City and County of San Francisco

Office of the Controller – City Services Auditor

SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY:

The Sustainable Streets Division Could Improve Its Operations

June 9, 2011

CONTROLLER'S OFFICE
CITY SERVICES AUDITOR

The City Services Auditor was created within the Controller's Office through an amendment to the City Charter that was approved by voters in November 2003. Under Appendix F to the City Charter, the City Services Auditor has broad authority for:

- Reporting on the level and effectiveness of San Francisco's public services and benchmarking the city to other public agencies and jurisdictions.
- Conducting financial and performance audits of city departments, contractors, and functions to assess efficiency and effectiveness of processes and services.
- Operating a whistleblower hotline and website and investigating reports of waste, fraud, and abuse of city resources.
- Ensuring the financial integrity and improving the overall performance and efficiency of city government.

The audits unit conducts financial audits, attestation engagements, and performance audits. Financial audits address the financial integrity of both city departments and contractors and provide reasonable assurance about whether financial statements are presented fairly in all material aspects in conformity with generally accepted accounting principles. Attestation engagements examine, review, or perform procedures on a broad range of subjects such as internal controls; compliance with requirements of specified laws, regulations, rules, contracts, or grants; and the reliability of performance measures. Performance audits focus primarily on assessment of city services and processes, providing recommendations to improve department operations.

We conduct our audits in accordance with the Government Auditing Standards published by the U.S. Government Accountability Office (GAO). These standards require:

- Independence of audit staff and the audit organization.
- Objectivity of the auditors performing the work.
- Competent staff, including continuing professional education.
- Quality control procedures to provide reasonable assurance of compliance with the auditing standards.

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City and County of San Francisco

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San Francisco Municipal Transportation Agency: The Sustainable Streets Division Could Improve Its Operations

June 9, 2011

Purpose of the Audit

The City Services Auditor (CSA) conducted this audit to evaluate the performance of the Sustainable Streets Division (SSD) of the San Francisco Municipal Transportation Agency (SFMTA). The audit set out to assess: how well SSD maintains the City and County of San Francisco's (City's) traffic markings, signals and signs; the compliance of its major contracts with basic City requirements; whether SSD coordinates its projects to prevent scheduling conflicts and ensure the work is efficient; whether SSD's off-street parking management model is advantageous to the City; and the adequacy of SSD's performance measures. This is the first in a planned series of annual CSA audits, each which will address one SFMTA division.

Highlights

The Sustainable Streets Division:

- Administers long-term leases of six City-owned parking garages to five nonprofit parking corporations, an arrangement that costs the City an estimated $551,000 extra per year, does not have tangible operational advantages and appears to exist nowhere else in California. Four of the five corporations are an additional layer of management between SFMTA and the contractual garage operator. The corporations are unlikely to serve the original purpose for which they were created — to incur debt to build City parking garages — because the City Charter now greatly restricts SFMTA's ability to construct or expand garages.
- Performs limited preventive maintenance, little of it scheduled. The Traffic Paint Shop, Traffic Sign Shop and Traffic Signal Shop may have to do more scheduled preventive maintenance in coming years as the City's traffic signs will have to comply with federal minimum reflectivity standards and pavement markings on some City streets will have to comply with similar standards, if adopted.
- Does not have management systems, including maintenance-oriented inventories indicating condition or age, for the City's installed signs and pavement markings. Such inventories would assist in a methodical, scheduled preventive maintenance programs in these areas.
- Cannot keep up with requests to maintain the City's traffic signals and markings. Estimated backlogs of requested work are three months at the Traffic Signal Shop and four to six months at the Traffic Paint Shop.
- Has an understaffed Traffic Signal Shop when compared to industry standards for staffing in terms of the number of signalized intersections. (Comparable standards were not available for the other shops.)
- Inadequately tracks its contracts. One contract was expired for over three years while work continued. There is no complete list of SSD contracts, not all SSD contracts are in SFMTA's IntelliContract database and contract documents cannot always be readily found.
- Coordinates project scheduling with other parts of SFMTA, other City departments and public utilities to avoid scheduling conflicts but

Recommendations

The audit report includes 38 recommendations for SFMTA to improve the operations of SSD. Specifically, the SFMTA should:

- Compare the costs and benefits of nonprofit parking corporations and establish a policy on whether the City should assume the outstanding debt of nonprofit parking corporations.
- Decide whether the City should continue to lease garages to nonprofit parking corporations that have no garage-related debt.
- As required by federal guidelines, by January 2012 adopt a sign reflectivity assessment or management method.
- Plan how it will replace signs that do not meet federal minimum reflectivity levels before the federal deadlines.
- Consider implementing a scheduled preventive maintenance program that will periodically assess all traffic control equipment, not just signs.
- Acquire database software to track the condition of the City's installed signs and

inconsistently and inadequately monitors the status of its projects, potentially reducing the ability of project managers and SSD management to keep projects on budget and on schedule. • Reports unreliable results data for several of its performance measures and uses some measures that are poorly designed or written, making the division's performance reporting less valuable to decision makers.	pavement markings. • Use the IntelliContract database as a tool to monitor all of its contracts. • Develop an operations manual for projects that details the project manager's duties, including the reporting of project status. • Periodically conduct and document reviews of source data for reported performance measure results.

Copies of the full report may be obtained at:
Controller's Office ● City Hall, Room 316 ● 1 Dr. Carlton B. Goodlett Place ● San Francisco, CA 94102 ● 415.554.7500
or on the Internet at http://www.sfgov.org/controller

CITY AND COUNTY OF SAN FRANCISCO
OFFICE OF THE CONTROLLER

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Controller

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June 9, 2011

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Nathaniel Ford, Sr.
Executive Director/CEO
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Dear President, Directors, and Mr. Ford:

The Controller's Office, City Services Auditor Division (CSA), presents its audit report on the Sustainable Streets Division (SSD) of the San Francisco Municipal Transportation Agency (SFMTA). The purpose of the audit was to evaluate SSD's operations in several key areas. The audit objectives were determined by CSA after a consultative process with SFMTA. This is the first audit in a series of annual audits by CSA that will eventually evaluate every division of SFMTA.

The audit concluded that:

- Leasing six parking garages to five nonprofit corporations is unnecessarily costly to the City.
- SSD does little scheduled preventive maintenance of the City's traffic signals, signs and traffic markings and will need to do more in the future to comply with federal standards.
- SSD should keep better track of its contracts; SFMTA has no comprehensive list or database of its contracts.
- SSD coordinates its projects to prevent scheduling conflicts and ensure the work is efficient. However, it needs to improve the tracking of and reporting on the status of its projects.
- SSD should improve some of its performance measures and the results data reported for them.

The audit report includes 38 recommendations for SFMTA to consider. SFMTA's response to the audit report is attached as Appendix E. CSA will work with SFMTA to follow up on the status of the recommendations made in this report.

We appreciate the assistance and cooperation that SFMTA staff provided to us during the audit.

Respectfully,

Tonia Lediju
Director of Audits

cc: Mayor
Board of Supervisors
Civil Grand Jury
Budget Analyst
Public Library

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LIST OF ABBREVIATIONS AND ACRONYMS

311	City and County of San Francisco's Customer Service Center
AASHTO	American Association of State Highway and Transportation Officials
AS/400	An IBM computer system
CFA	Central Fire Alarm unit (part of the Department of Technology)
CSA	City Services Auditor
DED	Deputy Executive Director
FHWA	Federal Highway Administration
FTE	Full-time Equivalent
MUTCD	Manual on Uniform Traffic Control Devices
NTOC	National Transportation Operations Coalition
OCA	Office of Contract Administration
SF*go*	San Francisco's transportation management system
SFMTA	San Francisco Municipal Transportation Agency
SSD	Sustainable Streets Division
SSRS	Service Standard Reference Sheet

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Introduction: An Overview of SFMTA

Audit Authority

This audit was conducted under the authority of the Charter of the City and County of San Francisco (City), Section 3.105 and Appendix F, which requires that the City Services Auditor (CSA) of the Controller's Office conduct periodic, comprehensive financial and performance audits of City departments, services, and activities.

This is CSA's first annual performance audit of the San Francisco Municipal Transportation Agency's (SFMTA) six divisions. This audit evaluates the operations of the SFMTA's Sustainable Streets Division (SSD). This work will inform SFMTA's leadership as they address ongoing fiscal concerns. Presented in this section of the report is a broad overview of the SFMTA's organization, background of the SSD, and the audit scope and objectives.

Background on SFMTA

SFMTA is responsible for and operates the City's transportation network. This network encompasses multimodal transportation such as pedestrian, bicycle, motor vehicle transportation and the San Francisco Municipal Railway. SFMTA is also responsible for all City street parking, including City-owned off-street parking facilities, and regulates the taxi industry in San Francisco.

SFMTA's governance and structure

SFMTA is governed by its Board of Directors, a seven-member body whose members are appointed by the Mayor and confirmed by the Board of Supervisors. In November 1999, San Francisco voters passed Proposition E, forming SFMTA by consolidating the San Francisco Municipal Railway and the City's Department of Parking and Traffic into one agency. In March 2009 SFMTA assumed responsibility for regulating taxis as a result of the passage of Proposition A on the City ballot.

SFMTA consists of six divisions:

- Administration, Taxis & Accessible Services
- Capital Programs & Construction
- Finance & Information Technology
- Safety, Training, Security & Enforcement
- Sustainable Streets
- Transit

As of January 11, 2011, SFMTA created a Deputy Executive Director's (DED) Office to ensure that the agency's strategic vision and critical programs are implemented throughout the organization and provide heightened attention to the day-to-day oversight of the business functions of each SFMTA division. The DED Office's key functions include agency audit, governmental affairs, contracting oversight, and corporate communications.

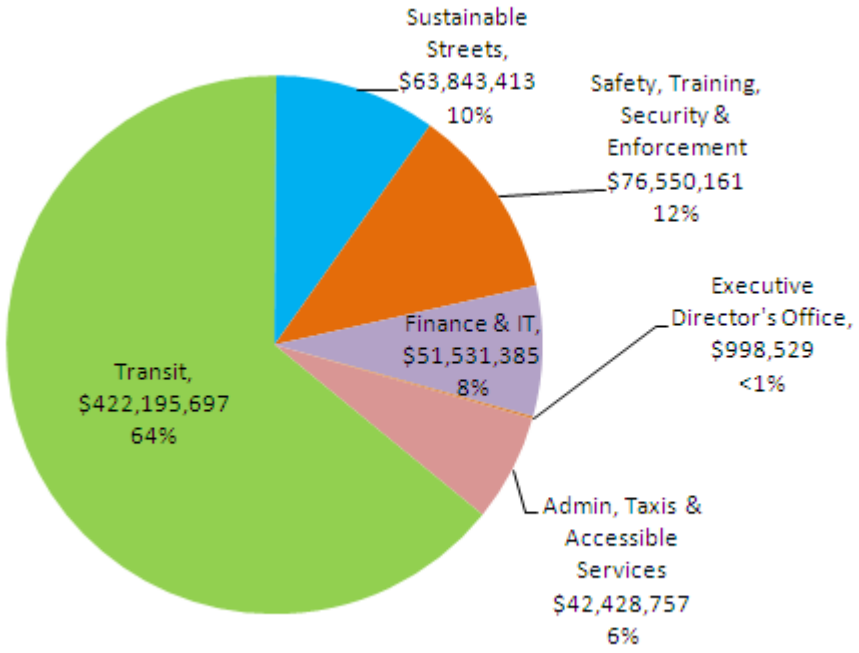
An organizational chart of SFMTA is included as Appendix A to this report.

SFMTA's staffing and budget

As of January 1, 2011 SFMTA had 4,534 budgeted full-time equivalent (FTE) employees and an operating budget for fiscal year 2010-11 of $776 million, including $467 million in grant funds allocated for specific programs and projects.

Exhibit 1 summarizes the breakdown of $658 million of the SFMTA's operating budget for the current fiscal year, excluding $118 million in budgeted agency-wide expenditures, work orders and Board of Directors' expenditures.

EXHIBIT 1 **San Francisco Municipal Transportation Agency Operating Budget for Fiscal Year 2010-11 Excluding Agency-wide Expenses**



Note: The chart does not include $118.2 million in agency-wide expenses, work orders, and Board of Directors' expenses.

Source: Auditors' analysis of SFMTA data.

SFMTA's strategic plan and current initiatives

In July 2007 SFMTA's Board of Directors adopted the agency's 2008-2012 Strategic Plan, consistent with San Francisco Administrative Code Section 3.5(b), which requires every City department to develop and annually review such a plan that looks forward at least three years. Through developing the plan, SFMTA established the following mission statement:

> SFMTA, comprised of the Municipal Railway, Department of Parking and Traffic and the Parking Authority, is responsible for all modes of transportation within the City and County of San Francisco including public transit, bicycling, pedestrian planning and accessibility, and parking and traffic management.

To achieve its mission, SFMTA set six goals in the following categories:

- Customer Focus
- System Performance
- External Affairs/Community Relations
- Financial Capacity
- SFMTA Workforce
- Information Technology

To reach its goals, SFMTA is engaged in a myriad of projects and programs for the enhanced safety and reliability of the City's transportation network including:

- Transit projects such as the Central Subway Project and the Transit Effectiveness Project.
- Bicycle projects including creating 23 miles of bicycle paths and marking over 40 miles of bicycle lanes and 1,250 shared lane markings.
- SF*go,* which utilizes intelligent transportation technology to replace the City's aging traffic signal and communications infrastructure.
- School Area Safety Program.
- Reform proposals aimed at improving the taxi industry.
- Parking and traffic projects including SF*park,* which uses parking management technology to manage the City's parking supply.
- Red Light Photo Enforcement Program.

Background on Sustainable Streets Division

SFMTA's Sustainable Streets Division, formed in December 2009, was the focus of the audit. SFMTA created SSD to manage non-transit modes of transportation, including bicycles, pedestrians, and vehicles other than taxis, and is responsible for designing and directing all engineering functions in San Francisco. SSD's mission is to provide multi-modal transportation planning, engineering and operational improvements to the City's transportation system to support sustainable community and economic development. SSD had 259 budgeted FTE employees as of January 1, 2011, and an operating budget of $63.1 million for fiscal year 2010-11. The division plans to spend an additional $29.4 million in grant funds during the fiscal year.

SSD's origin and structure

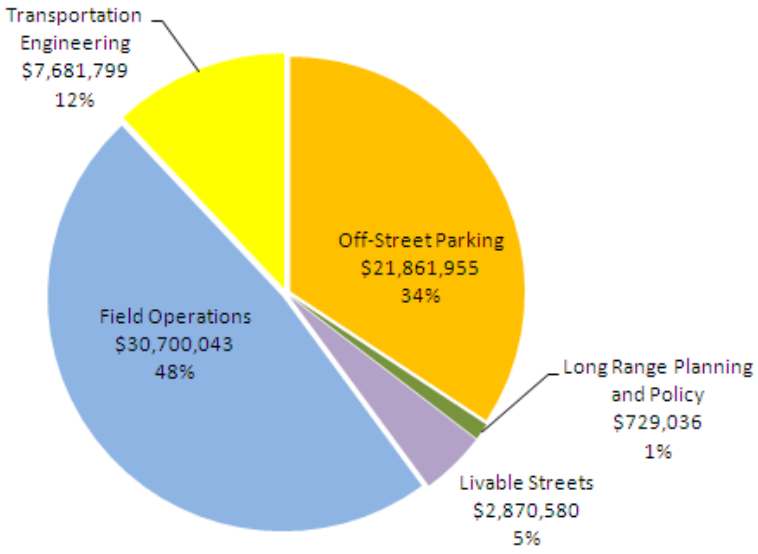
SSD is composed of five subdivisions:

- Field Operations
- Livable Streets
- Long-Range Planning and Policy
- Off-street Parking
- Transportation Engineering

These subdivisions are coordinated by an administrative group responsible for SSD's finance, human resources, and budget functions.

Exhibit 2 shows the subdivisions of SSD by their budgeted expenditures for fiscal year 2010-11.

EXHIBIT 2 **Sustainable Streets Division Operating Budget for Fiscal Year 2010-11**



Source: Auditors' analysis of SFMTA data.

Field Operations subdivision

The Field Operations subdivision is composed of three shops responsible for the installation, modification and maintenance of the City's traffic signs, and pavement markings. Traffic control devices such as pavement markings, signs, signals and special (color) curb zones promote roadway safety and efficiency by providing for the orderly movement of road users. The audit reviewed SSD's Traffic Paint Shop, Traffic Sign Shop and Traffic

Signal Shop, which design, place and maintain traffic control devices in San Francisco. These shops are described below.

Traffic Paint Shop

The Traffic Paint Shop, located under SSD's Field Operations subdivision, installs, modifies and maintains the City's pavement markings, which include traffic lane lines, crosswalks, including school crosswalks, bicycle lanes, colored curbs, reflective bumps and messages in the street. The Paint Shop receives requests for the marking and modification of streets and color curb zones from sources including the Transportation Engineering subdivision, Department of Public Works and the City's 24-hour telephone Customer Service Center (311). As of February 2011 the Paint Shop had 29 FTE staff, including 22 traffic marking painters. Three of these painters were recently hired and 3 painter positions remain vacant.

Traffic Sign Shop

The Traffic Sign Shop (Sign Shop), located under SSD's Field Operations subdivision, installs, modifies and maintains the City's more than 200,000 traffic signs. This includes regulatory (for example, speed limit) signs, warning signs, and guide signs. The Sign Shop fabricates some of the signs it installs.

The Sign Shop receives requests for the maintenance of traffic signs through SSD's Transportation Engineering subdivision, 311, SFMTA's parking control officers and the Department of Public Works. As of February 2011 the Sign Shop had 27 FTE staff, including 16 sign workers and 5 traffic survey technicians. The position that leads the shop (traffic sign manager) and 2 sign worker positions are vacant.

Traffic Signal Shop

The Traffic Signal Shop installs, modifies and repairs traffic signal systems at each of the City's 1,187 signalized intersections. A signalized intersection has a controller, a set of traffic signals, and associated components such as vehicle and pedestrian detection systems. Signal Shop personnel program timing data into intersection controllers and other devices to control the movement of traffic. The City uses four types of controllers, each of which requires different programming and staff expertise.

The Signal Shop receives requests for work from sources including the Transportation Engineering subdivision, 311, and the Police Department. As of February 2011 the Signal Shop had 26 FTE staff, although one employee was on long-term leave, including 16 traffic signal electricians, and no vacancies.

Effective December 2, 2010, SFMTA management moved the Signal Shop from the Field Operations subdivision to the SSD Transportation Engineering subdivision, which is headed by the City traffic engineer. SFMTA reports that this was done as the result of its shift to more technology-driven processes and programs, and the need for transportation engineers and planners to work more closely with the Signal Shop.

Appendix B contains more information about each of the shops and preventive maintenance.

Livable Streets subdivision

The Livable Streets subdivision promotes safety for bicyclists, pedestrians, and motorists by working closely with policy makers and community groups to provide design, planning, engineering, education, and outreach strategies to neighborhoods. Pedestrian, traffic calming, bicycle, and school area safety programs are managed in this subdivision.[1]

Long Range Planning and Policy subdivision

The Long-Range Planning and Policy subdivision consists of four main sections, including:

- *Policy Coordination and Analysis* – works on multi-modal transportation policies, performs trend analyses over long-term policies and coordinates with local, state and federal policy makers.
- *Capital Systems Planning* – prioritizes SFMTA's capital projects through the Capital Improvement Plan and updates short- and long-range plans.
- *Network Systems Planning* – updates various modal plans including pedestrian, bicycle and street design plans.
- *Station and Neighborhood Area Planning* – coordinates the optimization of SFMTA facilities as

[1] Traffic calming is the slowing or reduction of motor-vehicle traffic to improve safety for pedestrians and bicyclists and improve the environment for residents. Examples include speed humps and curb extensions for crosswalks.

well as SFMTA's environmental assessment issues.

Off-street Parking subdivision

The Off-street Parking subdivision of SSD is responsible for the management of the City's more than 15,000 parking spaces at 40 parking facilities that will generate an estimated $87 million in fiscal year 2010-11. These 40 parking facilities are a mix of City-owned lots and garages. The Off-street Parking subdivision also administers more than 70 contracts, including:

- 48 lease agreements for 95,000 square feet of space used for retail, storage or other purposes.
- 19 management agreements with garage or lot operators.
- 5 lease agreements with nonprofit parking corporations that lease 6 garages.

Transportation Engineering subdivision

The Transportation Engineering subdivision reports to the City's traffic engineer and consists of seven major sections:

- *Color Curb Program* – manages the program for the installation of red, white, green, blue and yellow colored curb zones.
- *SFgo* – implements intelligent transportation systems including transit signal priority components, changeable message signs, traffic cameras and signal controllers.
- *Special Projects/Street Use* – designs signals and signal upgrades, issues Special Traffic Permits and manages temporary street closures.
- *Traffic Management* – coordinates hearings for proposed changes in traffic regulations, introduces new legislation for traffic regulations, and responds to public requests regarding traffic conditions.
- *Traffic Routing for Construction* – coordinates the management of traffic during construction with state and local agencies including the City's Department of Public Works and Public Utilities Commission, the California Department of Transportation and Pacific Gas and Electric Company.
- *Traffic Signal Shop* – manages the installation, repair and modification of the City's over 1,200 traffic signals, including fully signalized intersections and

flashing beacons.[2]

- *Transit Engineering* – conducts work to improve street transit operations and works closely with the Municipal Railway on transit operations.

Objectives

The objectives of this audit were to provide a broad overview of the SFMTA organization and to answer the following questions.

1. How does the way in which San Francisco manages its off-street parking facilities — which involves SFMTA, nonprofit parking corporations, and contractual garage operators — compare to other cities? How do San Francisco's staffing level and financial results compare to those elsewhere? Is San Francisco's structure advantageous to the City?

2. Does SSD properly maintain the City's traffic signals, signs, and pavement markings?[3] Does it perform preventive maintenance?

3. Do SSD's major contracts comply with basic, key City requirements?

4. Does SSD coordinate projects, both internally and externally, to ensure that scheduling maximizes the projects' timeliness and effectiveness and minimizes conflicts with other organizations' work?

5. Regarding SSD's performance measures:
   - Do they adequately reflect SSD's mission and key goals?
   - Are they well formulated?
   - Are they supported by reliable results data?
   - Do they have reasonable targets that are being met?

Scope and Methodology

The audit considered SSD's structure and operations as of fiscal year 2010-11, the first full fiscal year that SSD existed.

The audit team:

[2] This shop was moved from Field Operations to Transportation Engineering during the audit.

[3] The Field Operations subdivision's Parking Meter Shop was excluded from the scope of this audit.

- Reviewed key documents about SSD's mission, duties, structure, and history.
- Interviewed more than 40 SFMTA staff and management personnel and managers of three nonprofit parking corporations.
- Reviewed nonprofit parking corporations' leases, articles of incorporation, by-laws and indenture agreements.
- Obtained and analyzed selected federal, state and local transportation guidelines, regulations and relevant codes.
- Reviewed literature in fields of endeavor relevant to SSD, including project management, traffic signals, traffic signs and pavement markings.
- Obtained an overview of several SFMTA databases including the IntelliContract database.
- Compared staffing levels of three of SSD's shops (paint, signals and signs) to levels in federal guidelines and other cities, as available.
- Performed field observations of work logged as performed for a sample of 28 recent work orders for the installation, repair or replacement of traffic signs, signals and pavement markings.
- Reviewed eight of SSD's contracts valued at more than $100,000 each.
- Assessed SSD's project management methods, focusing on scheduling effectiveness, through a random sample of current construction-related projects.
- Tested on a sample basis reported performance measure results data for accuracy and reliability.
- Surveyed comparable jurisdictions for relevant data, especially on off-street parking operations.

One objective could not be fully achieved

The audit verified, on a sample basis, that the Traffic Paint Shop, Traffic Signal Shop and Traffic Sign Shop performed the work that they indicated they had performed, but could not conclude as to whether SSD properly maintains all of the City's traffic markings and signs (part of objective 1) because SSD lacks complete inventories (lists) of these traffic control devices that would indicate their condition or age. Because SSD could not provide the information needed, the audit was unable to fully answer the question posed by this objective. As a result, the audit team is unable to provide

SFMTA management with the information it should have in this area to make informed decisions.

Statement of Auditing Standards

This performance audit was conducted in accordance with generally accepted government auditing standards. Those standards require planning and performing the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on the audit objectives. The audit team believes that the evidence obtained provides a reasonable basis for the findings and conclusions based on the audit objectives.

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CHAPTER 1 – Leasing Garages to Nonprofit Parking Corporations Is Unnecessarily Costly to the City

Summary

SSD manages leases in which five special-purpose nonprofit parking corporations (corporations) are tenants of six of the City's large parking garages. These corporations pay virtually no rent, add more than half a million dollars annually to the City's costs to manage garages, do not offer demonstrable operational advantages, are unlikely to be needed to help the City construct or expand garages in the future, and appear to be used nowhere else in California.

In fiscal year 2010-11 an estimated $375,500 in City parking garage revenue will go to three corporations that lease three garages that no longer have any associated long-term debt. Two of these corporations have no long-term debt and, therefore, do not need to exist for capital financing purposes. If the City were not leasing the three debt-free garages, SFMTA estimates it could save $256,700 per year. If the City were not leasing any of the six garages leased to nonprofit parking corporations — which would likely require the City to assume the debts of three corporations — it could potentially save an estimated $551,070 per year. If the corporations' $4.7 million in capital reserves were under the control of the City, it could more readily determine when and how to spend these funds.

Four of the five nonprofit parking corporations to which San Francisco leases garages serve as intermediaries between the City and the facility's contractual operator, so are a third level of garage management. Many of the advantages of the corporations stated by their corporate managers duplicate duties required to be provided by the operators of any City-owned non-metered parking facility.

Like San Francisco, the cities of Los Angeles, Oakland, Sacramento and San Jose use firms under contract to operate at least some of their parking facilities. Unlike San Francisco, none of the others leases parking facilities to nonprofit corporations or other organizations.

Background

The City uses contractual operators in most of its public parking facilities and a few garages also have nonprofit parking corporations as tenants.

Under Administrative Code Section 17.8, SFMTA is responsible for the administration of the leases and operating agreements of all City-owned parking facilities that are open to the public. The City owns 20 non-metered parking facilities (19 garages and one lot) with a total of 14,460 spaces. Most of the non-metered facilities are operated by private firms under contract to and exclusively overseen by SSD's Off-street Parking subdivision. However, the City leases six of its garages — Ellis-O'Farrell, Fifth & Mission, Japan Center, Portsmouth Square, Sutter-Stockton and Union Square — to five nonprofit parking corporations. The five corporations, each with its own board of directors and corporate manager, are tenants of the City and are expected to manage the garages they lease. In all but one of these garages, the corporate tenant does not operate the garage directly, instead working with a private firm that operates the garage under a management agreement. Portsmouth Square Garage is the only garage leased to a nonprofit parking corporation that directly operates the garage with its own staff.

Exhibit 3 lists the nonprofit parking corporations, the garages they lease from the City, their annual revenues and any outstanding debt of the corporation associated with each garage.

EXHIBIT 3 Revenues and Debts of Nonprofit Parking Corporations

Nonprofit Corporation	Garage	Budgeted Gross Revenue Fiscal Year 2010-11	Long-term Debt As of April 30, 2011
City of San Francisco Ellis-O'Farrell Parking Corporation	Ellis-O'Farrell	$6.7 million	$2,980,000 principal; $489,306 interest
City of San Francisco Downtown Parking Corporation	Fifth & Mission	$19.9 million	$6,955,000 principal; $1,487,956 interest
City of San Francisco Japan Center Garage Corporation	Japan Center	$4.3 million	None
City of San Francisco Uptown Parking Corporation	Sutter-Stockton	$11.9 million	None
City of San Francisco Uptown Parking Corporation	Union Square	$8.1 million	$16,320,000 principal; $12,232,939 interest
City of San Francisco Portsmouth Plaza Parking Corporation	Portsmouth Square	$4.5 million	None

Sources: Garage leases, operator agreements, and budget information provided by SFMTA.

As the exhibit shows, three garages that no longer have outstanding long-term debt associated with them — Japan Center, Sutter-Stockton and Portsmouth Square — are among the six leased to nonprofit parking corporations.

Finding 1.1

Nonprofit parking corporations add an estimated $551,000 annually to the City's costs to administer garages.

The City is deprived of an estimated $551,070 per year in off-street parking revenue that is used to pay the operating expenses of five nonprofit parking corporations that lease, but in most cases do not directly operate, six City garages. This amount is what SFMTA estimates could be saved, if the garages were not leased, out of the $808,800 in average annual expenses that the five corporations are expected to incur in fiscal years 2008-09 through 2010-11. The corporations' expenses, which reduce the parking revenues that revert to the City, are not even partially offset by rent because the corporations pay token rents such as $1 or no rent.[4]

Exhibit 4 shows the estimated savings possible if the City were using contractual operators alone and not leasing garages to nonprofit parking corporations, which would likely require the City to assume all the corporations' long-term debt.

[4] According to SFMTA, four corporations pay rent of $1 for the full term of their leases. One, the City of San Francisco Portsmouth Plaza Parking Corporation, pays no rent.

EXHIBIT 4 **SFMTA-Estimated Operating Costs to City of Leasing Garages to Nonprofit Parking Corporations**

Garage	Corporate Manager Costs (Salary + benefits)	Legal Expenses[a]	Corporate Insurance	Totals
Ellis-O' Farrell	$100,000	$30,000	$2,500	$132,500
Fifth & Mission	140,000	60,000	6,800	206,800
Japan Center	124,000	35,000	5,500	164,500
Sutter-Stockton[b]	66,000	25,000	3,000	94,000
Union Square[b]	66,000	25,000	3,000	94,000
Portsmouth Square	110,000	-	7,000	117,000
Total Annual Expenses of All Garages (Average of 3 Years)[c]	606,000	175,000	27,800	808,800
Estimated Savings to City as % of Total if No Corporations[d]	67%	67%	100%	
Potential Yearly Savings	$406,020	$117,250	$27,800	**$551,070**

Notes:
[a] Legal expenses exclude litigation and certain one-time events.
[b] The Sutter-Stockton and Union Square garages share a corporate manager. Half of the estimated cost of this position is assigned to each of these two garages for the purpose of this chart.
[c] Based on actual amounts for fiscal years 2008-09 and 2009-10 and estimates for fiscal year 2010-11.
[d] Portion of expenses SFMTA estimates would be avoided if garages were not leased to corporations.

Sources: SFMTA, Sustainable Streets Division, Off-street Parking unit

The City must pay for additional personnel and legal services at garages leased to corporations.

The City is obligated under its leases to allow the corporations to use garage revenues to pay for their personnel, legal and most other garage-related operating expenses. According to SFMTA, each of the nonprofit parking corporations has a full-time corporate manager. At five of the six garages leased to corporations, the corporate manager is in addition to a facility manager who is an employee of the contractual operator, adding to the expenses borne by SFMTA.

Because the corporations are separate legal entities from

the City, most of them hire a corporate attorney, as well as outside litigation firms, to represent the corporations' interests.[5] Like any City department, SFMTA is represented by the City Attorney's Office when it needs to become involved in significant legal issues to represent the department and City's interests, including in any landlord-tenant (for example, SFMTA-corporation) disputes that may arise. However, if the City and a parking corporation were to have a legal dispute with a third party, such as a contractual operator, the City would have to pay both its and the corporation's legal fees.

Finding 1.2 **It has not been demonstrated that nonprofit parking corporations offer tangible operational advantages.**

The added costs to SFMTA of doing business with the nonprofit parking corporations, presented in Finding 1.1, have not been shown to contribute to the effective operation of the garages. Some stated advantages duplicate responsibilities that any operator would be obligated to perform, while others would be difficult to confirm and impossible to quantify. If the City is to perpetually lease some of its largest garages to nonprofit parking corporations, it should have a rationale for doing so, and should be able to show that the arrangement has tangible benefits that equal or outweigh the costs.

Nonprofit parking corporations believe they bring advantages to the City versus other management models.

According to corporate managers of three of San Francisco's nonprofit parking corporations, the advantages to the City of leasing garages to the corporations include:

- On-site oversight. Corporate employees work at the garages and have direct oversight of the garage operations and, where applicable, operator's staff, while SFMTA is remotely located and cannot be as directly involved in day-to-day operations and oversight of the operator.

- Higher-quality service. The corporations provide a higher standard of service than do operators at other garages in terms of cleanliness, security, lighting, and customer assistance.

[5] The City of San Francisco Portsmouth Plaza Parking Corporation has a corporate manager that acts as the facility manager and, according to SFMTA, is the only nonprofit parking corporation that does not have a corporate attorney because a corporate board member provides pro bono legal services to the corporation.

- More prompt reporting of cash receipts. The corporations report cash receipts and cash flows daily instead of weekly or monthly, so any discrepancies may be caught sooner.

- More responsive to the community. If merchants or community organizations have parking concerns, the corporations can more readily address them than could the City and contractual operators because the corporations' directors and corporate managers often serve on boards of community groups and committees.

- Directors' input is free. Members of the corporations' boards of directors are not compensated so cost the City nothing. However, the directors make useful financial, operational and budget process recommendations.

Contractual operators must deliver the same level of service that the nonprofit parking corporations claim as their superior level of service.

Some of the claimed advantages, such as on-site oversight of the contractual operator or being highly responsive to customers' concerns may be valid but the benefits cannot be demonstrated. For example, it is impossible to know what would have happened had a corporate manager not been on site. However, most of the claimed advantages are duties and services required of garage operators in all City-owned non-metered parking facilities.

The most recent request for proposal (RFP) on the operation and management of parking facilities for SFTMA parking garages requires that the garage operators perform duties and uphold a level of service that the corporate managers interviewed by the audit team cited as advantages of nonprofit parking corporations. For example, according to the RFP:

- The garage operator's on-site facility manager is required to provide adequate management oversight during all hours of garage operation.

- Garage operators are selected based on a set of criteria to determine how well the bidder can provide parking management services, safety and security, and meet high standards of professional, courteous, and efficient customer assistance.

- The garage operator is responsible for routine maintenance and repair. This includes regular cleaning of all parking areas and ensuring light fixtures are functional and bright enough for safety.

- The garage operator is subject to penalties if work required at the garage is not performed within 72 hours of a written notice from SFMTA.

- On each day the garage operates, the operator is required to prepare and electronically submit a daily report to SFMTA and make a daily deposit of revenue into SFMTA's bank account. The report is in addition to a monthly report which includes an accounting of all gross revenues and a description of operating expenses.

Leasing garages to nonprofit parking corporations has disadvantages to the City besides lost garage revenues to cover corporate expenses.

There are several disadvantages to the City to leasing garages to nonprofit parking corporations, some of which indicate that the corporations may cost the City money and have opportunity costs for the City in addition to the corporations' expenses that are paid from garage revenues. Based on information provided by SFMTA, these disadvantages include:

- Economies of scale are missed. Because the corporations separately contract for services, potential savings from economies of scale (e.g., master contracts) are not realized. According to SFMTA, each corporation separately contracts for the leased garages' operators, janitorial services, auditors, elevator maintenance services, plus accounting, payroll and human resources functions.

- Contracting practices are inconsistent among corporations, most of which lack formal contracting procedures. Most of the corporations have no written guidelines to competitively solicit for or even establish contracts for services at garages and some contracts are not promptly extended or rebid. For example, as of the conclusion of audit fieldwork, the management agreements (between the corporation and the operator) at the Japan Center, Ellis-O'Farrell, and Fifth & Mission garages were expired. Such practices

do not ensure that the corporations — and indirectly, the City — are getting the best value for their expenditures.

- Corporation-set rents may be low. Because the corporations set the rental rates for their subleases, some subleases between corporations and subtenants who rent retail or storage spaces at garages may provide for rents that are below prevailing market rates, resulting in less revenue for the City. Because the rental income from the subleases reverts to the City, the corporations may not have an incentive to try to realize the highest possible rents.

- Corporate directors are not City employees. The members of the corporations' boards of directors may benefit the community, but because they are not City employees or appointees they may not necessarily consider the City's interests in managing the garages as much as City representatives would.

- Inconsistent expectations and compensation for corporate managers. There is no consistent job description, performance evaluation criteria or compensation standards for corporate managers. In addition, corporations have no standard policy on how — including how promptly — corporate managers should report and respond to customer complaints. Because the corporations are legal entities autonomous from the City, the City cannot unilaterally impose uniformity in these areas.

- Corporations control significant capital reserves. SFMTA reports that, as of February 28, 2011, the combined total in the corporations' capital reserve accounts was at least $4.7 million. If the City were able to take control over some or all of these funds, the City would be able to more readily use these funds for garage-related capital spending as it determined appropriate.

Finding 1.3 **The City is unlikely to need nonprofit parking corporations to help build or expand garages.**

San Francisco's nonprofit parking corporations were

established to provide funding for the construction of public parking garages for the City but are unlikely to serve this purpose in the future. The City used nonprofit parking corporations to issue revenue bonds that financed the construction of some garages.[6] However, the role of the corporations as construction financing entities is no longer critical because the City is now highly restricted by law from building or expanding parking facilities.

As amended by Proposition A in November 2007, the City Charter, Section 8A.113, states that the City cannot acquire, construct or expand parking facilities unless doing so would not reduce parking and garage revenues to SFMTA to an amount less than that provided for fiscal year 1999-2000, as adjusted for inflation. It further states that any contemplated acquisition, construction or expansion of a City-owned parking garage must be found by SFMTA's Board of Directors to advance or be consistent with the City's Transit First Policy. As a result, City law and policy make it unlikely that a new City parking garage will be built or that an existing one will be expanded.

The three garages that have no long-term debt associated with them do not need to be leased to corporations, potentially saving $256,700 per year.

Although they have no long-term debt associated with them, three City garages are leased to nonprofit parking corporations. Two of the three corporations that lease these garages also have no long-term debt. One of the two debt-free corporations, the City of San Francisco Portsmouth Plaza Parking Corporation, has existed for more than 50 years, while the other, the City of San Francisco Japan Center Garage Corporation, was created in 1998 as a successor to the previous corporation that retired the debt associated with the Japan Center Garages and was dissolved.[7] The third corporation, the City of San Francisco Uptown Parking Corporation, has no debt associated with its tenancy at the Sutter-Stockton Garage but does have other long-term debt. In fiscal year 2010-11 the City will pay an

[6] This method did not require the City to borrow the costs of construction. The debt was repaid to bondholders, with interest, from the garages' revenues. The ability of local governments to do business in this manner is provided for in state law (Section 32809 of the California Streets and Highways Code), which authorizes parking authorities to accept financial or other assistance from any source for the construction of parking facilities.

[7] The City of San Francisco Western Addition Parking Corporation, which was associated with the Japan Center Garages, built in 1968, retired its 50-year bond indenture early and its assets and liabilities were assumed by the City of San Francisco Japan Center Garage Corporation.

estimated $375,500 to these three corporations for their operations at the Portsmouth Square, Japan Center and Sutter-Stockton garages.

Exhibit 5 details the potential cost savings from no longer leasing the three debt-free garages to nonprofit parking corporations.

EXHIBIT 5 **SFMTA-Estimated Operating Costs to City of Leasing Debt-Free Garages to Nonprofit Parking Corporations**

Garage	Corporate Manager Costs (Salary + benefits)	Legal Expenses[a]	Corporate Insurance	Totals
Japan Center	$124,000	$35,000	$5,500	$164,500
Sutter-Stockton[b]	66,000	25,000	3,000	94,000
Portsmouth Square	110,000	-	7,000	117,000
Total Annual Expenses of All Garages (Average of 3 Years)[c]	300,000	60,000	15,500	375,500
Estimated Savings to City as % of Total if No Corporations[d]	67%	67%	100%	
Potential Yearly Savings	$201,000	$40,200	$15,500	**$256,700**

Notes:
[a] Legal expenses exclude litigation and certain one-time events.
[b] The Sutter-Stockton and Union Square garages share a corporate manager. Half of the estimated cost of this position is assigned to Sutter-Stockton for the purpose of this chart.
[c] Based on actual amounts for fiscal years 2008-09 and 2009-10 and estimates for fiscal year 2010-11.
[d] SFMTA estimates of the portion of expenses that would be avoided if garages were not leased to corporations.

Source: SFMTA, Sustainable Streets Division, Off-street parking unit

At two of these garages, Japan Center and Sutter-Stockton, a contractual operator, not the corporation, staffs and operates the garage. In fiscal year 2010-11 the City will pay an estimated $258,500 to the corporations that lease these two garages. If none of the three garages were leased, SFMTA estimates that it

could save more than $256,700 per year.

It is unclear if or when corporations should be dissolved but they cannot be dissolved if they have outstanding debt.

It is an open question as to whether nonprofit parking corporations should continue to exist if they have no bonds or long-term loans outstanding. The San Francisco Administrative Code, Section 1004.16, defines nonprofit parking (or garage) corporations as businesses for the purpose of the City's business tax. This definition includes any such corporation that was formed for the express purpose of aiding the City in building an off-street parking facility, which has issued tax-exempt revenue bonds to do so, "…and which bonds or a portion thereof is outstanding."

The audit found no law or regulation that mandates the existence of the corporations or addresses if or when they should cease to exist. The audit did find that the most recent indenture agreements for the City of San Francisco Downtown Parking Corporation, City of San Francisco Uptown Parking Corporation and City of San Francisco Ellis-O'Farrell Parking Corporation all state that the corporations *shall not dissolve when any of the bonds are outstanding*, and in the event of default, "…the existence of the corporation shall expire." However, other than in an event of default, no events are mentioned that would cause dissolution of the corporations.

Only two of the five corporations have formation documents that address what will occur in event of dissolution and none of the corporations' by-laws or articles of incorporation addresses how long the corporation shall exist or when it should be dissolved. According to the City of San Francisco Japan Center Garage Corporation's articles of incorporation, upon dissolution the remaining assets of the corporation will be distributed to the City or to a charitable or educational organization designated by the City. Amendments to the by-laws of the City of San Francisco Downtown Parking Corporation state that all assets of the corporation will be distributed to "…person or persons carrying on a similar purpose or purposes."

Some of the documents that govern the existence of the corporations were drafted over 50 years ago and do not address what would happen to the corporations

once their debts were paid off. One corporation, the City of San Francisco Japan Center Garage Corporation, was formed long after the garage was built and succeeded the corporation that retired its debt and dissolved. For the debt-free garages, the nonprofit parking corporations that issued the debt fulfilled the purpose of their creation, which was to finance the construction of the garages.

Finding 1.4 **Only San Francisco leases garages to corporations; its off-street parking revenues compare favorably to those of comparable cities.**

Four California cities contacted by the audit team report that they do not lease garages to nonprofit or for-profit parking corporations. The survey also revealed that San Francisco does business with relatively many parking operators and realizes higher revenues per parking space.

Similar to most of the other cities contacted, San Francisco contracts with parking management companies to operate city-owned parking facilities. However, the City entered agreements with eight parking operators, at least twice as many as the peer cities. In contrast, Sacramento has an unusually large number of staff in its off-street parking operation because city employees operate most of the parking facilities.

San Francisco has the highest revenue-to-cost ratio and parking revenue per space in comparison with other selected jurisdictions. However, this is largely due to its higher parking rates. In addition, San Francisco's operating cost per space is the highest amongst selected jurisdictions that responded.

Exhibit 6 details the responses to the off-street parking questionnaire provided to the selected jurisdictions.

EXHIBIT 6 **Responses to Off-Street Parking Questionnaire and Auditor Calculations**

Survey Question or Calculation	San Francisco	Los Angeles	Oakland	Sacramento	San Jose
Non-metered city-owned parking lots and garages	20	24	15	18	12
Total parking spaces	14,460	7,342	4,635	10,236	7,200
Full-time equivalent (FTE) city employees working in city's off-street parking unit	5.5 filled	9	0.33[a]	59.25[b]	6
Firms under contract to operate city-owned parking facilities	8	3	4	1 for 3 locations	1
2009-10 operating revenues (without parking taxes)	$69.7 million	$16.5 million	$6.8 million	$18.7 million	$8.1 million
2009-10 operating costs	$29.4 million	$13.9 million[c]	Not available	$12.1 million	$6.0 million
Range of hourly parking rates for daily parkers	$1.50 - $7; $12-$38 per day	$1.10 - $6; $3-$12 per day	$2	$1.50 - $3; $6 - $24 flat rates per day	$2.25 - 3; $5 - $18 flat rates per day
Auditor Calculations					
Average annual parking revenue per FTE city employee	$12.7 million	$1.8 million	$20.5 million	$315,612	$1.4 million
Revenue-to-cost ratio	2.37:1	1.18:1	Not available	1.55:1	1.35:1
Average parking revenue per space	$4,820	$2,241	$1,458	$1,827	$1,124
Average operating cost per space	$2,033	$1,893	Not available	$1,182	$833

Notes:
[a] Excludes administrative support, which is provided by the Parking Division and is not dedicated exclusively to off-street parking.
[b] Sacramento operates 15 locations and handles administrative work for all parking facilities. There are 42.25 FTE in off-street operations.
[c] Includes $5.3 million in annual debt service cost.

Source: CSA's off-street parking survey responses and calculations based on responses.

Defining an optimal parking operation model for the City is difficult.

Based on comparisons with selected other California jurisdictions, it is difficult to definitively state whether the City's parking operations are optimal. There are inherent differences between the cities. For example, just as parking facilities differ from each other within the city, each city's location, size, and demand versus supply of parking are significant factors that determine the success of its parking facilities. In its efforts to be a more walkable, bikeable, and public transit-friendly city, San Francisco also deters cars as a mode of transportation partly by charging high parking rates. All of these factors and others may contribute to the relatively high revenues of the City's off-street parking operations.

Recommendations

SFMTA should:

1. Compare the costs and benefits to the City of the nonprofit parking corporations that are garage tenants. The SFMTA Board of Directors should endorse a formal, long-term policy on whether the City should assume the outstanding debts of nonprofit parking corporations and whether it should continue to lease garages to them.

2. Request that each nonprofit parking corporation that has not already done so ensure that its articles of incorporation or by-laws address the events that will allow or cause the dissolution of the corporation. SFMTA should request that these provisions also state that each corporation's assets shall revert to the City in the event of dissolution.

3. Work with the nonprofit parking corporations to add to their lease agreements restrictions on how the corporations can spend City funds.

4. Develop a standard or minimum job description for the nonprofit parking corporations' corporate manager positions that clearly defines the position's duties and responsibilities. SFMTA should then seek the agreement of each corporation's board of directors to implement the job description.

5. Develop a compensation scale for the corporate manager position at the nonprofit parking

corporations. The scale should tie the value of each manager's salary and benefits to the size and complexity of the garage managed. SFMTA should then seek the agreement of each corporation's board of directors to conform to the compensation scale.

6. Consider whether it would be advantageous to the City to have nonprofit parking corporations' corporate managers work under employment contracts. If it is found to be advantageous, SFMTA should provide corporations with the elements of a model contract and seek the agreement of each corporation's board of directors to establish such a contract.

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CHAPTER 2 – The Division Should Do More Scheduled Preventive Maintenance of the City's Traffic Control Devices

Summary

SSD maintains the City's traffic control devices — pavement markings, signals and signs — largely by reacting to requests for service. Although some proactive repair and replacement occurs, SSD's maintenance shops lack a comprehensive, scheduled preventive maintenance program. Preventive maintenance is the planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system without increasing structural capacity.

Federal standards will soon require SSD to perform a form of preventive maintenance of signs and may require it to preventively maintain pavement markings in the future to ensure they are adequately reflective. The Traffic Paint Shop, Traffic Sign Shop and Traffic Signal Shop conduct the work they indicate has been completed. However, if there is unrequested maintenance that should be done it may not be getting done. If the resources for scheduled preventive maintenance did exist, it would be difficult for SSD to perform it systematically because SSD lacks comprehensive records (inventories) of the City's installed traffic signs or pavement markings, indicating their condition or age. As a result, the audit could not conclude as to whether SSD properly maintains *all* of the City's traffic signs and markings beyond doing general repairs.

SSD's paint and signal shops cannot keep up with all of the requests for work that they receive. These shops have three- to six-month backlogs of requested work. Thus, in some cases, requested maintenance can be deferred for some time. Further, there is no record of how much preventive maintenance may be needed and no system to methodically prioritize or schedule such maintenance. The Traffic Paint Shop and Traffic Sign Shop could more efficiently address deferred maintenance if they had inventories, preferably in databases, of the City's installed signs and street markings, indicating their condition or age.

Finding 2.1

The Traffic Sign Shop performs little scheduled preventive maintenance and will need to ensure that signs meet federal reflectivity standards.

The Sign Shop does not have a systematic, scheduled preventive maintenance program.

The Traffic Sign Shop does some preventive maintenance but little of it is scheduled. The shop does not track or schedule the upcoming maintenance needs of traffic signs in San Francisco, instead replacing signs on an ad hoc basis in reaction to requests from others or the observations of its employees. According to SSD's field operations manager, the shop responds to complaints as priority dictates, and completes work orders from the Transportation Engineering subdivision as they are received and as the shop's staffing level allows. Based on the audit's field observations, the Traffic Sign Shop conducts the work it indicates has been completed.

The American Association of State Highway and Transportation Officials (AASHTO), a nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, defines preventive maintenance as:

> The planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system without increasing structural capacity.

Although little sign maintenance is scheduled or planned in advance, some is proactive. SSD management reports that five traffic sign surveyors are in the field daily writing work orders to replace old, faded or defaced signs, some of which are still reflective, readable and in the manufacturer's recommended lifespan. Nonetheless, according to management, these signs are written up for replacement because they may be slightly faded or bent. Management also reports that the shop has proactively replaced some stop signs with more reflective and durable signs and upgraded all pedestrian, school and bicycle warning signage to the new federal fluorescent yellow-green color.

Although proactive sign replacement occurs, the Sign Shop lacks a comprehensive, scheduled preventive maintenance program. Without such a program and the

documentation of results that should accompany it, SFMTA cannot be as assured as it would be if such a program existed that there is no inadequate traffic signage in San Francisco. Although the audit found no evidence of inadequate or unsafe signage, SSD cannot document that its maintenance efforts ensure that all traffic signage in the City is in the position and condition it should be.

The Sign Shop is close to keeping up with the work requested, having only a one- to two-week backlog.

The Sign Shop's workload is reasonably close to its capacity, resulting in a modest backlog. During January through June 2010, on average, the Sign Shop assigned its field staff 232 tasks, known as work tags, per day and sign workers completed 227 of them per day, or approximately 15 work tags for sign installations, modifications or repairs per sign worker per day. Work requests, known as work orders, can vary widely in their extent and complexity, with some resulting in many work tags. Some of the more extensive and complex work orders may be more likely to be deferred. According to a Sign Shop supervisor, as of February 2011 the shop had a backlog of only approximately 10 work orders. The supervisor estimated that, *if no additional work orders were received* from Transportation Engineering, this backlog would take one to two weeks to complete. Therefore, under current conditions a one- to two-week backlog of sign work may exist for some time but such a modest backlog is acceptable.

Signs will have to meet federal minimum reflectivity standards in coming years.

Like all state and local agencies that maintain street signs, the Sign Shop is required to adhere to standards, compiled in the Manual on Uniform Traffic Control Devices (MUTCD), set forth by the Federal Highway Administration (FHWA). These standards require compliance with sign placement, dimension, reflectivity, color, location, and wording and abbreviations. The MUTCD, Section 2A.09, will require agencies to maintain signs so they meet specified minimum retroreflectivity standards by 2015 or 2018, depending on the type of sign.[8]

Agencies will have to implement a program to meet sign reflectivity standards.

To ensure that the minimum sign reflectivity requirements will be met, the MUTCD also requires all agencies to adopt a sign assessment or management method by January 2012. For the Sign Shop, assessing the reflectivity of all

[8] Retroreflectivity is defined by the FHWA as the redirection of light back to a source regardless of the angle at which the light hits the surface. This audit report uses "reflectivity" in place of the technical term.

signs in San Francisco and determining which signs need to be replaced is the first step. Implementing the knowledge gained through these assessments will most likely require a preventive maintenance program. As the MUTCD states, compliance with the standard "is achieved by having a method in place and using the method to maintain the minimum levels established."

A jurisdiction with inadequately reflective signs could see negative consequences.

The audit did not look for or find inadequately reflective traffic signs in San Francisco. However, the issue of compliance with federal sign reflectivity standards is serious for the safety of street users and because a jurisdiction found not to be in compliance with federal standards could see the withdrawal of federal funds and increased tort liability. As stated by the FHWA, noncompliance with this requirement:

> …could result in withdrawal of Federal-aid funds. Now that most states no longer have sovereign immunity, tort liability in lawsuits is another possible penalty for non-compliance, especially in situations where a crash has occurred that might be attributed to inadequate, inappropriate, or noncompliant traffic control devices.

The Sign Shop is scheduled to implement an assessment method in line with MUTCD requirements.

According to SFMTA management, including SSD's field operations manager, SSD is currently in the test phase of establishing a sign database that will allow the Sign Shop to efficiently inventory and monitor the condition of signs on San Francisco's streets. According to SSD, the database is scheduled to be implemented before July 2011, and the database's ability to monitor the condition of traffic signs will ensure that the Sign Shop will fulfill the requirement of the MUTCD to implement an assessment method by January 2012.

Recommendations

SSD should:

7. Adopt a sign reflectivity assessment or management method as required by the Federal Highway Administration's Manual on Uniform Traffic Control Devices by January 2012.

8. Plan for a scheduled preventive maintenance program that will allow the Sign Shop to replace, by 2015 or

2018, depending on the type of sign, all signs that do not meet federal minimum reflectivity levels.

9. Establish a systematic, documented method to periodically inspect, assess and maintain traffic signs to ensure the safety of motorists and other road users. This method should not be limited to considerations of sign reflectivity.

Finding 2.2 **The Traffic Signal Shop performs little scheduled preventive maintenance and appears to be understaffed.**

The Signal Shop does not have a systematic, scheduled preventive maintenance program.

Like the Traffic Sign Shop with respect to the City's signs, the Traffic Signal Shop does little scheduled preventive maintenance of signal equipment. SSD management reports that signal lamps are replaced on a fixed schedule and other improvements, such as signal controller upgrades, occur on an unscheduled but proactive basis. According to the Signal Shop's manager, the shop does not perform more preventive maintenance because it does not have enough staff. Based on the audit's field observations, the Traffic Signal Shop conducts the work it indicates has been completed.

The Signal Shop has no formal method to determine maintenance needs on a recurring basis. Rather, on a daily basis, the Signal Shop assigns two traffic signal electricians to respond to public complaints and emergency requests, and crews fully inspect signals at intersections where they have been called. The shop does most of the remainder of its work at signalized intersections based on work orders and requests from SSD's Transportation Engineering subdivision. More scheduled preventive maintenance would better assure SFMTA that traffic signals are more reliable. The users of San Francisco's streets would less often find traffic signals that need emergency service if the shop could do more work before traffic signal equipment malfunctions or fails.

Preventive maintenance of signal equipment is not mandated but is a best practice.

No federal requirements mandate that agencies that manage traffic signal systems must perform preventive maintenance but it is advisable. Several transportation publications and FHWA guidelines describe industry best practices and provide support for the use of traffic signal system maintenance programs. Literature in the field

suggests that a preventive maintenance program is critical to a well-timed traffic signal system and adequate staffing levels are essential for an agency to establish such a program. Of the three cities contacted by the audit — Portland, Oregon; San Diego and Seattle — all of them report that they have a preventive maintenance program for signal equipment (see Appendix C).

The Signal Shop cannot keep up with the amount of work requested, resulting in a three-month backlog.

According to the Signal Shop manager, as of February 2011, the shop had a backlog of approximately 70 work orders from the Transportation Engineering subdivision, in contrast to backlogs of approximately 30 work orders on average in recent years. She estimated that with current staffing and priorities – which are signal relamping, complaints and emergencies – and if no additional work order requests were received, this backlog would take approximately three months to clear. Moreover, this timeframe would be achievable only if all signal electrician training was suspended. Thus, under current conditions, a significant backlog of signal work may not be reduced or eliminated any time soon.

Compared to industry standards, SSD's signal maintenance function is understaffed.

SSD's Transportation Engineering subdivision has 17 active FTE electricians, positions that are directly involved in the installation, repair and modification of traffic signals, and 11 active FTE engineers, positions responsible for the planning and development of signal timing, conducting signal studies for improved transit as well as the design and analysis of signalized intersections.[9] This staffing falls far short of guidelines in FHWA and National Transportation Operations Coalition (NTOC) reports. These organizations found that, while industry practice varies, it is considered advisable to have a signal electrician for every 30-40 signalized intersections and a signal engineer for every 75-100 signalized intersections.[10]. In contrast, San Francisco's staffing levels equate to 70 signalized intersections per traffic signal electrician and 108 signalized intersections per signal engineer. Even if SSD electricians and engineers who are on long-term leave are included in these calculations, SSD's staffing still falls short of advisable levels. An assessment of the Signal Shop's status regarding

[9] Active employees are those not on long-term leave.

[10] The recommended staffing levels result from an FHWA nationwide survey of agencies that operate various-sized signal systems and a self-assessment issued by the NTOC, to which 378 jurisdictions responded. The NTOC indicates that the survey responses represent approximately one-third of all signals in the United States.

preventive maintenance and staffing performed by the Signal Shop's manager reached a similar conclusion.

SSD must maintain 1,187 signalized intersections. The averages from the ranges in the guidelines above would require approximately 34 FTE signal technicians/electricians and 13 FTE engineers to adequately manage a system the size of San Francisco's. Based on these same averages, SSD's staffing level of signal electricians is sufficient to maintain a system of only about 600 signalized intersections and its staffing level of signal engineers is sufficient to maintain a system of only about 970 signalized intersections. The reports point to the obvious conclusion that to maintain a well-functioning traffic signal system, it is critical to have adequate qualified maintenance staff.

The Signal Shop is hampered by the lack of a dispatcher position.

The Traffic Signal Shop no longer has a dispatcher position in its budget. This key position is responsible for receiving and assessing 311 calls, and dispatching technicians and equipment to work locations, including locations where signalized intersections require emergency service. In fiscal year 2009-10, the Signal Shop responded to 8,126 requests for work. Of these, 4,929 (61 percent) came in as work orders while 3,197 (39 percent) were categorized as public complaints.

Due to the loss of the dispatcher position, the Signal Shop routinely performs this function using signal electricians because it requires the knowledge of signal systems to properly assess service requests. This practice often reduces the number of available electricians able to service the City's signal system, further hampering the shop's ability to perform its work and increasing its backlog.

Additional Signal Shop staffing for more scheduled preventive maintenance could save money in the long run.

If the Signal Shop's budget is increased to allow for additional positions, and if those positions can be filled, the shop could perform scheduled preventive maintenance and equipment replacement that would allow it to achieve its goal to modernize San Francisco's traffic signal system and reduce the need for emergency repairs. Traffic signal controller modernization should reduce the frequency of maintenance needed and perhaps eventually reduce the number of staff needed to repair signal equipment that fails.

The timing of the City's traffic signals relies on — and the Signal Shop must have staff with the expertise to repair — four types of signal controllers. The Signal Shop estimates that approximately 650 of these controllers are or will soon be obsolete because they are years beyond their useful life, are no longer supported by their manufacturers or both. According to the Signal Shop manager, with its current workload and number of active electricians, the Signal Shop can replace approximately 100 controllers per year. Thus, even with the resources to purchase modern controllers, the Signal Shop as it is now staffed would need more than six years to replace all of the 650 obsolete controllers. If the Signal Shop had more electricians and a budget for more controllers, it could replace the older, obsolete equipment with modern equipment years sooner. With fewer and newer types of controllers in use, eventually fewer electricians may be needed to make repairs.

Besides improved reliability, there are other benefits to installing modern controllers. Unlike older equipment, modern controllers are capable of regulating complex intersections that must allow for transit priority for SFMTA's buses and light rail vehicles, emergency vehicles and heavy rail preemption. State-of-the art controllers should also reduce the number of signal timing errors. More rapid replacement of old controllers would also allow the Signal Shop to increase the pace at which intersections are connected to the City's transportation management system, SF*go*.

Recommendations

SSD should:

10. Make a plan to address the Traffic Signal Shop's backlog of work.

11. Consider implementing a scheduled preventive maintenance program that will include the periodic assessment of traffic control equipment.

12. Seek additional budgeted positions in the Transportation Engineering subdivision while considering its goals to modernize the traffic signal system in San Francisco.

Finding 2.3

The Traffic Paint Shop performs little scheduled preventive maintenance to ensure that pavement markings are adequately reflective.

The Paint Shop does not have a systematic, scheduled preventive maintenance program.

Like the sign and signal shops, the Paint Shop does limited scheduled preventive maintenance of street markings. The Paint Shop primarily responds to complaints as priority dictates, and completes SSD Transportation Engineering work orders and requests as it is able and as weather conditions allow. In addition, the shop repaints streets after the Department of Public Works repaves them, following that department's schedule, which may not correspond to a schedule the Paint Shop would create according to its priorities. As examples of scheduled preventive maintenance, SSD management reports that the Paint Shop does some work annually, such as work on all commercial corridors, work around AT&T Ballpark and the Embarcadero and work for the Fisherman's Wharf tourist season. Based on the audit's field observations, the Traffic Paint Shop conducts the work it indicates has been completed.

According to the SSD field operations manager, just as at the other shops, the lack of more preventive maintenance is the result of heavy workloads and insufficient staffing. Because the Paint Shop performs little scheduled preventive maintenance, it has not needed to systematically monitor the condition, including the reflectivity, of all street markings in San Francisco to regularly determine and prioritize maintenance needs. As a result, SFMTA cannot demonstrate or be assured that there are no insufficiently visible markings.

The Paint Shop cannot promptly fulfill all the work requested, resulting in a four- to six-month backlog.

According to its supervisor, the Paint Shop had a backlog of approximately 75 work orders as of February 2011. This backlog has grown significantly since requests for bicycle lane projects drastically increased after the lifting of the Bicycle Plan injunction in August 2010. Some of the projects in the backlog are planned or considered projects that require other departments to complete work before the shop can initiate its work. The shop supervisor estimates that with current resources, and if no additional requests were received and all pending paving and street projects were completed by

other City departments, the Paint Shop could complete the backlog of requests within four to six months. However, with the number of requests continuously received and the increasing number of bicycle lane projects, the supervisor estimates that the backlog of paint work will never be eliminated. SSD management reports that to systematically maintain all the markings in the City, the Paint Shop would need an additional one to two crews (four to eight painters) and one thermoplastic paint truck with two support trucks as well as an increase in its material and supply budget.

No process ensures that pavement markings remain visible and adequately reflective.

The audit did not look for or find faded pavement markings in San Francisco. However, because SFMTA has no program to ensure that pavement markings are maintained before they degrade to the degree that they are not adequately reflective, there are potential risks. To mitigate these risks, SSD management reports that the Paint Shop has been installing raised reflective pavement markings on major streets, which, besides repainting, is another way to ensure that pavement markings are visible although lines fade.

Some pavement markings may have to meet minimum reflectivity standards in coming years.

Reflective pavement markings that are adequately maintained improve the safety of roadways by bouncing light from a vehicle's headlights to the driver's eyes and improve the visibility of markings. Reflectivity of markings degrades over time and requires recurring assessment. Similar to the federal standards on the reflectivity of traffic signs, a proposed revision to the MUTCD, Section 3A.03, would require agencies including SFMTA to establish a method designed to maintain longitudinal pavement markings (e.g., center lines, median lines, and lane lines, but not crosswalks or turn arrows) on some streets to a specified minimum level of reflectivity. The draft rule would not apply to streets with speed limits of less than 35 miles per hour, which, according to SSD management, are the vast majority of those the Paint Shop maintains.

Proposed changes to federal standards would require the implementation of a pavement marking maintenance program.

The Traffic Paint Shop is required to follow standards set forth in the MUTCD by the FHWA when installing, painting, or modifying pavement markings on public roads. These include standards for visibility, color, widths, patterns, locations and functions of markings.

As of the conclusion of audit fieldwork, proposed changes to the MUTCD's requirements for the reflectivity of pavement markings had not yet been adopted. However, the MUTCD amendment process is taking its course. The FHWA published a Notice of Proposed Amendment in April 2010 in the Federal Register to give the public an opportunity to comment, comments were due in August 2010, and the FHWA was then to begin its review to prepare the final rule, which is expected to be published within nine months to one year of the closure of the comment period. Thus, the final rule should be issued no later than August 2011. If the proposed language is adopted, agencies will have four years from the FHWA final rule's effective date to establish and implement a pavement marking maintenance method. This requirement would then be effective in 2015.

If adopted, such a maintenance method will require the Paint Shop to adopt a method designed to maintain longitudinal markings for which it is responsible. Although the rule will not require agencies to inspect and measure the reflectivity of each marking, agencies may have to assess the service life of markings that are still adequately reflective, or provide for blanket replacement of markings in certain groups, areas or corridors.

If the MUTCD requirement takes effect in 2011, and if SFMTA did not implement a maintenance program to ensure reflectivity within four years after the final rule is effective, the consequences could be serious. As stated by the Federal Highway Administration in regard to sign reflectivity, noncompliance with this requirement may result in consequences such as the withdrawal of federal funds and increased tort liability.

Recommendations

SSD should:

13. Make a plan to address the Traffic Paint Shop's backlog of work.

14. SSD should continue to monitor the FHWA's actions regarding the proposed changes to the MUTCD regarding the reflectivity of pavement markings. While the changes are not yet effective, SSD should

begin to develop an assessment method that could be used to maintain minimum levels of reflectivity of pavement markings.

Finding 2.4 **The Traffic Sign Shop has no sign management system and uses an outdated and inefficient work tracking system.**

The Traffic Sign Shop does not have a sign management system that would allow it to inventory the signs installed on City streets. According to the FHWA, for agencies responsible for the management of traffic signs to achieve the desired goal of quality sign maintenance, a comprehensive sign management system should be developed which includes an inventory, manual or computer-based, of signs installed on all public roads.

The Sign Shop's work order tracking system is outdated and not a sign database.

The Sign Shop uses an outdated work order creation and tracking system, the AS/400. The AS/400 is a work order tracking database that maintains records of all sign work completed, including installations, repairs, modifications and removals, and can be filtered or searched by intersection. AS/400 was not intended to contain, nor can it provide, the number or types of signs on City streets, their age, or the estimated useful life of signs that could help in estimating their reflectivity and expected date of needed replacement.

The AS/400 system functioned successfully and met the needs of the Sign Shop for more than 20 years. As a result, Sign Shop management saw no needed changes to the system until recently. However, according to SSD's field operations manager, AS/400 is no longer supported by its manufacturer. Thus, it may not be reparable if it fails. Moreover, AS/400 contains neither the inventory of signs installed and maintained on San Francisco's streets nor the inventory of unused and available signs in the Sign Shop's warehouse.[11]

The Sign Shop uses a secondary complaint logging system that is not integrated with the work order tracking

The Sign Shop also uses an interactive, web-based system which is connected to the City's 311 system. This web-based system tracks all 311 complaints

[11] The Sign Shop has a separate spreadsheet that is supposed to be used to track the inventory in its warehouse but it is not updated.

system, resulting in inefficiency.

received from their inception to the Sign Shop's response and completion. SSD management reports that this system is not integrated with the AS/400 system due to software conflicts. As a result, any 311 complaints received must be hand keyed into the AS/400 system to generate the work order needed to complete the request. This results in Sign Shop personnel spending additional time to document requests from system to system. An updated, integrated inventory and work management system with the needed functionality would allow the Sign Shop to work more efficiently and increase its operating effectiveness by tracking the age, location, and expected reflectivity of each sign and actively monitoring the maintenance needs of signs based on age.

An inventory would help SSD efficiently comply with federal reflectivity requirements.

As noted in Finding 2.1, the MUTCD will require agencies to meet minimum sign reflectivity standards and implement a sign reflectivity assessment program in coming years. For the Sign Shop to effectively monitor the condition of the signs for which it is responsible, an inventory of all installed signs will be needed. Without such an inventory, the task will be much more difficult, and less efficient and effective, increasing the risk that the Sign Shop will fail to comply with federal requirements.

Recommendation

15. To comply efficiently with new federal reflectivity requirements, SSD should consider acquiring and implementing a database or databases that would allow the Traffic Sign Shop to record and track the City's inventory of installed signs, including their age and/or condition, and its inventory of stored signs available for installation.

Finding 2.5 **The Traffic Paint Shop has no maintenance inventory of the City's pavement markings.**

The Traffic Paint Shop does not maintain a list or database of the City's street markings that shows the age or condition of the markings. Such an inventory could allow SFMTA to accurately record and report the total linear feet or miles of markings throughout the City, which is a number critical to important SSD performance measures, as noted in Chapter 5. Additionally, the use of an inventory system to track

pavement markings is critical to an effective marking management system. SSD management reports that the Paint Shop has access to the City's striping blueprints that show what is supposed to exist on all major streets but acknowledges that this is insufficient and that a new striping system should be explored.

The Paint Shop's records of work performed do not function as an inventory of pavement markings or readily indicate their condition.

To keep track of its work installing various types of pavement markings, including lane lines, crosswalks, bicycle lane lines, and several other markings, the Paint Shop uses multiple computerized spreadsheets to track and log all completed service requests. The work logged includes all complaints received through 311 and work orders from SSD's Transportation Engineering subdivision. Each completed request is recorded by date, location, intersection or street, type of marking and linear footage marked. These records allow the Paint Shop to report miles of markings completed each quarter, as SSD management requires.

Completed requests are logged and tracked by work order, and by location. As a result, any remarking or modifications to existing pavement markings are added to the list rather than shown as revisions to the original line-item of work. Not only does this method not provide for accurate reporting of the total inventory of pavement markings throughout the City, it does not allow SSD to assess or estimate the condition of markings based on when they were last worked on.

An inventory of pavement markings would be a critical tool in assessing their reflectivity.

As noted in Finding 2.3, a proposed federal rule would require agencies responsible for the management of pavement markings to implement an assessment or management method to meet minimum standards of reflectivity for some pavement markings. SSD could most efficiently implement this requirement by means of an inventory of longitudinal pavement markings on public roads for which it is responsible. If the rule is adopted, the Paint Shop could rely on such an inventory as its basis to periodically monitor the condition of pavement markings on streets to which the rule would apply.

For the most effective system, which would exceed the proposed federal requirement, this inventory would include all markings, not just longitudinal ones. This is

because the advantages of an inventory go beyond its value in assessing reflectivity. Without such an inventory, SFMTA has no way to know the condition of all pavement markings on San Francisco's streets or to prioritize its work based on such comprehensive knowledge.

Recommendation

16. SSD should acquire and implement a database that would allow the Traffic Paint Shop to capture the City's inventory of installed pavement markings, including their age and/or condition, to comply efficiently with proposed federal reflectivity requirements.

Finding 2.6

San Francisco's shops must maintain far more signs and signals per employee than do shops in other jurisdictions.

When compared to shops in three cities with populations of comparable size — Portland, Oregon; San Diego; and Seattle — San Francisco is shown to have many more installed signs per Sign Shop employee than does San Diego or Seattle (Portland did not report its sign shop staffing) and the second-highest number of signalized intersections per signal shop employee of the four cities.

Specifically, the survey results (in Appendix C) show that each non-supervisory employee in San Francisco's shops is responsible for two-and-a-half times as many signs (14,933) as their counterparts in Seattle, the city with the next closest quantity (5,769) of signs per worker. Each non-supervisory Signal Shop employee here is responsible for 80 signals, which is far more than each worker in Portland (50) or Seattle (38) must maintain, but fewer than in San Diego (91).

The comparison shows that San Francisco and Seattle have the lowest number of linear miles of street markings (51) per paint shop employee but this comparison is tempered by the fact that at least one of the other cities (San Diego), unlike San Francisco, uses contractors to paint street markings after streets are repaved. Also, this measure for San Francisco is based on an unsupported number of miles of street markings

in the City.[12]

[12] Various SFMTA documents show the distance of street markings in San Francisco as 700, 900, and 905 linear miles, all of which appear to be estimates. The audit used 900 miles in its analysis although SFMTA could not provide support for any of these figures. According to the November 2010 SFMTA Transportation Fact Sheet, the City has 946 miles of roads, including 850 miles of paved roads, as estimated by the Department of Public Works.

CHAPTER 3 – The Division Does Not Adequately Monitor Its Contracts

Summary

SSD does not adequately keep track of its contracts. Many of SSD's contracts are not listed in SFMTA's database that is intended for this purpose, reducing SSD's and SFMTA's ability to track and monitor its contracts. As a result, SSD is at greater risk of violating City contracting requirements and mismanaging its contracts. In addition, SSD has inadvertently misinformed decision makers about its contracts as evidenced by an incomplete list of contracts in a quarterly report provided to SFMTA's board of directors.

Seven of the eight major SSD contracts reviewed comply with basic City requirements in that they appear to have been properly competitively bid and are not expired. The exception was a $1.1 million SSD contract that was not extended when needed. It was amended to effect a retroactive, four-year extension three years after the contract had expired. SFMTA's database still showed this contract as active months after it had been closed.

Finding 3.1 **The division should better keep track of its contracts to monitor their status.**

SSD does not effectively track key information about its contracts, including how many it has and when they expire. The audit analyzed eight SSD contracts with a value of at least $100,000 each to determine if SSD complies with the City's basic contracting requirements, including whether the contract:

- Is currently in effect (not expired).
- Was properly competitively bid (or exempted from competitive bidding), including whether there was written justification if the lowest bid was not selected.
- Was approved by the required parties.

Seven of the eight SSD contracts reviewed met all of these requirements. However, SSD does not adequately keep track of its contracts. Monitoring the status of contracts is important, especially when they often change. Six of the eight contracts reviewed by the audit had one or more amendments extending the contract's scope, term, and/or

value.

The audit identified the contract-monitoring issues described below.

The division does not have a comprehensive list of its contracts and does not consistently use the department's IntelliContract database.

SSD does not have a complete list of its contracts and does not consistently use the departmental database that SFMTA has established to manage its contracts. SSD does not always include, update and monitor its contracts in SFMTA's contract management database, IntelliContract, which allows users to upload copies of contracts and amendments, conduct searches, and generate reports showing each contract's term, status, and designated contact.

The audit team had difficulty obtaining a complete list of all SSD contracts over $100,000. SSD provided the audit team a list of seven contracts of more than $100,000. That list was incomplete because it did not include any of the contracts related to SSD's Off-street Parking subdivision. The audit team then reviewed the IntelliContract database and found records of some off-street parking contracts, including four management agreements with operators and 35 space lease agreements that were not on the list SSD had provided.[13] Moreover, the IntelliContract database is incomplete because it only includes 4 of the 17 management agreements SFMTA has with off-street parking facility operators. The IntelliContract database also does not include updated information for some SSD contracts.

Because SSD does not track and manage all its contracts with one tool, decision makers may be misinformed. For example, SFMTA's Quarterly Contracts Report dated November 10, 2010, that was submitted to the SFMTA Board of Directors lists 18 active SSD contracts, including 11 active contracts of over $100,000, with a total value of $15.4 million. However, the list presented in the report is incomplete because it excludes all the off-street parking garage space leases and 13 of the 17 management agreements SFMTA has with garage operators. Further, this exclusion is not noted in the report. The SFMTA board resolution that mandates the Quarterly Contracts Report

[13] Some of the missing management agreements could cost SFMTA more than $100,000 per agreement over the life of the agreement, and some of the leases could bring SFMTA more than $100,000 in revenue per lease over the life of the lease.

requires that it include all contracts, including contracts that bring revenue to SFMTA, of any value up to $500,000.

The lack of a comprehensive database of SSD contracts and related documents inhibits SSD's ability to locate documents needed to manage its contracts.

If SSD had all its contracts in the department-wide IntelliContract database, these contracts would be more likely to be properly managed, tracked, and reported on. Because IntelliContract does not include all SSD contracts, SSD is less able to readily identify, review, or know the status of its contracts and related documents. This was evident when the audit team requested a number of supporting documents related to SSD's large contracts, including copies of contracts, amendments, requests for proposals, and proposals. It took SSD several weeks to locate and provide some of this information because the documents are not centrally stored and are instead maintained with various employees who did not always properly retain the documentation.

One SSD contract received a retroactive four-year extension over three years after it expired.

SFMTA worked with a contractor that had an expired contract for more than three years, which indicates that SSD did not adequately monitor this contract. In this instance — SFMTA's system integrator contract with PB Farradyne, Inc. (later Telvent Farradyne, Inc.) — SSD did not amend the contract to extend its term until three years and five months after it expired. The Telvent contract was established to complete the initial phase of the SF*go* program, and the contractor was to provide software, hardware, project management, testing and training. The original contract was for $699,961 and a term of one year, ending in February 2006. The contract was amended four times, resulting in a total amount of $1,129,838. However, it was not until the fourth amendment, in July 2009, that the contract was extended.

The fourth amendment to the Telvent contract retroactively extended the contract by more than four years, from February 2006 to March 2010. The Telvent contract expired again in March 2010. SFMTA paid the vendor's final invoice, which was received March 8, 2010, and considers the project completed and the contract closed. Despite this, as of late 2010, the Telvent contract was still listed in the IntelliContract database as active.

Long contract extensions can distort the competitive solicitation process.

According to an SFMTA senior engineer, the Telvent contract was extended and expanded because of additional funds becoming available from a grantor.

Although this may have been reasonable in this case, in general, whenever possible, City contracting personnel should thoroughly consider all foreseeable circumstances when drafting professional services contracts to minimize the need for long or multiple extensions. When unforeseeable circumstances dictate major expansions of scope or extensions of term, a new competitive solicitation for the services should be considered. Amending contracts in ways that significantly change the terms of the City's solicitation documents can be unfair to respondents that were not selected for the contract. Such changes also may be unfair to potential respondents who did not submit proposals because of solicitation terms, such as the planned duration of the contract, that were unattractive to them. When contracts are amended in this way, the City is less assured that it receives the best available price, value, and quality of service.

Recommendations

SSD should:

17. Use the agency's IntelliContract database as a tool to monitor all of its contracts.

18. Avoid doing business with vendors whose contracts have expired.

19. Monitor contract expiration dates so that the need to extend contracts is foreseen and acted on months before they expire. Doing so will avoid retroactive contract extensions.

20. Carefully consider whether the scope of services and contract term proposed for solicitation documents for the procurement of professional services are reasonable and sufficiently flexible for the City to minimize the need for later contract amendments.

21. Avoid amending contracts in ways that significantly change the terms of the contract's solicitation documents, such as a request for proposal. Such contract amendments may indicate that a new competitive solicitation is needed.

CHAPTER 4 – The Division Should Better Monitor the Status of Its Projects

Summary

SSD effectively coordinates its projects with other divisions of SFMTA and other City departments to avoid scheduling conflicts and inefficient work. However, SSD inconsistently and sometimes inadequately monitors the status of its projects.[14] This reduces SSD's ability to foresee and avoid project delays and budget overruns. Project managers monitor critical aspects of projects, such as budgeted versus actual expenditures, at different intervals and in different ways from one another because they have differing or no written departmental or divisional procedures to guide them. In the absence of uniform procedures, SSD's project managers often monitor and report the status of their projects via quarterly reports written according to the project funders' requirements. Preparing individual quarterly reports for each of SSD's many projects, although required by funders, does not constitute a robust and effective management reporting mechanism, especially when some projects last less than a year.

SSD lacks a uniform reporting tool that would inform management each week, month or quarter of the status of each project. SSD's ability to track its projects — or even see its entire portfolio of projects at a glance — is inhibited because it does not have a concise list of its projects, let alone a unified status report. SSD would benefit from an easy-to-update, uniform, periodic report with detailed status information, such as project budget, actual costs and scheduled interim milestone and completion dates.

Finding 4.1

The division lacks a uniform tool that would allow it to more effectively track and report the status of its projects.

SSD's primary project monitoring tools, project-specific quarterly reports in various formats prepared to fulfill funders' requirements, are not the most effective way to provide SSD management the information it should have to ensure that projects are progressing as planned, on

[14] The audit uses "projects" to mean SSD's construction-related projects.

time and on budget. Although grant-funded projects reviewed during the audit require that quarterly reports be submitted to funding agencies, some of these reports do not present project status in terms of important indicators. For example, some show the percentage of project completion while others do not. Some show both the original and revised budget while others do not. Not all of the quarterly reports include the same information because reporting requirements differ among funding agencies.

Although SSD project managers may be competently managing their projects, there is no single report to show which projects are on or behind schedule and on or over budget from the reporting now done, and it is impossible to do so on a monthly or more frequent basis based on quarterly reports. As a result, SSD management is at a disadvantage in ensuring that projects are running smoothly and knowing when they are not.

SSD could more effectively monitor its projects and report results to management if it had a single tool to do so, requiring that the same data — and all data desired by management — be entered for each project each week, month or quarter. A uniform project management tool should be able to capture and report indicators of project progress such as:

- Personnel assigned
- Scheduled versus actual milestone dates
- Percentage of budget spent versus percentage of project completed
- Indication of approaching budget overrun or missed deadline

Some of this data is captured by the existing reports, but not all of it is reported for all projects, even quarterly.

SSD's main project report is designed for financial purposes only.

In response to the audit team's request for a list of SSD projects, SSD provided a report showing 541 SSD-related projects from the City's accounting system. By its nature, this system relies on a different, financial definition of project than the construction-related projects that the audit team's inquiry concerned. For example, the list contains several studies and other items listed as projects that appear to be appropriated or unallocated amounts related

to other projects. For each item listed, the report provides its budget, expenditures to date, amount expended in the current fiscal year, encumbered amount and remaining balance. Although this report may be useful for financial purposes, it lacks the data fields that would make it an adequate all-purpose project management tool for SSD management.

Monitoring project status to enhance accountability is a best practice.

Adequate monitoring of project status should be considered a best practice. The National Cooperative Highway Research Program – Transportation Research Board states that a project's budget is the most important thing a project manager needs to manage. Although the accounting system report described above includes the budget and expenditures to date for each project, it is an inadequate forecasting and accountability tool. A study performed by the Arizona Department of Transportation found that desired outcomes for construction project management include that agencies should be able to manage and be held accountable for delivering projects against predetermined scope, schedule, budget, and quality.

Managing projects with the help of a unified monitoring and reporting tool is consistent with the practices of agencies in five other jurisdictions that the audit team researched: King County (Seattle), Washington; Los Angeles County Metropolitan Transportation Authority; Redwood City; Sacramento County; and San Jose. Four of these five jurisdictions indicate that they use a project management database or other similar software tool to monitor the status of projects in their organizations. In addition, according to a lead project manager in SFMTA's MTA's Capital Projects and Construction Division, that division is currently in the process of procuring project management software.

Recommendation

22. SSD should work with SFMTA's Capital Projects and Construction Division to see if the Sustainable Streets Division can use the project management software that the Capital Projects and Construction Division is now procuring.

Finding 4.2

The division should improve the methods project managers use to monitor the status of projects.

In addition to the inconsistent and in some cases inadequate information included in the project-specific quarterly reports explained in Finding 4.1, SSD project managers do not track the status of their projects as effectively as they should. This conclusion is based on a review of five projects representing the three SSD subdivisions with project responsibilities — Long Range Planning and Policy, Livable Streets and Transportation Engineering — and the three units in Transportation Engineering with project responsibilities.

Exhibit 7 presents what was and was not adequately monitored (i.e., checked at reasonable intervals using reliable information) for the five projects reviewed.

EXHIBIT 7 **Five SSD Projects: What Project Managers Adequately Monitored[a]**

Project	Subdivision	Project Budget	Budget to Actual Cost Adequately Monitored?	Progress Versus Schedule Adequately Monitored?
Balboa Park Station Pedestrian and Bicycle Connection Project	Long Range Planning & Policy	$ 220,000	No	No
Kirkham Street Class Bikeway/Lanes	Livable Streets	115,000	No	No
New Traffic Signal Contract 59	Transportation Engineering – Special Projects/ Street Use	Note b	No	No
Oak & Fell Signal Upgrade Project	Transportation Engineering – SFgo / Transit Engineering	2,651,648	Yes	No
Harrison Street Pavement Renovation	Transportation Engineering – Traffic Routing	185,000	No	No

Notes:
[a] Monitoring, i.e., documented periodic tracking, was considered to be adequate if it was done at reasonable intervals given the duration of the project and based on reliable information.
[b] According to the project manager, the project cost was $2,588,191 but the auditor could not determine the project's total budget because the project received funds from various grants, some of which came early in the project and had been closed out by the time of this analysis. The project manager did not track total project budget to actual costs.

Sources: Interviews with SSD personnel, including project managers, and auditor's analysis of project documents provided.

For only one of the five projects analyzed was there documentation of adequate monitoring of project budget to actual costs and none of the projects had documentation of consistent monitoring of project progress versus schedule.

According to SSD management, SSD project managers state that they keep track of their projects' budgets to actual costs and monitor their projects versus schedule. To a limited and inconsistent extent, this does occur. However, based on the sample of five projects the audit considered, monthly or more frequent monitoring based on reliable sources of information appears to be rare.

Some key aspects of projects were not kept track of as well as they could have been. Some project monitoring shortcomings found by the audit are illustrated by the example of the Balboa Park Station Pedestrian and Bike Connection. For that project:

- The "final" scope document, dated July 28, 2008, describes project tasks and their due dates but the project schedule, dated February 25, 2009, lists the same project tasks with later due dates than those in the final scope, with no explanation for the differences. No project monitoring document showed the original due dates or that they had been changed.

- The initial timeline for action items was updated and revised as the items were completed. However, with no comparison to the deadlines in the initial timeline, the updated timeline does not indicate whether items were completed on time or late.

- The project manager stated that she used the City's accounting system to check the project's

expenditures only every three to four months. This is infrequent for a project that was expected to take nine months.

- To document the project's costs, the project manager mainly relied on invoices received from the project's consultants, which is not the most reliable source of information on the amounts actually paid by the City.

Different SSD project managers monitor projects in different ways.

Project managers monitor and report the status of their projects in different ways because SSD project managers are required to track and document each of their projects in the way required by a funding source, according to the requirements of their subdivision or in no particular way at all. Project managers may informally monitor some things that they do not document.

Not only do the three SSD subdivisions that manage projects track them differently, methods vary even among project managers in different units of the same subdivision, Transportation Engineering. Appendix D lists each SSD subdivision's project management tools and their characteristics.

SSD's lack of an adequate tool to monitor project status could have negative effects.

The lack of a uniform project management tool to allow identification and review of all projects and their status in terms of cost versus budget and progress versus schedule makes SSD's job more difficult. It may inhibit the ability of SFMTA and SSD's senior managers to efficiently and effectively manage the work for which they are responsible.

Lack of adequate project status monitoring increases the risk that the following *could* occur:

- Project delays not being foreseen or identified promptly.
- Project budget overruns not be foreseen or identified promptly.
- Project costs increasing due to delays.
- Lack of accountability for projects that fall behind schedule or exceed budget.
- Loss of grant funds from funding agencies for current or future projects due to missed deadlines.

Because SSD does not use a comprehensive and consistent project monitoring tool and the data that such a tool would include is not readily available, the audit could not fulfill its objective to determine whether projects are completed on time, the causes of any late projects, and whether the way in which projects are scheduled contributes to or limits their effectiveness.

SSD does not have an operations manual for managing its projects.

SSD does not yet have an operations manual to guide its staff in managing projects. The Long Range Planning and Policy subdivision identified a few documents as its written procedures, but they are rather brief guides and definitions for project teams and not an adequate operations manual. The Livable Streets and Transportation Engineering subdivisions reported that they do not have any such written procedures.

An operations or policies and procedures manual can be a valuable tool for any organization. Literature[15] in the field indicates that it is a best practice is to have an integrated, end-to-end project manual. In contrast to SSD, SFMTA's Capital Program and Construction Division has an operations manual. Some of the key aspects of that manual are detailed descriptions of job duties and responsibilities, a policy that there be staffing work plans by phase to include project budgets, and detailed project control procedures such as reporting of milestone schedules, budgets and actual costs.

An operations manual sets out clear duties and responsibilities for staff. The lack of an operations manual at SSD makes the success of a project highly dependent on the management and monitoring methods that each project manager chooses to use (or not use). If SSD or SFMTA management has specific expectations about how projects should be managed, including duties and responsibilities, it cannot expect its project managers or SSD subdivision management to be aware of them unless they are in writing. An operations manual can be a tool for training new employees and ensuring consistency of work produced. The creation of an operations manual will foster dialogue between SFMTA and SSD's senior and mid-

[15] North Carolina General Assembly, Final Report, *NCDOT Project Delivery Study,* July 19, 2004.

level management regarding expectations.

Recommendations

SSD should:

23. Use project management software to uniformly report on project data such as staff assigned, scope of work, original budget, revised budget, actual cost to date, original and revised schedule (milestone dates), actual milestone completion dates, and percentage of project complete.

24. Develop an operations manual for projects that details staff duties and responsibilities, including the reporting of project status.

Finding 4.3

The division coordinates its projects to avoid scheduling conflicts and wasted effort.

SSD coordinates projects with other divisions of SFMTA and other City departments to ensure that scheduling maximize the projects' timeliness and effectiveness. SSD cooperates with the Long Range Planning and Policy, Livable Streets, and Transportation Engineering subdivisions, which are responsible for various aspects of SSD's projects. SSD also works with organizations outside SFMTA to identify existing or pending work and prevent project interference and scheduling conflicts.

SSD uses the City's project coordination tool, which is administered by the Department of Public Works.

SSD participates in the City's Utility Excavation and Paving Five-Year Plan (plan), administered by the Department of Public Works, which controls all excavation and paving projects that occur in San Francisco's public streets. The plan relies on a database that allows all utilities (e.g., Pacific Gas and Electric Company) and City departments to coordinate street excavation, utility work, paving, and other construction projects in the public right of way to minimize the impact of construction on streets and in neighborhoods. Agencies that participate in the plan can indicate projects in the database and check to see if other agencies have done the same. The coordination of projects is critical because once a street has been paved, there is a five-year moratorium in which the street cannot be excavated.

According to SSD project managers, the plan, along

with SFMTA's participation in various interdepartmental City committees, such as the Committee for Utility Liaison on Construction and Other Projects and the Transportation Advisory Staff Committee, and routine internal meetings have made project coordination efforts effective. According to the Civil Engineer in charge of the plan at the City's Department of Public Works, SSD project managers consistently use the plan to coordinate projects within the City.

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CHAPTER 5 – Some of the Division's Performance Measures Are Unreliable

Summary

SSD needs to strengthen its performance reporting to ensure that it is using accurate and reliable data to make decisions and determine if it is meeting its mission, goals, and objectives. The audit considered SSD's 11 published performance measures and found that:

- Results reported for 4 of 5 measures tested for data reliability are based on data that is missing, inaccurate, or does not match what is reported.
- At least 3 measures are worded imprecisely or have incorrect or unclear definitions.
- Some SSD measures address activities that are not entirely within SSD's control and rely on results data of unknown reliability collected by other organizations.
- There are no measures of the activities of SSD's Off-street Parking and Long Range Planning & Policy subdivisions.

SSD needs to review and maintain documentation to support the accuracy of reported performance measure results, reformulate titles and definitions for performance measures and ensure that the division's measures best reflect SSD's mission, goals, and work.

Background: What is a performance measure?

A performance measure is a quantifiable indicator of an activity or outcome. The City uses performance measures to evaluate the efficiency and effectiveness of programs and services provided to its citizens. Performance measures have multiple uses for management such as:

- Assessing employee performance
- Making policy and budget assessments
- Monitoring operations
- Upholding accountability
- Conveying priorities

Organizations may use several different types of

performance measures, including measures of input, output, efficiency, and outcome. Exhibit 8 details the types of performance measures used by organizations.

EXHIBIT 8 Types of Performance Measures

Measure Type	Definition	Examples
Inputs	Resources expended to produce services and products	Dollars spent Staff hours used
Outputs	Products and services delivered	Eligibility interviews conducted Library books checked out Children immunized Purchase orders issued
Efficiency	Ratio of cost to amount of output, or vice versa	Cost per appraisal Plans reviewed per reviewer
Outcomes	Results, benefits, or effectiveness of an activity or program for customers or the public	Percent of job trainees who hold a job for more than six months Percent of juveniles not reconvicted within 12 months

Source: Guide to Good Measures, Controller's Office, City Services Auditor, July 2009.

According an analyst in the Controller's Citywide Performance Measurement Program, a strong performance measure should have three elements:

- A *name* that clearly and briefly states what the number reports.
- A *description* that puts the measure in context and explains what is being tracked and why. If the measure is a percentage, the numerator and denominator should be provided.
- A *technical description* that clearly outlines the data collection methodology, including the source (where the data that the measure reports comes from), the collection method (how the department collects the source data) and the collection frequency (how often the data is collected, recorded and reported) and the storage location (where the data is stored).

SSD has 11 published performance measures.

As a result of Proposition E, approved by San Francisco voters in November 1999 and incorporated into the San Francisco Charter as Article VIIIA, Section 8A.103, SFMTA established a number of performance measures that are published in its quarterly Service Standard Reports and citywide reports such as the

Mayor's budget book. Eleven of SFMTA's 44 service standards are performance measures for SSD. Exhibit 9 presents SSD's 11 published performance measures, which are presented in more detail in Appendix E.

EXHIBIT 9 SSD's Eleven Published Performance Measures*

- Traffic and Parking Control Requests - Percentage Addressed Within 90 Days
- Color Curb Applications - Percentage Addressed Within 30 Days
- Parking Meter Malfunction Reports - Percentage Addressed Within 48 Hours
- Hazardous Traffic Sign Reports - Percentage Addressed Within 24 Hours
- Hazardous Traffic Signal Reports - Percentage Addressed Within 2 Hours
- Traffic Lane Lines, Bus Zones and Crosswalks - Percentage of Network Maintained Annually
- Pedestrian Safety - Number of Intersections Equipped with Countdown Signals
- Bicycle Network Usage – Counts at Key Locations
- Congestion Management – Level of Service on Principal Arterials
- Sustainability - Percentage of Trips by More Sustainable Modes
- Safety – Vehicle Collisions Involving Bicyclists and Pedestrians

Note: *One SSD performance measure is not published as a part of SFMTA's Service Standards and was not reviewed by the audit.

Source: SFMTA's Service Standard Reference Sheet.

Finding 5.1 **The division's reported performance results are often not supported by reliable data.**

For four of five measures reviewed, the division's reported level of performance is not supported.

SSD cannot be certain that it is achieving its objectives in certain instances and may be making decisions based on inaccurate or unreliable data. The audit team selected for analysis of supporting data five of SSD's performance measures, those in the areas of:[16]

- Traffic and parking
- Color curb applications
- Traffic sign reports
- Traffic signal reports
- Traffic lane lines

After requesting data to support the reported results, tracing reported results back to source data for a one-year period, and recalculating the results data, the audit

[16] These areas were selected because their measures are representative of SSD's measures as a whole and included a number of outcome measures.

could not verify the reported results for four of the five measures. This was due to missing data, data that appears to be entered or calculated incorrectly, and data that does not match what is reported.

Specifically, SSD did not:

- Retain documents supporting reported results for *Hazardous Traffic Sign Reports - Percentage Addressed Within 24 Hours*.
- Provide support for the striping grand total number used to calculate reported results for *Traffic Lane Lines, Bus Zones and Crosswalks - Percentage of Network Maintained Annually*.
- Require information for each measure to be entered into one location to prevent missing data for the calculation of *Traffic Lane Lines, Bus Zones and Crosswalks - Percentage of Network Maintained Annually*.
- Ensure that data was accurately calculated for *Traffic Lane Lines, Bus Zones and Crosswalks - Percentage of Network Maintained Annually*.
- Confirm that results calculated match results reported in quarterly service standards for *Traffic Lane Lines, Bus Zones and Crosswalks - Percentage of Network Maintained Annually*.
- Ensure that data is correctly entered into the databases for *Hazardous Traffic Signal Reports - Percentage Addressed Within 2 Hours*, *Color Curb Applications - Percentage Addressed Within 30 Days*, and *Traffic and Parking Control Requests - Percentage Addressed Within 90 Days*.[17]
- In two out of eleven color curb requests, retain documents supporting the date received and/or the date responded for *Color Curb Applications - Percentage Addressed Within 30 Days.*
- Timely run the backlog query function to maintain

[17] The *Hazardous Traffic Signal Reports – Percentage Addressed Within 2 Hours* measure was verified with supporting data. However, there were data entry errors in the database.

more reliable data and improve reported results for *Traffic and Parking Control Requests - Percentage Addressed Within 90 Days*.

- Contact the public regarding the status of requests scheduled for public hearing or approved by interdepartmental review before logging them as completed for *Traffic and Parking Control Requests - Percentage Addressed Within 90 Days.* Instead, requests were assumed to have been completed.

- Implement controls to ensure the accuracy of data after supervisors reactivate entries to change "completed" or "received" dates for *Traffic and Parking Control Requests - Percentage Addressed Within 90 Days*.

Recommendations

SSD should:

25. Conduct and document periodic reviews of performance measure source data, calculated results, and reported results.

26. Maintain source documentation to support reported results for performance measures.

27. Establish or strengthen existing written procedures on performance measures.

28. Enter each performance measure's data used to calculate reported results into one location to avoid errors.

29. Consider hiring a full-time dispatcher for the Traffic Signal Shop to reduce manual data entry errors.

30. Schedule periodic running of the backlog query for "traffic and parking control requests" and follow-up in a timely manner.

31. Communicate status of requests approved by interdepartmental review or scheduled for public hearing to constituents before logging as completed.

32. Implement controls such as spot checking to ensure the reliability of data after supervisors reactivate

entries used in the calculation of performance measure results.

Finding 5.2 **The majority of the division's performance measures could be better formulated.**

Of SSD's 11 performance measures, at least 3 are imprecisely worded or defined, such that what is reported is not exactly what the measure implies. In fact, 5 of the measures use the term "addressed" when it is unclear if that means responded to, made safe, fully resolved or something else. As a best practice, performance measures should be clearly formulated to accurately reflect to stakeholders what it intends to evaluate. Otherwise, SSD's actual performance in these areas may be difficult to interpret or understand. In addition, the performance of the programs in question may be misrepresented, either exaggerated or understated.

Examples of ambiguous wording and imprecise definitions of performance measures include:

- **Traffic and Parking:** *Traffic and Parking Control Requests - Percentage Addressed Within 90 Days*. The full title of this performance measure is confusing since it appears to be related to requests for parking enforcement done by Parking Control Officers (PCOs). Instead, it intends to measure timely customer service in addressing the public's requests for traffic engineering, including engineering-related parking requests and parking hazard investigations. The title should be more specific, such as "Traffic Engineering Control Requests: Percentage Responded to Within 90 days." Additionally, in materials provided to the audit team defining SSD's reported performance measure results, the reported goal of this measure included responding to requests from the public for changes to bicycle and traffic calming controls, which is the responsibility of Livable Streets, another subdivision within SSD. According to an SSD senior engineer, this performance measure may have included these types of requests in the past when Transportation Engineering and Livable Streets were organized together. Also, it is unclear from the Service

Standard Reference Sheet (SSRS) what types of requests are included in the measure.

- **Color Curb Applications:** *Color Curb Applications – Percentage Addressed Within 30 days.* The SSRS definition and title of the measure are confusing because the standard measures the time to respond to color curb applications, not necessarily the time the request is completed. For example, an applicant might receive a response granting approval for a color curb but the curb will not be painted until certain fees are paid. In addition, the SSRS is inaccurate in that some applications do not require a fee and residents are not always notified in writing once an investigation is complete. For this and other measures, "addressed" is ambiguous; "resolved" is clearer.

- **Traffic Signal Reports**: *Hazardous Traffic Signal Reports – Percentage Addressed Within 2 Hours.* Based on the title, it is unclear whether this is a measure of response time, time to fully repair a problem or something in between. According to SSD management, it considers and reports the target met when an electrician arrives within two hours of a traffic condition report and “makes safe” whatever condition is found. Thus, the immediate hazard must be resolved but this may or may not mean that all needed repairs are completed. Any repair time and necessary follow-up by a larger crew is not considered. In addition, results data for this measure includes all traffic signal reports, not just those concerning hazardous conditions.

It is unclear what part of SSD is responsible for the activity being measured.

It is unclear whether parties outside SFMTA would know which SFMTA division or subdivision is responsible for outcomes of a particular activity or program reported on by SFMTA’s performance measures. For example, colored curb applications are handled by the Transportation Engineering subdivision of SSD, but this cannot be determined from reading the title or definition of the measurement in the SSRS. Making clear which measures address programs for which SSD is responsible will help promote SSD’s role and mission to the public.

SSD's measures have other problems in the way they are formulated.

Besides imprecise wording and other shortcomings described above, SSD performance measures in the following five areas are not well formulated:

- Bicycle Network Usage
- Congestion Management
- Sustainability
- Safety
- Traffic Lane Lines

For example, the Traffic Paint Shop's *Traffic Lane Lines, Bus Zones and Crosswalks - Percentage of Network Maintained Annually* does not indicate whether pavement markings are in an acceptable condition or if complaints are addressed in a reasonable timeframe. As such, neither the public nor SFMTA is able to effectively evaluate the Paint Shop's performance in these regards. In addition, the life cycle of paint chosen affects performance results.

Some measures include activities that are not under SSD's control so do not directly reflect SSD's performance.

For three of its service standards, SSD uses measures of activity that it cannot control or can only minimally control, and reports results that rely on data from other organizations that it does not vet for reliability.

- The *Hazardous Traffic Signal Reports – Percentage Addressed Within 2 Hours* measure discussed above includes the data reported by the Department of Technology's Central Fire Alarm (CFA) unit that assists the Traffic Signal Shop with requests after regular business hours. It is unclear why CFA's performance is included in SSD's service standards as SSD has little or no control over CFA's performance. The Traffic Signal Shop's manager agreed that CFA unit data should be excluded from the results reported for this measure.

- The *Safety – Vehicle Collisions Involving Bicyclists and Pedestrians* measure does not directly reflect how SSD is performing. Many factors outside of SSD's control affect the number of such collisions and it is impossible to show that SSD's efforts caused any reductions in injuries and fatalities.

- Data for other SSD performance measures is collected by other parties and SFMTA does not test

and cannot demonstrate its reliability. Data for the *Congestion Management – Level of Service on Principal Arterials* is collected by the San Francisco County Transportation Authority and data for *Sustainability - Percentage of Trips by More Sustainable Modes* is collected only every other year as a part of the City Survey conducted by the Office of the Controller. Although this data may be reliable, because SSD is not involved with the data collection for these measures it is less familiar with the data's parameters and limitations than it might be otherwise.

Recommendations

SSD should:

33. Update all public and internal communication on performance measures definitions that is incorrect or unclear and correct any imprecise wording of measures.

34. Exclude data on the Department of Technology Central Fire Alarm unit's performance from reported results for the traffic signal reports performance measure.

35. Provide additional information to the SFMTA Board and the public on which of SFMTA's performance measures SSD is responsible for achieving.

Finding 5.3

Performance measures could better reflect the division's mission, goals and work.

SSD's measures do not reflect major aspects of its work and do not address all of SSD's goals.

On the whole SSD's performance measures reflect much of its mission and many of its goals and objectives, but there are some significant exceptions. According to CSA's Guide to Good Measures, criteria for good performance measures include being comprehensive. This means that major performance elements or program components should be addressed, including the division's mission, core services, and functions.

SSD's performance measures are not comprehensive because some key SSD programs have no measures, and none directly report on the efforts of two of its subdivisions, Long Range Planning & Policy and Off-

street Parking. As a result, SFMTA cannot use its performance measures to evaluate the efficiency, productivity or effectiveness of these programs. If these programs were not achieving their goals, the lack of measures and targets would make it more difficult to identify this fact. Besides measures for the Long Range Planning & Policy and Off-street Parking subdivisions, performance measures for the Livable Streets subdivision's bicycle projects should be formulated and the Traffic Paint Shop should devise at least one measure that better gauges the work it does. This will help SFMTA and the public determine how well the subdivision's major programs and activities are performing.

Based on measures being used by other jurisdictions, the following are examples of measures that SSD might consider adding or adapting in the future:

- Percentage of traffic pavement markings rated in good condition (or rated as adequately reflective)
- Percentage of initial phases of construction projects coordinated on schedule and within budget
- Percentage of roadway miles that are bicycle accessible
- Percentage of City bicycle rack parking spots used
- Off-street parking operating expenses as a percentage of operating revenue
- Percentage of energy efficient lighting used in parking facilities

The Long Range Planning & Policy subdivision coordinates initial phases of construction projects and lists some of these in its long-term goals. Having a measure for management of these projects would evaluate how efficiently and effectively Long Range Planning & Policy is achieving its stated goals. Further, developing a measure or two for the Off-street Parking subdivision's work could assist in assessing its progress in areas such as increasing energy efficient lighting in parking lots and garages or increasing the City's revenues from its parking operations.

For the Field Operations subdivision, tracking the percentage of traffic pavement markings rated in good condition would require the Traffic Paint Shop to

prioritize maintenance for pavement markings that are in an unacceptable condition and maintain an inventory listing of the City's pavement markings. For the Livable Streets subdivision, establishing a measure on the percentage of roadway miles that are bicycle accessible would help determine whether the subdivision is meeting its goal of growing and defining the bicycle network in the City's Bicycle Plan. A measure on bicycle racks rated in good condition would also evaluate whether Livable Streets is making strides toward the goals listed in City's Bicycle Plan.

Recommendations

SSD should:

36. Consult with the Office of the Controller's Performance Measurement Team to improve existing measures and develop new ones.

37. Ensure that its measures fully reflect its mission, goals, and objectives, and all areas of its work.

38. Periodically evaluate the usefulness of its measures.

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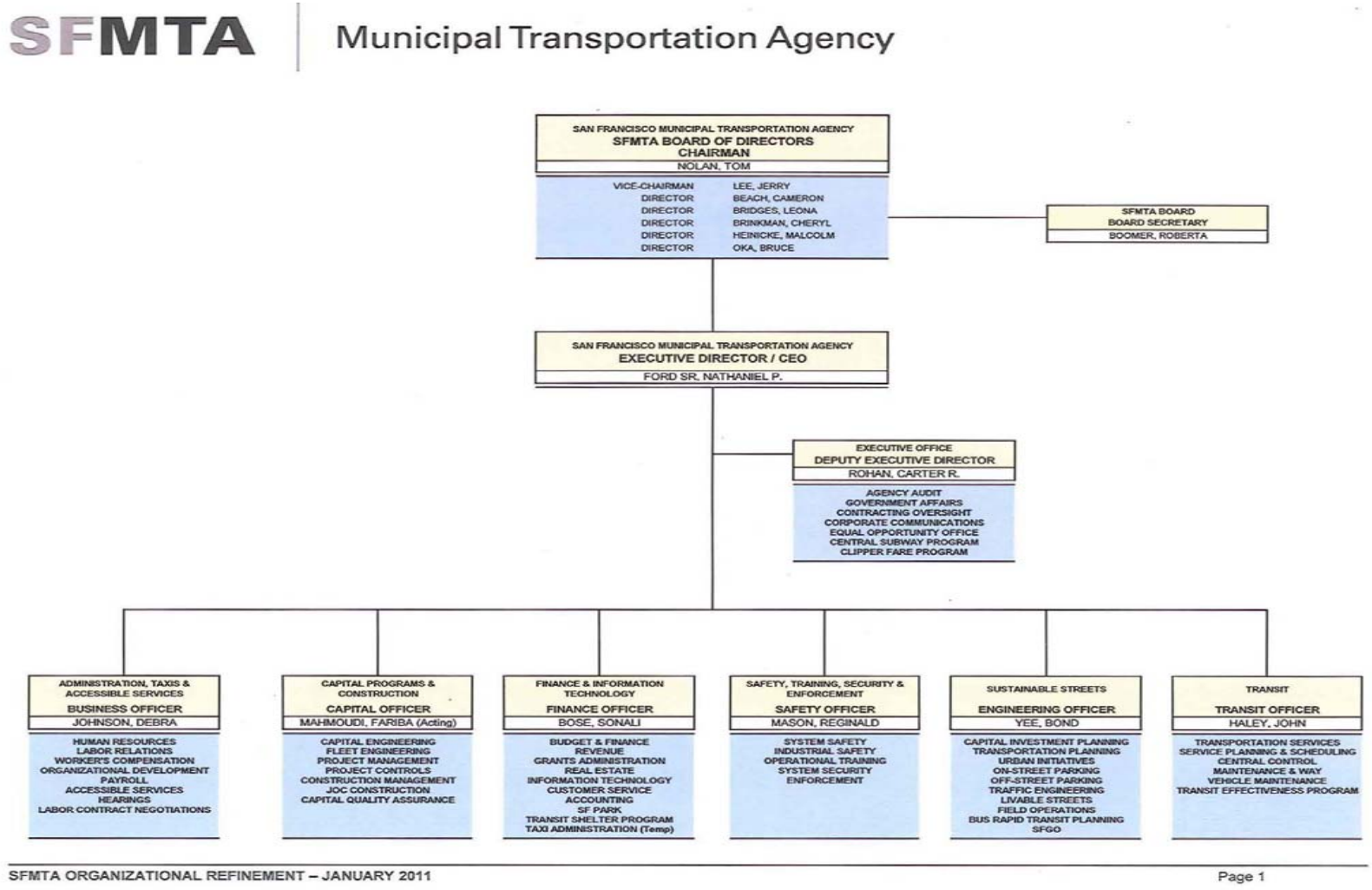
APPENDIX A: SFMTA ORGANIZATIONAL CHART



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APPENDIX B: BACKGROUND ON PAINT, SIGN AND SIGNAL SHOPS; PREVENTIVE MAINTENANCE AND INVENTORIES

The exhibit below summarizes key characteristics of each Sustainable Streets Division shop: what it is expected to maintain, its staffing level and the software it uses to track and log work performed and/or maintain inventory, as applicable.

EXHIBIT Characteristics of Three Sustainable Streets Division Shops

Shop	Inventory Maintained	Total FTE[c]	Total Active Supervisory FTE[a]	Total Active Maintenance FTE[a]	System/ Software Used
Traffic Paint	900 miles of pavement markings[b]	30	3	22	Microsoft Excel
Traffic Signals	1,187 signalized intersections	26	2	15	Microsoft Access
Traffic Signs	224,000 signs	27	2	15	IBM AS/400

Notes:
[a] Active employees exclude those on long-term leave.
[b] SSD could not provide support for this estimated distance.
[c] Total FTE includes all full-time employees that perform administrative duties as well as those performing the supervision and maintenance of traffic control devices.

Sources: Staffing levels from SFMTA, Sustainable Streets Division, Administration, as of December 15, 2010. Inventory data from SFMTA Transportation Fact Sheet, November 2010.

Preventive Maintenance Is a Recommended Practice

According to the Federal Highway Administration (FHWA), preventive maintenance cost-effectively extends the useful life of roadway assets and related traffic control devices.

The Traffic Sign, Signal and Paint Shops are required to follow specific federal standards when installing, modifying and maintaining traffic control devices placed on public roads. These standards, which act as the authoritative guidance for all traffic control devices, are set by the FHWA, and detailed in the *Manual on Uniform Traffic Control Devices* (MUTCD).

Related to preventive maintenance, the MUTCD, Section 1A.05, states:

> Functional maintenance of traffic control devices should be used to determine if certain devices need to be changed to meet current traffic conditions. Physical maintenance of traffic control devices should be performed to retain the legibility and

> visibility of the device, and to retain the proper functioning of the device.

Publications issued by bodies representing transportation coalitions such as the AASHTO, and the National Transportation Operations Coalition (NTOC), as well as the FHWA, all indicate that preventive maintenance provides agencies responsible for the management of traffic control devices with a cost-effective deterrent to device failures and increased roadway safety and efficiency.

A 2004 FHWA memorandum notes that:

> Timely preventive maintenance and preservation activities are necessary to ensure proper performance of the transportation infrastructure. Experience has shown that when properly applied, preventive maintenance is a cost-effective way of extending the service life of highway facilities…

Additionally, a 2005 NTOC technical report reiterates that an effective maintenance practice is a key component to a well-timed traffic signal system and requires the:

> Regular assessment of the condition of traffic signal control equipment, including verification that detectors are working properly, traffic signal controller timings are entered correctly, verification that signal displays are operational, visual assessment of the alignment of traffic signal and pedestrian displays to make sure they are visible to motorists and pedestrians, and a semi-annual comprehensive assessment of all operating conditions.

It Is Critical to Inventory Installed Traffic Control Devices

The use of an inventory system to track traffic control devices is critical to an effective traffic control device management system.[18] An ideal inventory system can be used to track an inventory of signs, signals and markings from their installation, through all maintenance and modification work, to the removal of the sign, signal or marking from the system.

As outlined in a guide for traffic signs, which the audit team considers equally applicable to signals and pavement markings, such an inventory system, preferably in a computerized database tied to a geographic information system, can provide SSD's shops with tools and functions that can assist in:

- **Assessing traffic control device life.** Signs (and other traffic control devices), are subject to degradation and have estimated useful lives. By recording the date of installation, agencies can effectively track the life of devices which can assist in assessing recommended replacement dates.

- **Minimizing tort liability.** By tracking the inspection and maintenance dates of traffic control devices, an agency has access to documented evidence in the event of litigation.

[18] *Iowa Traffic Control Devices and Pavement Markings: A Manual for Cities and Counties*, Iowa Department of Transportation, April 2001.

- **Budgeting.** By providing an accurate representation of the number of signs, signalized intersections or miles of pavement markings, agencies can budget personnel and resources to effectively service such devices.

- **Increasing efficiency.** By allowing for the tracking of work orders by location and inventory item, an agency can efficiently monitor work being performed and compare it to future planned work or recent work performed, thus preventing duplicative maintenance activities.

Using such an inventory allows an agency to accurately track and report the condition, existence and age of each traffic control device.

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APPENDIX C: COMPARISON OF THREE SHOPS IN FOUR CITIES

Comparison of Three of the Sustainable Streets Division's Shops to Those in Three Selected Jurisdictions

		Traffic Signs				Traffic Signals				Traffic Markings			
Jurisdiction	**Population**	**Number of Signs**	**FTE[a]**	**SPM[b]**	**Signs/FTE**	**Signalized Intersections**	**FTE[a]**	**SPM[b]**	**Signals/FTE**	**Miles of Markings[c]**	**FTE[a]**	**SPM[b]**	**Miles/FTE**
San Francisco, CA	815,000	224,000	15	None	14,933	1,187	15	None	80	900	17.7[d]	None	51
Portland, OR	566,000	145,000	No Data	None	No Data	1,070	21	Yes; Annually	50	1,615	18	None[e]	89
San Diego, CA	1,306,000	53,000	24[f]	None	2,208	1,550	17	Yes; Quarterly	91	6,000	26[f]	None	230
Seattle, WA	617,000	150,000	26[f]	No Data	5,769	1,001	26	Yes	38	1,318[g]	26[f]	No Data	51

Notes:
[a] Excludes supervisory personnel
[b] SPM = scheduled preventive maintenance.
[c] Includes longitudinal markings such as, center lines, traffic lane lines, bicycle lane lines and edge lines
[d] Excludes 4.3 FTE painters assigned to curb painting.
[e] Portland reports that it does no preventive maintenance although it repaints all markings semiannually
[f] Includes signs and markings personnel because shops are combined. Also, San Diego requires its paving contractors, not its City staff, to repaint street markings after street repaving.
[g] Seattle reports this number to include only lane line miles of pavement delineators; this total does not include all longitudinal markings such as bicycle lane lines.

Sources: Information on other cities from telephone interviews of responsible personnel in those jurisdictions; San Francisco staffing levels from SFMTA, Sustainable Streets Division, Administration unit; inventory levels obtained from SFMTA Transportation Fact Sheet, November 2010; population totals from US Census Bureau and are as of July 2009; remaining data independently obtained by auditor.

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APPENDIX D: SUSTAINABLE STREETS DIVISION'S PROJECT MANAGEMENT TOOLS

Unit	Project Management Tool	Identify existing/ pending projects?	Track Project Budget to Actual?	Identify Staffing?	Track Project Schedules?	Track % of Project Completion?
Long Range Planning & Policy	Annual Work Plan	Yes	No	No[g]	No	No
Livable Streets	Proposed Project Schedule and Funding Plan	Yes	No[e]	No	No	No
	Fund Tracking Management Schedule	Yes	No[e]	No	No	Yes[i]
	Access Database	No	No	Yes	No	No
Transportation Engineering – Special Projects / Street Use	Quarterly Report[a]	No	No[f]	No	No[h]	No
	FAMIS[b]	No	No[b]	No	No	No
	Project Schedule[c]	No	No	No	No[c]	Yes
Transportation Engineering – Sf*go* & Transit Engineering	Quarterly Report[a]	No	No[f]	No	No[h]	No
	Project Budget Sheet[d]	No	Yes	No	No	No
Transportation Engineering – Traffic Routing	Project Schedule	Yes	No[e]	No	No	No

Notes:
[a] Excel spreadsheets with tabs for each project; submitted to funding agencies.
[b] Project manager uses City's accounting system biweekly to track project balances but does not review budget information.
[c] Recently developed for individual projects, the schedules show actual dates of project task completion but not scheduled dates.
[d] Prepared individually for each project.
[e] Shows project budget but not actual expenditures.
[f] Format of each report is based on funding agency's requirements. May contain project budget information and not actual expenditures to date.
[g] Plan shows FTE employees and their allotted percentage of time assigned to various projects but does not track actual hours.
[h] Reports contain project schedules in accordance with the funding agency's grant agreements but actual dates are not updated.
[i] Project's percentage of completion is tracked but not all projects have percentage of completion data.

Source: Interviews with SSD project managers.

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APPENDIX E: PERFORMANCE STANDARD REFERENCE SHEET

Standard	Goal	Purpose	Definition	Method / Source
Traffic and Parking Control Requests: Percentage Addressed Within 90 Days *Quarterly*	>82%	To measure responsiveness to the public.	Each request is logged into an electronic database system and given a tracking number. Requests are then assigned to staff for investigation, which can include evaluation of existing conditions, collision history, traffic and pedestrian volume, circulation, and transit impact. Residents are notified of investigation results and recommendations. The request is then logged as completed.	Using the existing database system, a report is generated to provide a response rate for all requests completed within a specific quarter.
Color Curb Applications: Percentage Addressed Within 30 Days *Quarterly*	>90%	To measure responsiveness to the public.	Residents, organizations, and business owners may apply for various color curb parking designations as authorized by the California Vehicle Code. These zones include loading zones (white), green zones (ten-minute parking), and red zones (driveway tip prohibited parking). This program administered by SSD is fully cost recovery. Upon receipt of application and fee, each request is logged into an electronic database system and given a tracking number. Requests are assigned to staff for investigation which includes an on-site survey to determine feasibility, necessity, and parking impact. Once the investigation is completed, the resident is notified in writing. If approved, an invoice is sent for painting fees. The request is then logged as completed.	Using the existing database system, a report is generated to provide a response rate for all requests completed within a specific quarter.
Parking Meter Malfunction Reports: Percentage Addressed Within 48 Hours *Quarterly*	>85%	To ensure consistent operation of parking meters and promptly repair inoperable meters.	Electronic parking meters are capable of self-reporting malfunctions. In addition, a hotline number is posted on each meter to enable members of the public to report instances of malfunction directly to the meter shop. These reporting mechanisms enable SSD to respond and repair meters in a timely and efficient manner to ensure the highest level of service to the public.	The San Francisco Parking Meter Management System (SFPM) is a work order system which automates requests for service and allows them to be tracked and compiled. A report is generated providing the

Standard	Goal	Purpose	Definition	Method / Source
				average response rate for all complaints received within a quarter.
Hazardous Traffic Sign Reports: Percentage Addressed Within 24 Hours *Quarterly*	>98%	To ensure the safety of all modes of transportation by responding quickly to complaints of hazardous traffic sign conditions.	The Sign Shop receives reports of hazardous sign conditions from city agencies and members of the public. Hazardous conditions include missing safety related signs or those that create physical public danger due to damage or disrepair. Staff maintains a manual log to record receipt of complaints and dispatches repair crews immediately.	Sign Shop staff manually logs in each complaint and the date and time that the work is completed. SSD plans on upgrading this manual record keeping process to an electronic database system in the future.
Hazardous Traffic Signal Reports: Percentage Addressed Within 2 Hours *Quarterly*	>92%	To ensure the safety of all modes of transportation by responding quickly to complaints of hazardous traffic signal conditions.	During business hours, the Signal Shop enters malfunctions in a manual log and dispatches crews. During other hours, calls are routed to the 24-hour hotline which logs the call and dispatches staff from the Department of Telecommunications and Information Systems (DTIS). If the problem is major and urgent, DTIS pages a Signal Shop emergency crew to the scene. Repair crews record their arrival time and the time the call is completed.	All complaints and service requests are maintained in a database system. Reports are generated to determine average response rate.
Traffic Lane Lines, Bus Zones and Crosswalks Percentage of Network Maintained Annually *Quarterly (Annualized Results)*	>12%	To ensure the safety of all modes of transportation by maintaining visibility of existing lane line, bus zone, and crosswalk designations.	The Paint Shop's productivity is measured in relationship to annual goal. This measurement has been adjusted from a percentage of goal to a percentage of total inventory maintained.	Work crews report actual daily production numbers to staff at the end of each day. This information is entered into a spreadsheet and tabulated to generate a report.

Standard	Goal	Purpose	Definition	Method / Source
Pedestrian Safety Number of Intersections Equipped with Countdown Signals *Annually*	>776	To measure the Agency's progress toward installation of countdown signals.	Number of intersections equipped within countdown signals.	Total number of intersections equipped with countdown signals is tabulated at the end of the fiscal year.
Bicycle Network Usage Counts at Key Locations *Quarterly*	Baseline to be established	To measure bicycle ridership to key locations.	Definition pending receipt of initial data.	Results from counting devices will be tabulated on a quarterly basis.
Congestion Management Level of Service on Principal Arterials *Annually*	NA	To measure roadway conditions on key arterials.	Ratings assigned in San Francisco County Transportation Authority (SFCTA) report.	Results from the SFCTA report on level of service are presented for informational purposes.
Sustainability: Percentage of Trips by More Sustainable Modes *Annually*	Baseline to be established	To measure the City's progress toward promotion of travel by more sustainable modes.	Percent of trips conducted by bicyclists, pedestrians, and transit users.	Currently evaluating data collection methodology.
Safety Vehicle Collisions Involving Bicyclists and Pedestrians (Citywide) *Annually*	NA	To measure the City's progress toward promotion reduction in collisions.	Citywide results pulled from the Collision Report for informational purposes.	Citywide results pulled from the Collision Report.

Source: SFMTA's Service Standard Reference Sheet

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APPENDIX F: SFMTA RESPONSE

SFMTA | Municipal Transportation Agency

June 7, 2011

Tonia Lediju
Audit Director
Office of the Controller, City Services Auditor Division
City and County of San Francisco
City Hall, Room 476
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Subject: SFMTA Responses to the Office of the Controller's Audit Report on Sustainable Streets

Dear Ms. Lediju:

Thank you for providing the draft report of your audit to evaluate the performance of the Sustainable Streets Division (SSD) of the San Francisco Municipal Transportation Agency (SFMTA). We appreciate the thoroughness of your staff in reviewing SSD's operations and procedures.

Attached for your review and consideration is the completed Audit Recommendation and Response form, detailing the responses from the managers in the Sustainable Streets Division. In general, we concur with your recommendations and will work with all relevant parties to address the concerns that you have raised.

We look forward to working with you and your staff to complete the next SFMTA division management audit. If you have any questions or need additional information regarding the Sustainable Streets Division, please contact Bond Yee, Sustainable Streets Director at (415) 701-4677.

Sincerely,

Nathaniel P. Ford Sr.
Executive Director/CEO

cc: Carter R. Rohan, R.A. Deputy Executive Director
Bond Yee, Director, Sustainable Streets
Sonali Bose, Chief Financial Officer
Ricardo Olea, City Traffic Engineer/Director, Transportation Engineering Subdivision
Amit Kothari, Director, Off-Street Parking
Antoinette Coe, Field Operations Manager
Bridget Smith, Director, Livable Streets Subdivision
Timothy Papandreou, Deputy Director, Long Range Planning & Policy Subdivision

San Francisco Municipal Transportation Agency
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APPENDIX G: AUDIT RECOMMENDATIONS AND RESPONSES

Recommendations	Responsible Entity	Responses
1. SSD should compare the costs and benefits to the City of the nonprofit parking corporations that are garage tenants. The SFMTA Board of Directors should endorse a formal, long-term policy on whether the City should assume the outstanding debts of nonprofit parking corporations and whether it should continue to lease garages to them.	SSD, Off-Street Parking	Concur. We will work with Recreation and Park Department (RPD) and the non-profit corporations, and compare the costs and benefits per this recommendation in Fall 2011. If necessary, a recommendation will be made to the SFMTA Board of Directors for its review and approval.
2. Request that each nonprofit parking corporation that has not already done so ensure that its articles of incorporation or by-laws address the events that will allow or cause the dissolution of the corporation. SFMTA should request that these provisions also state that each corporation's assets shall revert to the City in the event of dissolution.	SSD, Off-Street Parking	Concur (Recommendation 2 through 6). We will work with the Recreation and Park Department (RPD) and the non-profit corporations on these issues. Appropriate recommendations will be made to the non-profit corporation boards (if necessary) and the SFMTA Board of Directors for its review and approval.
3. Work with the nonprofit parking corporations to add to their lease agreements restrictions on how the corporations can spend City funds.	SSD, Off-Street Parking	Concur (Recommendation 2 through 6). We will work with the Recreation and Park Department (RPD) and the non-profit corporations on these issues. Appropriate recommendations will be made to the non-profit corporation boards (if necessary) and the SFMTA Board of Directors for its review and approval.

Recommendations	Responsible Entity	Responses
4. Develop a standard or minimum job description for the nonprofit parking corporations' corporate manager positions that clearly defines the position's duties and responsibilities. SFMTA should then seek the agreement of each corporation's board of directors to implement the job description.	SSD, Off-Street Parking	Concur (Recommendation 2 through 6). We will work with the Recreation and Park Department (RPD) and the non-profit corporations on these issues. Appropriate recommendations will be made to the non-profit corporation boards (if necessary) and the SFMTA Board of Directors for its review and approval.
5. Develop a compensation scale for the corporate manager position at the nonprofit parking corporations. The scale should tie the value of each manager's salary and benefits to the size and complexity of the garage managed. Seek the agreement of each corporation's board of directors to conform to the compensation scale.	SSD, Off-Street Parking	Concur (Recommendation 2 through 6). We will work with the Recreation and Park Department (RPD) and the non-profit corporations on these issues. Appropriate recommendations will be made to the non-profit corporation boards (if necessary) and the SFMTA Board of Directors for its review and approval.
6. Consider whether it would be advantageous to the City to have nonprofit parking corporations' corporate managers work under employment contracts. If it is found to be advantageous, provide corporations with the elements of a model contract and seek the agreement of each corporation's board of directors to establish such a contract.	SSD, Off-Street Parking	Concur (Recommendation 2 through 6). We will work with the Recreation and Park Department (RPD) and the non-profit corporations on these issues. Appropriate recommendations will be made to the non-profit corporation boards (if necessary) and the SFMTA Board of Directors for its review and approval.

Recommendations	Responsible Entity	Responses
7. Adopt a sign reflectivity assessment or management method as required by the Federal Highway Administration's Manual on Uniform Traffic Control Devices by January 2012.	SSD, Field Operations	Concur. The SHOPS database, currently in development, is expected to be fully adopted in January 2012. This database will note installation dates.
8. Plan for a scheduled preventive maintenance program that will allow the Sign Shop to replace, by 2015 or 2018, depending on the type of sign, all signs that do not meet federal minimum reflectivity levels.	SSD, Field Operations	Concur. This plan will be developed following the implementation of the SHOPS database in order to accurately assess the total quantity of expired assets and the resources available. Final development of this plan is expected in January 2013. However, implementation of the item will be dependent on available reserves.
9. Establish a systematic, documented method to periodically inspect, assess and maintain traffic signs to ensure the safety of motorists and other road users. This method should not be limited to considerations of sign reflectivity.	SSD, Field Operations	Concur. Concurrent with the plan for scheduled maintenance described above, the method to periodically inspect, assess and maintain traffic signs will be implemented by January 2013. However, implementation of the item will be dependent on available reserves.
10. Make a plan to address the Traffic Signal Shop's backlog of work.	SSD, Transportation Engineering	Concur. Sustainable Streets Division's Signal Review Committee will meet to develop a plan, to be completed by January 2012. However, implementation of the item will be dependent on available reserves.
11. Consider implementing a scheduled preventive maintenance program that will include the periodic assessment of traffic control equipment.	SSD, Transportation Engineering	Concur. We will assess the need to upgrade the Signal Shop's database, in order to more carefully consider implementing a scheduled maintenance plan by January 2012. However, implementation of the item will be dependent on available reserves.

Recommendations	Responsible Entity	Responses
12. Seek additional budgeted positions in the Transportation Engineering subdivision while considering its goals to modernize the traffic signal system in San Francisco.	SSD, Transportation Engineering	Concur. Sustainable Streets will request to add additional budgeted positions in the FY2013-15 budget cycle. However, implementation of the item will be dependent on available reserves.
13. Make a plan to address the Traffic Paint Shop's backlog of work.	SSD, Field Operations	Concur. Currently, the Paint Shop Manager position is vacant, and the shop is undergoing a change in location. Following these transitions, the Paint Shop will be in a better position to address the backlog of work. However, implementation of the item will be dependent on available reserves.
14. SSD should continue to monitor the FHWA's actions regarding the proposed changes to the MUTCD regarding the reflectivity of pavement markings. While the changes are not yet effective, SSD should begin to develop an assessment method that could be used to maintain minimum levels of reflectivity of pavement markings.	SSD, Field Operations	Concur. Sustainable Streets will continue to monitor the FHWA's actions and develop an assessment method.
15. To comply efficiently with new federal reflectivity requirements, SSD should consider acquiring and implementing a database or databases that would allow the Traffic Sign Shop to record and track the City's inventory of installed signs, including their age and/or condition, and its inventory of stored signs available for installation.	SSD, Field Operations	Concur. The SHOPS database is in development and will be implemented in January 2012.

Recommendations	Responsible Entity	Responses
16. SSD should acquire and implement a database that would allow the Traffic Paint Shop to capture the City's inventory of installed pavement markings, including their age and/or condition, to comply efficiently with proposed federal reflectivity requirements.	SSD, Field Operations	Concur. Following the implementation of the SHOPS database for the Sign Shop, Field Operations will consider expanding this tool to include pavement markings, or will research alternate methods. However, implementation of the item will be dependent on available reserves.
17. Use the agency's IntelliContract database as a tool to monitor all of its contracts.	SFMTA, SSD in particular	Concur. SFMTA will increase its user licenses for the IntelliContract database to allow SSD to monitor its contracts more effectively. The SSD has already included all Off-Street Parking contracts into the IntelliContract database, and will continue to do so into the future.
18. Avoid doing business with vendors whose contracts have expired.	SFMTA, SSD in particular	Concur.
19. Monitor contract expiration dates so that the need to extend contracts is foreseen and acted on months before they expire. Doing so will avoid retroactive contract extensions.	SFMTA, SSD in particular	Concur.
20. Carefully consider whether the scope of services and contract term proposed for solicitation documents for the procurement of professional services are reasonable and sufficiently flexible for the City to minimize the need for later contract amendments.	SFMTA, SSD in particular	Concur.

Recommendations	Responsible Entity	Responses
21. Avoid amending contracts in ways that significantly change the terms of the contract's solicitation documents, such as a request for proposal. Such contract amendments may indicate that a new competitive solicitation is needed.	SFMTA, SSD in particular	Concur.
22. Work with SFMTA's Capital Projects and Construction Division to see if the Sustainable Streets Division can use the project management software that the Capital Projects and Construction Division is now procuring	SSD, Administration	Concur. The current roll-out for Capital Projects and Construction Division's project management software is anticipated in approximately 18 months. Per the Project Manager for this software's implementation, Sustainable Streets projects can be included in the next phase, following initial roll-out, pending identification of additional funding.
23. Use project management software to uniformly report on project data such as staff assigned, scope of work, original budget, revised budget, actual cost to date, original and revised schedule (milestone dates), actual milestone completion dates, and percentage of project complete.	SSD, all subdivisions with projects	Concur. Sustainable Streets will research software options for project management while waiting to be incorporated into the project management software to be adopted by Capital Projects and Construction. The Division will work with SFMTA's Finance and Information Technology group and will begin use of this interim project management tool by August 2011.
24. Develop an operations manual for projects that details staff duties and responsibilities, including the reporting of project status.	SSD, Administration	Concur. Our Long Range Planning and Policy Subdivision will take the lead on this process, and will develop a framework for the operations manual by November 2011.

Recommendations	Responsible Entity	Responses
25. Conduct and document periodic reviews of performance measure source data, calculated results, and reported results.	SSD, Administration	Concur. Sustainable Streets will randomly select one performance measure each quarter for appropriate data, beginning FY2012, Q1.
26. Maintain performance measure source documentation to support reported results.	SSD, Administration	Concur. Data will be consistently retained effective FY2012, Q1.
27. Establish or strengthen existing written procedures on performance measures.	SSD, Administration	Concur. Sustainable Streets Division will formalize written procedures on performance measures by January 2012.
28. Enter each performance measure's data used to calculate reported results into one location to avoid errors.	SSD, Administration	Concur. Sustainable Streets Division will perform a review of current practices and will identify recommended changes by January 2012.
29. Consider hiring a full-time dispatcher for the Traffic Signal Shop to reduce manual data entry errors.	SSD, Transportation Engineering	Concur. Sustainable Streets Division will request to incorporate this position into the next budget (FY2013-15). However, implementation of the item will be dependent on available reserves.
30. Schedule periodic running of the backlog query for "traffic and parking control requests" and follow-up in a timely manner.	SSD, Transportation Engineering	Concur. Transportation Engineering has already instituted this process.

Recommendations	Responsible Entity	Responses
31. Communicate status of requests approved by interdepartmental review or scheduled for public hearing to constituents before logging as completed.	SSD, Transportation Engineering	Disagree. Transportation Engineering currently logs off a file as completed when passing interdepartmental review to facilitate processing and to indicate that review process is substantially completed. This point of logging legislation files as completed has been consistent since this statistic was created. A public hearing is scheduled usually a couple of weeks after interdepartmental approval, at which point notification is sent with a specific hearing date and location. Adopting this recommendation would require logging off files when they go to public hearing, which would unnecessarily report that our response is delayed by a few weeks for these files; or, to avoid this, require communicating twice with the constituent, one to say the item will be scheduled for a public hearing after interdepartmental review, and then later with the actual hearing information.
32. Implement controls such as spot checking to ensure the reliability of data after supervisors reactivate entries used in the calculation of performance measure results.	SSD, Administration	Concur. The division will develop a spot-checking procedure for implementation by January 2012.
33. Update all public and internal communication on performance measures definitions that is incorrect or unclear and correct any imprecise wording of measures.	SSD, Administration	Concur. The SFMTA Technology and Performance unit will update this language in FY 2012, Quarter 1 Reports.
34. Exclude data on the Department of Technology Central Fire Alarm unit's performance from reported results for the traffic signal reports performance measure.	SSD, Transportation Engineering	Concur. This change will be incorporated in FY 2012, Quarter 1 Reports, with a notation of the change.

Recommendations	Responsible Entity	Responses
35. Provide additional information to the SFMTA Board and the public on which of SFMTA's performance measures SSD is responsible for achieving.	SSD, Administration	Concur. This language will be added in FY 2012, Quarter 1 Reports.
36. Consult with the Office of the Controller's Performance Measurement Team to improve existing measures and develop new ones.	SSD, Administration	Concur. The Technology and Performance Unit will work together with Sustainable Streets during the summer-fall of 2012 to do a comprehensive review of all performance measures for FY13-15. During this course of this review, the Office of Controller's Performance Measurement Team will be consulted.
37. Ensure that its measures fully reflect its mission, goals, and objectives, and all areas of its work.	SSD, Administration	Concur. The mission, goals and objectives will be reflected as a result of the comprehensive review of all performance measures for FY13-15.
38. Periodically evaluate the usefulness of its measures.	SSD, Administration	Concur. Comprehensive reviews, including the usefulness of measures, will be conducted every two years.

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