



**SAN RAFAEL
PUBLIC LIBRARY
FACILITIES PLANNING
PROJECT**

**EXISTING FACILITIES
REPORT**

**City of San Rafael
California**

July 2019

**NOLL
& TAM
ARCHITECTS**

ARCHITECTS:
NOLL & TAM
729 Heinz Avenue, Suite #7
Berkeley, CA. 94710
Tel: (510) 542 -2200

ELECTRICAL ENGINEERS
O'Mahony & Myer
4340 Redwood Hwy., Suite 245
San Rafael, CA. 94903
Tel: (415) 492-0420

PLUMBING ENGINEERS CAPITAL
Engineering Consultants, Inc.
11020 Sun Center Drive, Suite 100
Rancho Cordova, CA 95670
Tel: (916) 851-3500

COST ESTIMATORS
TBD Consultants
111 Pine Street, Suite 1315
San Francisco, CA 94111
Tel: (415) 981-9430



TABLE OF CONTENTS:

1. Executive Summary
2. Project Objective & Scope
3. Detailed Project Scope of Work
4. Building Code Compliance
5. Accessible Code Compliant Restrooms
6. Interior Features
7. Exterior Features
8. Cost Estimate Summary
9. Plumbing Assessment Report
10. Electrical Assessment Report
11. Detailed Cost estimate

Appendix:

2019 0716 Excel Document of COST ESTIMATE





1. EXECUTIVE SUMMARY

In 1909 the Carnegie-funded public library was opened in downtown San Rafael, at 1100 E Street. Originally a 5,000 GSF two story facility the library has undergone several expansions since that time. In 1959 a 6,000 sq. Ft. new addition was added on North side, while modifications to the Carnegie exterior steps and it's second floor entry were also undertaken.

Recent analysis of the downtown library revealed substantial weaknesses in the areas of safety and access, building systems, architectural issues and functionality. The facility currently suffers from age-related issues such as water leaks, inadequate restrooms and minimal ADA compliance. Analysis has indicated that the current downtown library facilities are inadequate to meet the demands of the San Rafael community. Based on the city's population it should have approximately 45,000 sq. ft. of library service space. Extensive design study is currently underway to establish a variety of approaches to address this imbalance.

Until these studies are concluded the City of San Rafael has commissioned a report to understand what scope of work will be necessary for the downtown library facility to remain operational and code complaint for at least five years. In April 2018, Noll & Tam Architects was secured to prepare a report to focus on accessibility within the building, waterproofing issues and plumbing, electrical and code deficiencies. The design team included: Plumbing Engineers, Capital Engineering; Electrical & Lighting Engineers, O'Mahony & Myer; and Cost Estimators, TBD Consultants. Critical client stakeholders include: San Rafael Department of Public Works, Kevin McGowan & Bill Guerin; Interim Library Director, Henry Bankhead; and Facilities Manager, Omar Garcia.

The design team undertook the scope of work in two stages during the Fall 2018 and the Spring 2019. The first stage assessed the existing conditions of the building's infrastructure and the ADA accessibility for occupants. The second stage established the scope of work necessary to improve the safety, operations, and ADA accessibility, including anticipated timelines and projected costs of these improvements.

RECOMMENDATIONS

The report considers the project as potentially five scopes of work and prioritizes them in the following order:

- Waterproof the building;
- Electrical - life safety updates;
- Plumbing & ADA compliance scope;
- Carpentry code upgrades;
- Additional remedial construction.

A summary of the specific scope, its suggested schedule, and its construction costs are noted on the following page. The Cost Estimate considers the financial impact to undertake the scope in five construction phases from September 2019 to June 2021 (Option 1), or in one construction phase starting in June 2020 (Option 2). There are considerable savings to be realized should the project scope occur as suggested per Option 2. The detailed Cost Estimate is summarized in Section 11 of this report: the original Cost Estimate is provided as an Appendix to this report.

Noll & Tam Architects looks forward to supporting the City of San Rafael in realizing their mission for this impressive facility.

EXECUTIVE SUMMARY - RECOMMENDATIONS

OPTION 1 SUMMARY – FIVE PHASES

Phases	Discipline	Construction Costs	Schedule
First Phase	ARCHITECTURAL/WATERPROOFING	\$794,148	2019/September
	Make building water tight before the winter rains		
Second Phase	ELECTRICAL - LIFE SAFETY	\$647,245	2019/December
	Provide an appropriate level of life safety upgrades		
Third Phase	PLUMBING & ADA COMPLIANCE	\$836,187	2020/June
	Address inadequate amount of restrooms for staff and public		
Fourth Phase	CARPENTRY CODE UPGRADES	\$60,239	2020/September
	Amend current interior code violations		
Fifth Phase	ADDITIONAL REMEDIAL CONSTRUCTION	\$49,887	2021/June
	Amend east entry landing & library stacks in reading room		
Total for 5 Separate Phases		\$2,387,705	

OPTION 2 SUMMARY – ONE PHASE

Phases	Discipline	Construction Costs	Schedule
One Phase	ALL DISCIPLINES ARE BID CONCURRENTLY	\$1,772,682	2020/June



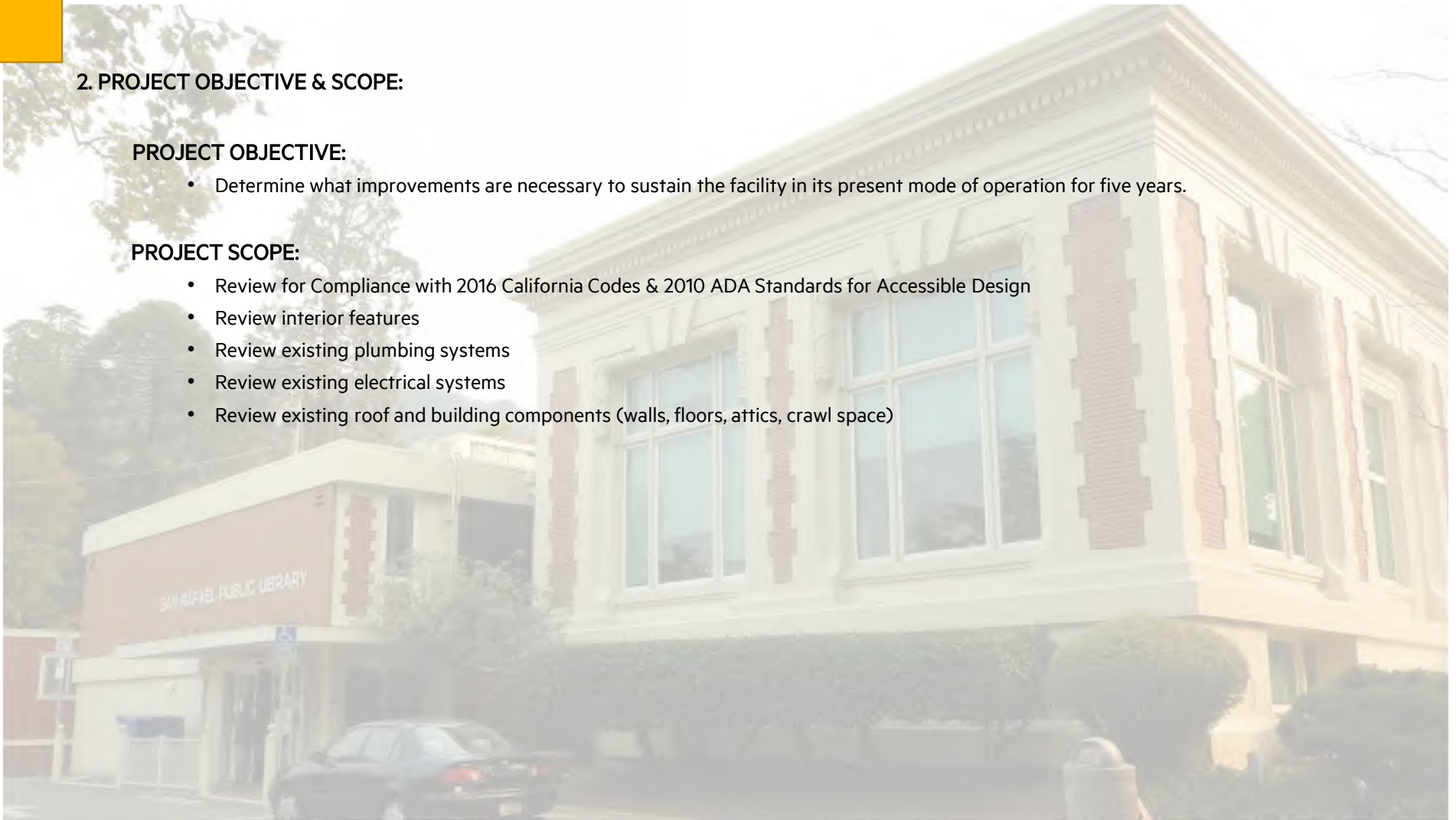
2. PROJECT OBJECTIVE & SCOPE:

PROJECT OBJECTIVE:

- Determine what improvements are necessary to sustain the facility in its present mode of operation for five years.

PROJECT SCOPE:

- Review for Compliance with 2016 California Codes & 2010 ADA Standards for Accessible Design
- Review interior features
- Review existing plumbing systems
- Review existing electrical systems
- Review existing roof and building components (walls, floors, attics, crawl space)





3. DETAILED PROJECT SCOPE OF WORK

ARCHITECTURAL

- Review building to ensure there are no code violations relevant to 2010 ADA Standards for Accessible Design, (ADA Standards) &/or 2016 California Building Code (C.B.C.)
- Review conditions of existing restroom features for code and ADA compliance.
- Review conditions of interior features
- Determine cost to replace roof on Carnegie Building and to seal existing roof on the addition.
- Confirm if replacement of damaged building components needs to be considered.
- Determine cost to caulk and paint both buildings.

PLUMBING

- Review building to ensure there are no code violations relevant to 2016 California Plumbing Code (C.P.C.)
- Review all existing plumbing systems and determine course of action necessary for improvements.
- Confirm modifications required to plumbing systems to prevent sewer backflow into restrooms and to prevent future water leaks on floor, walls & roof.

ELECTRICAL

- Review building to ensure there are no code violations relevant to 2016 California Electric Code (C.E.C.)
- Review existing electrical systems
- Confirm modifications required to existing electrical systems to improve performance

DELIVERABLES

Final report of existing conditions of all scope surveyed and proposals for improvement, and associated costs.

Matrix to determine costs of scope of work associated with different phasing for the scope of work.



4. BUILDING CODE COMPLIANCE

BUILDING FLOOR PLANS

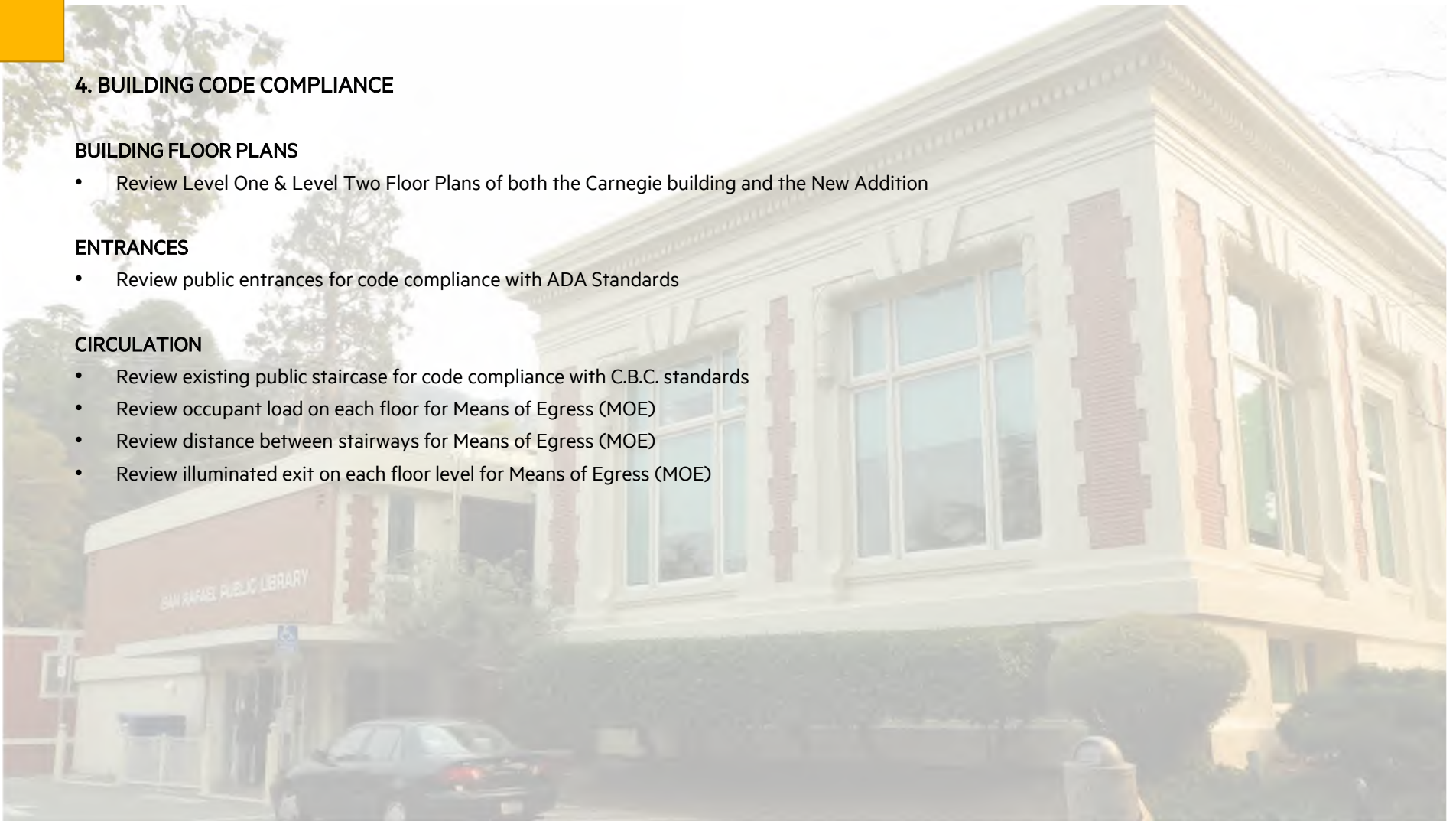
- Review Level One & Level Two Floor Plans of both the Carnegie building and the New Addition

ENTRANCES

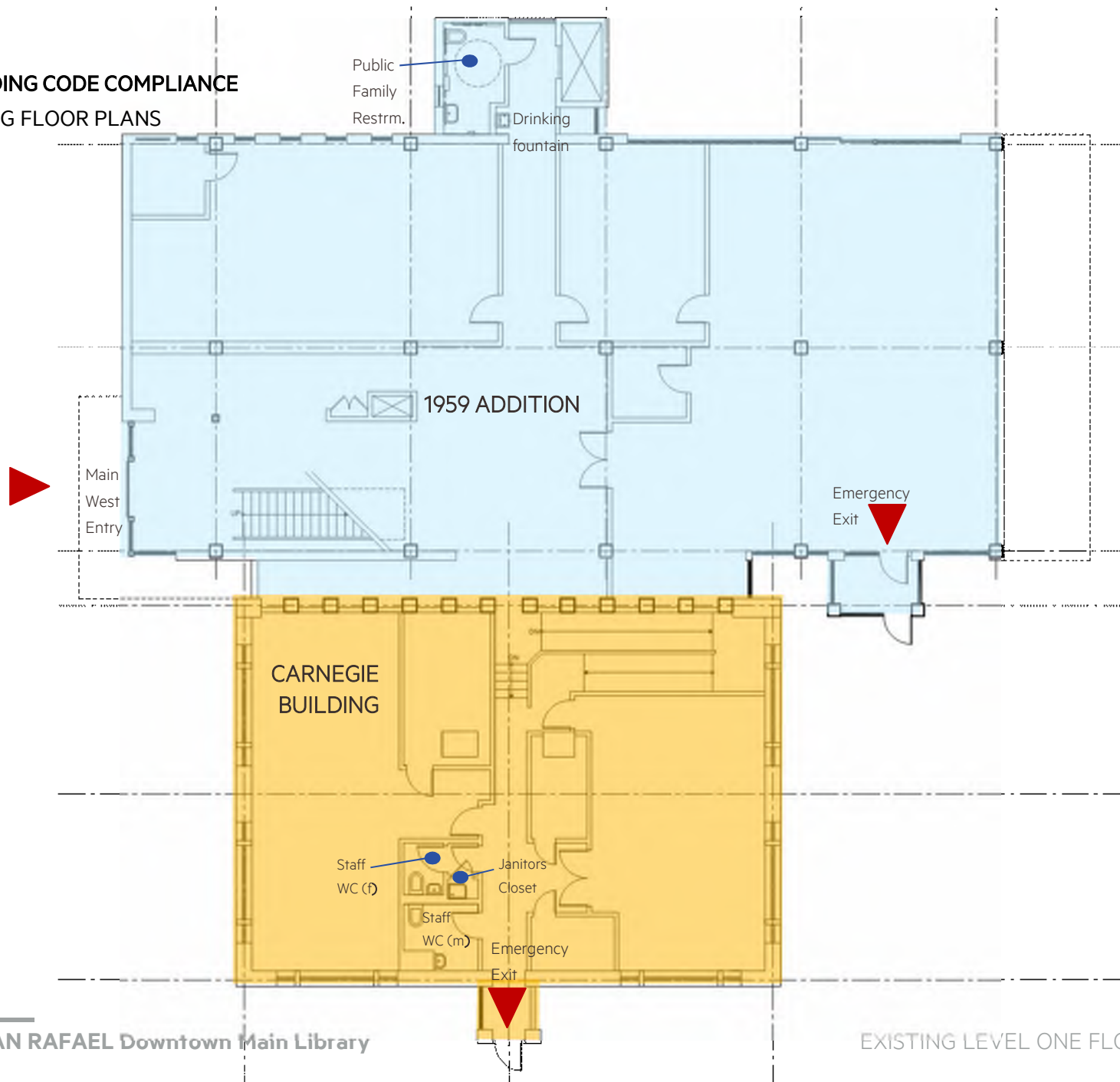
- Review public entrances for code compliance with ADA Standards

CIRCULATION

- Review existing public staircase for code compliance with C.B.C. standards
- Review occupant load on each floor for Means of Egress (MOE)
- Review distance between stairways for Means of Egress (MOE)
- Review illuminated exit on each floor level for Means of Egress (MOE)



4. BUILDING CODE COMPLIANCE
BUILDING FLOOR PLANS



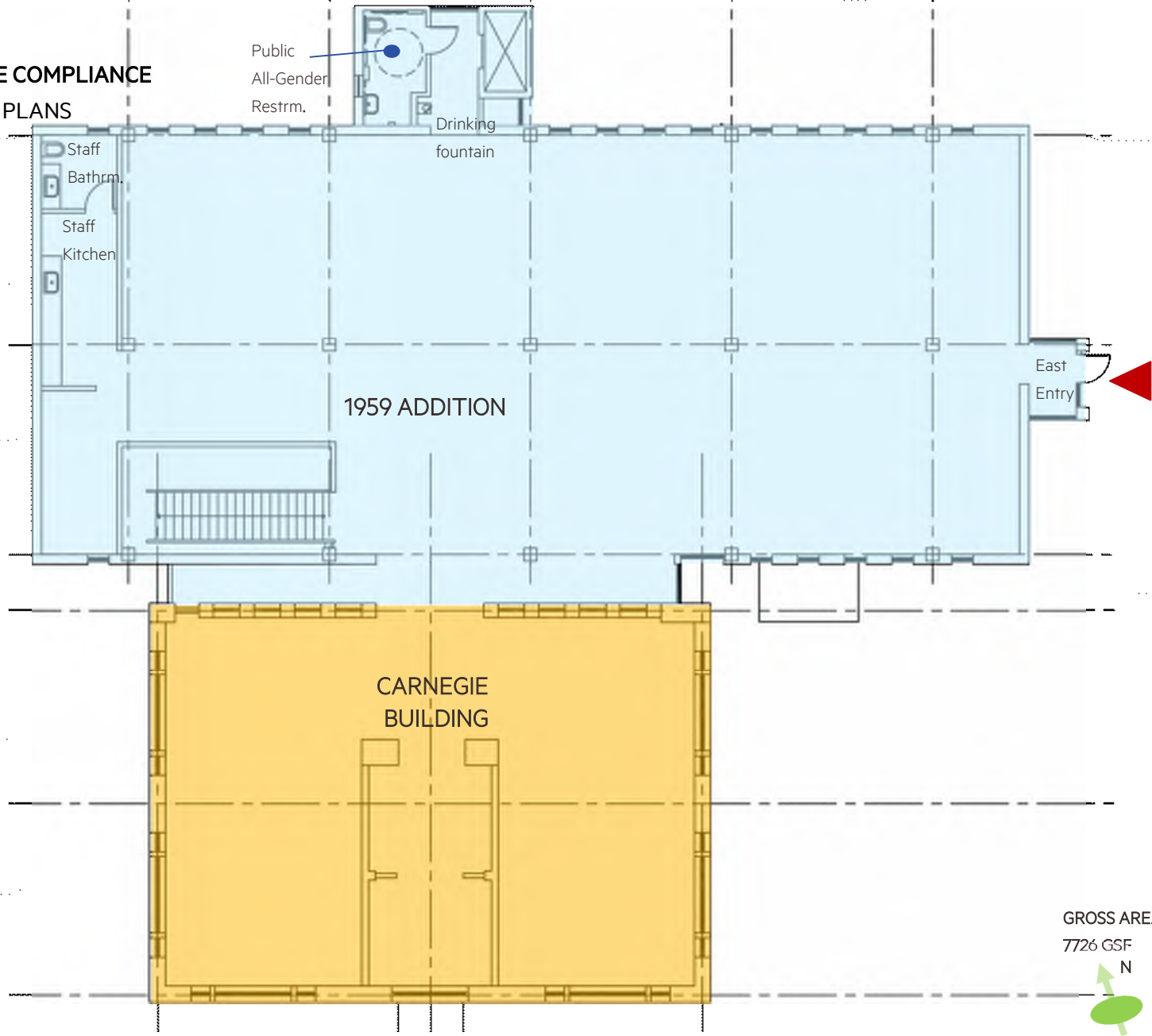
GROSS AREA=
7344 GSF



SAN RAFAEL Downtown Main Library

EXISTING LEVEL ONE FLOOR PLAN

4. BUILDING CODE COMPLIANCE
BUILDING FLOOR PLANS





4. BUILDING CODE COMPLIANCE

ENTRANCES

- Review public entrances for code compliance per ADA Standards.
- Review 2016 C.B.C. 1010.1.5 Landings at Doorways
Relevant extracts from 2016 C.B.C. are cited below:

1010.1.5 Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

1010.1.6 Landings at doors. Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). Where a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

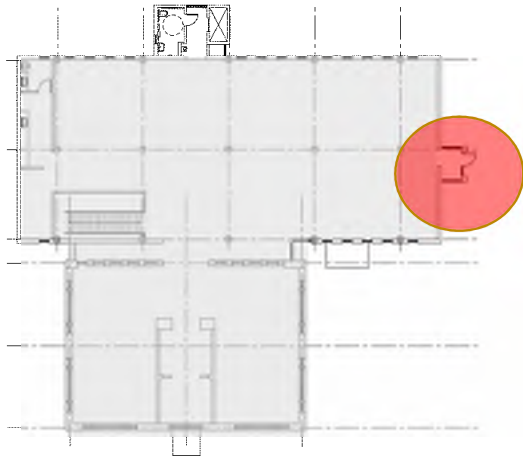
4. BUILDING CODE COMPLIANCE

ENTRANCES

- West entrance on Level one and East entrance on Level Two was reviewed for code compliance per ADA Standards.
- Per 2016 C.B.C. West entrance was not found to have code violations per 2016 C.B.C.
- Per 2016 C.B.C. 1010.1.5 East entrance does not have an exterior level landing at the doorway as required.

Determination:

- Existing landing on East entry shall be measured to determine if it slopes 1/4 : 12 units (2% slope).
- If landing slopes greater than 2% it is not code compliant and it should be amended to be code compliant.



Existing landing on east Entry

4. BUILDING CODE COMPLIANCE

CIRCULATION

- Internal staircases

Relevant extracts from 2016 California Building Code (C.B.C.) 11B – 505 are cited below:

11B-505.4 Height. Top of gripping surfaces of handrails shall be 34 inches (864 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.

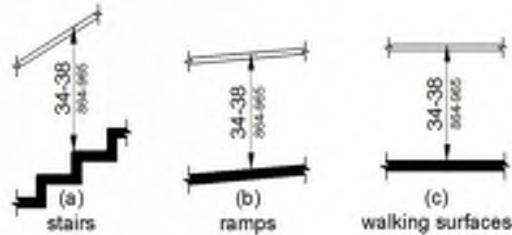


FIGURE 11B-505.4
HANDRAIL HEIGHT

11B-505.10.2 Top extension at stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the first riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.



FIGURE 11B-505.10.2
TOP HANDRAIL EXTENSION AT STAIRS

11B-505.10.3 Bottom extension at stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the last riser nosing. *The horizontal extension of a handrail shall be 12 inches (305 mm) long minimum and a height equal to that of the sloping portion of the handrail as measured above the stair nosings.* Extension shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

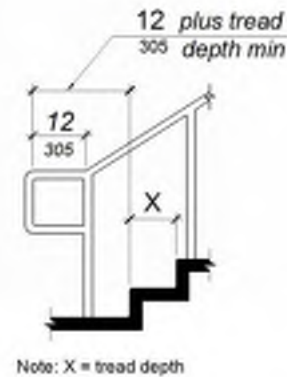
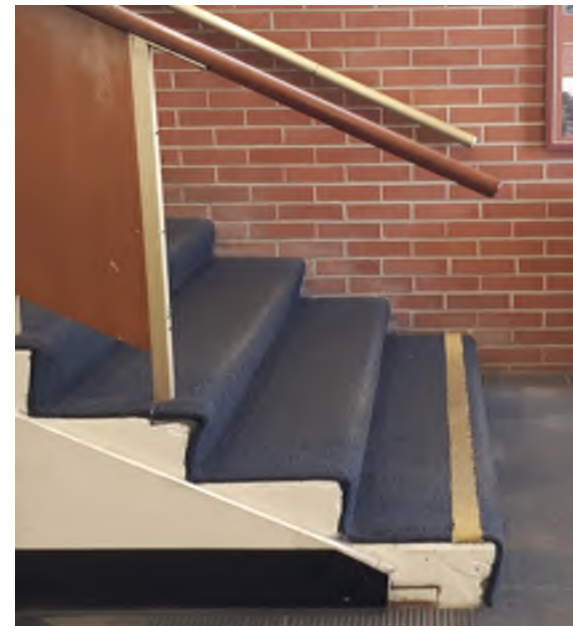


FIGURE 11B-505.10.3
BOTTOM HANDRAIL EXTENSION AT STAIRS

4. BUILDING CODE COMPLIANCE

CIRCULATION

- Internal staircases



- Internal public staircase does NOT have a code compliant handrail as required per C.B.C 11B-505. 4.
- The handrail is 32.5" above the finished floor and not 34" -38" above the finished floor.
- Public internal staircase does NOT have a code compliant handrail as required per C.B.C 11B-505. 10.3.
- The handrail extensions do not extend 23" minimum beyond last tread.
- The ends of the handrails do not return to the wall.

Determination: Remove guardrail and handrail from open side of stairwell and the handrail from the wall side. Replace with code compliant guardrail and handrails.

4. BUILDING CODE COMPLIANCE

CIRCULATION

- Confirm adequate Means of Egress (MOE) from Level One

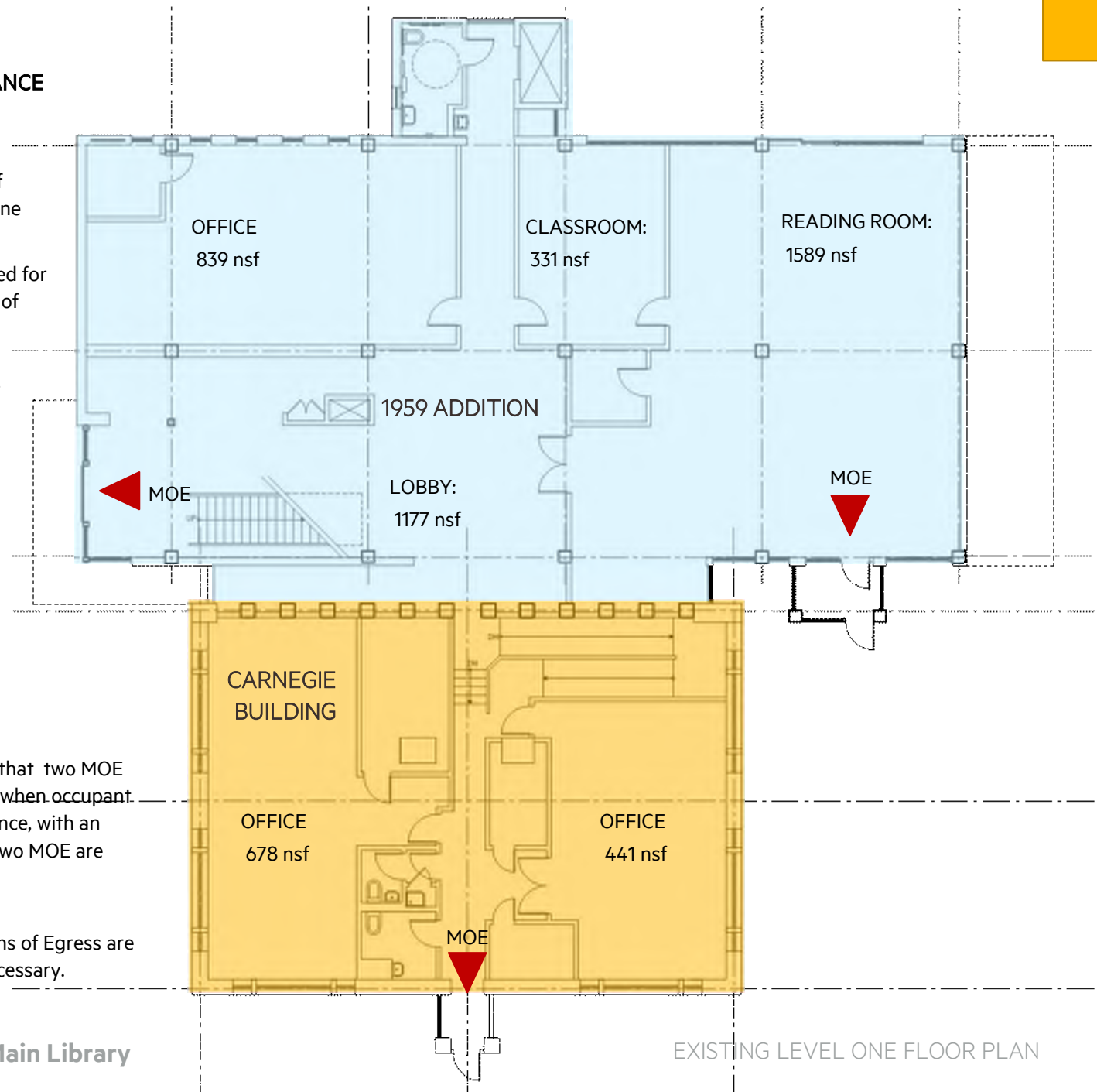
Level One floor plan was reviewed for compliance for adequate means of egress.

- READING ROOMS: 1589 nsf
Occupancy = 32
- CLASSROOM: 331 nsf
Occupancy = 17
- OFFICE: 1958 nsf
Occupancy = 20
- LOBBY: 1177 nsf
Occupancy = 24

TOTAL OCCUPANCY ON FIRST FLOOR = 93 occupants

- C.B.C. Table 1006.3.1 notes that two MOE are required from the floor when occupant load is between 1 - 500. Hence, with an Occupant Load of 93 only two MOE are required from Level 1.

Determination: Number of Means of Egress are in compliance so no action is necessary.



4. BUILDING CODE COMPLIANCE

CIRCULATION

- Confirm adequate Means of Egress (MOE) from Level two

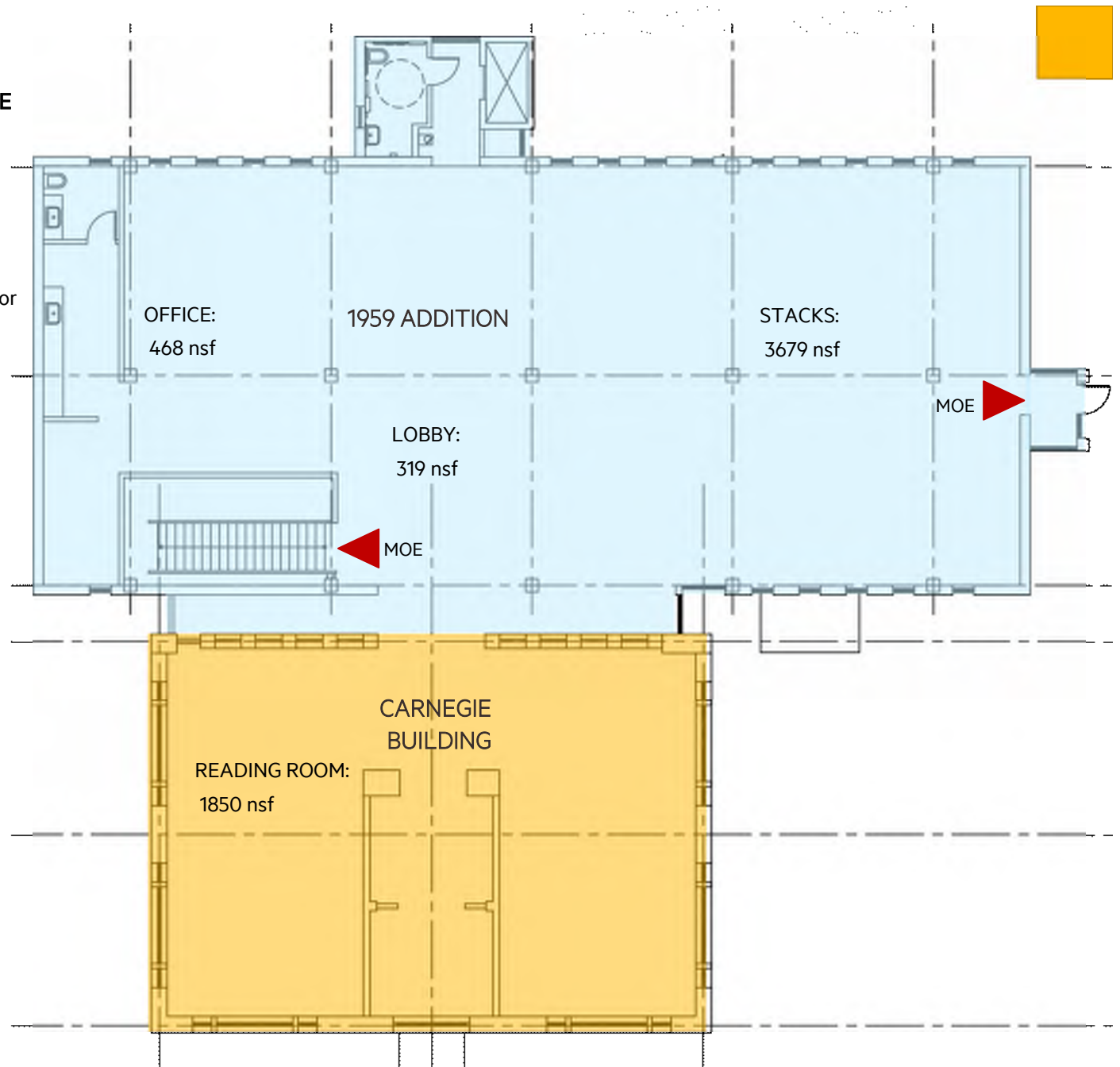
Level Two floor plan was reviewed for compliance for adequate means of egress.

- READING ROOMS: 1850 nsf
Occupancy = 37
- STACKS: 3679 nsf
Occupancy = 37
- OFFICE: 468 nsf
Occupancy = 5
- LOBBY: 319 nsf
Occupancy = 21

TOTAL OCCUPANCY ON SECOND FLOOR = 100

- C.B.C. Table 1006.3.1 notes that two MOE are required from the floor when occupant load is between 1 - 500. Hence, with an Occupant Load of 100 only two MOE are required from Level 2.

Determination: Number of Means of Egress is in compliance - no action is necessary.



4. BUILDING CODE COMPLIANCE

- CIRCULATION
- 2016 C.B.C 1007 EXIT & EXIT ACCESS
- Level Two floor plan was reviewed for compliance of adequate travel distance between each means of egress.
- 2016 C.B.C 1007.1.1 notes that two exits must be placed apart by a distance greater than half the diagonal dimensional of the building
- Diagonal dimension = 126'-0"
Distance between Exits = 74'-0"
- The distance between both means of egress is in code compliance.

Determination:

No action necessary.





4. BUILDING CODE COMPLIANCE

CIRCULATION

Illuminated Means of Egress

2016 C.B.C. 1008.1 Illumination of Means of Egress (MOE) by 1 foot candle minimum is required.

2016 C.B.C. 1008.3.2: When two MOE are required by code the Emergency electrical system shall illuminate the MOE

2016 C.B.C. 1009.1 Exception 1: Accessible Means of Egress (MOE) are not required in existing buildings. (i.e. No Areas of refuge are required)

- 2016 C.B.C. Table 1006.3.1 notes that two MOE are required from the floor when occupant load is between 1 - 500.
- The Occupant Load on each Level is approximately 100 so two MOE are required from each Level.
- Hence the MOE are also required to be illuminated by an emergency electrical system

Determination: Means of Egress must be illuminated and powered by an emergency powered system.

4. BUILDING CODE COMPLIANCE

CIRCULATION

- **Illuminated Means of Egress**

It is determined that illuminated exit signs are required throughout the building in locations as indicated.



EXISTING LEVEL ONE FLOOR PLAN



EXISTING LEVEL TWO FLOOR PLAN



5. ACCESSIBLE CODE COMPLIANT RESTROOMS

- APPLICABLE BUILDING CODES
- PUBLIC RESTROOMS - EXISTING
- STAFF RESTROOM LEVEL 1 – EXISTING
- STAFF RESTROOM LEVEL 2 – EXISTING
- STAFF RESTROOM LEVEL 1 – PROPOSED
- STAFF RESTROOM LEVEL 2 - PROPOSED

5. ACCESSIBLE CODE COMPLIANT RESTROOMS

APPLICABLE BUILDING CODES

1. Code Required Restrooms
2. Door Heights
3. Single Occupancy Restroom Plan diagram
4. Grab Bars

1. Code Required Restrooms

2016 California Plumbing Code for an A-3 occupancy the building is required to provide restroom facilities as follows:

WC (male) = 2

WC (Female) = 4

Urinals = 2

Lavatories (male) = 1

Lavatories (female) = 2

Building was designed under an earlier code and currently has the following plumbing fixtures:

WC (male) = 0

WC (Female) = 1

WC (All-Gender) = 2

Urinals = 0

Lavatories (male) = 0

Lavatories (female) = 1

Lavatories (All-Gender) = 2

In consideration of Code required amount we would recommend the City consider providing additional restrooms. This is considered a “Nice-to-have” recommendation.

2. Door Heights

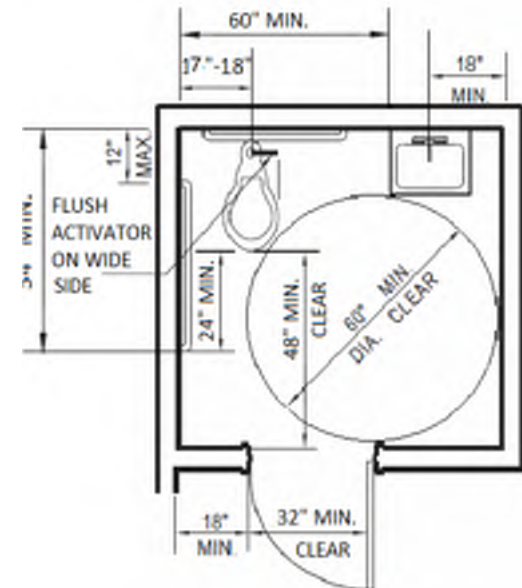
2016 C.B.C. 1010.1.1 “The height of door openings cannot be less than 80”.

Public restrooms doors in the library were noted to be less than 80” high: Level One door height is 79.5” , Level Two door height is 78”.

Determination: Undertake remedial repair to install new doors at 80” high in both public restrooms. This is considered a “Nice-to-have” recommendation.

3. Single Occupancy Restroom Plan diagram

2016 C.B.C Identifies an ADA compliant restroom with dimensions noted in plan diagram



5. ACCESSIBLE CODE COMPLIANT RESTROOMS

4. Grab Bars

Relevant extracts from 2016 C.B.C. pertaining to ADA Standards for code compliance are cited below:

- Where an administrative authority requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then the rear grab bar shall be permitted to be split or shifted to the open side of the toilet area.

11B-604.5.1 Side wall. The side wall grab bar shall be 42 inches (1067 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1372 mm) minimum from the rear wall with the front end positioned 24 inches (610 mm) minimum in front of the water closet.

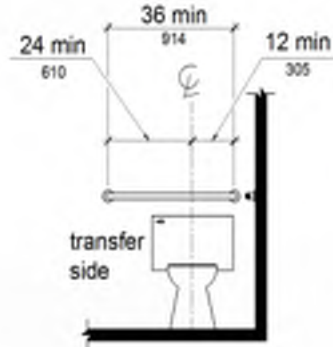


FIGURE 11B-604.5.2
REAR WALL GRAB BAR AT WATER CLOSETS

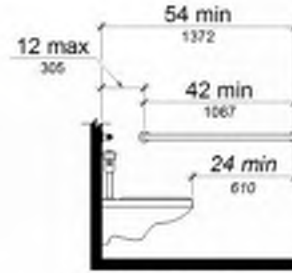
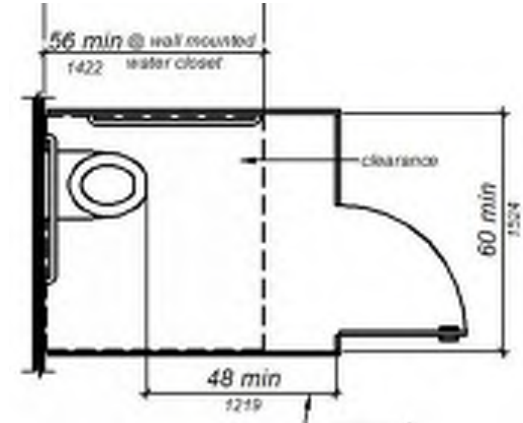


FIGURE 11B-604.5.1
SIDE WALL GRAB BAR AT WATER CLOSETS



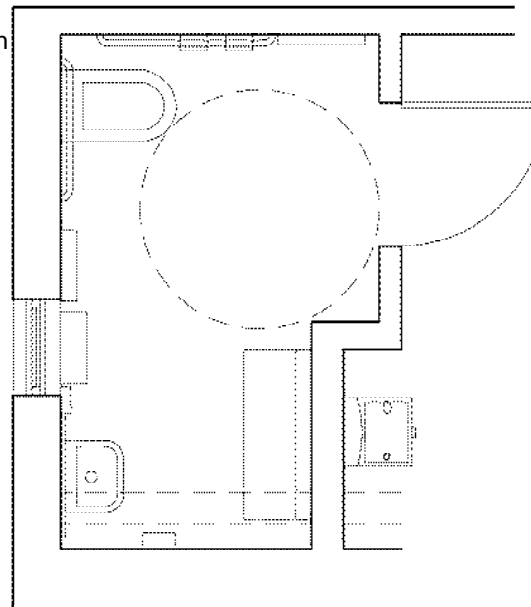
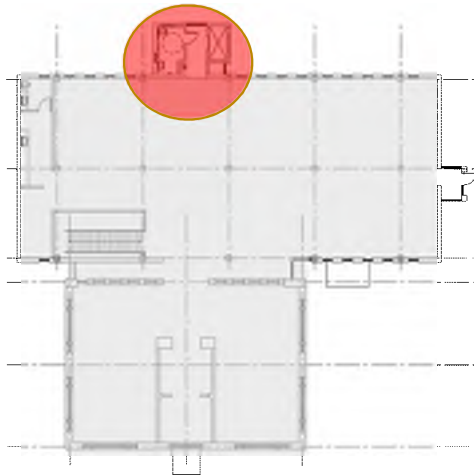
5. ACCESSIBLE CODE COMPLIANT RESTROOMS

PUBLIC RESTROOMS - EXISTING

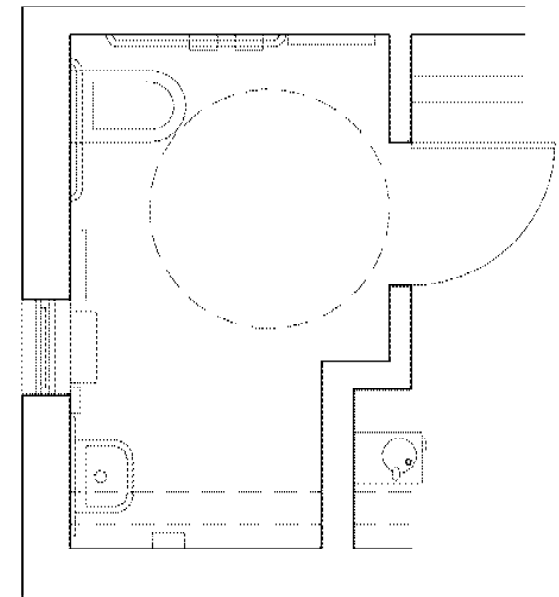
Public restrooms on level one and level two were reviewed for access code compliance against ADA Standards per 2016 C.B.C.

- Public restrooms were NOT found to be in violation of the ADA Standards per 2016 C.B.C.

Determination. No action necessary.



EXISTING LEVEL ONE FLOOR PLAN
PUBLIC FAMILY RESTROOM



EXISTING LEVEL TWO FLOOR PLAN
PUBLIC ALL- GENDER RESTROOM

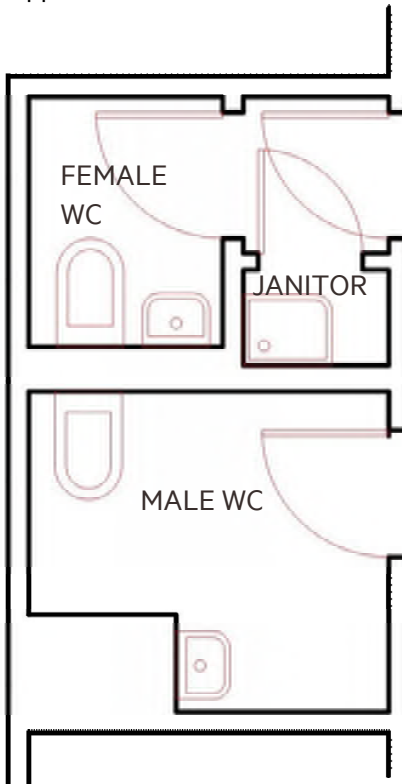
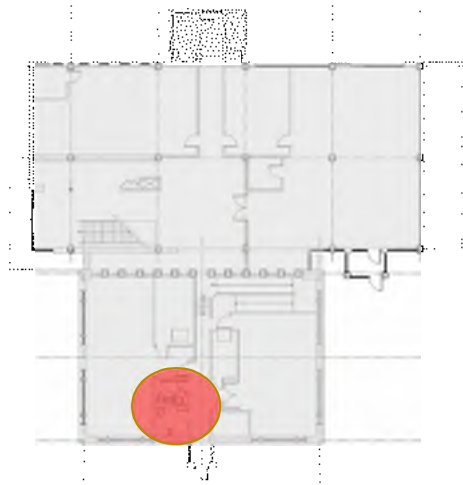
5. ACCESSIBLE CODE COMPLIANT RESTROOMS

STAFF RESTROOM LEVEL 1 – EXISTING

- Staff restroom (F) is not ADA compliant – size of room is too small.
- Staff restroom (M) no longer functions as a restroom – some fixtures have been removed. Room currently stores cleaning supplies.
There is inadequate clearance distances around location of potential fixtures.
- Janitors closet has an older mop sink, most likely leaks.

Determination:

Female restroom on Level One does not have adequate space to be code compliant per ADA Standards.



EXISTING LEVEL ONE PLANS
STAFF RESTROOMS



STAFF RESTROOM - FEMALE



STAFF RESTROOM - MALE

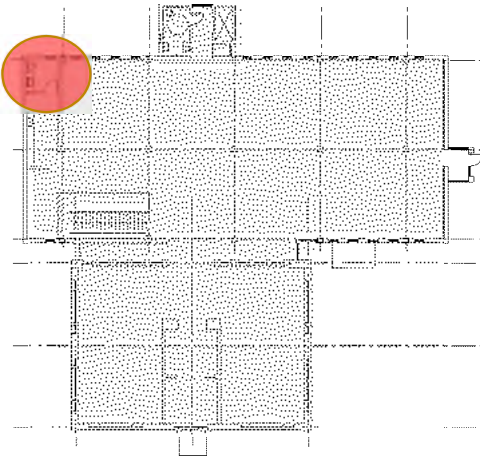
5. ACCESSIBLE CODE COMPLIANT RESTROOMS

STAFF RESTROOM LEVEL 2 – EXISTING

On Level Two there is one All-Gender staff restroom. It was reviewed for access code compliance per ADA Standards.

It was found to be in violation of the code:

- Grab bars are not code compliant.
- No accessible space under lavatory for wheelchair
- Toilet paper dispenser is too high



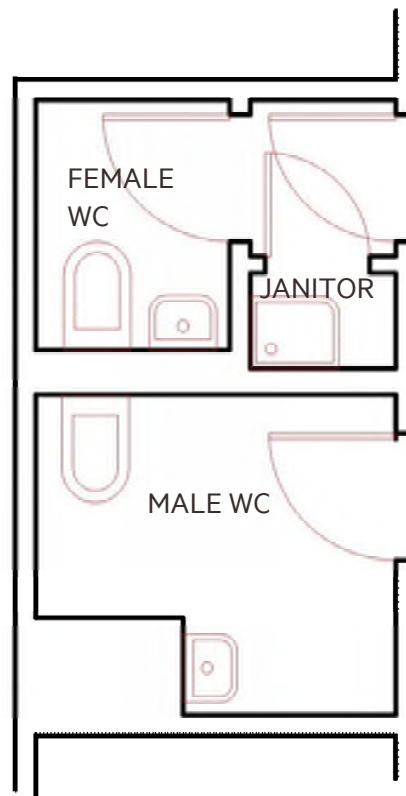
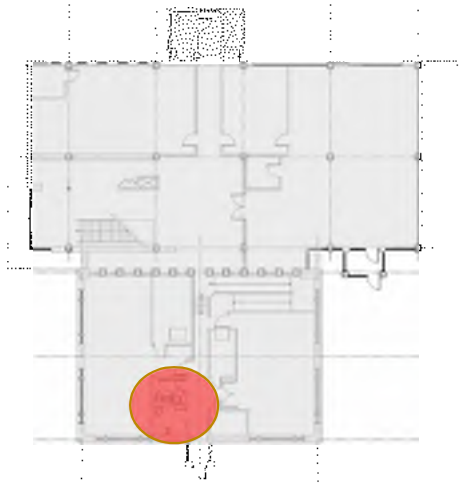
Determination:

Staff restroom on Level Two should be remodeled to be code compliant.

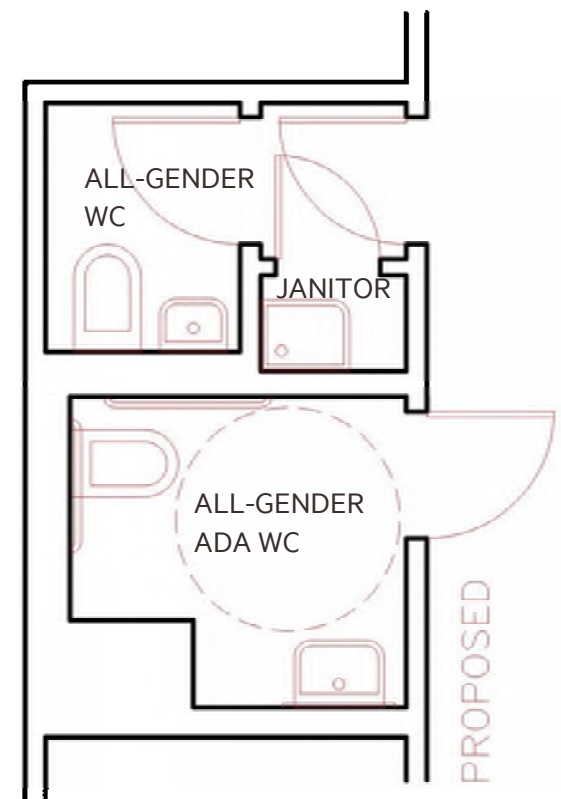
5. ACCESSIBLE CODE COMPLIANT RESTROOMS

STAFF RESTROOM LEVEL 1 – PROPOSED

- Staff restroom (F) becomes All-Gender non-ADA compliant restroom.
- Staff restroom (M) converts to single Occupancy All-Gender C.B.C. Code compliant accessible restroom.
- Mop sink in Janitors closet is replaced with new sink.



EXISTING LEVEL ONE PLANS
STAFF RESTROOMS

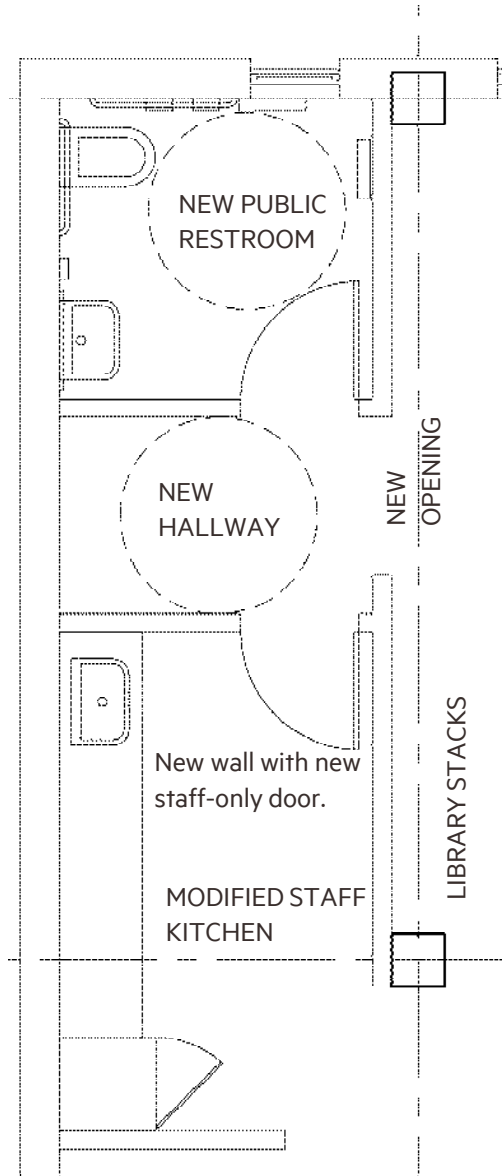
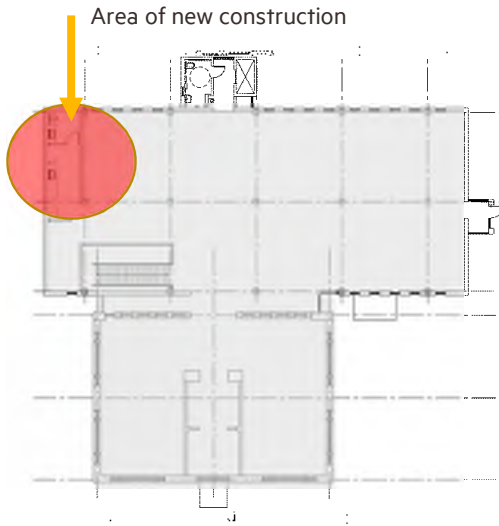


PROPOSED LEVEL ONE PLANS
STAFF RESTROOMS

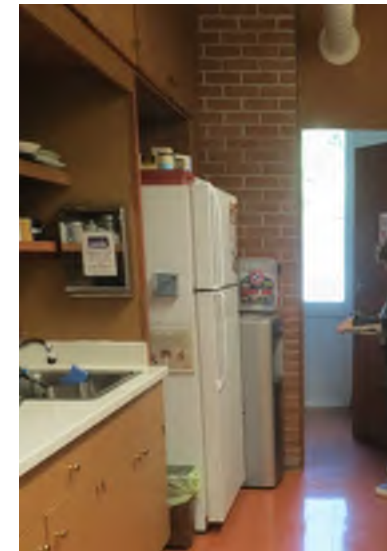
5. ACCESSIBLE CODE COMPLIANT RESTROOMS

STAFF RESTROOM LEVEL 2 - PROPOSED

- To address perceived inadequate number of public restrooms in the building, staff restroom on Level Two converts to single Occupancy All-Gender C.B.C. Code compliant accessible restroom for the public. This is considered a “Nice-to-Have” scope of work
- Create a new opening in north/south wall and create a new hallway from kitchen space, allowing public access from library stack area. Modify kitchen casework to incorporate fridge on south side of casework. This is considered a “Nice-to-Have” scope of work.



EXISTING LEVEL TWO STAFF RESTROOM



EXISTING LEVEL TWO STAFF KITCHEN



6. INTERIOR FEATURES

CIRCULATION

- Review library stack area for safety concerns

FINISHES

- Review ceiling leaks
- Review air quality
- Review floor finishes for wear and tear



6. INTERIOR FEATURES

CIRCULATION

Library stacks were reviewed for safety.



- Several Library Stacks in reading area on second floor were not structurally braced to the main structure or to each other. Based on their loading these stacks appear to require bracing. These stacks are 73” and 77” high.
- Per 2016 C.B.C 1010.1.1 The height of door openings cannot be less than 80”. *Interpretation:* one can pass under an 80” high “opening” for a temporary period of time. If these 73” high stacks are braced to each other at the top of the stacks they will not be in code compliance for access.

Determination: Replace existing stacks with 4'-0” high lower stacks that do not require to be braced. Alternatively brace the stacks from above or below.



6. INTERIOR FEATURES

FINISHES

Ceiling Leaks

- Level One Entry lobby has evidence of leaks in the ceiling in two locations.
- Level One has a leak in ceiling within office space
- Level Two circulation desk: leaks occurring above circulation desk – captured in plastic bag.

Determination: Determine cause of leaks and repair all affected ceilings.



LEVEL ONE ENTRY LOBBY

LEVEL ONE STAFF OFFICE



LEVEL TWO CIRCULATION DESK



6. INTERIOR FEATURES

FINISHES

- **Air Quality**

Level Two staff kitchen vent pipe serving kitchen sink does not vent to exterior – it produces odor.

Determination: Install new vent pipe within the new wall to daylight at above the roof level.

- **Floor Finishes**

Floors all have relatively new floor finishes.

Determination: No need to change floor finishes.



LEVEL TWO STAFF KITCHEN

7. EXTERIOR FEATURES

ROOF

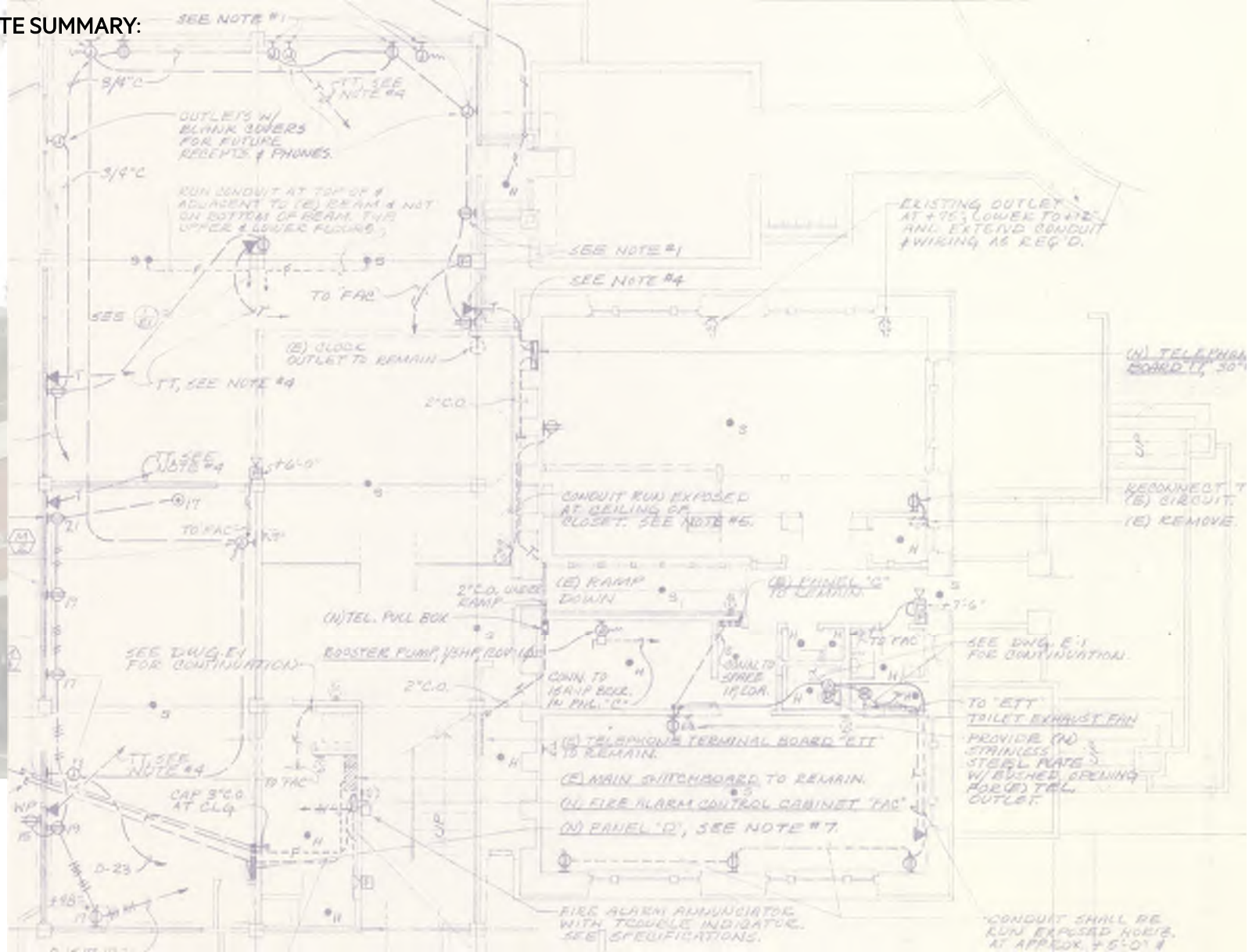
- Install new roof on both facilities to improve waterproofing of the facility.

FACADE

- Caulk and paint both buildings to improve waterproofing of the facility.



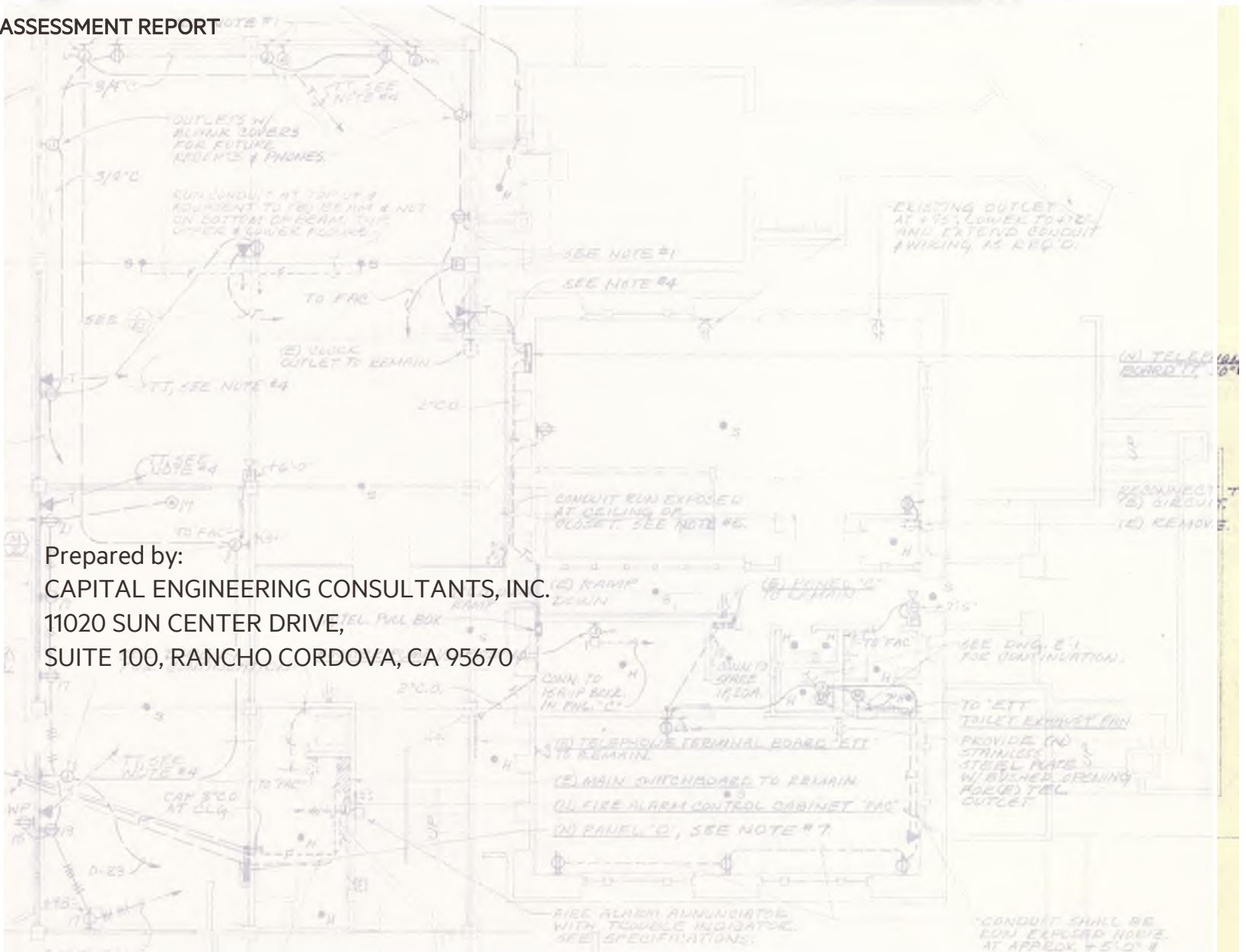
8. COST ESTIMATE SUMMARY:



8. COST ESTIMATE SUMMARY

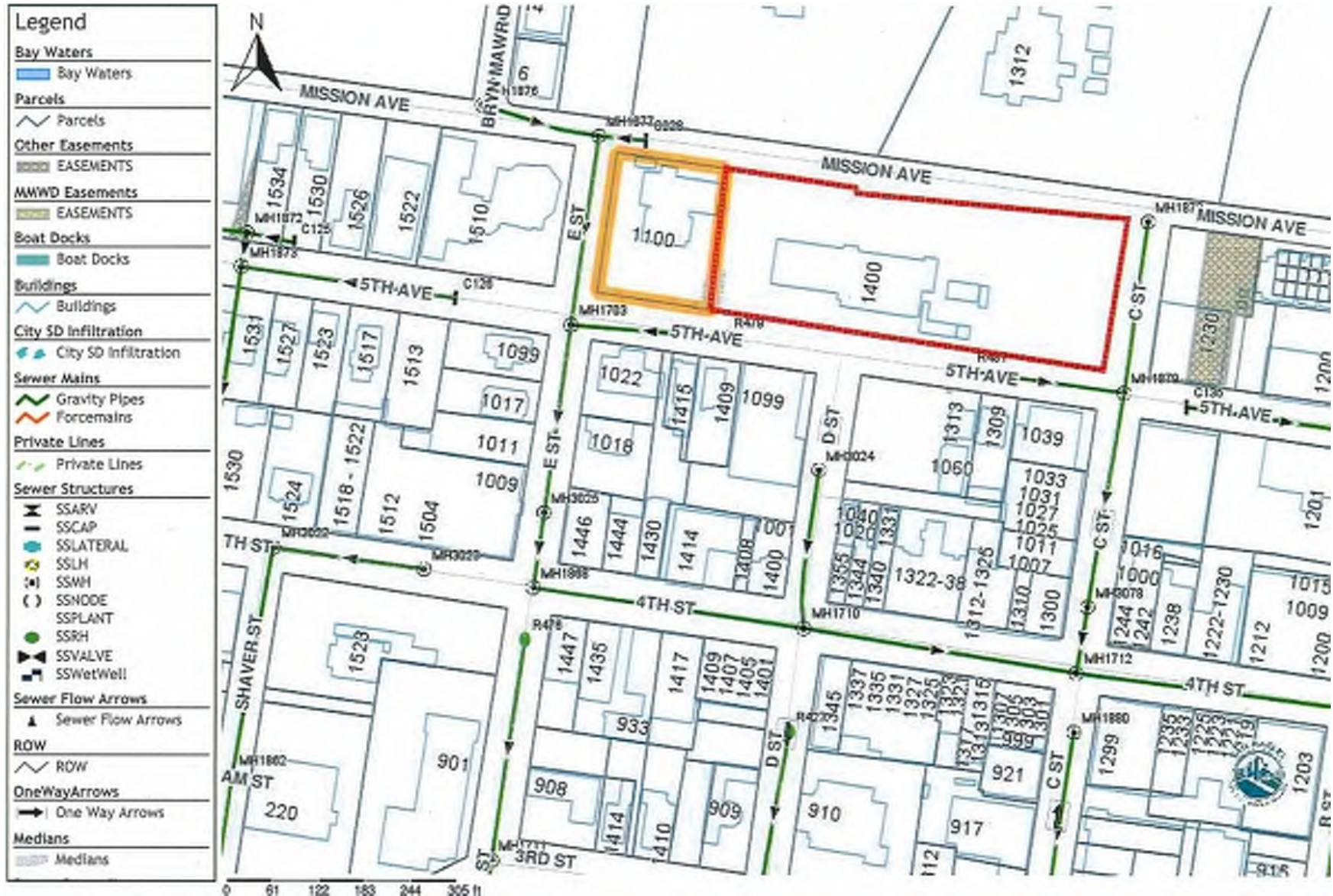
	2019/Sept.	2019/December	2020/June	2020/Sept.	2021/June	TOTAL
OPTION 1 - PHASED CONSTRUCTION						
DIRECT CONSTRUCTION COST	\$309,125	\$221,400	\$311,800	\$16,550	\$13,160	
MARKUPS						
GENERAL CONDITIONS AND REQUIREMENTS	\$77,281	\$66,420	\$77,950	\$6,620	\$5,264	
PHASING - OFF HOURS WORK EXCLUDED	\$15,456	\$11,070	\$15,590	\$828	\$658	
SUBTOTAL	\$401,863	\$298,890	\$405,340	\$23,998	\$19,082	
INSURANCE & BONDING	\$9,042	\$6,725	\$9,120	\$540	\$429	
FEES	\$48,224	\$35,867	\$48,641	\$2,880	\$2,290	
SUBTOTAL	\$459,128	\$341,482	\$463,101	\$27,417	\$21,801	
DESIGN CONTINGENCY	\$114,782	\$85,370	\$115,775	\$6,854	\$5,450	
CONSTRUCTION CONTINGENCY	\$45,913	\$34,148	\$46,310	\$2,742	\$2,180	
SUBTOTAL	\$619,823	\$461,000	\$625,186	\$37,013	\$29,432	
ESCALATION	\$15,496	\$18,440	\$43,763	\$3,146	\$3,826	
SUBTOTAL	\$635,318	\$479,440	\$668,949	\$40,159	\$33,258	
BIDDING CONTINGENCY	\$158,830	\$167,804	\$167,237	\$20,080	\$16,629	
TOTAL	\$794,148	\$647,245	\$836,187	\$60,239	\$49,887	\$2,387,705
OPTION 2 SINGLE PHASE CONSTRUCTION						
DIRECT CONSTRUCTION COST	\$0	\$0	\$872,035	\$0	\$0	
MARKUPS						
GENERAL CONDITIONS AND REQUIREMENTS	\$0	\$0	\$174,407	\$0	\$0	
PHASING - OFF HOURS WORK EXCLUDED	\$0	\$0	\$26,161	\$0	\$0	
SUBTOTAL	\$0	\$0	\$1,072,603	\$0	\$0	
INSURANCE & BONDING	\$0	\$0	\$24,134	\$0	\$0	
FEES	\$0	\$0	\$128,712	\$0	\$0	
SUBTOTAL	\$0	\$0	\$1,077,192	\$0	\$0	
DESIGN CONTINGENCY	\$0	\$0	\$269,298	\$0	\$0	
CONSTRUCTION CONTINGENCY	\$0	\$0	\$107,719	\$0	\$0	
SUBTOTAL	\$0	\$0	\$1,454,210	\$0	\$0	
ESCALATION	\$0	\$0	\$101,795	\$0	\$0	
SUBTOTAL	\$0	\$0	\$1,541,462	\$0	\$0	
BIDDING CONTINGENCY	\$0	\$0	\$231,219	\$0	\$0	
TOTAL	\$0	\$0	\$1,772,682	\$0	\$0	\$1,772,682

9. PLUMBING ASSESSMENT REPORT



Prepared by:
 CAPITAL ENGINEERING CONSULTANTS, INC.
 11020 SUN CENTER DRIVE,
 SUITE 100, RANCHO CORDOVA, CA 95670

9. PLUMBING ASSESSMENT REPORT



SAN RAFAEL Downtown Main Library

Map of street utilities San Rafael



9. PLUMBING ASSESSMENT REPORT

EXECUTIVE SUMMARY

Background and Purpose of Assessment Report

This report documents the findings of field survey work performed on September 24, 2018 to determine the condition of the existing Plumbing systems at the Main Library in San Rafael, CA. This report comments on the life expectancy of the existing systems, any observed code or safety deficiencies, and makes recommendations for improvements for the proposed remodel or building re-structuring.

The Main Structure was built in 1903 and major addition were built around in the 1909 with extension to the North around year 1960. Further expansion took place in 1973, 1976 & 1993 according to carnigue-libraries.org.¹ The building is situated in a sloping topography where Mission Avenue at the North side is almost 1 story higher than the Fifth Avenue on the South.

Summary of Existing Conditions

PLUMBING:

The Plumbing and Piping Systems on the original building appear to be original to the building with some fixtures replaced. The restrooms at the original building wing appears to be small and may not be up to current ADA requirements. There were no as-built drawings available to provide a map of the plumbing system within the building.

1.0 Main Sewer Piping & Perimeter Subsoil Storm Drain Pump

As noted from Facility Repair Supervisor, main cleanout is right outside entrance door towards Fifth Street. Cleanout consists of a concrete box with open grate on the top. All sewer running thru pipe gets exposed to rain. Sewer pipe flows towards the South to City sewer at Fifth Avenue, 2 sewer cleanouts can be seen at the side walk, See Pictures 1.1 and 1.2.

A sump pump basin can be found on the Southeast corner of the building that per Facility Supervisor is for the perimeter subsoil storm drain. The water is discharged to a nearby curb where runoff is to flow towards Fifth Ave.

PLUMBING – VISUALS OF EXISTING CONDITIONS - SITE



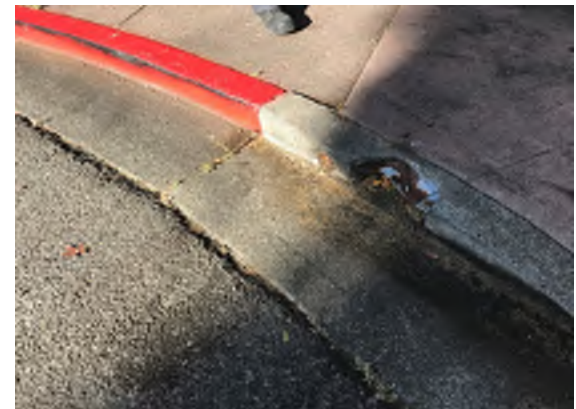
1.1 Sewer Main cleanout



1.2 Sewer cleanouts at Fifth Ave Sidewalk. Entrance to the library can be seen on the background.



1.3 Perimeter Drain Sump Pump Location



1.4 Perimeter Drain Sump Pump discharge at curb



2.0 Original Building Wing – Level 1 Restrooms & Janitors Closet

There is 1 Men's Restroom, 1 Women's Restroom and 1 Janitor's closet found in the Original Building's first level. These are for staff use only.

The Men's Restroom which has 1 floor mounted tank type water closet, 2 urinals stubs and 1 lavatory. The water closet fixture is not connected to the sewer pipe on the floor. The urinal fixtures were missing and not found inside the toilet room. The lavatory is still seen mounted on the wall. The restroom had been temporarily closed from occupants and has been converted to a temporary storage space.

According to the Facility Repair Supervisor, there had been sewer odor detected from the adjacent Admin area that is coming from the toilet. To temporarily mitigate the problem, the toilet had been disconnected from the sewer pipe, and the whole toilet room temporary closed for further repair. See Pictures 2.1, 2.2 & 2.3. According to the Facility Repair Supervisor, the odor is more apparent during after rain. There may be a crack in the sewer pipe under the Men's water closet that lets rain water enter the sewer system that worsens the odor and there might also be a crack in the vent lines that lets sewer gases out.

The Women's Restroom has 1 floor mounted tank type toilet and a lavatory. Both fixtures seem to be in working conditions but may not be compliant with current ADA regulations. Restroom currently used as an all-gender restroom. See Picture 2.4.

The Janitor's Closet has 1 Wall mounted mop sink with a water heater at the top. Water heater is an Electrical Water heater which seems to have been recently installed. See Picture 2.5.

PLUMBING – VISUALS OF EXISTING CONDITIONS - STAFF



2.2 Level 1 Staff men's restroom



2.4 Level 1 Staff women's restroom



2.5. Level 1 Janitors Closet



2.1 Level 1 Staff men's restroom



2.3 Level 1 Staff men's restroom



3.0 New Wing – Level 1 & Level 2 Restrooms

Two restrooms found at the North end of the New wing. Restrooms are for public use. Both restrooms seem to be in good working condition. Both restrooms seem to have identical layouts sharing same stacked piping systems. See picture 3.1 & 3.2.

Adjacent Drinking Fountains seems new and they are in good working condition. See picture 3.3 & 3.4.

4.0 New Wing – Level 2 Staff Kitchen Sink & Toilet Room

Kitchen sink seems to be in good working condition. It has been found that the kitchen sink vent terminates just below the countertop and is not routed to the outdoors. See picture 4.1

The fixtures inside Staff Restroom appears to be in good working condition. See picture 4.2

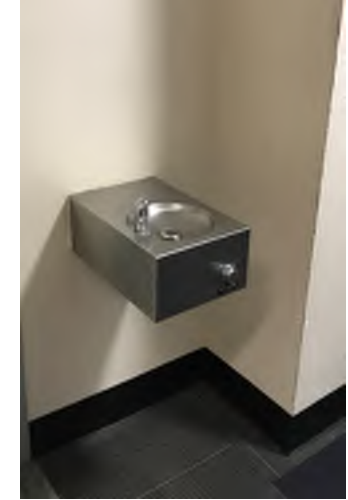
PLUMBING – VISUALS OF EXISTING CONDITIONS – STAFF & PUBLIC



3.1 Level 1 Public All-Gender restroom



3.2 Level 2 Public All-Gender restroom



3.3 Level 2 Drinking Fountain



4.1 Level 2 Staff kitchen

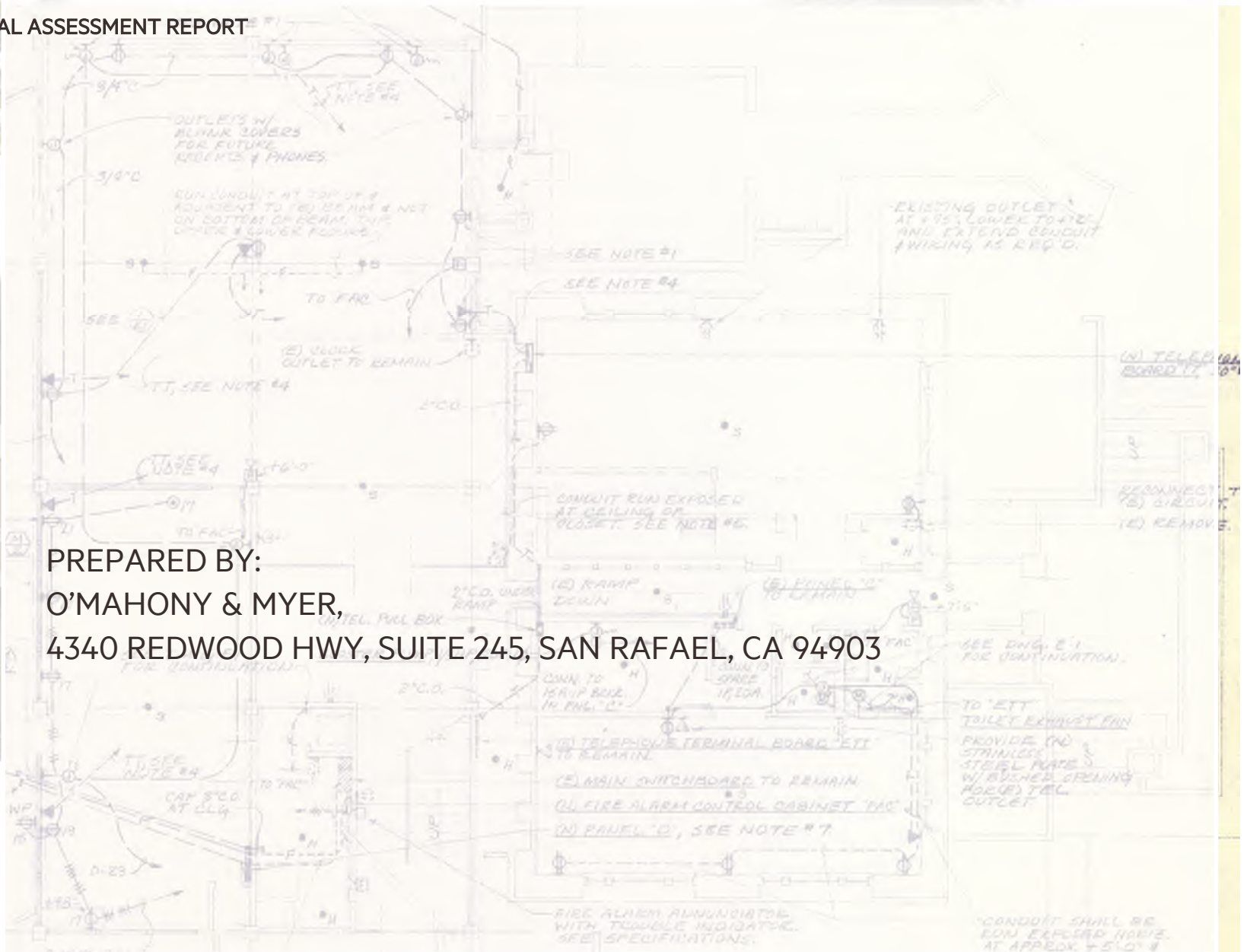


4.2 Level 2 Staff bathroom



3.4 Level 1 Drinking Fountain

10. ELECTRICAL ASSESSMENT REPORT



PREPARED BY:
O'MAHONY & MYER,
4340 REDWOOD HWY, SUITE 245, SAN RAFAEL, CA 94903



10. ELECTRICAL ASSESSMENT REPORT

EXECUTIVE SUMMARY

Background and Purpose of Assessment Report

O'Mahony & Myer visited the San Rafael Main Library on Monday, September 24, 2018 to review the existing conditions of the electrical, lighting, and signal systems at the facility. The purpose of our review was to evaluate the condition of the various systems and to comment on their ability to support ongoing use and the proposed building expansion.

Below is a summary of the existing conditions, with related recommendations for modernization and/or expansion:

Summary of Existing Conditions

ELECTRICAL:

1.0 Existing PG&E Electric Service:

The electric service is rated 800A, 120/208V, 3-Phase, 4-Wire, and was manufactured by Eaton; PG&E Smart Meter #1005721885. It is in a Nema 3R exterior enclosure at the North/East corner of the building and is fed from an underground PG&E utility transformer #T-5328.

The service is fed with PG&E underground primary and secondary lines from underground utilities along Mission Avenue.

There is currently no solar photovoltaic (PV) system at the Library. Any proposed expansion or renovation of the Library should consider electrical rough-in to support a future solar PV system interconnections to the electric service, to meet current California energy code requirements.



10. ELECTRICAL ASSESSMENT REPORT

1.0 Existing PG&E Electric Service contd.:

The electric service includes the following sub-feed circuit breakers to existing Library loads:

15A/3P	Hot Water Pump
20A/1P	GFI Receptacle
20A/1P	Boiler
20A/3P	Chilled Water Pump
100A/3P	Panel M1
100A/3P	Panel M2
250A/3P	Chiller
400A/3P	Old Switchboard

Electric Service Condition and Capacity:

The electric service gear is in good condition and includes resettable circuit breakers. It has additional physical space in the distribution section for additional sub-feeders. It is not the original building service and was upgraded to the current switchboard some time in 2007. It back-feeds the older original switchboard, as described below under the power distribution system.

The capacity of the electrical service is approximately 230 kW of continuous rated load (288 kW peak). This is adequate to feed approximately 17,000 gross square feet are of fully air-conditioned building area, or a larger square footage, if not all air-conditioned.

Overall PG&E historical peak service demand figures (in kW) should be gathered, based on available PG&E on-line data for the meter account number noted above.

The maximum previous peak demand kW for the last 12 months can be used to evaluate the available additional service capacity that may be available at the electric service for expansion or additional loads. These actual previous demand figures may show that additional capacity and square footage can be added, over the numbers listed above, without a service upgrade.



10. ELECTRICAL ASSESSMENT REPORT

2.0 Electric Service Expansion (if required):

If sufficient additional load is added to the Library, with additional new building area or added load, then a service upgrade may be required. This could be accomplished with the construction of a new service near the existing service, while maintaining and back-feeding the existing service. In this scenario, the existing service board could be maintained, with all existing outgoing feeders maintained as well. Since the original building service has already been back-fed in this same manner, it is recommended to completely remove and replace the original electric service board and related branch panels as outlined below.

Any service replacement work would also include special bussing space in the new service to support a future solar PV system interconnection.

3.0 Power Distribution System:

The Library distribution consists of 3-phase, 208V feeders to the original switchboard and (2) newer sub-panels, as noted above. There are no transformers at the Library, since the service is 120/208V.

The condition of the existing sub-feeders could not be evaluated for this visual review, but the (2) newer branch panelboards appear to have been maintained well and are in good condition. These panels can remain in their current locations and can be re-used, if accommodated in the new design layouts. Panel M1 is at the lower level of the newer building area (old parking Garage) at the far North/East corner of the building and was installed at the same time as the exterior service upgrade. Panel M2 is in the same location on the upper level, directly above Panel M1.

The original building switchboard is located at the North/West exterior by the rear door of the Circulation Desk / Office area and is sub-fed via an exterior conduit routed along the exterior. It includes existing original sub-feeders to original branch panels inside the original library. These original panels (including the original switchboard) are rather old and near the end of their useful life. They should be replaced with any modernization or upgrade of the existing building.

(see power service photos on the following pages)

ELECTRICAL – VISUALS OF EXISTING CONDITIONS - SITE



Main Electrical Service Panel



Main Electrical Service Meter



Utility Transformer Vault



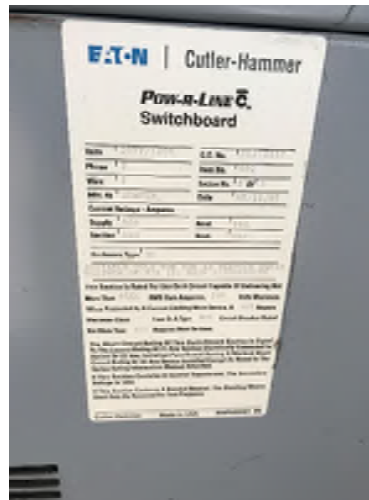
Main Meter / Main Section 1



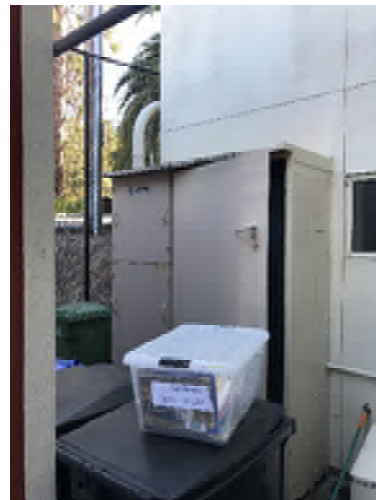
Distribution Section 2



Exterior Feeder to Old Service



Service Nameplate



Original Switchboard

ELECTRICAL – VISUALS OF EXISTING CONDITIONS - INTERIOR



Original Distribution Panel
(At front entry Lobby)



Original Branch Panels



Original Branch Panels



Newer Panel M1 (Lower)



Newer Panel M2 (Upper)



10. ELECTRICAL ASSESSMENT REPORT

Lighting Systems:

The existing lighting systems at the Library are a mix of recessed and surface mounted lensed and open T8 fluorescent fixtures, with some very old fixtures still active in small closets and storage rooms. Most point source fixtures that were originally incandescent have been replaced with screw-in LED's.

There are numerous exterior wall and under-canopy mounted lighting units on the building exterior, near the front and rear entrances, which appear to have been replaced with LED screw- in sources.

Lighting Control System:

Interior lighting controls currently consist of only manual wall switches and circuit breaker controls. The various branch panels have colored dots on various breakers to identify the loads for daily manual switching by staff. Since circuit breakers are not designed to be used as repetitive switches, this situation should be upgraded with any renovation or expansion. Current code requires automatic controls for all lighting in the Library, which should include a master switch bank control from the circulation desk area, as well as automatic timeclock control for after-hours and exterior operation. The circuit breakers should not be used as switching devices.

Exterior lighting is currently on various mechanical timeclocks that must all be set manually and separately. This should be consolidated into an automatic system with astro-dial seasonal control.

For all interior areas with available natural daylighting, new controls will need to be included to automatically dim the lighting systems in proportion to the natural daylight available in the daylight areas. This will include daylight photo-sensors and dimming controls in place of wall switches, for any new or renovated lighting.

All new lighting should be dimmable LED type, to meet current CA Title 24 requirements, with new digital controls.

(see lighting photos on the following pages)

ELECTRICAL – VISUALS OF EXISTING CONDITIONS - INTERIOR



Interior Lensed Lighting



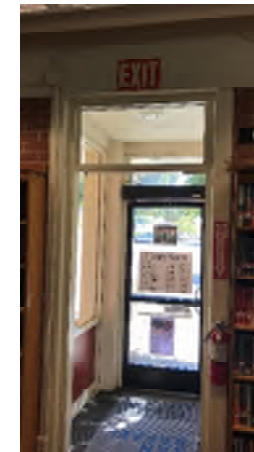
T8 Fluorescent Lamping



Original Bldg. Lighting



Circuit Breaker Controls



Paper Exit Signs



Stack Area Open Lighting



Original Bldg. Lighting



Surface Mounted Lighting



Exterior Lighting



10. ELECTRICAL ASSESSMENT REPORT

Emergency Lighting and Exit Signs:

There does not appear to be any emergency lighting in the building. Emergency lighting would be required by new code for all required interior paths or egress. An average of at least 1fc of emergency illumination will be required in the paths of egress when a renovation is undertaken. Power for this emergency lighting can be provided from a central battery system Inverter located with the main electric equipment, to provide 90 minutes of egress lighting power, as per code.

There are also no illuminated exit signs in the building. All exit signage is with paper signs only. As with the emergency lighting, new illuminated exit signs with 90 minutes of stand-by power will need to be provided to identify the buildings exits and paths to the exits.

(see lighting photos on the previous page)



10. ELECTRICAL ASSESSMENT REPORT

Telecommunications System Backbone:

The Library includes standard telecom infrastructure, including a very cramped Main Distribution Frame (MDF) rack located in a closet on the upper level of the original building. External AT&T telecom utility services originate at this closet. Network and telephone connectivity is then distributed throughout the Library with older Category 5 and 5e style cabling. There are no additional Intermediate Distribution Frames (IDF's) in the Library and therefore no fiber optic cabling systems, other than the incoming utility and City Optiman services.

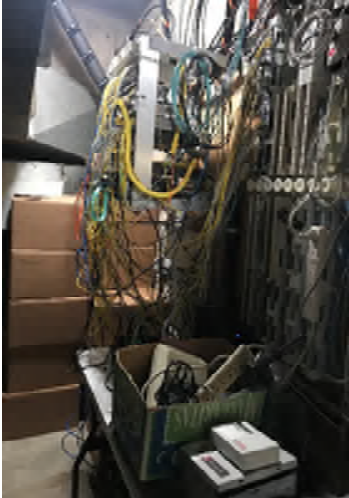
The MDF is currently located in a shared Storage / Mechanical Room and has numerous stored boxes and misc. equipment stored in the same room. The MDF should be provided with a dedicated space in the same location. The basic telecom distribution system is in good condition, but it includes older style Category 5 and 5e cabling that limits the bandwidth capability of the system. The system can be expanded with new components and wiring, such as higher category rated cabling to bring the system into current-day telecom standards.

Telecommunications System Station Cabling:

The Category 5 and 5e cable type is old and outdated to serve modern and growing telecom needs of up to 10GB. Any renovation or expansion of the Library should include new Category 6A unshielded twisted-pair (UTP) station cabling. Based on the limited size of the building, no additional IDF cabinets may be required, as all network station cables can be kept to under the 300 foot length limit. If the building design creates distances further than this, then new fiber optic cabling and an additional Intermediate Distribution Frame (IDF) will need to be provided at another location in the building.

The Library currently has various data cables throughout the workstation areas, including wireless access points in each area. Each wireless access point faceplate location should be provided with a minimum of (2) new Category 6A jacks and cables. This will support the newer modern dual-radio access point hardware and ensure that each area can support a modern quantity and type of wireless usage. Additional hard-wired Category 6A data cables should also be added to computer and OPAC station locations, as needed, to support other hard-wired uses.

ELECTRICAL – VISUALS OF EXISTING CONDITIONS - INTERIOR



Storage C0-located with MDF



Cramped MDF Space.



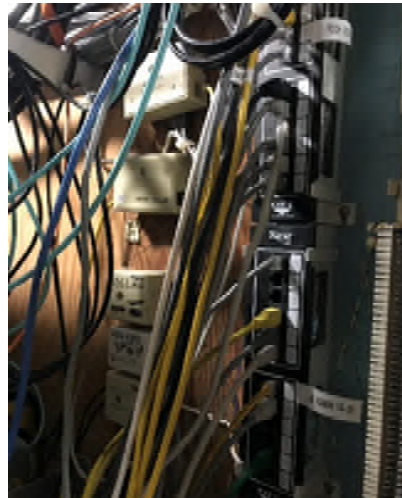
AT&T Fiber Service



Wireless Access Points



Older Cat 5 Cabling





10. ELECTRICAL ASSESSMENT REPORT

Clock / PA Systems:

There are no central clocks and no public address system in the Library.

All clocks are standard battery operated, manually adjustable clocks.

Any modernization work could include a IP based clocks, that connect to the Ethernet network in the building and are updated automatically through the IP based system. These types of clocks would be Power over Ethernet (PoE) and would not require batteries or any other intervention on a regular basis, since they would be automatically controlled and powered through the network system already in place at the Library.

If public address functions are required, a similar IP based system could be provided to serve network powered speakers throughout the public areas, that would allow staff paging or similar public address messages to be conveyed, as initiated from a staff telephone hand set.

(see clock photos on the following page)

AV Systems:

The Library does not currently appear to include any audio-visual system components such as flat panel displays or projector systems. If video media output is to be part of the new building program, a packaged AV system could be considered from various providers such as FrontRow or Extron. These systems include all cabling, amplifiers, speakers, and control functions to properly support a modern AV system for video and audio media presentations with wall mounted flat panels, short-throw projectors, or ceiling mounted projectors. Wireless voice-lift presenter microphone integration is also possible with these systems.

ELECTRICAL – VISUALS OF EXISTING CONDITIONS - INTERIOR



8.1 Exterior Timeclocks



8.2 Typical Existing Library Clock



8.3 Example of typical IP Clock



9. Example of a typical IP Speaker (if used in renovation)



10. ELECTRICAL ASSESSMENT REPORT

Fire Alarm System:

The Library does not currently have a fire alarm system.

A fire alarm system could be provided in the new building if desired by the City but would not be required by code if the building occupancy remains Type A and with less than 300 total occupants. If the occupant load exceeds 300, then a fire alarm system will need to be provided.

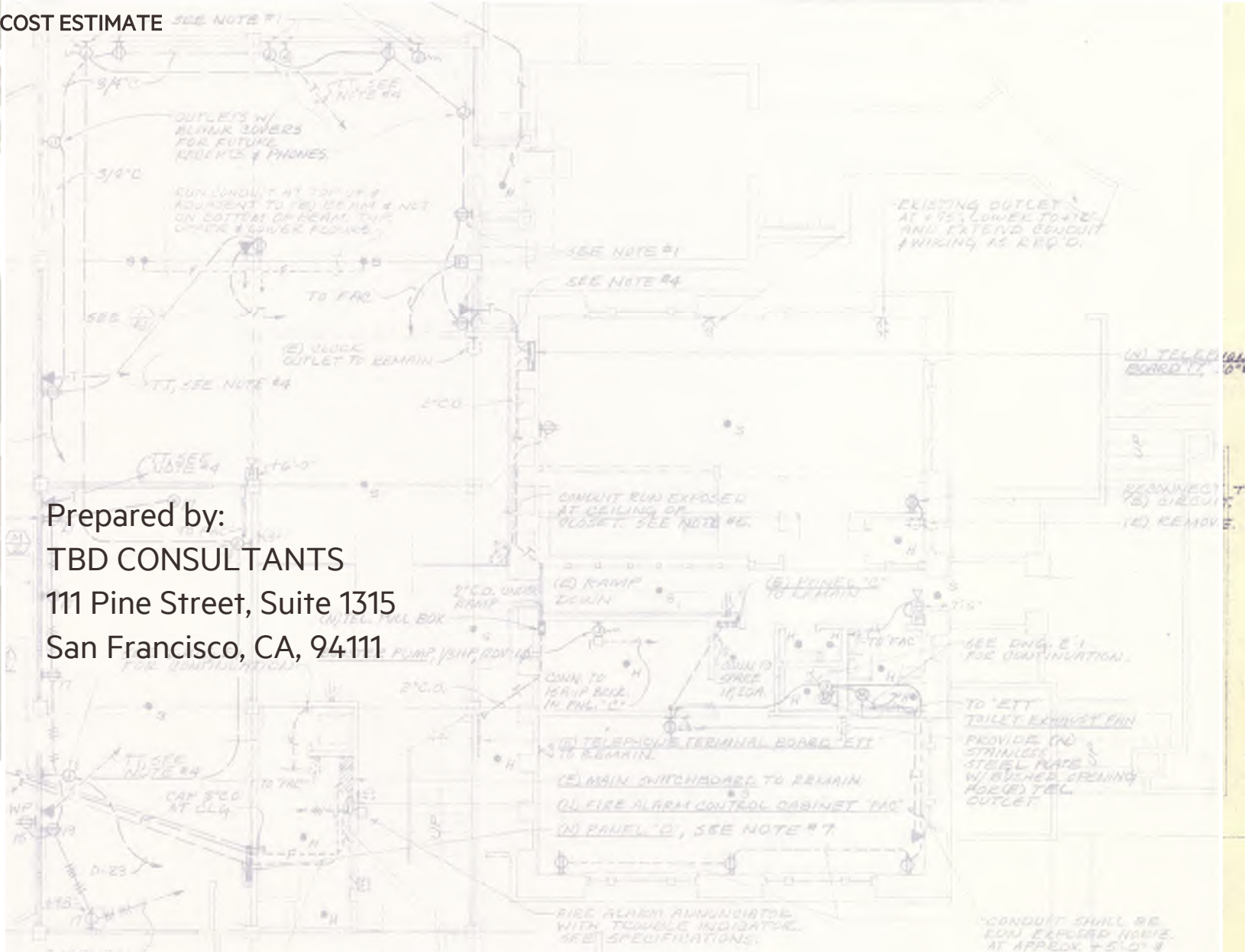
A new fire alarm system would consist of manual pull stations at all exits, as well as some automatic smoke detectors in selected areas (related to the elevator), and sprinkler water flow and valve tamper switch monitoring.

Alarm devices would include ceiling and/or wall mounted horn/strobe devices to be activated upon sprinkler system alarm, smoke detection alarm, or manual pull station activation.

Determination: At present occupant load does not exceed 300 so this scope is considered as “Nice-to-Have”

End of Detailed Electrical Assessment Report

11. DETAILED COST ESTIMATE



Prepared by:
TBD CONSULTANTS
111 Pine Street, Suite 1315
San Francisco, CA, 94111





11. DETAILED COST ESTIMATE

OPTION 1 SUMMARY – FIVE PHASES

Phases	Discipline	Construction Costs	Schedule
First Phase	ARCHITECTURAL/WATERPROOFING	\$794,148	2019/September
	Make building water tight before the winter rains		
Second Phase	ELECTRICAL - LIFE SAFETY	\$647,245	2019/December
	Provide an appropriate level of life safety upgrades		
Third Phase	PLUMBING & ADA COMPLIANCE	\$836,187	2020/June
	Address inadequate amount of restrooms for staff and public		
Fourth Phase	CARPENTRY CODE UPGRADES	\$60,239	2020/September
	Amend current interior code violations		
Fifth Phase	ADDITIONAL REMEDIAL CONSTRUCTION	\$49,887	2021/June
	Amend east entry landing & library stacks in reading room		
Total for 5 Separate Phases		\$2,387,705	

11. DETAILED COST ESTIMATE

DEMO		ARCHITECTURAL/WATERPROOFING Scope	DIRECT COST	SCHEDULE
Level One lobby	1.8	Investigate condition of exterior waterproofing	\$5,000	2019/Sept.
Level Two stacks	1.9	Investigate waterproofing of roof	\$7,500	2019/Sept.
Level Two library	1.10	Investigate water leak on vertical window by the connecting sky light zone east side between both buildings.	\$5,000	2019/Sept.
Level Two Carnegie original	1.11	Remove existing pointing on original skylight windows over roof.	\$3,500	2019/Sept.
NEW CONSTRUCTION		ARCHITECTURAL/WATERPROOFING Scope		
Level One lobby	2.8	Patch and repair around base of windows	\$20,000	2019/Sept.
level Two stacks	2.9	Add new 10-year roof membrane over entire building - exclude gutters and leaders.	\$193,125	2019/Sept.
Level Two library	2.10	Patch water leak on vertical window by the connecting sky light zone east side between both buildings.	\$25,000	2019/Sept.
Level Two Carnegie skylight	2.11	Install new pointing on original skylight windows.	\$5,000	2019/Sept.
	2.12	Caulk and paint both buildings - including window trims	\$45,000	2019/Sept.
DIRECT CONSTRUCTION COST - 2019/SEPT			\$309,125	
MARKUPS				
GENERAL CONDITIONS AND REQUIREMENTS			\$77,281	
PHASING - OFF HOURS WORK EXCLUDED			\$15,456	
SUBTOTAL			\$401,863	
INSURANCE & BONDING			\$9,042	
FEES			\$48,224	
SUBTOTAL			\$459,128	
DESIGN CONTINGENCY			\$114,782	
CONSTRUCTION CONTINGENCY			\$45,913	
SUBTOTAL			\$619,823	
ESCALATION			\$15,496	
SUBTOTAL			\$635,318	
BIDDING CONTINGENCY			\$158,830	
TOTAL CONSTRUCTION COST - 2019/SEPT			\$794,148	

11. DETAILED COST ESTIMATE

DEMO		ELECTRICAL - LIFE SAFETY Scope	DIRECT COST	SCHEDULE
Illuminated Means of Egress	1.1	Prep building for location of a new central battery inverter connected to existing light fixtures for 1 foot candle of illumination along Means of Egress (MOE) throughout the library on both floors.	\$20,000	2019/December
Illuminated Exit Signs	1.2	Prep walls and electric panel to receive 22 illuminated exit signs on 90 minute stand-by power throughout the library on all floors.	\$11,000	2019/December
Light switches	1.3	Prep walls for new light switches to activate all the lights throughout the library on both floors.	\$10,000	2019/December
NEW CONSTRUCTION		ELECTRICAL - LIFE SAFETY Scope		
Illuminated Means of Egress	2.1	Provide a central battery inverter connected to designated lighting and independent exit signs with 90 minutes of stand-by power to illuminate (MOE) throughout the library on both floors.	\$50,000	2019/December
Illuminated Exit Signs	2.2	Install 22 illuminated overhead exit signs connected to 90 minute stand-by power throughout the library on all floors.	\$15,400	2019/December
Light switches	2.3	Install light switches to activate all the lights throughout the library on both floors.	\$10,000	2019/December
	(new scope) 2.4	Install a new Fire Alarm System	\$105,000	2019/December
DIRECT CONSTRUCTION COST - 2019/DEC			\$221,400	
MARKUPS				
GENERAL CONDITIONS AND REQUIREMENTS			\$66,420	
PHASING - OFF HOURS WORK EXCLUDED			\$11,070	
SUBTOTAL			\$298,890	
INSURANCE & BONDING FEES			\$6,725	
SUBTOTAL			\$35,867	
SUBTOTAL			\$341,482	
DESIGN CONTINGENCY			\$85,370	
CONSTRUCTION CONTINGENCY			\$34,148	
SUBTOTAL			\$461,000	
ESCALATION			\$18,440	
SUBTOTAL			\$479,440	
BIDDING CONTINGENCY			\$167,804	
TOTAL CONSTRUCTION COST - 2019/DEC			\$647,245	

11. DETAILED COST ESTIMATE

DEMO		PLUMBING & ADA COMPLIANCE Scope	DIRECT COST	SCHEDULE
UG Plumbing lines	1.1	Site utility and topographic survey. Survey shall include pipe system type, location and elevation. Perform video survey to check on condition of piping, report back findings to Architect.	\$25,000.00	2020/April
	1.2	Plumbing utility survey within building. Survey shall include pipe system type, location and elevation if possible. Perform video survey to check on condition of piping, report back findings to Architect.	\$25,000.00	2020/April
	1.3	Remove existing sewer, storm and water piping from building perimeter to city connection. Provide trench-work and any site pavement demolition required for the completion of the work.	\$11,250.00	2020/April
		Remove existing main water piping from building perimeter to 2nd floor staff restroom. Remove existing sewer main underground from building perimeter to Level 01 Men's Restroom. Provide trench-work required from building perimeter to Level 01 Restroom as necessary to complete work. Demo floor, wall or ceiling to reach existing water and sewer piping and for preparation to install new piping. Provide provisions for temporary utilities serving existing fixture to remain operational during time of construction.	\$6,500.00	2020/April
		Remove plumbing fixtures from staff restroom - level two. Prepare for reconnection to new fixtures.	\$1,000.00	2020/April
Janitors closet	1.4	Remove existing mop sink. Prepare for reconnection to new fixtures.	\$1,000.00	2020/April
Staff Kitchen	1.5	Modify existing casework to install vent pipe line in new 8'-0" long wall	\$1,250.00	2020/April
Staff restroom - men: level one	1.6	Remove all abandoned plumbing fixtures: prep for new remodeled ADA compliant single occupancy All-Gender restroom.	\$1,000.00	2020/June
Staff restroom - all gender: level two	1.7	Remove all existing fixtures in restroom. Remove overhead casework above fridge in staff kitchen. Create 4'-0" wide x 8'-0" high opening in kitchen wall into library stack area.	\$3,500.00	2020/June
Overhead Leaks:				
Level One staff office	1.8	Open up gypsum ceiling to investigate source of leak. Patch to match.	\$750.00	2020/June
Miscellaneous		Allow for cut & patch, unforeseen work as needed	\$35,000.00	2020/June
NEW CONSTRUCTION		PLUMBING & ADA COMPLIANCE Scope	DIRECT COST	SCHEDULE
Plumbing Lines	2.1	Provide new sewer waste system from city connection to building perimeter. Assume to use 4" PVC Sch 40 DWV pipe and fittings. Provide trench-work required to complete work. Patch back any damaged pavement and/or landscaping to match existing.	\$23,000.00	2020/June
	2.2	Provide new storm system from city connection to building perimeter. Connect storm to existing piping at building perimeter. Assume to use 6" PVC Sch 40 DWV pipe and fittings. Provide trench-work required to complete work. Patch back any damaged pavement and/or landscaping to match existing.	\$25,000.00	2020/June
	2.3	Provide new water system from city connection to building perimeter. Assume to use 2" PVC Sch 40 pressured pipe and fittings. Provide trench-work required to complete work. Patch back any damaged pavement and/or landscaping to match existing.	\$19,500.00	2020/June
	2.4	Upgrade water meter size to 2". Provide new 2" backflow preventer and 2" PRV.	\$5,000.00	2020/June

11. DETAILED COST ESTIMATE

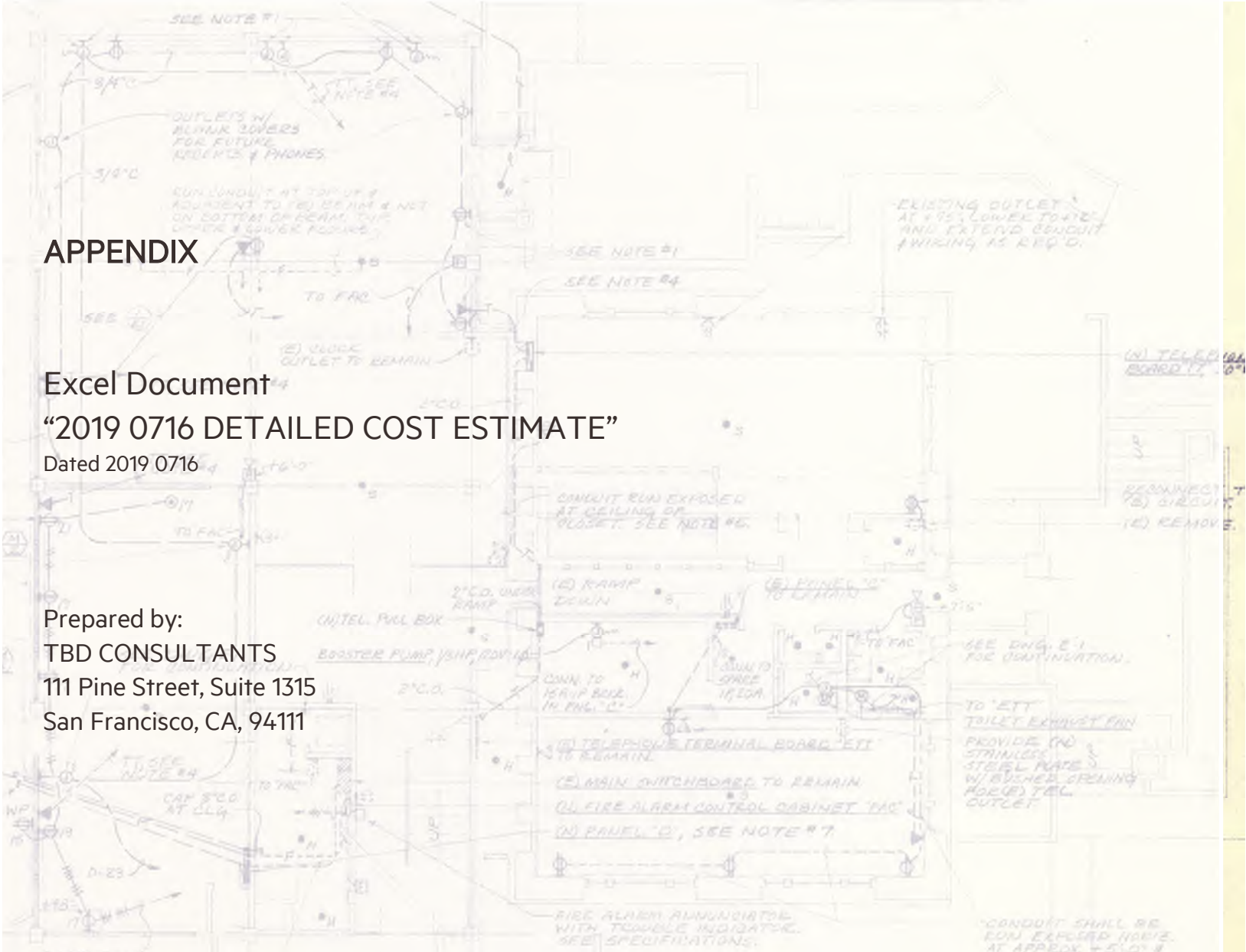
	2.5	Provide new water and sewer main from building perimeter to Level 1 Men's Restroom, provide new water main from building perimeter to Level 02 Staff Restroom. Assume water to be 2" Type L copper, sanitary waste to be 4"NH Cast Iron marked with CISPI 301. Provide backfill and compaction on all trenches. Patch back any damaged floor, wall or ceiling to match existing.	\$12,500.00	2020/June
	2.6	Modify existing plumbing lines in response to reconfigured staff restroom on level two. Patch back any damaged walls and ceiling to match existing.	\$3,500.00	2020/June
	2.7	Install new mop sink in same location as original.	\$2,000.00	2020/June
Janitors closet	2.8	Install new 2" vent pipe line inside new 8'-0" long wall; terminate on the roof 3'-0" a.f.f. Add new roof vent cover.	\$2,550.00	2020/June
Miscellaneous	2.9	Flush and clean all sewer and storm piping to remain. Access piping thru existing cleanouts.	\$10,500.00	2020/June
Staff restroom - men	2.10	Build new ADA compliant single occupancy All-Gender restroom - install new plumbing fixtures and restroom accessories. Wall mounted WC with flush valves.	\$30,000.00	2020/June
Staff restroom - all gender: level two	2.11	Install new ADA compliant plumbing fixtures and restroom accessories. Patch and repair walls. Build new full height Type V wall STC 50 (approximately 8'-0" long) to create a 5'-0" wide hallway in front of restroom. install new 3'-0" wide x 7'-6" high door for staff only access into kitchen. Wall mounted WC with flush valves. Trim out with painted wood new 4'-0" wide x 8'-0" high opening in kitchen wall into library stack area.	\$37,000.00	2020/June
Overhead Leaks:				
Level One staff office	2.12	Determine source of leaks and repair pipe.	\$5,000.00	2020/June
Miscellaneous		Miscellaneous plumbing allowance	\$25,000.00	2020/June
DIRECT CONSTRUCTION COST - 2020/JUNE			\$311,800	
MARKUPS				
GENERAL CONDITIONS AND REQUIREMENTS			\$77,950	
PHASING - OFF HOURS WORK EXCLUDED			\$15,590	
SUBTOTAL			\$405,340	
INSURANCE & BONDING FEES			\$9,120	
SUBTOTAL			\$463,101	
DESIGN CONTINGENCY			\$115,775	
CONSTRUCTION CONTINGENCY			\$46,310	
SUBTOTAL			\$625,186	
ESCALATION			\$43,763	
SUBTOTAL			\$668,949	
BIDDING CONTINGENCY			\$167,237	
TOTAL CONSTRUCTION COST - 2020/JUNE			\$836,187	

11. DETAILED COST ESTIMATE

DEMO		CARPENTRY CODE UPGRADES	DIRECT COST	SCHEDULE
Public Staircase	1.2	Remove both handrails from public staircase Remove the guardrail on open side of the stairwell.	\$750.00 INCLUDED	2020/Sept.
Public restrooms - Level one & Level two	1.3	Remove entry door and make larger opening for 80" high door in public restroom on both levels. Prep frame for bigger door.	\$1,800.00	2020/Sept.
NEW CONSTRUCTION		CARPENTRY CODE UPGRADES		
Public Staircase	2.2	Install new solid stock wood handrails on both sides of staircase Install new 42" high painted steel picket guardrail with 4" spacing	\$10,500.00 INCLUDED	2020/Sept.
Public restrooms - Level one & Level two	2.3	Install new 80" high wooden door with new associated hardware.	\$3,500.00	2020/Sept.
DIRECT CONSTRUCTION COST - 2020/SEPT			\$16,550	
MARKUPS				
GENERAL CONDITIONS AND REQUIREMENTS			\$6,620	
PHASING - OFF HOURS WORK EXCLUDED			\$828	
SUBTOTAL			\$23,998	
INSURANCE & BONDING			\$540	
FEES			\$2,880	
SUBTOTAL			\$27,417	
DESIGN CONTINGENCY			\$6,854	
CONSTRUCTION CONTINGENCY			\$2,742	
SUBTOTAL			\$37,013	
ESCALATION			\$3,146	
SUBTOTAL			\$40,159	
BIDDING CONTINGENCY			\$20,080	
TOTAL CONSTRUCTION COST - 2020/SEPT			\$60,239	

11. DETAILED COST ESTIMATE

DEMO		ADDITIONAL REMEDIAL CONSTRUCTION SCOPE	DIRECT COST	SCHEDULE
Exterior East entry door	1.1	Prep exterior landing on East entry with adequate amplitude to receive new level landing 44" wide x 44" long x 3" deep with 2% slope.	\$710.00	2021/June
Carnegie Level two - Circulation Library -	1.6	Remove 3 rows of metal stacks in center of reading room, level two, Carnegie building.	\$2,250.00	2021/June
NEW CONSTRUCTION		ADDITIONAL REMEDIAL CONSTRUCTION SCOPE		
Exterior East entry door	2.1	Build new exterior asphalt level landing, 44" wide x 44" long x 3" deep with 2% slope. Feather surrounding content with new asphalt to blend with context.	\$1,200.00	2021/June
Carnegie Level two - Circulation Library -	2.6	Install three new rows of 4'-0"high X 4'-0" long metal stack shelves (4 stacks per row).	\$9,000.00	2021/June
DIRECT CONSTRUCTION COST - 2021/JUNE			\$13,160	
MARKUPS				
GENERAL CONDITIONS AND REQUIREMENTS			\$5,264	
PHASING - OFF HOURS WORK EXCLUDED			\$658	
SUBTOTAL			\$19,082	
INSURANCE & BONDING			\$429	
FEES			\$2,290	
SUBTOTAL			\$21,801	
DESIGN CONTINGENCY			\$5,450	
CONSTRUCTION CONTINGENCY			\$2,180	
SUBTOTAL			\$29,432	
ESCALATION			\$3,826	
SUBTOTAL			\$33,258	
BIDDING CONTINGENCY			\$16,629	
TOTAL CONSTRUCTION COST - 2021/JUNE			\$49,887	



APPENDIX

Excel Document
 “2019 0716 DETAILED COST ESTIMATE”
 Dated 2019 0716

Prepared by:
 TBD CONSULTANTS
 111 Pine Street, Suite 1315
 San Francisco, CA, 94111



END OF REPORT