion of this optional system on all 88 California Cars resulted in an increase in the contract's cost of \$407,616.

Not all change orders increased the contract's cost. For instance, one change order resulted in an overall cost savings to the California Car project. The purpose of the change was to exercise an accelerated payment schedule option offered by M-K in its original proposal. The option had the effect of reducing the price of the car order by \$2.2 million. The original contract included a payment schedule requiring Caltrans to make progress payments to M-K amounting to 34 percent of the total contract price before the delivery of the first California Car. In exchange for the \$2.2 million price reduction, Caltrans agreed to substitute a payment schedule requiring Caltrans to make progress payments to M-K totaling 44 percent of the total contract amount before the delivery of the first California Car.

To determine the reasonableness of paying M-K 44 percent of the contract price before the delivery of the first California Car, we obtained an analysis performed by the consultant Caltrans hired to administer the contract of milestone payment schedules for several other vehicle construction projects, including light railcars and tri-level commuter cars. The analysis included seven vehicle construction projects undertaken in the United States between 1988 and 1992. Although different construction projects may structure milestone payment schedules based on different assumptions and factors, a general comparison can be made between projects concerning the percentage of the total contract amount advanced to the contractor before product delivery. According to the consultant's analysis, new vehicle construction contracts have provided for progress payments

varying from 21 percent to 51 percent of the total contract price before the construction of the first vehicle. In view of similar practices throughout the industry, Caltrans' decision to execute a change order to increase its progress payments to M-K by 10 percentage points appears reasonable.

Also, although Caltrans has agreed to implement various changes and modifications during the course of the California Car project, Caltrans still has the means to guarantee the faithful performance by the contractor. Specifically, the contract required M-K to post a performance bond of at least 50 percent of the total contract price to ensure M-K's performance on this project. In addition, this same contract provision also requires the bond to be increased to offset price increases caused by exercising contract options, such that the performance bond at all times equals at least 50 percent of the total outstanding contract price. Therefore, Caltrans has a mechanism to enforce M-K's performance on the construction of the California Car.

Effect of Change Orders in Producing Delays

Various factors contributed to delays in the original schedule of the California Car. Each of the delays in the scheduled delivery dates are reflected in the form of change orders. As of January 1994, the schedule for the delivery of the California Car has slipped by 12 months since the contract was originally signed. The delivery schedule established after Caltrans signed the contract for the production of the 88-car order called for the delivery of the first California Car by August 1993 with the last of the cars to be delivered by October 1994. The most recent schedule now calls for the delivery of the first car by August 1994 with the last of the cars scheduled for delivery by April 1996. The latest schedule also reflects the delivery of an additional 25 railcars.

To ensure the timely delivery of the railcars, Caltrans included liquidated damages provisions in the contract. These provisions require M-K, in lieu of actual damages, to pay the State an agreed upon amount for each calendar day delay in finishing the work in excess of the prescribed delivery requirements. For example, if M-K does not deliver the first railcar by the latest schedule, that is, by August 1994, then Caltrans can penalize M-K by requiring a cash payment from M-K for each day beyond the deadline that M-K is late. The provisions of the damages clause take into consideration the changes in the delivery requirements established after Caltrans signed the contract for the production of the 88-car order, imposed by executed change orders.

Change Order for the Modification of Railcar Floor Height Caused Five-Month Delay

The first delay affecting the delivery schedule was associated with a design change to the floor height of the California Car, causing a delay of five months. To increase passenger accessibility, Caltrans intended the California Cars to have the lowest possible floor height within the parameters specified in the RFP.

The floor height of the railcar is measured in a design specification as the height from the top of the railroad tracks to the railcar's floor. In the RFP, Caltrans had originally issued a performance specification that was approved by the RSAC for the lowest feasible floor height within clearance requirements and the general structure of the railcar. The clearance requirement outlined in the performance specification merely required the cars to be capable of operating within clearances for restricted operation, as defined by the California Public Utilities Commission diagram and Amtrak's Western Operations clearance diagram. In the design process, clearance diagrams provide guidelines that railcar builders use to develop a design such that no part of the railcar will be obstructed by the rail tracks or objects external to the railcar. For instance, a clearance diagram provides measured limits to the design of any equipment attached below the railcar floor. These underfloor limits ensure that the railcar can safely pass over the railroad tracks without obstruction.

Despite not knowing the minimum floor height the clearance diagrams could accommodate, Caltrans suggested a 14 inch floor height as a goal in the RFP. While not presented as a contractual requirement, the specifications implicitly suggested that proposers should explore designing the railcars with a 14 inch floor height, as long as the height was within the parameters of the clearance diagrams. However, Amtrak operates railcars with a minimum floor height of 18 inches from the top of the railroad tracks. In response to the RFP, M-K's initial proposal specified an 18 inch floor height that was within Amtrak's existing Western Operations clearance diagram parameters. However, Caltrans continued to pursue the possibility of a lower floor height to increase passenger accessibility, particularly for those passengers with physical disabilities. Then, in November 1991, after Caltrans had issued the RFP, the Association of American Railroads, a trade organization that sets clearance standards for railcars, adopted a new "plate H" clearance diagram with less restrictive clearance requirements. M-K initially expressed reservation about designing the cars with a 14 inch floor height but it agreed it could technically design and build the cars with a lower floor height if the recently adopted "plate H" diagram were included in the specifications. Caltrans and M-K agreed to substitute this newer diagram for the Amtrak clearance

diagram in the specifications. After Caltrans made this modification, M-K committed to the 14 inch floor height and began designing to this criteria.

At a meeting in May 1992, to discuss the progress of the California Car, Amtrak indicated that if the California Car were built to the existing Amtrak clearance diagrams it would have no problem operating the cars. However, Amtrak asserted that if the cars were built to design guidelines other than its own, the design would need to be submitted to Amtrak for review and approval before the cars could be permitted to run on Amtrak lines. Amtrak was uncertain as to how long the review process would take but stated that it might be lengthy. Consequently, to avoid any delays associated with obtaining approvals for operating the railcars from Amtrak and other host railroads, M-K and Caltrans agreed to use the 18 inch floor height specifications from existing Amtrak Superliner equipment. As a result, a change order was executed to use the higher floor height specification for the California Car design. The discussions among the interested parties over this proposed change to the railcar's design caused a delay in M-K's design effort. To accommodate this, Caltrans and M-K agreed to a delay in the delivery schedule of up to five months. (Figure 2 on page 21 shows the delay in the delivery schedule because of the change in the floor height specifications.)

Insert Figure 2

Change Order To Reconfigure Interior of the California Car Caused Five-Month Delay

Caltrans also agreed to another five-month delay in the California Car delivery schedule when it executed a change order that converted the design for the commuter car portion of the order from a bi-level to a tri-level design. This change resulted from negotiations between Caltrans and several commuter service providers.

The bi-level commuter car design in M-K's proposal complied with the intent of the California Car concept to develop a standard railcar that could be used in intercity and commuter services throughout the State. The proposed M-K bi-level commuter car design provided a commuter car using a car shell with most of the major systems, subsystems, and components placed in the same location as in the intercity cars. Although M-K's design complied with the RSAC specifications, some of the Southern California members of the RSAC stated that they did not want to operate the bi-level car in their services because they did not like the interior arrangement of the stairs. During a progress review meeting in November 1992, Caltrans and M-K agreed that the commuter agencies had a strong preference for a tri-level commuter car.

During negotiations between Caltrans and the SCRRA, M-K introduced the possibility of converting the bi-level commuter design into a tri-level configuration. In particular, the SCRRA expressed its desire to have a commuter car produced similar to the tri-level design built by another railcar producer, the Urban Transit Development Corporation. However, M-K learned that the Portugal-based company it had contracted with to produce the California Car shells was not interested in producing the car shells with a tri-level design. M-K eventually found a Brazil-based car shell producer who could accommodate the production of the tri-level design, but it would cost M-K an additional \$7.5 million to cancel the commuter car portion of its contract with the original car shell producer. M-K eventually agreed to absorb the cost associated with canceling the commuter car part of its original order with the Portuguese car shell producer. But in exchange for M-K making this and other concessions, Caltrans agreed to exercise a contract option to purchase an additional 25 intercity cars. Another of the concessions that M-K made as part of obtaining the additional 25-car order was discussed on pages 9 and 10 of this report, where M-K agreed to more specific and enforceable provisions for California content on this project.

When the SCRRA was satisfied with Caltrans' and M-K's commitment to produce the commuter car with a tri-level design, it formalized its agreement with Caltrans for the procurement. After the

"no cost" change order for the conversion to a tri-level railcar was executed in July 1993, the SCRRA signed a formal agreement in September 1993 to have Caltrans act as its purchasing agent to procure 24 tri-level commuter cars. Even though Caltrain had already signed an agreement with Caltrans for up to 24 bi-level commuter cars, it, too, expressed its preference for the tri-level design. Consequently, because the design was changed anyway, Caltrain will also receive tri-level railcars.

Caltrans incurred no additional cost in changing the design for the type of commuter car from a bi-level to a tri-level car but did agree to a five-month delay in the delivery of the cars as a result of the negotiation process between Caltrans, M-K, and the local commuter service providers. (Figure 3 on page 24 shows the delay in the delivery schedule because of the change to a tri-level design.)

Insert Figure 3

Changes Needed To Correct Structural Design Flaws Caused an Overlapping Delay of Five Months

Along with the five-month schedule delay associated with the conversion of the commuter car to a tri-level design, structural design problems caused an overlapping delay of five months. According to correspondence between Caltrans and M-K, it is standard practice in the railcar industry to perform a structural stress analysis of the car shell design early in the design process. This analysis is known as a finite element analysis. However, before performing this analysis of the car shell, M-K had completed the design for other structural portions of the car and ordered raw materials for their manufacture. When M-K eventually performed its first finite element analysis in November 1992, it found several high stress concentrations in the car shell design that would render it unstable under higher weight loads. As part of the structural redesign that these stress concentrations necessitated, M-K determined it also needed to use a higher strength steel for portions of the car shell. The redesign process, coupled with the time needed to order the higher strength steel, resulted in a delay of approximately five months.

Despite repeated statements of concern issued by Caltrans to M-K as early as July 1992 regarding M-K's approach to testing the car's structural design, M-K waited until late in the design sequence to begin the finite element analysis of the car shell. According to a letter to M-K from the chief of the Office of Rail Equipment for Caltrans, the delay associated with the design problem would have been mitigated had the finite element analysis been initiated earlier in the car shell design process. However, because the delay associated with this problem ran concurrently with another delay, no additional time was added to the overall delivery schedule and no added costs were incurred by Caltrans. Therefore, Caltrans did not penalize M-K for causing the delay.

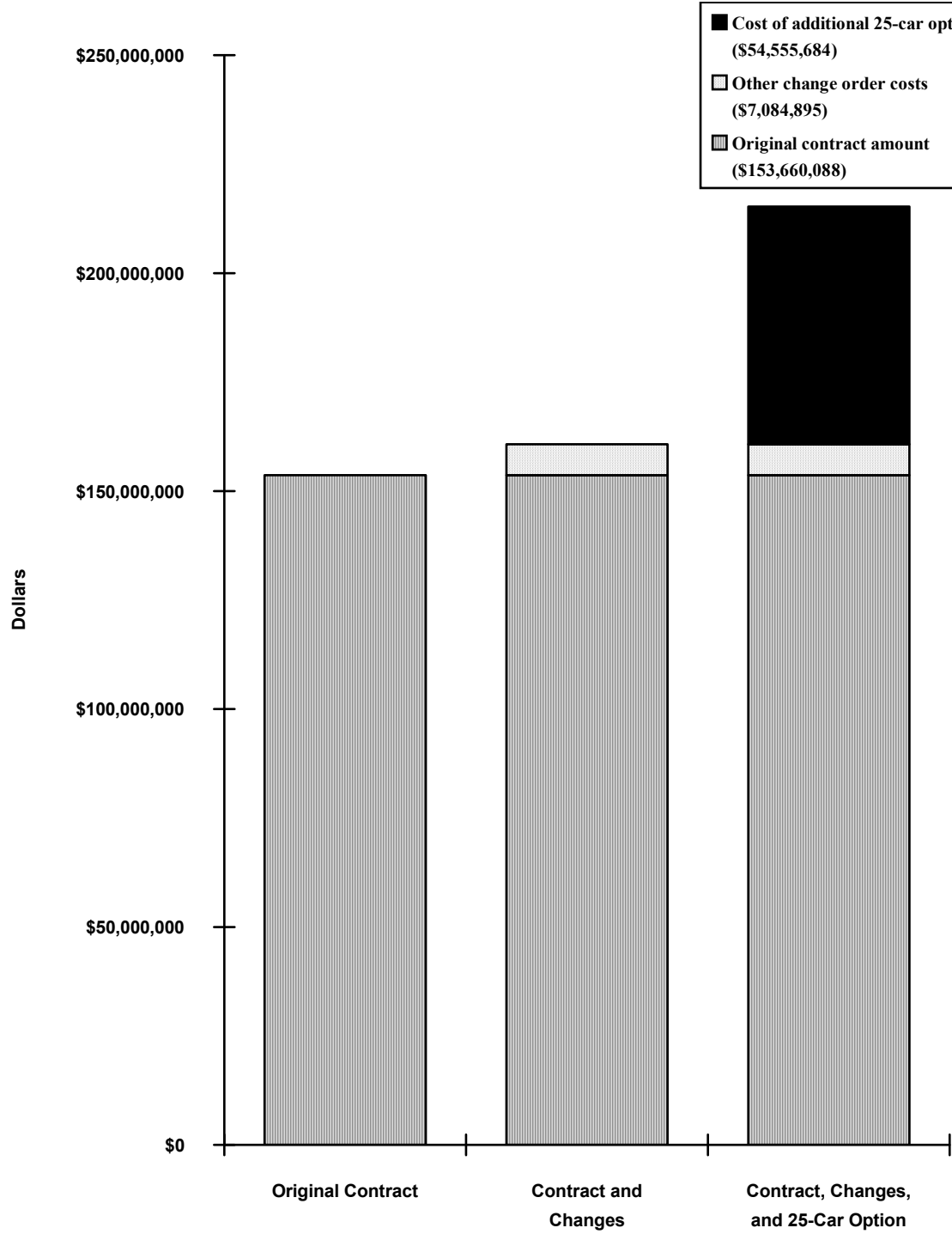
Change Order To Acquire 25 Additional Cars Resulted in a Two-Month Delay

The most recent delay in the delivery schedule occurred in November 1993. This delay was accepted by Caltrans when it executed the change order to authorize the acquisition of an additional 25 intercity cars. The revised schedule projected the delivery of the first railcar to August 1994, extending by two months the delivery schedule that was in effect before the change order. (Figure 4 on page 26 shows the delay in the delivery schedule because of the additional 25 cars.)

Insert Figure 4

FIGURE 1

Cost Changes to the California Car Contract



According to the chief of the Office of Rail Equipment, Caltrans agreed to M-K's request for an additional two-month delay in the delivery schedule in exchange for more comprehensive provisions for liquidated damages in the agreement between Caltrans and M-K. These added provisions applied to the additional 25 intercity cars and to the first two cars of the original 88-car order. These provisions for liquidated damages were included in a Memorandum of Agreement attached to the change order authorizing the production of the additional 25 intercity cars. These provisions stipulate that for the two cars of the original order, M-K will be assessed \$50,000 for the first late day beyond the scheduled delivery dates of August 31, 1994, and September 20, 1994, respectively, and \$1,000 for each late day thereafter up to \$80,000 per car.

In addition, with respect to the additional 25 intercity cars, a \$300 liquidated damages assessment will be levied upon M-K for each day's delay beyond the scheduled delivery date of each car, but only if the car is delivered on or after May 30, 1996. According to the Legislative Counsel, these added contract provisions do not limit the provisions for liquidated damages that existed before these changes. Consequently, M-K can also be charged \$300 for each car for each day's delay beyond the final delivery date of December 31, 1995, for the remaining 86 cars included in the original purchase.

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Chapter 3 A Change in the Participation Goals for Disadvantaged Business Enterprises and Its Effect on the California Car Contract

Chapter Summary

The Legislature requested information about the efforts of the state Department of Transportation (Caltrans) and the Morrison Knudsen Corporation (M-K) to meet participation goals for disadvantaged businesses in the California Car Project. Both state and federal law contain provisions encouraging increased participation of disadvantaged businesses in the fulfillment of contracts with governmental entities. Originally, Caltrans included California's statewide goals for the participation of disadvantaged businesses in the railcars project. But by the time the contract for designing and producing the railcars was awarded to M-K, Caltrans had substituted the less rigorous federal goals for the statewide goals. This substitution took place because of the involvement of \$5 million of federal dollars on this project. However, Caltrans changed course again, eight months after the award of the contract to M-K. At this time, Caltrans negotiated a change order with M-K that reiterated that the federal goals were to apply for this contract, but also required that M-K make a "good faith effort" to attain the state's goals throughout this contract. However, the change order does not outline M-K's responsibilities in making a "good faith effort" in seeking the participation of disadvantaged businesses in the event it is unsuccessful at meeting the participation goals.

We recommend that M-K's responsibilities to make a good faith effort be clearly specified in the event that M-K is ultimately unable to meet the statewide goals for the participation of disadvantaged businesses. In their original proposal, M-K expressed reservation about their ability to meet statewide participation goals for this contract.

Background

Both state and federal law contain provisions encouraging increased participation of disadvantaged business enterprises in the fulfillment of contracts with governmental entities. Specifically, Section 10115 of the California Public Contract Code requires state agencies that award contracts for construction, professional services, materials, supplies, equipment, alteration, repair, or improvement to have statewide participation goals of at least 15 percent for minority businesses and at least 5 percent for women's businesses. In addition, beginning January 1, 1993, Section 10115 was amended to include a statewide

participation goal of 3 percent for disabled veteran business enterprises. These statewide participation goals apply to the overall dollar amount each state agency spends for the contracts it awards during the year.

In addition, Section 10115.2 of the code requires agencies awarding contracts to consider the efforts of bidders to meet the participation goals established for the business enterprises of minorities, women and disabled veterans. The code requires agencies to award contracts to the lowest responsive bidder either meeting the statewide participation goals by including the requisite percentage for the businesses of minorities, women and disabled veterans as subcontractors or suppliers or by making a good faith effort at meeting the goals.

The code defines a good faith effort as a bidder's ability to prove to the awarding agency's satisfaction that the bidder took all the following actions:

- Contacted the awarding department, other state and federal agencies, and local business organizations of minorities, women and veterans to identify these business enterprises;
- Advertised in papers focusing on these types of businesses; and
- Submitted invitations to bid to these businesses and gave them consideration as subcontractors.

Furthermore, the Code of Federal Regulations, Title 49, Section 23.67, requires each entity receiving federal funds to ensure that transit vehicle manufacturers, as a condition of being authorized to bid on transit vehicle procurements in which federal funds are used, formulate their goals for obtaining the participation of disadvantaged businesses. The goals established by the transit vehicle manufacturers are approved by the Federal Transit Administration of United States Department of Transportation, formerly called the Urban Mass Transit Administration (UMTA). The participation goal is expressed as a percentage and is calculated using, as its base, the amount of UMTA funds that will be spent within the United States on transit vehicle contracts undertaken by the vehicle manufacturer during the fiscal year of the bid. If the goal the vehicle manufacturer projects is less than 10 percent of the base, Section 23.65 requires the manufacturer to justify to the UMTA administrator why it feels it will not be able to meet 10 percent participation.

Unlike state law, federal law makes no distinction between minorities' and women's businesses, including both under the category of disadvantaged business enterprises. In addition, federal law does not set any participation goals for the businesses of disabled veterans.

**Participation
Goals Contained
in the Request
for Proposals**

Although Caltrans had originally established state goals for the participation of disadvantaged businesses in the railcars contract, by the time the contract was awarded Caltrans had substituted federal goals for obtaining the participation of disadvantaged businesses. Caltrans' original Request for Proposals (RFP), dated August 16, 1991, contained a section relating to disadvantaged business enterprise goals. In its original form, this section of the RFP informed proposers that Caltrans had established a disadvantaged business enterprise (DBE) participation goal for the California Car contract of 15 percent for minority business enterprises (MBE) and 5 percent for women's business enterprises (WBE). The RFP stated that the DBE requirements would apply to the total price of all work performed on the contract within the United States. The RFP also required interested proposers to identify proposed MBE and WBE subcontractors and the proportion of the total proposal value to be allocated to each. Additionally, the extent to which proposals met or exceeded the participation goals specified in the RFP was listed by Caltrans as one of the criteria used in selecting the winning proposal for the California Car contract. However, the RFP did not specify what constituted a good faith effort or make any reference to the Public Contract Code section that does define such efforts.

According to the chief of the Office of Rail Equipment, M-K submitted the only responsive proposal for the railcar project. In its proposal, M-K established disadvantaged business enterprise goals projected at 2.5 percent for MBE content and .4 percent for WBE content. Further, in its proposal for disadvantaged businesses M-K included a statement about the participation goals for disadvantaged businesses in the RFP. M-K stated that, because of the unique nature of the California Car project and the fact that the design was only in the preliminary stages, it was not possible to firmly identify all minority and women's business participation at that time. M-K went on to say that it would be very difficult to fulfill the aggressive 15 percent MBE and 5 percent WBE participation goals established in the RFP but that M-K was committed to achieving the maximum level of participation. M-K also stated that it intended to use as many qualified minority firms as possible once the designs and workscopes were further defined. However, M-K did not present any evidence in its proposal as to the good faith efforts it had made to obtain the participation of disadvantaged businesses in this project.

In addition to its participation goals and statement, M-K's original response to the RFP also included a letter from the UMTA. The letter stated that the UMTA had reviewed and approved M-K's corporate-wide goal of 10.7 percent for the participation of disadvantaged businesses projected for federal fiscal year 1991-92. The letter further stated that, to comply with UMTA requirements, all disadvantaged businesses counted as part of a participation goal must be certified as eligible.

The Code of Federal Regulations, Title 49, Section 23.45, requires that, in determining whether a business qualifies as an eligible disadvantaged business, the certifying entity must take at least the following steps:

- Perform an on-site visit of the enterprise to obtain resumes or work histories of the principal owners and conduct interviews with these individuals;
- Analyze stock ownership if the enterprise is a corporation;
- Assess the bonding and financial capacity of the enterprise;
- Determine the work history of the enterprise, including contracts received and work completed;
- Compile a list of the equipment to be used, the licenses issued to the enterprise, and the key personnel pertaining to the work to be performed as a disadvantaged enterprise; and
- Obtain a statement from the enterprise regarding the type of work it is seeking as a disadvantaged business enterprise.

The letter from the UMTA to M-K further advised that certifications of eligibility could be obtained from a recipient of federal funds, other transit vehicle manufacturers, or the Small Business Administration, so long as M-K kept proper documentation in its files. Alternatively, the letter stated that M-K could certify as to the eligibility of disadvantaged businesses if M-K first conducted and documented eligibility investigations in conformity with the Code of Federal Regulations, Title 49, Section 23.45.

**Participation
Goals
Contained in the
Contract**

By the time M-K and Caltrans entered the contract on February 20, 1992, the provision concerning participation goals had been changed. As discussed previously, in the RFP Caltrans specified the State's participation goals of 15 percent for MBEs and 5 percent for WBEs. However, the contract was drafted so that this procurement would now be governed by federal requirements concerning the participation goals for disadvantaged enterprises. The revised provision further required that M-K submit an annual corporate-wide participation goal for disadvantaged business enterprises to the federal government and to provide evidence of federal approval or disapproval. M-K had already fulfilled the requirement of providing federal approval of its participation goal by resubmitting a letter provided to Caltrans before as part of M-K's original proposal. Although the federal goals are less stringent than the state goals, at this point we cannot evaluate the impact this change could have on the actual participation of disadvantaged businesses. Up to now, most of the production work on the railcars has occurred outside the United States.

However, by using the federal requirements, M-K was allowed to establish a participation goal of 10 percent for disadvantaged businesses, with both minority and women's businesses falling under the same designation of disadvantaged businesses. Furthermore, under federal requirements, the participation goal is computed using the amount of federal funds that will be spent within the United States on all of M-K's transit contracts undertaken within a given fiscal year. Therefore, if M-K had other large federal contracts it would be theoretically possible for M-K to attain the 10 percent federal participation goal without ever attaining any participation from minority, women's or veteran's businesses on the California Car contract.

**Facts
Surrounding the
Use of Federal
Funds for the
California Car
Contract**

Proposition 116, passed by the voters of California in June 1990, provided funding for the procurement of intercity and commuter railcars. The proposition allowed either Caltrans or local agencies to apply to the California Transportation Commission (CTC) for the allocation of state funding for an initial equipment procurement. In February 1992, Caltrans applied for, and the CTC approved, an allocation of \$100 million for the acquisition of commuter and intercity railcars. Part of that allocation was on behalf of the Peninsula Corridor Joint Powers Board (PCJPB), for whom Caltrans was acting as a negotiator and purchasing agent in the procurement of 23 commuter cars for use on the Peninsula Commute Service.

In addition to the funding provided by the Proposition 116 allocation, Caltrans also intends to use a \$5 million federal grant to help pay for

the 23 California Cars purchased on behalf of the PCJPB. The grant is offered by the Federal Transit Administration (FTA), formerly known as the UMTA, for improved passenger accessibility to commuter railcars. However, as of January 1, 1994, Caltrans had not received the \$5 million in grant funds. Instead, Caltrans has obtained a Joint Statement of Understanding from the FTA allowing Caltrans to continue to incur costs associated with improved railcar accessibility until June 30, 1995, or until the FTA approves the grant without Caltrans jeopardizing the possible future federal reimbursement of those costs.

By intending to use federal funding along with state funds as the means of paying for the M-K California Car contract, Caltrans contends that federal, rather than state, participation goals apply for disadvantaged business enterprises. As a result, Caltrans chose to require that M-K adhere to federal participation goals. According to a legal counsel for Caltrans, the department's position regarding federal regulations taking precedence over state law is based on a legal analysis prepared by the legal division for Caltrans. Caltrans had the chief counsel at the Department of General Services review this legal analysis. The chief counsel agreed that federal regulations could take precedence over state regulations in the establishment of participation goals for disadvantaged businesses, but only if Caltrans could demonstrate that in attaining its goals under federal regulations that it also attained the statewide goals.

The legal analysis was prepared in November 1990 in response to the implementation of AB 1933, Chapter 61, Statutes of 1988, which revised the Public Contract Code to require state agencies to establish statewide participation goals for minority and women's businesses in the awarding of contracts. The analysis argued that the State's requirement for the inclusion of minority and women's participation goals in construction and service contracts conflicted with federal laws and regulations governing Caltrans contracts that were funded partially or wholly with federal money. The two areas of state law cited by Caltrans as conflicting with federal law concerned the establishment of goals and the method of achieving the goals, once established. Specifically, the analysis stated that, while state law requires setting separate participation goals of 15 percent for minorities and 5 percent for women's businesses, federal law sets a single minimum participation goal of 10 percent for "disadvantaged businesses," defined as encompassing both minority and women's businesses.

Another difference between the state law and federal law cited in the analysis is that the state law requires a bidder to either meet minority and women's businesses participation goals or demonstrate a good faith

effort to meet those goals for each contract. According to the state law, if bidders cannot demonstrate good faith efforts, they risk being declared nonresponsive by the agency awarding the contract. Federal law, on the other hand, requires that the recipient of federal funds set an overall organization-wide goal of 10 percent or more for the participation of disadvantaged businesses on contracts awarded or justify establishing a projected goal of less than 10 percent.

We sought an opinion by the Legislative Counsel on whether the federal participation requirements for disadvantaged businesses supersede the State's participation requirements when a portion of the funding for a procurement comes from a federal source. It was the Legislative Counsel's opinion that, for the purposes of a federally assisted contract for the procurement of railcars, state requirements for the participation of disadvantaged businesses are not superseded by the federal requirements.

The Legislative Counsel based his opinion on the fact that, although the federal and state programs for the participation of disadvantaged businesses in public contracts differ significantly, it does not appear that a state agency that was in compliance with the requirements of the state program would necessarily be unable to comply with the federal requirements applicable to that contract. Therefore, according to the Legislative Counsel, Caltrans should apply both federal and state standards in this project, not one standard or the other. Under this scenario, M-K would be expected to strive for the higher state standard and by doing so would also be attempting to meet the federal standard.

Participation Goals Contained in Contract Change Orders

Caltrans executed a contract change order in October 1992, eight months after the original contract became effective, modifying the section of its contract with M-K regarding the participation of disadvantaged businesses. The change order still required M-K to comply with federal requirements concerning participation; however, it also required M-K to make a good faith effort to attain state participation goals throughout the life of the contract. State participation goals for the following business enterprises were specified:

- 15 percent for minority-owned businesses;
- 5 percent for women-owned businesses; and
- 3 percent for disabled veterans' businesses.

The change order further required M-K to submit a quarterly report to Caltrans identifying the percentage and specific substance of participation attained by M-K's suppliers. However, although the change order did mention that M-K make a good faith effort to obtain participation of disadvantaged businesses, the change order did not specify what constituted a good faith effort. Also, it did not make any reference to the section of the Public Contract Code that defines such efforts.

Because much of the early production work on the California Car is performed outside of the United States, there has been limited opportunity for participation by United States' businesses at this point in the M-K contract. However, we obtained the most recent plan prepared by M-K showing anticipated participation of disadvantaged businesses under the California Car contract. The plan, as of January 1994, shows M-K's commitment to a total of 20 disadvantaged businesses representing a participation value of approximately \$5 million, or 2.3 percent of the value of the United States' portion of the contract. Of the 20 disadvantaged businesses, 9 are minority owned and 11 are women owned. The minority-owned businesses represent a participation value of approximately \$2.3 million (1.3 percent) and women-owned businesses represent approximately \$2.7 million (1.5 percent).

However, not all of the 20 disadvantaged businesses that M-K lists have been certified by Caltrans as disadvantaged businesses. Seven of the businesses possess certifications of eligibility issued by Caltrans, although one has expired; another 9 have certifications of eligibility on file with other entities, and the remaining 4 have not yet been certified.

**Effect That
Revision of
Participation
Goal Had on the
California
Contract**

If Caltrans had retained the state requirements in its contract with M-K rather than the less vigorous federal requirements regarding the participation of minorities' and women's businesses, M-K's required participation goals would have been higher. Using the amount M-K identified in its proposal as the portion of the contract to be spent in the United States, state participation goals for the initial contract would have been \$17.7 million for minority businesses and \$5.9 million for women's businesses (participation goals for disabled veterans' businesses did not become effective until January 1, 1993). Moreover, once Caltrans exercised its option in November 1993 to purchase an

additional 25 railcars from M-K, the participation goals would have increased to \$27.1 million for minority businesses, \$9 million for women's businesses and \$5.4 million for disabled veteran's businesses. Using the State's requirements, M-K would have had to either attain each of these participation goals in fulfilling the contract or demonstrate to Caltrans that it had made a good faith effort to attain them.

Recommendation Caltrans needs to clearly specify M-K's responsibilities to make a good faith effort in seeking the participation of disadvantaged businesses in the event it is unsuccessful at meeting the statewide goals.

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Chapter 4 Caltrans' Ownership Rights to Design Plans and Technical Specifications for the California Car

Chapter Summary One of the purposes of this audit was to determine whether the state Department of Transportation (Caltrans) could have entered into an agreement with a contractor other than the Morrison Knudsen Corporation (M-K) to build the 25 railcars beyond the initial 88 railcars called for in M-K's contract. Caltrans chose not to do this, instead exercising an option in its contract with M-K to have M-K build the 25 cars. However, if Caltrans had decided to seek a contractor other than M-K for the additional 25 cars, Caltrans would have needed to obtain the design drawings prepared by M-K. This raises the question of whether Caltrans would have had access to M-K's design drawings.

To address this question for the Legislature, we obtained a Legislative Counsel's opinion on whether Caltrans could exercise a right to use design data developed by M-K during the railcar contract and whether Caltrans could use such design data to solicit proposals from other contractors to procure additional railcars. According to the Legislative Counsel, at any time following the execution of the contract, Caltrans could exercise its right to use design data developed by M-K. Further, it was the counsel's opinion that the engineering data could be used by Caltrans in connection with the solicitation of proposals for the procurement of additional railcars.

Another issue we were asked to address in this audit was whether it would have been less costly for Caltrans to use a contractor other than M-K to build the 25 additional railcars. However, it is not possible for us to conclude whether the State would have saved money doing this without actually going through the process of advertising for this work and receiving proposals from competing firms. According to the consultant for Caltrans, the design drawings are refined over the life of the contract. However, the closer the plans are to the as-built phase, the more value the plans have to other contractors who might bid on the production of additional railcars.

Background Caltrans issued Requests for Proposals (RFP) to procure the California Car project based on approved performance specifications. An entity issuing an RFP can request potential contractors to submit proposals based on either detailed specifications or performance specifications. Detailed specification contracts are used when the awarding entity's objective is essentially to reproduce an existing product, with design elements, drawings, and specifications available to contractors at the time of proposal. In contrast, performance specification contracts are used when the awarding entity intends to produce a new product and existing designs are not available. Performance specification contracts provide proposers with the general parameters of the project to be constructed, leaving the actual design details to the prospective proposers.

Provisions Contained in the Request for Proposals In its RFP, Caltrans included a provision regarding its rights to designs and tooling developed under the California Car contract. In that provision, Caltrans reserved the right to use the design and tooling developed during the course of the contract, including any drawings, layouts, and relevant engineering data. Further, the RFP stated that the contractor selected would be responsible for maintaining this material and tooling in good order for a minimum of ten years after the delivery of the last car under the contract. In addition, the RFP stipulated that all plans, drawings, diagrams, schematics, and specifications become the property of the State and that the contractor will transfer such material to the State on demand, at no cost to the State.

On February 20, 1992, Caltrans executed a contract with M-K incorporating all the provisions included in the RFP, including the provision regarding design and tooling rights.

Legislative Counsel's Opinion One of the purposes of this audit was to determine whether Caltrans could have entered an agreement with a contractor other than M-K to build the 25 railcars beyond the 88 railcars called for in M-K's contract. Caltrans chose not to do this, instead exercising an option in its contract with M-K to have M-K build the 25 cars.

However, if Caltrans had decided to seek a contractor other than M-K for the additional 25 cars, Caltrans would have needed to obtain the design drawings prepared by M-K. This raises the question of whether Caltrans would have had access to M-K's design drawings. To address this question for the Legislature, we obtained a Legislative Counsel's opinion on whether Caltrans could exercise a right to use design data developed by M-K during the railcar contract and whether Caltrans could use such design data to solicit bids from other contractors to procure additional railcars. According to the Legislative Counsel, at any time following the execution of the contract, Caltrans could exercise its right to use design data developed by M-K. Further, it was the counsel's opinion that the engineering data could be used by Caltrans in connection with the solicitation of bids for the procurement of additional railcars.

Design Plans Have Relative Value According to a senior associate at Booz-Allen & Hamilton Incorporated (Booz-Allen), the consulting firm hired by Caltrans to administer the California Car contract, the detailed design for the railcar will be developed and refined over the life of the contract with M-K. The senior associate identified the following types of plans as already developed or to be developed under the contract with M-K:

- **Initial plans** are plans based on the performance specifications contained in the RFP and only present broad concepts of the railcars' design;
- **Reviewed plans** are the initial plans reflecting refinements made as a result of plan reviews by both Caltrans and Booz-Allen;
- **Prototype plans** are plans reflecting changes made after tests, such as structural stress tests, on prototypes of the railcar;

- **Construction-in-progress plans** are plans reflecting any changes made during the assembly line production of the railcars; and
- **As-built plans** are the final plans for the finished railcars after all acceptance testing has been completed.

According to the senior associate, as M-K progresses toward the as-built plan phase under the contract, the value and accuracy of plans increase as does the ability of Caltrans to effectively use the plans to solicit bids for the production of additional railcars. The senior associate stated that Caltrans was the owner of all the plans developed for the railcar by M-K. However, the senior associate also stated that the closer the plans are to the as-built plan phase, the more value the plans have to contractors bidding on the production of additional railcars.

Should Caltrans Have Chosen Other Contractors for Additional Work? One of the issues that we were asked to address in this audit was whether it would have been less costly for Caltrans to use a contractor other than M-K to build the 25 additional railcars. Without actually soliciting proposals from other contractors, we cannot conclude on whether the State would have saved money using other contractors.

However, M-K would enjoy certain advantages over other proposers if Caltrans were to solicit proposals for additional railcars and M-K were one of the proposers. These advantages include, but are not limited to, the avoidance of start-up and infrastructure costs, tooling costs, and learning curve delays. In addition, M-K already has secured suppliers and proven subcontractors.

Chapter 5 Incurred and Projected Overhead Associated With the California Car Contract

Chapter Summary One of the purposes of this audit was to assess the reasonableness and propriety of the overhead costs associated with managing the California Car contract. Overhead includes the costs of approving and inspecting each of the deliverables produced by the Morrison Knudsen Corporation (M-K), such as the designs, plans, and railcars. Overhead also includes the costs of administering the M-K contract. Overhead for the M-K contract is incurred by both the Division of Rail and the Office of Rail Equipment within the state Department of Transportation (Caltrans) in addition to the consultant hired to administer this contract, Booz-Allen & Hamilton, Incorporated (Booz-Allen).

The overhead costs associated with managing the M-K contract will total an estimated \$8.2 million, or 3.8 percent of the total cost of the M-K contract. This includes the expenses of both the Office of Rail Equipment and the consultant, Booz-Allen. To gauge the reasonableness of the \$8.2 million that will be spent overseeing the M-K contract, we contacted three entities that administer contracts of comparable size and

scope to the M-K contract. We requested from these entities their overhead costs for managing their respective contracts. However, these entities were either unable or unwilling to share this information with us. According to a Division of Rail planning document, for other railcar procurements in the United States, the cost of overseeing the project typically ranges between 5 percent and 8 percent of the total contract price.

To gauge the propriety of the amounts charged by Booz-Allen for overseeing the M-K contract, we reviewed a sample of the supporting documentation for all billings received to date by Caltrans. We ensured that the amounts being charged were allowable costs according to the terms of Booz-Allen's contract with Caltrans. We found no improper expenditures among the items we tested.

Background Caltrans entered into a contract with Booz-Allen on January 29, 1992, to provide consultant services for the oversight, support, and training of Caltrans employees in administering the California Car contract between Caltrans and M-K. The total amount of the Booz-Allen contract is \$3.7 million, and unless it is extended, will end on June 30, 1995.

As the consultant chosen by Caltrans to oversee the M-K contract, Booz-Allen agreed to provide support to Caltrans in the following primary areas:

- Ensuring M-K complies with the specifications contained in its contract with Caltrans;
- Representing the interests of the State of California throughout the design, development, production, assembly, and acceptance testing phases of Caltrans' procurement of railcars from M-K;
- Training Caltrans employees to oversee the manufacturing of the railcars produced by M-K; and
- Providing general engineering, administrative, and management support in solving any problems that might arise during the course of the M-K contract.

The Office of Rail Equipment was assigned responsibility for determining the number of commuter and intercity railcars needed throughout the State, developing a competitive negotiation process for the acquisition of the railcars, evaluating proposals, awarding the contract to the most competitive of the proposers, and establishing a delivery schedule for the railcars that would best serve the needs of the operators of California's rail services.

Overhead costs of the California Car contract are paid from two different fund sources. The Booz-Allen consulting contract is funded from Proposition 116 bond proceeds while the overhead incurred by the Office of Rail Equipment is funded through the Caltrans operating budget, except for out-of-state travel, which Caltrans pays for with \$400,000 of Proposition 116 bond proceeds allocated for that purpose.

Incurred and Projected Overhead Relating to the California Car Contract We limited our analysis of overhead costs to only those costs directly related to administering the M-K contract. Therefore, we excluded administrative costs incurred by the Office of Rail Equipment for developing the Request for Proposals (RFP) for the California Car and for evaluating proposals. In addition, we excluded any estimated post-contract activities, such as inspection and maintenance costs occurring after M-K has completed the contract. Likewise, we excluded from our analysis consultant fees paid to Booz-Allen by Caltrans for assistance in developing the California Car RFP and any costs that may be incurred by Booz-Allen after the completion of the M-K contract.

Managing the M-K contract is only one of the various responsibilities of the Office of Rail Equipment. However, the Office of Rail Equipment does not account for its costs associated with the M-K contract separately. Therefore, we were required to estimate the Office of Rail Equipment's costs related to the M-K contract.

To estimate the annual labor component, we identified the number of personnel years (PY) spent or budgeted within the Office of Rail Equipment for each year of the M-K contract. Then, we multiplied each year's total PYs by \$53,000, the amount Caltrans uses to express the value of a person year for budgetary purposes. In estimating the Office of Rail Equipment's overhead expense, we also included a portion of the costs of Caltrans' Division of Rail.

As shown in Table 1 below, the total incurred and projected overhead associated with the oversight of the California Car contract is approximately \$8.2 million or 3.8 percent of the total cost of the M-K contract. Moreover, of the \$8.2 million, \$1.9 million was for the incurred or projected overhead costs of the Office of Rail Equipment and \$6.3 million was for the incurred and projected overhead costs of Booz-Allen. However, the \$6.3 million figure also includes Booz-Allen's request for a \$2.5 million increase in its contract with Caltrans to compensate it for work beyond that covered in the original contract and for administering the additional procurement of 25 more railcars. Booz-Allen's request is currently under review by Caltrans but has not been approved as of February 3, 1994.

Table 1
Overhead Costs for Oversight of the California Car Contract

	Fiscal Year					Total Contract Period
	1991-92 <u>Actual</u>	1992-93 <u>Actual</u>	1993-94 <u>Budget</u>	1994-95 <u>Projected</u>	1995-96 <u>Projected</u>	
Caltrans	\$181,643	\$ 307,913	\$ 535,031	\$ 546,056	\$ 343,044	\$1,913,687
Booz-Allen Contract	<u>277,723</u>	<u>1,413,075</u>	<u>1,004,173</u>	<u>1,004,173</u>	<u>2,548,283</u>	<u>6,247,427</u>
Total Cost	<u>\$459,366</u>	<u>\$1,720,988</u>	<u>\$1,539,204</u>	<u>\$1,550,229</u>	<u>\$2,891,327</u>	<u>\$8,161,114</u>

To determine if the incurred and projected costs for Booz-Allen's and Caltrans' oversight of the California Car contract with M-K is reasonable, we contacted three other entities that administered contracts of comparable size and type to the M-K contract and attempted to obtain their costs for administration. However, we were unable to obtain such information either because the entity did not keep records that segregated these costs or because they were unwilling to share such information with us.

However, according to a Division of Rail planning document dated December 6, 1991, the cost of oversight for most United States' railcar procurements typically ranges between 5 percent and 8 percent of the total contract price, with 6 percent or 7 percent being the average.

To determine the propriety of the amounts charged by Booz-Allen for overseeing the M-K contract, we reviewed a sample of the supporting documentation for all billings received to date by Caltrans. We ensured that the amounts being charged were allowable costs according to the terms of Booz-Allen's contract with Caltrans and that such charges agreed with the amounts shown in the summarized billings. We found no exceptions during our testing. In addition, we reviewed all the allocations of Proposition 116 bond proceeds made as of December 1, 1993, by the California Transportation Commission to ensure that all such allocations were in the amounts and for the purposes intended by the proposition and stated in the California Public Utilities Code, Section 99620 et seq. Again, we found no exceptions.

We conducted this review under the authority vested in the state auditor by Section 8543 et seq. of the California Government Code and according to generally accepted governmental auditing standards. We limited our review to those areas specified in the audit scope of this report.

Respectfully submitted

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