



MEMORANDUM

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Edward Melton, Chief of Branches, San Francisco Public Library
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FROM: Celeste Berg, Randle McClure & Catherine Omalev, Controller's Office

DATE: October 28, 2014

SUBJECT: SFPL Branch Resource Analysis: Custodial Services Assessment

Executive Summary

Upon request by San Francisco Public Library (SFPL) management, the Controller's Office performed a comprehensive assessment of the organization's system-wide custodial services. The objective of the assessment, conducted from March to July 2014, was to evaluate SFPL's custodial protocols, cleaning standards and communication methods at the Main Library and 27 branches, and to offer recommendations for improvements in coverage, accountability and quality control. The assessment included interviews with SFPL staff, custodians, senior management and external stakeholders, review of branch characteristics and staff deployments, and research on industry best practice standards.

The Controller's Office makes 12 recommendations broken into three focus areas:

- 1) **Custodial Coverage and Staffing Deployment**
- 2) **Improved Accountability**
- 3) **Supplies and Equipment Retention**

In the Custodial Coverage and Staffing Deployment focus area, the Controller's Office found that the Library can improve staff deployment across the 27 branches to optimize coverage. Even with an improved deployment plan, the Library has a personnel gap that can be represented by the number of hours needed to clean the Main and 27 branch libraries on Sunday and Monday, which are the two days during the seven-day week that have the fewest branches open.

Findings from the Improved Accountability focus area show that SFPL does not provide defined cleaning standards, performance metrics, or conduct clear communication channels between the custodial division and library staff. The recommendations in this section aim to improve accountability by instituting a survey questionnaire to determine baseline cleaning levels to improve cleaning and track performance. By implementing a Service Level Agreement, this will

increase accountability and information transfer through tracking duties in individualized binders so library staff and custodians understand cleaning protocols and policies. Increasing supervisory branch visits will further promote accountability and performance tracking.

The third focus area, Supplies and Equipment Retention, describes the need for improved supplies and streamlined equipment procurement and delivery processes, and recommends strategies for implementing such methods.

Overview of SFPL Custodial Services

Currently there are four supervisors that oversee the 41.5 FTE custodians at the SFPL (note: there is one additional supervisor budgeted but not yet hired as of October 2014). These supervisors take on a variety of roles, which up until January 2014 included filling in for custodian vacancies as needed, but also include management of staff and other administrative duties.

SFPL custodians work in a public setting where the daily demands of unanticipated incidents can interrupt their normally scheduled cleaning tasks. This is common at the Main Library and branches, which are heavily trafficked environments used by a large number of daily patrons. Custodial staff not assigned to the Main Library are deployed to clean as many as three or four different branches during a full work day, so that not all branches have a regularly scheduled custodian but rather a rotating custodian who maneuvers through the system in response to calls for service.

Interviews with Library management and custodial staff conveyed that existing resources limits custodial staff's ability to do more than basic housekeeping of the facilities due to the daily number of available custodians, time constraints from traveling to different branches, and incidents needing immediate attention. Concurrent organizational issues of internal communication, accountability, staff deployment, and management of supplies have perpetuated the challenges of reaching optimal cleanliness at all library facilities.

Since 2000, the Library has increased branch square footage by 27 percent and the number of open hours across all facilities by 14 percent. Although it is beyond the scope of this assessment to determine collinear correlations between the growth of size and open hours with staffing needs, it is reasonable to presume that the Library's corresponding 25 percent increase in custodial staffing levels over the same period is not sufficient to meet its current needs.

I. Custodial Coverage and Staffing Analysis

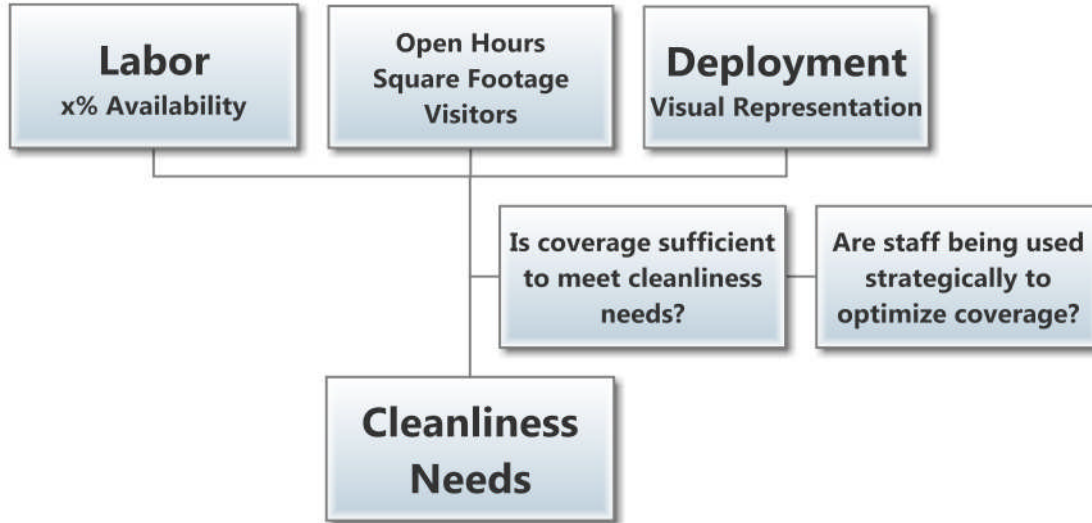
Initial Findings

To better understand how SFPL can utilize strategic coverage to achieve its desired cleanliness, the Controller's Office reviewed inputs of current custodial services. As SFPL includes 28 facilities¹, most of which are open seven days a week, many factors must be considered in staff deployment. These inputs include facility square footage, facility open hours and annual visitor

¹ Facilities assessed include the Main Library and all 27 branches. 190 Ninth Street is not included in this analysis as it is adequately staffed for 1 FTE and is not generally used as public space.

counts. In addition, staff availability also impacts deployment. Figure 1 below shows the inputs evaluated to first determine if current coverage is sufficient to meet cleanliness needs, and then to understand how staff may be used to optimize coverage.

Figure 1: Inputs for Staffing Coverage



Branch Characteristics

Table 1 below displays branch-specific characteristics that impact cleaning time such as square footage, annual visitor count (2012-13), and open hours. These factors as well as management input determine whether a branch is classified as Cleaning Level Tier 1 -- large and/or heavily trafficked branches that require a high level of daily cleaning -- or Cleaning Level Tier 2 -- smaller and/or less busy branches that require a moderate to low level of cleaning. Appendix A visually represents how branch libraries compare to one another with respect to square footage, annual visitor count, open hours tier and location.

Table 1: Branch Characteristics and Effects on Cleaning Time

Facility	Annual Visits 2012-13	Square Footage	Open Hours Tier	Cleaning Level Tier	Cleaning Time		Visitors per Square Foot
					3,000 square feet per hour	2,200 square feet per hour	
Bayview	267,872	9,000	2	Tier 1	3.00	4.09	29.76
Bernal Heights	344,073	8,777	3	Tier 1	2.93	3.99	39.20
Chinatown	556,387	17,340	1	Tier 1	5.78	7.88	32.09
Excelsior	254,290	8,322	1	Tier 1	2.77	3.78	30.56
Ingleside	275,450	6,075	3	Tier 1	2.03	2.76	45.34
Mission	259,316	10,479	1	Tier 1	3.49	4.76	24.75
North Beach	326,477	5,530	3	Tier 1	1.84	2.51	59.04
Ortega	316,421	9,000	2	Tier 1	3.00	4.09	35.16
Richmond	341,963	10,690	1	Tier 1	3.56	4.86	31.99
Sunset	213,569	9,434	1	Tier 1	3.14	4.29	22.64

West Portal	222,218	8,010	1	Tier 1	2.67	3.64	27.74
Anza	102,422	8,222	3	Tier 2	2.74	3.74	12.46
Eureka Valley	99,352	5,610	3	Tier 2	1.87	2.55	17.71
Glen Park	185,688	8,500	3	Tier 2	2.83	3.86	21.85
Golden Gate Valley	72,131	7,432	3	Tier 2	2.48	3.38	9.71
Marina	184,173	7,633	2	Tier 2	2.54	3.47	24.13
Merced	139,454	6,376	1	Tier 2	2.13	2.90	21.87
Mission Bay	111,168	8,000	3	Tier 2	2.67	3.64	13.90
Noe Valley	98,612	5,810	3	Tier 2	1.94	2.64	16.97
Ocean View	61,518	4,794	3	Tier 2	1.60	2.18	12.83
Park	125,219	8,825	2	Tier 2	2.94	4.01	14.19
Parkside	196,262	5,824	3	Tier 2	1.94	2.65	33.70
Portola	179,804	6,300	3	Tier 2	2.10	2.86	28.54
Potrero	83,285	5,428	3	Tier 2	1.81	2.47	15.34
Presidio	103,229	10,205	3	Tier 2	3.40	4.64	10.12
Visitacion Valley	130,679	9,945	3	Tier 2	3.32	4.52	13.14
Western Addition	182,688	8,000	2	Tier 2	2.67	3.64	22.84

Note: Open hours tiers are as follows: "1" branches are open 55 hours per week, "2" branches are open 50 hours per week, and "3" branches are open 45 hours per week.

SFPL management indicated that 18 custodians are currently staffed per day to maintain cleanliness at the Main library. Based on production rate industry standards² used in other public use City buildings like City Hall and Public Utilities Commission (525 Golden Gate Avenue location), as indicated by Department of Real Estate custodial services, the Main Library requires 16 to 22 custodians per day. As SFPL already staffs the Main Library adequately, the remainder of this analysis focuses on coverage at the 27 branches.

Staff Availability

For the purposes of this analysis, staff availability is defined as the amount of work time custodians must devote to cleaning their respective assignments. The inputs for the calculation in Table 2 below are as follows:

Leave

- Custodians are available to work, on average, approximately 75 percent of the maximum available time for 1 FTE.³

Travel and Break Time

- Currently, custodians must, on average, travel to three facilities during a typical 8-hour shift. SFPL custodial schedules and focus group interviews indicated that custodians who use Muni and their own vehicles commute roughly 30 minutes between branches. In aggregate and regardless of transit option, SFPL custodians currently travel between facilities for an average of 60 to 90 minutes during an 8-hour shift.

² See Appendix C for further explanation of production rates.

³ See Appendix B for leave calculation methodology, which is based on historical SFPL leave data beginning in 2009.

- Custodians also receive two paid 15-minute breaks and an unpaid 30-minute lunch period during a shift. Accounting for travel time and break time, custodians are left with approximately six hours of cleaning time per shift.

The Library currently has 13 FTE custodians scheduled to clean the branch libraries.⁴ The maximum number of hours one FTE can work in one week is 40 hours; the maximum number of hours 13 FTE custodians can work in one week is therefore 520 hours.

Based on historical leave data from July 2009 to April 2014⁵, 75 percent of custodial staff will be present to work on any given day. Therefore, it is important to note that the aggregate number of custodial hours per week must be adjusted to account for staff leave, as seen in Table 2.

However, availability on any given day is binary: when custodians *are* present, they are scheduled to work a full eight-hour shift. Therefore, when calculating cleaning time on any given day, it is important to note that on average, 75 percent of staff will be present to work an eight-hour shift. The leave input must be accounted for prior to adding additional inputs, such as travel and break time, into the cleaning time availability calculation.

The last line of Table 2 below accounts for staff leave with the 8 hours x .75 availability input. Given existing staffing constraints, the net available cleaning hours for the branch facilities equals 292.5 hours per week.

Table 2: Current Aggregate Custodial Hours for Branch Libraries

Maximum Aggregate Hours
13 custodians x 40 hours per week = 520 maximum custodial hours per week for the branch facilities
Leave Adjusted Aggregate Hours
520 hours x .75 availability = 390 hours per week (13 custodians, 5 day work week)
Accounting for Travel and Break Time
8 hours per day (– 30 min break time – 1 hour transit) = 6.5 cleaning hours per day per custodian
Net Available Cleaning Hours (for the branch facilities for one week)
[8 hours (.75 availability) – 1.5 travel and break hours] x 13 custodians x 5 days per week = 292.5 hours

Aggregate Custodial Hours Needed to Clean Branch Libraries

⁴ Derived from current schedule received from SFPL Custodial Supervisor.

⁵ Historical leave data provided by SFPL Human Resources. Discussions between SFPL Management and the Controller’s Office concluded that historical leave data beginning five years ago (2009) is sufficient for this analysis.

Inputs and Assumptions:

- Square footage of each branch (100%) must be cleaned every day that the branch is open.
- 18 branches are open 7 days a week; 9 branches are open 6 days a week.
- Production rates are based on industry standards used for other public use City buildings like City Hall and PUC (525 Golden Gate Avenue), as indicated by Department of Real Estate custodial services.⁶

With a production rate of 2,200 square feet per hour, approximately 16.8 additional custodial staff are needed to completely clean the square footage of the branches each day the respective branches are open. With a production rate of 3,000 square feet per hour, approximately 8.9 additional staff are needed to completely clean the square footage of the branches each day the respective branches are open.

Table 3: Production Rate Calculations and Staff Needed for Branches

Total hours per week needed to clean branch facilities ⁷			
Production rate	Hours	Gap	# FTEs to Fill Gap
2,200 square feet per hour	670.50	353.63	16.8
3,000 square feet per hour	491.70	174.83	8.9

Aggregate square footage of all branches that must be cleaned in one week = 1,475,105 sq feet

These calculations in Table 3 show that there is a gap between the number of custodians currently on Library staff and the number of custodians required to maintain an ideal level of cleanliness at the 27 branches. However, these calculations only show the gap in terms of aggregate hours.⁸ The next section provides recommendations and a deployment strategy that enables the SFPL to maximize its available resources and utilize specific strategies to mitigate the personnel gap.

Recommendations

1. **Maintain custodial staffing level at Main.** SFPL management indicates that a goal of 18 custodians are staffed per day to maintain cleanliness at the Main library. Ten custodians are required to perform basic housekeeping tasks during the day and eight custodians are required on the night crew to perform deep cleaning tasks that cannot be performed during the heavily-trafficked open hours. Production rates calculations indicate that 16 to 22 custodians are required to clean the Main Library at 3,000 square feet per hour and 2,200 square feet per hour production rates, respectively. Hence, SFPL should continue to use 18 custodians per day to clean the Main library. In order to ensure successful output of the different production rates, staff assignments should be based on relative skill level.

⁶ See Appendix C for further explanation on production rates.

⁷ See Appendix D for complete gap calculation methodology.

⁸ For example, availability on any given day is binary: when custodians are present, they work eight, not six, hours (75 percent). Rather, on average 75 percent of custodians on staff will be present on any given day.

2. **Establish a Tuesday to Saturday work week.** SFPL should consider designating Tuesday to Saturday as the standard SFPL custodial staff work week because all 27 branch libraries are open on these five days. Sunday and Monday have 20 and 25 branches open, respectively. Making Tuesday to Saturday the official work week for full-time custodians will maximize available custodial resources and minimize the corresponding personnel gap.

3. **Assign no more than 2 branches for every 1 custodian.** Custodians are currently assigned to three to four branches in one 8-hour shift. Accounting for breaks and travel time, custodians have approximately 6 to 6.5 hours of cleaning time per 8-hour shift. Current deployment strategy is shown in Table 4.⁹ Staff should routinely clean the same branches to establish familiarity and working relationships between custodial unit and branch librarians, improving communication and accountability.

Table 4: Current Branch Assignments

Branch 1	Branch 2	Branch 3	Branch 4	Combined Square Footage	Cleaning Time	
					3,000 sq ft/hour	2,200 sq ft/hour
Chinatown	Marina	North Beach		30,503	10.17	13.87
Golden Gate	Richmond	Sunset		27,556	9.19	12.53
Anza	Golden Gate	Richmond		26,344	8.78	11.97
Park	Presidio	Western Addition		27,030	9.01	12.29
Ortega	Sunset	West Portal		26,444	8.81	12.02
Eureka Valley	Mission	Noe Valley		21,899	7.30	9.95
Bernal Heights	Mission Bay	Portrero		22,205	7.40	10.09
Excelsior	Glen Park	Mission	Parkside	33,125	11.04	15.06
Ingleside	Merced	Ocean View		17,245	5.75	7.84
Bayview	Portola	Visitation Valley		25,245	8.42	11.48

The current branch assignment strategy organized in Table 4 does not give custodians sufficient time to adequately clean their facilities. For example, the assignment group that includes Excelsior, Glen Park, Mission, and Parkside takes 11 to 15 hours to complete, roughly double the amount of cleaning time a custodian has available in one 8-hour shift. These calculations as well as discussions with management and focus groups strongly indicate that custodians should be assigned a maximum of two branches in one shift. Moreover, traveling between two branches rather than three to four branches will decrease aggregate travel time, allowing more time for cleaning at the facilities.

Deployment Strategy: Ideal Coverage

The assignments in Table 5 below are based on combined square footage, annual visitor count, open hours tier, and proximity. Assignments have been developed to minimize travel time on

⁹Derived from schedule received from SFPL Custodial Supervisor

Muni; traveling between the two branches in each assignment takes, on average, 30 minutes. See Appendix E for transit routes between branches.

Table 5: Ideal Branch Coverage

Assignment	Deployment		Combined square footage	Cleaning Time	
	Branch 1	Branch 2		3,000 sq ft/hour	2,200 sq ft/hour
1	Chinatown	-	17,340	5.78	7.88
2	Ingleside	Ocean View	10,869	3.62	4.94
3	Bernal Heights	Glen Park	17,277	5.76	7.85
4	Ortega	Parkside	14,824	4.94	6.74
5	Richmond	Anza	18,912	6.30	8.60
6	Excelsior	Portola	14,622	4.87	6.65
7	West Portal	Merced	14,386	4.80	6.54
8	Mission	Noe Valley	16,289	5.43	7.40
9	Sunset	Park	18,259	6.09	8.30
10	Mission Bay	Potrero	13,428	4.48	6.10
11	Bayview	Visitacion Valley	18,945	6.32	8.61
12	North Beach	Golden Gate Valley	12,962	4.32	5.89
13	Marina	Presidio	17,838	5.95	8.11
14	Western Addition	Eureka Valley	13,610	4.54	6.19

To achieve an ideal level of cleaning, the Library needs 32 custodians per day: 14 for the branch libraries, and 18 for the Main library, as indicated above.¹⁰

Some assignments such as assignment 2 (Ingleside and Ocean View) have a low number of cleaning hours required; however, management indicated that Ingleside is a very heavily trafficked branch that requires special cleaning attention. For a complete list of assignment explanations, see Appendix E.

Coverage Gap

In FY15, the Library has 41.5 FTE custodians on staff: 35 full-time custodians and 13 part-time custodians.¹¹

- Custodians work a 40-hour, five-day work week.
- On any given day, 75 percent of the Library’s 41.5 custodians will be available to work, leaving 31-32 custodians available for a five-day work week. Following Recommendation 2, Tuesday to Saturday should be the designated work week for SFPL custodians.

¹⁰ The Controller’s Office developed two alternate deployment strategies that allocate available resources differently than the ideal deployment strategy; however, management stressed the need for a two branch maximum per custodian and for a deployment plan that can be implemented effectively Appendix F presents these deployment strategies.

¹¹ As indicated by management and in the Facilities Division vacancy report.

- The Library has enough custodians on staff to adequately cover the five-day, Tuesday to Saturday work week; however, the Library is open seven days a week.
- An accurate representation of the Library’s personnel gap is the total number of hours required to clean the Main and open branch libraries on Sunday and Monday, the two additional days beyond the 40-hour work week.

Recommendation

4. **Utilize Department of Real Estate Custodians to Address the Two-Day Gap.** The Library should use Department of Real Estate custodians to fill its personnel gap on Sunday and Monday. Table 5 above shows how many custodians are needed to work an 8-hour shift on Sunday, Monday, and an aggregate total for the two days. As 20 branches are open on Sunday and 25 branches are open on Monday, a slightly different number of custodians are required for each day. It is important to note that Department of Real Estate custodians are utilized for one shift at a time (8 hours). In Table 6 below, roughly 50 shifts are needed to clean the Main and branches on Sunday and Monday at the 100 percent cleaning level, and roughly 40 shifts are needed at the 80 percent cleaning level. Cleaning level is based on square footage cleaned; for example, at the 80 percent cleaning level, custodians should focus on the heavily trafficked public use areas.

Table 6: Staffing Coverage for Sunday and Monday

100%	Sunday	Monday
Main	11 to 15	11 to 15
Branches	10 to 11	13
Total Shifts		45 to 54

80%	Sunday	Monday
Main	9 to 12	9 to 12
Branches	8 to 9	10 to 11
Total Shifts		36 to 44

Table 7 shows cleaning level by cost per year: if the Library uses Department of Real Estate custodians to clean 100 percent, 80 percent, 50 percent, or 25 percent of the combined Main and branch Library square footage on Sunday and Monday, it would cost roughly \$1 million, \$832,000, and \$520,000, and \$270,000 per year for each of these strategies, respectively.

Table 7: Yearly Cost Estimates for Department of Real Estate Custodians

Cleaning Level	Shifts Required		Total Shifts Required	Cost (per year)
	Sunday	Monday		
100%	24	26	50	\$1,040,000
80%	19	21	40	\$832,000
50%	12	13	25	\$520,000
25%	6	7	13	\$270,400

The Controller’s Office designates the 50% cleaning level as a viable option for the SFPL for several reasons. First, it is anticipated that cleaning quality will improve during the Tuesday to Saturday work week because, under the ideal branch deployment scenario, custodians will be assigned two rather than three or four branches, and will be able to clean their assignments more thoroughly. Moreover, related recommendations outlined below in Section II such as developing Service Level Agreements and staff accountability will further improve the overall cleanliness level during the work week. Finally, at both the branch and the Main libraries, Sunday and Monday have fewer open hours than most of the other days during the week. This will enable custodians to spot-check their assignments more effectively.

In the “Overview of SFPL Custodial Services” section, the Controller’s Office notes that SFPL has increased open hours by 14 percent over the last decade without an equivalent increase in personnel. Note that in terms of aggregate hours, utilizing Department of Real Estate custodians on Sunday and Monday would increase SFPL custodial hours by 10 percent.¹²

II. Improved Accountability

Findings:

Four custodial supervisors currently supervise 41.5 FTE custodians, and as the unit currently functions, supervisors often experience difficulty prioritizing managerial duties. After the Division Director, supervisors are the point of contact for custodial staff and branch management for both general work order needs and emergency-related incidents. Improved communication between SFPL custodial services and library staff would enable streamlined service delivery. Supervisors often find themselves addressing incidents that require immediate custodial attention because if these issues are not handled promptly, branch librarian staff members must clean the area themselves, or close the incident area. For example, when incidents occur in the restrooms, branch managers must close off the area, which is problematic for patrons. A system for addressing emergency incidents that is understood by both custodial services and library branch staff members would enable supervisors to prioritize managerial duties rather than current crises. Based on stakeholder interviews, there are also concerns about the current process of request forms for maintenance needs that do not require immediate attention.

SFPL custodial services does not currently outline branch-focused daily cleaning guidelines for custodians. Moreover, no Service Level Agreement is in place and so branch librarians are unaware of what tasks outside of general maintenance fall under custodial services. Based on

¹² See Appendix G for full calculations.

discussions with management and branch staff, branch visits by supervisors are generally a result of reactive management due to unexpected incidents rather than performance-tracking and evaluation oriented methods. CSA spoke with other custodial divisions that serve multiple locations and found that such units do inspections and staff evaluations frequently. For example, Department of Real Estate custodial services clean San Francisco City Hall and PUC (525 Golden Gate Avenue), and management conducts quarterly inspections in addition to annual evaluations. Improved guidelines and more regular contact between custodial supervisors, custodians and branch staff will promote effective management and adequate maintenance.

Recommendations

5. **Develop Survey Questionnaire based on Association of Physical Plant Administrators (APPA) standards.** In order to develop a Service Level Agreement and track future performance, the department should design and administer a survey questionnaire based on APPA¹³ or other industry standards. The purpose of the questionnaire is to a) determine current cleanliness levels, b) identify specific cleaning areas that warrant additional attention, and c) develop cleanliness performance standards. The survey would be administered to library staff and custodial services representatives, and following APPA standards, for example, respondents could grade cleanliness levels on a five-point scale, from Level 1 as “exceptional” to Level 5 as “unacceptable.” Following the survey, SFPL should use these or similar guidelines to develop clear, customized standards that can be used to objectively measure cleanliness levels and track performance, as well as to validate staffing requirements and production rates. The survey instrument can also be used to introduce structured cleaning duties for each branch and publicize the resultant Service Level Agreement (fully explained in Recommendation 7). Survey results will be illustrative of how industry standards can be applied to the department, and regardless of APPA standard implementation, the questionnaire will evaluate existing procedures of the custodial unit.
6. **Revise current process and content of Staffnet.** Staff members currently submit work order items online through a website called Staffnet and supervisors subsequently receive and review request forms. As there are no clear, shared guidelines for what tasks constitute a standard cleaning procedure versus a work order item, branch staff members often must submit a request form for standard custodial tasks that should be regularly scheduled (i.e. carpet cleaning). Moreover, branch management expressed uncertainty about whether forms were received, and concerns about turnaround time for requests. A revision of both the form’s content and review-and-respond process should occur in tandem with the development of a Service Level Agreement in order create cleaning guidelines that are understood by library staff and custodians.
7. **Develop a Service Level Agreement.** Developing a Service Level Agreement based on data collected through the survey questionnaire will be the comprehensive deliverable that designates cleaning guidelines and tasks, streamlines work orders, and creates operational transparency that will improve communication between library staff and SFPL custodial services. This agreement should be tailored to the specific maintenance

¹³ The APPA Custodial Staffing Guidelines for Educational Facilities are recognized by a variety of well-known associations including: International Facilities Management Association (IFMA), Building Owners and Managers Association (BOMA), and Leadership in Energy & Environmental Design (LEED).

needs of the Main and each branch. A Service Level Agreement will establish standards so that library staff understand what level and type of cleaning to expect, and custodians know what is expected of them.

8. **Create individualized binders for staff that meet specified branch needs.** Custodial staff should have individual binders that are customized to their assigned branches. Binders should include cleaning procedures based on the Service Level Agreement, branch-specific duties, a time log of completed tasks, and MSDX index. This recommendation is based on the strategy used by Department of Real Estate Custodial Services at City Hall, which has a binder for each staff member that cleans an area of the building(see Appendix H). CSA recommends that the department collect data through a time log of task completion and subsequently use the data to develop clear duties for each custodial assignment. Individualized binders will improve accountability as they will hold custodians responsible for clear tasks that can be mapped directly to a performance plan. Furthermore, any custodian filling in temporarily can use the binder to determine his or her daily tasks.
9. **Increase frequency of branch visits by supervisors.** Custodial supervisors should conduct regular site visits to evaluate cleanliness and track staff performance over time. Visits to evaluate cleanliness could be organized into three focus areas such as restrooms, dusting, and vacuuming, each led by a supervisor who will be the point of contact for that specific task. Assuming implementation of individualized binders, supervisor visits to monitor staff performance can be done efficiently as the list of duties and time log of tasks are tracked in individual staff binders. Increased management presence will expedite information transfer of current issues and mitigate issues quickly. In addition to better quality control, regular visits will further improve staff accountability. Finally, management noted that larger, more heavily trafficked branches often require afternoon spot-checking such as light restroom cleaning, table wiping, etc. If feasible, supervisors could perform these minimal tasks while visiting branches.

III. Supplies and Equipment Retention

Findings

Current management and distribution of custodial supplies could be improved in a few key areas. Focus groups indicate that there is no standardized supply delivery process, and consequently, custodians often have limited supply stocks that only last roughly one week. These custodians must then travel from their assigned branches to the Main to pick up supplies for the custodian scheduled to clean the branch on the next shift. Moreover, library staff indicated that custodians must often use old supplies like a dirty mop to execute their cleaning tasks. Library staff also report that in the event of a minor, non-hazardous spill, for example, they would be willing to address these incidents themselves rather than calling a custodian back, but are unable to do so because they cannot navigate the custodial supply space to locate the appropriate supplies.

Recommendations

10. **Update custodial supplies and develop inventory and procurement process.** Focus groups indicate that custodians currently use supplies that are in need of replacement, and hence SFPL should prioritize investment in new equipment. The custodial division should develop a comprehensive system for inventorying materials so that both custodians and custodial supervisors are responsible for maintaining and procuring an adequate supply stock. Custodians should conduct scheduled inventories and consistently communicate needed supplies, and custodial supervisors should compile these requests to make comprehensive orders for the unit. A structured assessment of supplies and equipment will promote the expectation that custodians monitor and conduct inventory of the condition of their supplies, and custodial management maintain a process for compiling supply requests and ordering the appropriate supplies timely.
11. **Designate staff from Main for supply delivery.** Focus group interviews indicate that branch custodians must spend shift time retrieving supplies from the Main library, which decreases cleaning time. To improve management and distribution of supplies and equipment to branches, the department should utilize staff located at the Main (i.e. utility crew) for branch deliveries on a scheduled basis. To more effectively transport supplies, the department can provide each branch a designated bin that can be delivered by utility crew or the book vanpool. This recommendation is dependent on a well-functioning inventory system, as custodians must know what supplies they will be receiving and how these supplies fit into current stock, and management must know what supplies are going to what branches for delivery.
12. **Provide in-house maintenance kit for staff.** This recommendation is intended to work concurrently with the establishment of the Service Level Agreement. Given that limited coverage creates a backlog of tasks, each branch should be provided a maintenance kit for basic clean-ups. The Service Level Agreement should have a MSDX index (also to be included in the staff binders) that describes clean-ups that can be handled by branch librarians, provided that the tasks are not hazardous and do not interfere with obligatory duties.

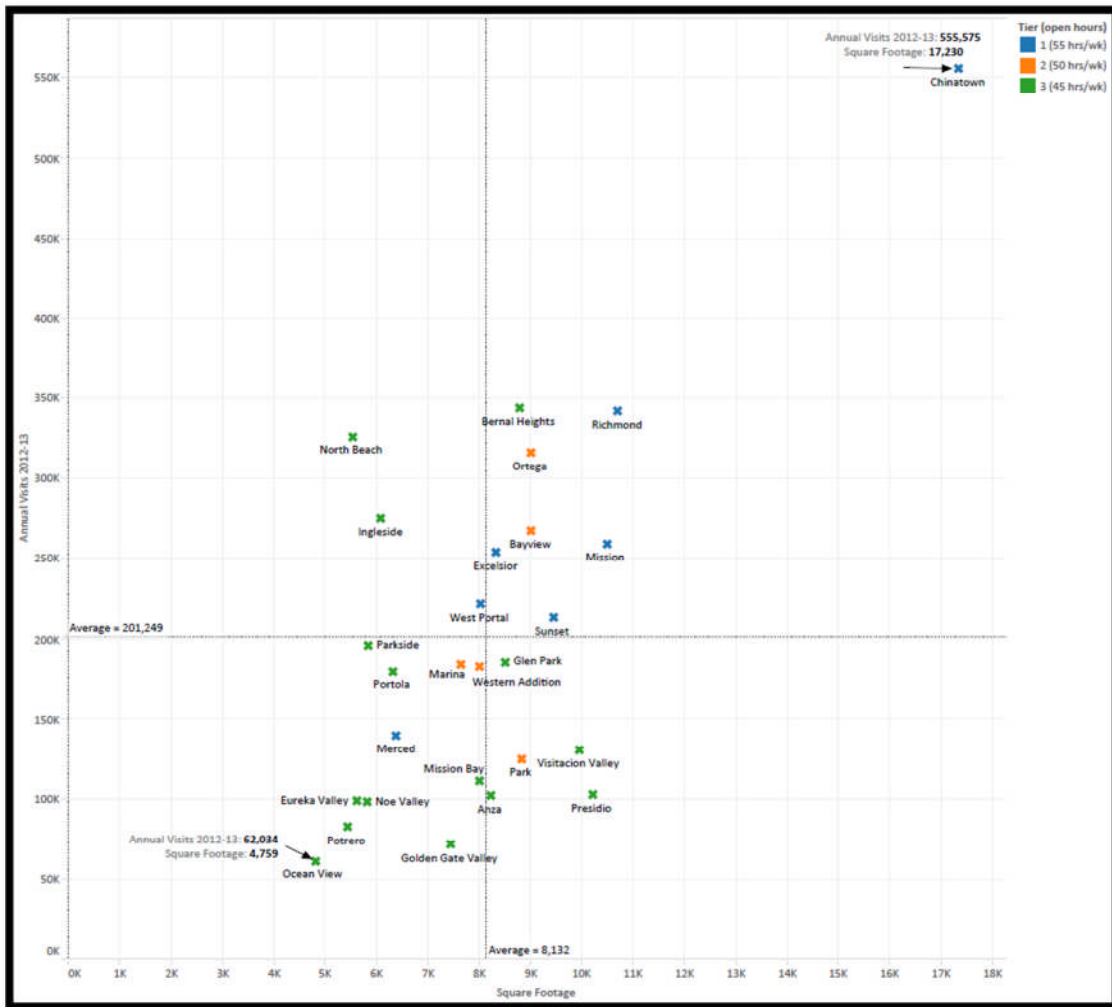
Appendices

Appendix A: Visual Representation of Branch Characteristics

The Controller’s Office used branch characteristics and locations to develop a deployment strategy that pairs larger, more trafficked branches with smaller, less trafficked branches, and minimizes travel time.

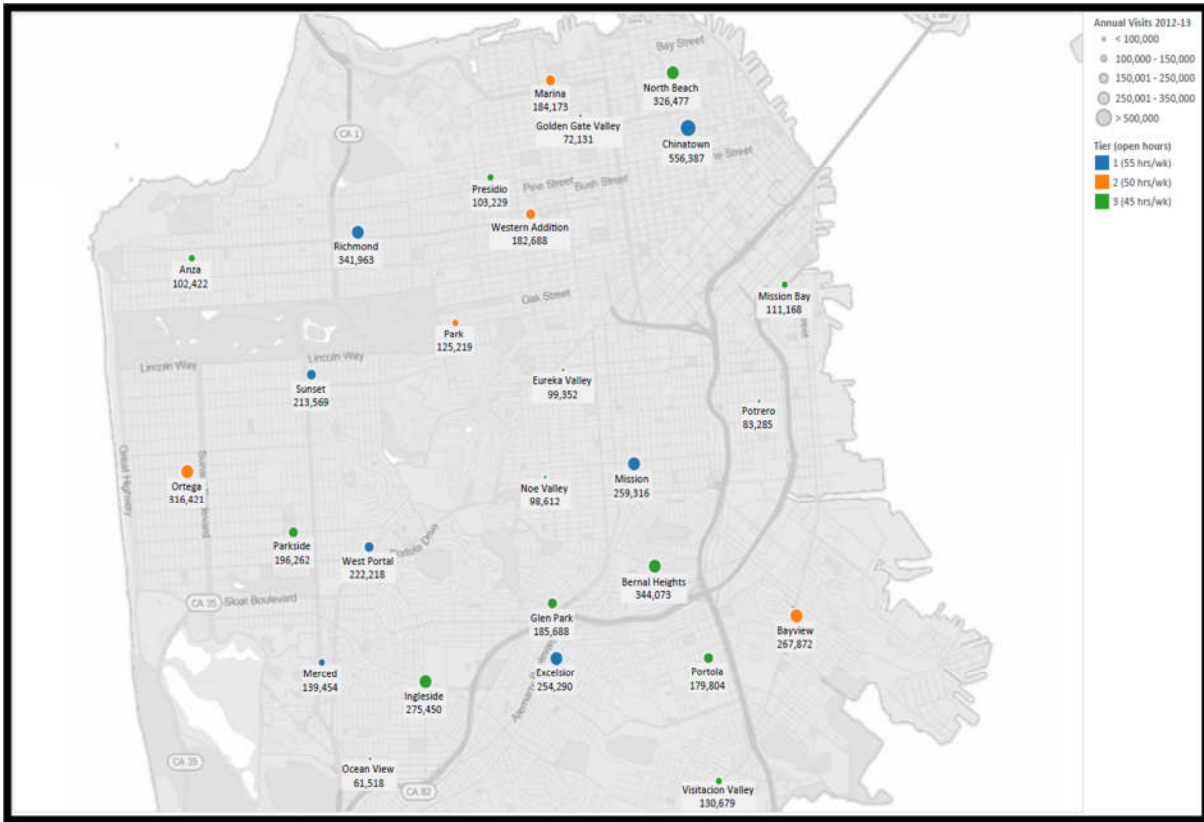
1. Scatter Plot – Annual Visitor Count 2012-13 and Square Footage

Branches in the upper right quadrant have 2012-13 annual visitor counts and square footages that are greater than average, indicating that these branches require a high level of cleaning; branches in the lower left quadrant have 2012-13 annual visitor counts and square footages that are less than average, indicating that these branches require a lower level of cleaning than other branches that are larger or more heavily trafficked. Branches in the remaining two quadrants were classified as Tier 1 or Tier 2 through discussions with management.



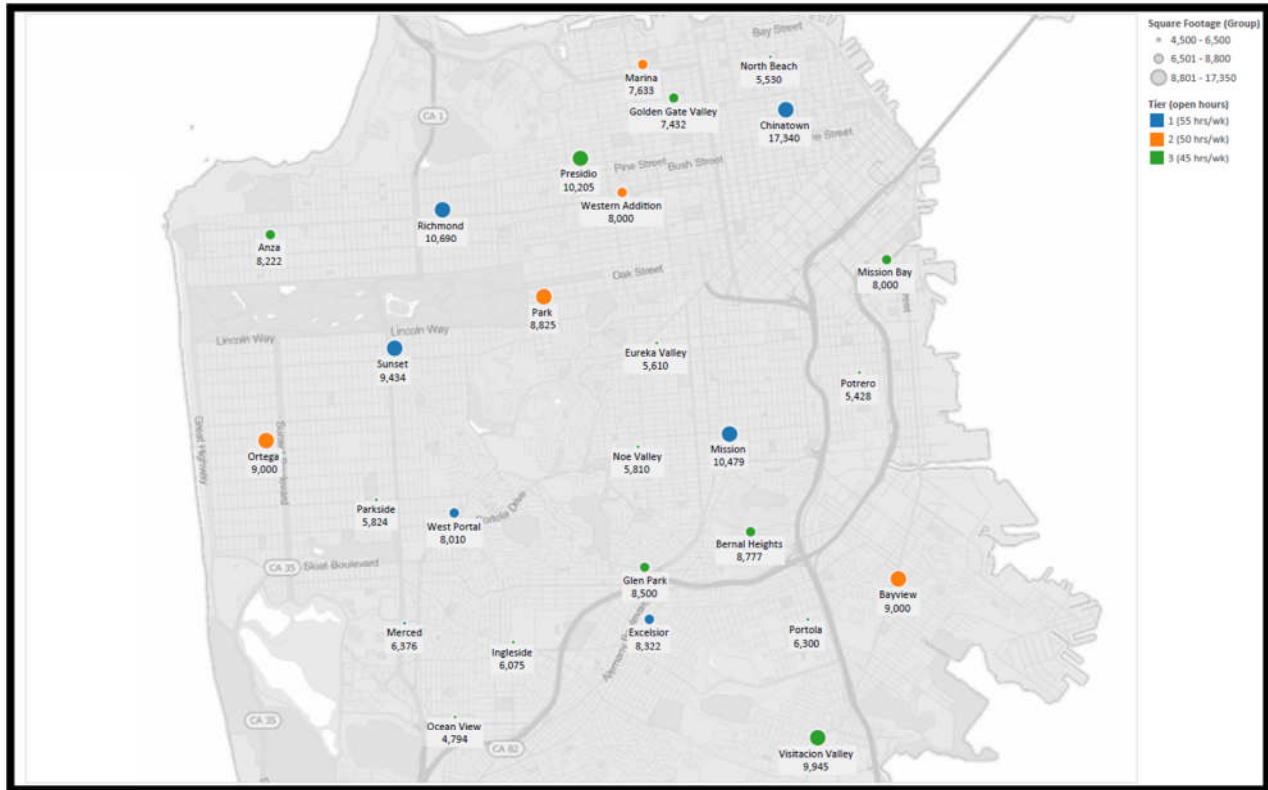
2. Branches by Annual Visitors 2012-13 and Open Hours Tier

Figure 2 is a spatial representation of each branch; the branch indicators are sized by the annual visitor count 2012-13 and colored by open hours tier.



3. Branches by Square Footage and Open Hours Tier

Figure 3 is a spatial representation of each branch; the branch indicators are sized by the square footage and colored by open hours tier.



Appendix B: Custodian Availability Calculation

Using Library custodian leave data from July 2009 to April 2014, the Controller’s Office calculated that custodians are available, on average, 75.3 percent of the maximum available time of 1 FTE. In this phase of the availability calculation, the Controller’s Office did not account for paid breaks; only leave such as vacation, sick pay, etc., is taken into account. The maximum available time of 1 FTE is 2085.6 hours per year, based on a 40-hour work week, 52.14 weeks per year (weeks in a year on average, including leap years). This availability percentage is quite similar to the annual net available work hours for Department of Emergency Management 9-1-1 Call Center dispatchers, who are available 76.9 percent of maximum available time for one FTE, not accounting for paid breaks and the one-hour lunches that dispatchers receive.¹⁴ It is also strikingly similar to Library security guards, who are available, on average, 76.7 percent of maximum available time (not including paid breaks).

¹⁴ Office of the Controller – City Services Auditor. “Department of Emergency Management: The 9-1-1 Call Center’s Minimum Staffing Levels Exceed the Necessary Number of Staff Required. The Department Should Change Policies and Practices to More Efficiently Meet Workload Demands.” 10 January 2014.

Appendix C: Custodial Production Rates

Calculations use a cleaning production rate of 2,200-3,000 square feet per hour. This production rate is based on generic rates used by custodial services at the Department of Real Estate, City Hall, and the Public Utilities Commission building on 525 Golden Gate Avenue. Interviews were conducted with management staff of these custodial divisions that provided and results showed that utilizing the aforementioned production rates yield successful cleaning that can be replicated by others. These interviews focused on management practices, staffing levels, and types of cleaning to be taken into consideration.

Appendix D: Gap Calculation Methodology

Total hours per week needed to clean branch facilities			
Production rate	Hours	Gap	# FTEs
2200 square feet per hour	670.5	378.0	16.8
3000 square feet per hour	491.7	199.2	8.9

The “Hours” column is calculated by dividing the total square footage that must be cleaned in one week (1,475,105) by the two production rates, 2,200 and 3,000 square feet per hour. The “Gap” is calculated by subtracting 292.5, the number of cleaning hours SFPL currently devotes to the branches per week, from the “Hours” figures. The “# FTEs” column is calculated by dividing the “Gap” figures by the leave-adjusted amount that 1 custodian can work in 1 week (4.5 hours per day x 5 days per week). 16.8 and 8.85 additional staff are needed to clean 100% square footage of each branch each day that the branch is open at the 2,200 and 3,000 square feet per hour production rates, respectively.

Appendix E: Ideal Deployment Transit Routes and Explanations

Branch 1	Branch 2	Travel Time			Explanation
		Time (minutes)	Transit Line	Pick-up Frequency (minutes)	
Chinatown	-	-	-	-	Chinatown is the largest branch with more than double the average square footage and almost triple the FY13 average visitor count compared to all branches. Based on the designated production rate range, it would take a full 8-hour shift for one custodian to clean the Chinatown branch.

Ingleside	Ocean View	15	29	15	Despite the 10,869 combined square footage of Ingleside and Ocean View, this branch combination has one of the highest annual visitors per square foot ratio at 31. Management indicated that Ingleside has heavy traffic and soil conditions.
Bernal Heights	Glen Park	12	23	20	This is slightly above the range, but both branches are only open 45 hours per week.
Ortega	Parkside	25	29 to L	13	This is slightly below the range, but there is a high visitor per square footage ratio.
Richmond	Anza	15	38	15	This is slightly above the range, but Anza has relatively small number of visitors per square feet.
Excelsior	Portola	17	44	12	This is slightly below the range, but Excelsior is a Tier 1 open hour with a high number of visitors
West Portal	Merced	8	M	12	This is slightly below the range, but both branches are Tier 1 open hours.
Mission	Noe Valley	12	48	12	This is within the range and an ideal combination. Mission is a large branch with a high number of visitors, where Noe Valley is a small branch with a low number visitors.
Sunset	Park	16	71 or 71L	13	This combination is somewhat high in square footage, but low in the visitors per square footage ratio.
Mission Bay	Potrero	16	10	10	Right-sized combination.
Bayview	Visitacion Valley	15	KT	10	Right-sized combination.
North Beach	Golden Gate Valley	15	45	16	North Beach is small in size, but heavily trafficked.
Marina	Presidio	17	43	12	Large branches, but neither are heavily trafficked.
Western Addition	Eureka Valley	19	24	13	Small-sized branches.

Appendix F: Alternate Deployment Scenarios

The Controller’s Office developed two other deployment strategies based on available custodial resources. It is important to note that a gap still exists between the number of FTEs needed to clean the branch libraries and the number of FTEs that SFPL currently deploys; these alternate strategies simply utilize available resources differently.

Alternate Deployment 1: Public Use Areas

The Controller’s Office received square footage figures for public use and staff use areas for eight¹⁵ branch libraries. For these eight branches, it was calculated that an average of 80% of branch square footage is designated as public use areas. With approval from management, the Controller’s Office projected that 80% of the square footage of the 27 branch facilities can be classified as public use areas in order to determine how many FTE hours are needed to clean only the public use areas. See the “80% Cleaning: Public Use Areas of Branches” section in the table above.

Public use areas of the branch facilities must be cleaned every day that each respective branch is open, whereas branch management noted that staff areas must be cleaned 3-4 times per week. Therefore, the Library can maximize resources by cleaning the public use areas of the branch facilities every day of the week while cleaning the additional square footage of the staff areas 3 days per week.

Weekly Staffing Level Requirements

		Day of the Week						
		Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday
# Branches Open		27	27	27	27	27	20	25
Branch Cleaning Level	80% Cleaning: Public Use Areas Only	10 FTE	10 FTE	10 FTE	10 FTE	10 FTE	8 FTE	10 FTE
	100% Cleaning: All Branch Square Footage	14 FTE		14 FTE		14 FTE		

- Green represents days that custodial services could clean both public use areas and staff areas. 14 FTE hours are required at this 100% cleaning level.
- The Library may decide to outsource services to gain four more additional FTEs necessary to achieve 100% cleaning level on three designated days, or utilize internal

¹⁵ Branches: Eureka Valley, Western Addition, Chinatown, Ocean View, Portola, Noe Valley, Ingleside, West Portal

FTE hours and the deployment strategy that the Controller’s Office developed for 100% cleaning.

- Gray highlight boxes represent a standard 40-hour work week.
- 10 FTEs that cover Tuesday through Saturday only work a 40 hour week and hence two days, Sunday and Monday, will need additional staffing resources.
- The Main Library requires 18 custodians per day: 10 during open hours and 8 on the night crew.

If, on two days during the Tuesday-Saturday work week, 10 custodians are required at the branch libraries to clean the public use areas only, the four additional custodians required to achieve 100% cleaning on those days could be allocated toward filling the gap on Sunday and Monday. For example, staffing 10 rather than 14 custodians on Wednesday and Friday would make an additional eight custodians available per week, and these eight custodians could be allocated toward cleaning the branches on Sunday.

This would achieve some cost savings: the Library would use fewer Department of Real Estate custodians to fill the Sunday-Monday gap. However, it should be noted that the cleaning quality will inherently decrease because custodians will be assigned three branches rather than two on the days that they are supposed to clean the public use areas only. Even though they are cleaning roughly 80% of each assigned branch, management stressed the difficulty of cleaning three branches (added transit and other factors).

Branch Deployment Plan: Public Use Areas (80% Cleaning)

Cleaning Time by Square Footage Cleaned				80% Cleaning: Public Use Areas		
Assignment	Branch 1	Branch 2	Branch 3	Combined Square Footage	Cleaning Time Range* (hours)	
					3,000	2,200
1	Richmond	Western Addition	-	14,952	4.98	6.80
2	Mission	Mission Bay	Noe Valley	19,431	6.48	8.83
3	North Beach	Golden Gate Valley	Presidio	18,534	6.18	8.42
4	Chinatown	Marina	-	19,978	6.66	9.08
5	Sunset	Parkside	West Portal	18,614	6.20	8.46
6	Merced	Ortega	Ingleside	17,161	5.72	7.80
7	Glen Park	Excelsior	Ocean View	17,293	5.76	7.86
8	Anza	Park	Eureka Valley	18,126	6.04	8.24
9	Visitacion Valley	Bayview	-	15,156	5.05	6.89
10	Potrero	Bernal Heights	Portola	16,404	5.47	7.46

* Cleaning Time Range is based on production rates of 3,000 square feet per hour and 2,200 square feet per hour, as denoted.

Alternate Deployment 2: Staggered Cleaning

Staggering shifts across the morning, afternoon, and evening would generate six days of cleaning out of the seven day work week. This strategy is shown below, and you can see that it is built upon each cleaning session taking place more than 24 hours after the one prior.

	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday
Morning				●			●
Afternoon	●		●				
Evening		●			●		

Discussions with management indicated that this deployment would be difficult to implement due to its complexity. Currently, the custodial schedule is hard to manage because custodians are deployed to various shift times across differing five day work weeks. Management indicated that streamlining scheduling will enable effective implementation.

Appendix G: Square Footage, Open Hours, and Staff Numbers (since 2000)

Square Footage (data received from SFPL management):

As a result of BLIP, the 27 branch facilities have a square footage total of **228,800**, and this figure represents a **48,788** square footage increase from pre-BLIP facilities.

Branch square footage has increased by 27 percent since 2000.

Open Hours (data received from SFPL management):

SFPL aggregate open hours have increased from **1,172** in 2000 to **1,338** in 2012.

Open hours have increased by 14 percent since 2000.

Custodial Staffing (data received from SFPL management):

SFPL had 33.16 FTE 2708 Custodians on staff in FY01, and 41.5 FTE 2708 Custodians on staff as of FY14.

2708 Custodians on staff has increased by 25 percent since FY01.

SFPL Custodial Staffing Gap (year 2000)

The numbers below represent the amount of hours it would take to clean the square footage of all facilities in one day.

	Main	Branches	Total
Year 2000 square footage	376,000 sq ft	180,012 sq ft	556,012 sq ft
Cleaning Time (3000 sq. ft./hr)	125 hours	60 hours	185 hours
Cleaning Time (2200 sq. ft./hr)	171 hours	82 hours	253 hours

Number of FTE	Availability Rate	Cleaning Time per day	Cleaning Hours per Day
33.16	0.75	6.5	161.655

A gap exists between the number of hours needed to clean the aggregate square footage in one day and SFPL’s custodial staff hours in one day; moreover, the custodians on staff work five days a week while SFPL facilities are open seven days per week. Dividing the gap between cleaning hours needed and available by 6.5, which is the number of cleaning hours each custodian has in an eight hours shift after transit time, indicates that the gap is 3-14 FTE custodians (varies by production rate).

Department of Real Estate Custodians: Proposed Addition as % of Staffing

Proposed Addition as % of Staffing	FTE	Hours per year
SFPL Custodians	41.5	86320
Department of Real Estate	25 shifts per weekend	10400

If SFPL were to add Department of Real Estate Custodians at 50% cleaning level, this would be a 10 percent staffing increase with respect to current staffing.

Appendix H: Example of Binder Document for Custodial Staff

San Francisco City Hall – Department of Custodial Services

Job Instructions for Custodian #13:

Area: 3rd Floor – Rooms 350-398

1. Empty all the trash and recycle containers in the offices (change liners if wet or dirty)
2. Dust all phones, desks (if nothing on top), tables, chairs, picture frames, window sills, extinguishers, signs, etc.; dust mop floor or vacuum if there is carpet daily
3. Remove spots as found. If spots cannot be removed, please notify your supervisor
4. Vacuum all carpets in your area
5. Clean all restrooms in your area and fill up all supplies. (See attached “Restroom Cleaning Procedures”)
6. Clean around baseboard, ledges, handrails, walls, etc.
7. Keep your J room neat and clean. Clean your tools, equipment and store them 30 minutes before end of shift
8. Perform and other duties as required, requested and/or instructed

Remarks:

1. If the recycle or trash containers appear too heavy to lift, please ask for help. (Never try lifting alone)
2. If any improper conditions are encountered, please notify your supervisor
3. If you notice any health hazard, chemical spill or equipment problem, please notify your supervisor immediately
4. Wear Personal Protective Equipment (PPE)

City Hall Custodial Department MSDS Index

Product Items	Company	Description
1. AUGUST GREEN 300S-1	AUG.SUPPLY	HAND SOAP
2. TWIST’N FILL -1L	3M (WAXIE)	GLASS CLEANER
3. TWIST’N FILL -4L	3M (WAXIE)	BATHROOM DISINFECTANT CLEANER CONCENTRATE
4. TWIST’N FILL -23H	3M (WAXIE)	NEUTRAL QUAT DISINFECTANT CLEANER
5. TWIST’N FILL -8L	3M(WAXIE)	GENERAL PURPOSE CLEANER
6. KL BOWL CLEANER PACKETS	WAXIE	TOILET CLEANER
7. CARPET & UPHOLSTERY CLEANER	PROCYON	CARPET & UPHOLSTERY CLEANER
8. BOUNCE BACK	SPARTAN	FLOOR FINISH RESTORER