

# SANTA MONICA COLLEGE

## 2040 CAMPUS MASTER PLAN

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### FACILITIES CONDITIONS ASSESSMENT

*CREATED JUNE 2020; SUBMITTED JUNE 2024*





# FACILITIES CONDITIONS

## GOAL

Provide a high-level, due diligence assessment of the physical capability of the facilities and systems to support Santa Monica College programs.

## OBJECTIVES

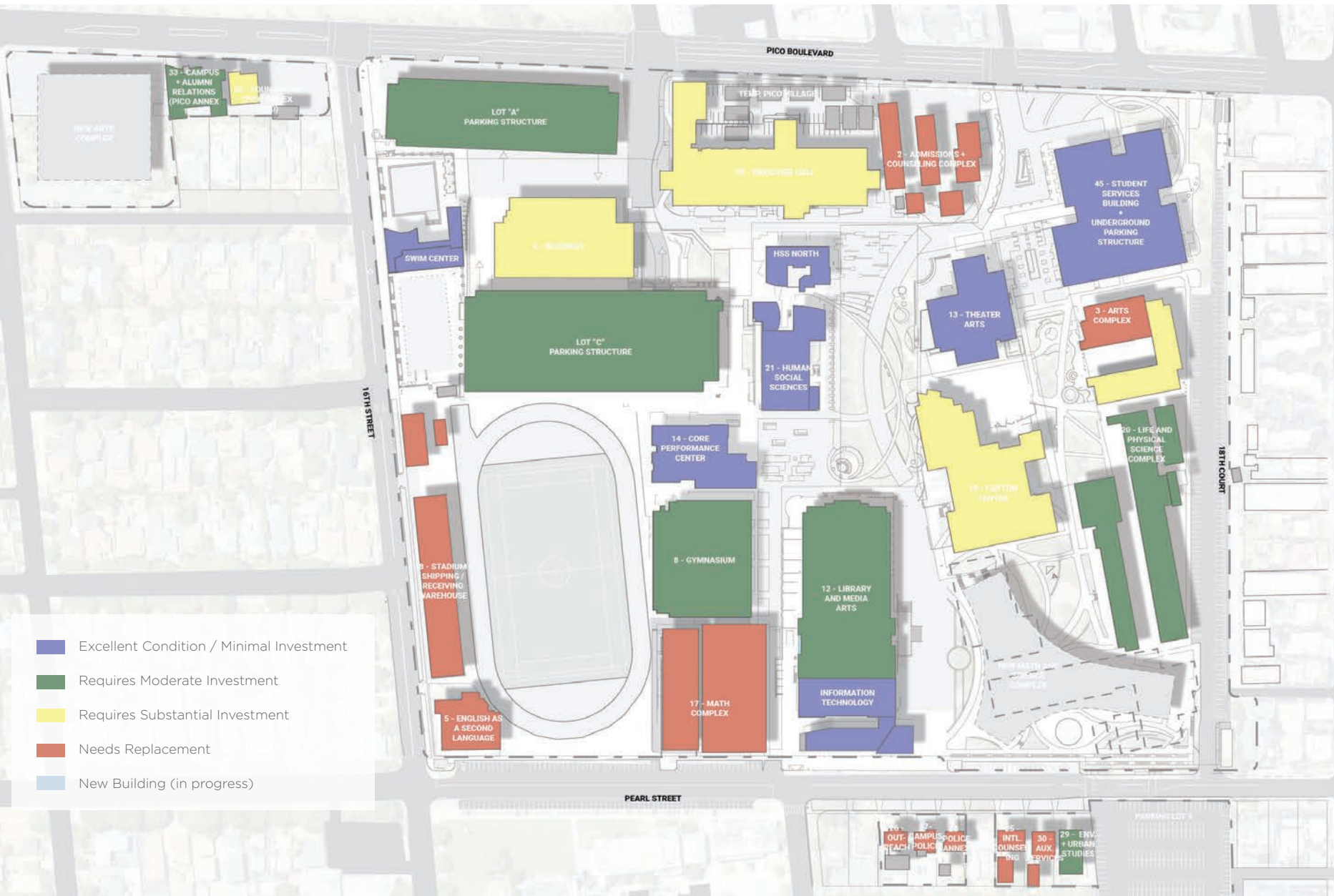
- Determine and rank the existing buildings based on functional quality and capacity
- Document current condition of each system component
- Utilize the data to create informed decisions of the future of building over the next two decades

## PROCESS

During the Summer of 2019, a consultant team composed of architects and engineers completed a Facilities Conditions Assessment to assess each building in multiple categories. Over seven days, the planning team walked, observed, and documented the conditions of existing campus buildings and open spaces. In addition, interviews with College Facilities staff informed the documentation and recommendations included in this report. Buildings slated to be demolished already were not assessed, including Liberal Arts and Letters and Sciences.

## ASSESSMENT CATEGORIES

- **Site:** Accessibility, Wayfinding
- **Architecture:** Roof, Building Envelope, Elevators
- **Interiors:** Accessibility, Lighting, Corridor Widths
- **Environmental Quality:** Acoustics, Daylight, Views, Thermal Comfort
- **Furnishings + Equipment:** Transparency, Collaboration Capacity, Layout Flexibility, Writable Surfaces
- **Technology/Audio-Visual:** Panels, Cabling, AV, Wifi
- **Electrical:** Switchboards, Panelboards, Transformers
- **Plumbing:** Domestic Hot Water, Water Closets, Urinals, Lavatories
- **Mechanical (HVAC):** Equipment, Fans, Controls, Piping
- **Fire Sprinklers/Fire Alarm**



- Excellent Condition / Minimal Investment
- Requires Moderate Investment
- Requires Substantial Investment
- Needs Replacement
- New Building (in progress)

## OVERALL RESULTS

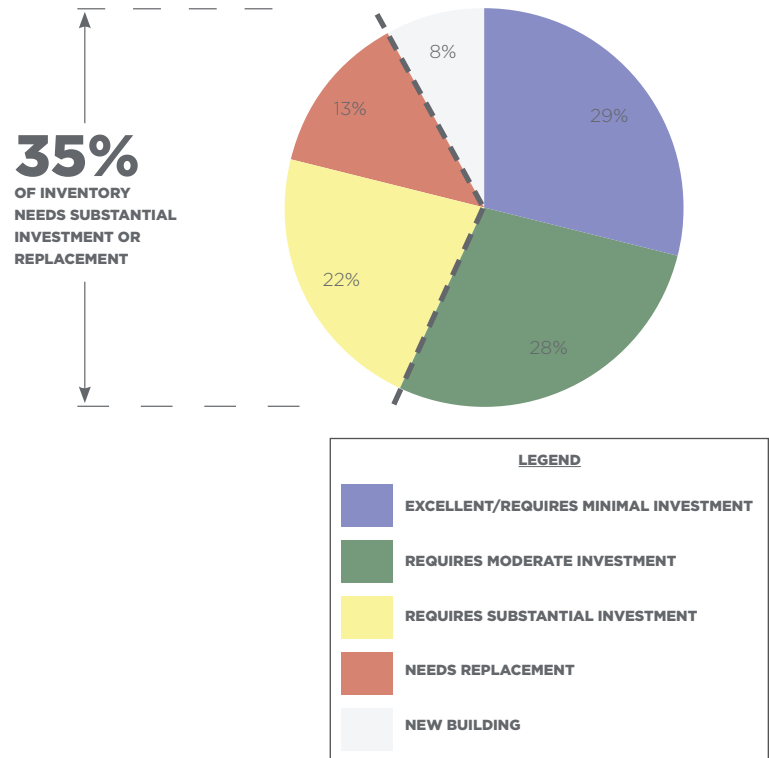
Through thorough assessment, buildings were categorized into five categories: excellent condition; minimal investment needed; needs replacement; requires substantial investment; and, planned demolition.

- The buildings in excellent condition and those requiring moderate investment are able to remain, but require strategic investments over the course of the next two decades in maintenance and projects to keep them functioning at least at the level and condition that they exist in today.
- Buildings deemed to be in excellent condition/minimal investment needed are primarily new or recently renovated buildings with sporadic building repair and life cycle needs.
- Buildings requiring moderate investment are beginning to show their age and may require more significant investment on a case-by-case basis.
- The buildings which require a substantial investment inevitably need large-scale capital infusions/renovations.
- Finally, buildings needing replacement are in jeopardy of complete failure.

**Approximately one-third of the existing building inventory was deemed necessary to be demolished or replaced.**





The Facility Conditions Assessment informed decisions regarding strategic demolitions renovations. A majority of the buildings that are scheduled to be demolished or replaced are:

- modular and temporary structures;
- those that take up a larger footprint than they require;
- buildings that do not have the flexibility to transition to future learning environments



Approximately 1/3 of buildings were in need of substantial investment or replacement from today through 2040. Buildings that were slated to be demolished were not assessed which comprised 8% of buildings including: Liberal Arts and Letters and Sciences

## RATING STRATEGY PER CATEGORY: SITE, ARCHITECTURE, AND INTERIORS

RANK	SITE	ARCHITECTURE
<b>EXCELLENT/REQUIRES MINIMAL INVESTMENT</b>	 <p>Surrounding site is accessible, well planted, and well maintained. Its character aligns with the campus environment.</p>	<p>All exterior architectural elements including roofs and envelope are in excellent condition. Also, elevators are present and well functioning.</p>
<b>REQUIRES MODERATE INVESTMENT</b>	 <p>Surrounding site is accessible, and well planted, well maintained. Its character lacks connection to the overall campus environment.</p>	<p>All exterior architectural elements are in good condition. Elevators are present.</p>
<b>REQUIRES SUBSTANTIAL INVESTMENT</b>	 <p>Surrounding site is not up to current accessibility codes. There is minor to no planting around the building.</p>	<p>Exterior and interior architectural elements show signs of deterioration and damage. Elevators are in fair condition.</p>
<b>NEEDS REPLACEMENT</b>	 <p>Surrounding site is not up to current accessibility codes. There is no planting around the building.</p>	<p>Exterior and interior architectural elements have major signs of deterioration and damage. Elevators are in poor condition or not present and needed.</p>

**INTERIORS/FIT TO PROGRAM****ENVIRONMENTAL QUALITY****FURNISHINGS AND EQUIPMENT**

All interior architectural elements are in great condition. There are no signs of visible damage to walls, ceilings, floors, stairs, elevators, etc.

Furniture is up to current standards. Room layouts are flexible and open.

Spaces are well lit, clean, spacial, and sound proof.

All interior architectural elements are in good condition. There are minor visible damage to walls, ceilings, floors, stairs finishes.

Furniture is good quality. Room layouts are semi flexible and open.

Spaces are relatively well lit, clean, spacial, and sound proof.

There are major visible damage to walls, ceilings, floors, stairs finishes.

Furniture is poor quality. Room layouts are not flexible and cramped.



Spaces are limited natural light. Surfaces are not clean and hard to clean. There is limited sound proofing.

There are major visible damage to walls, ceilings, floors, stairs finishes.

Furniture is old, broken and in terrible condition. Room layouts are not flexible and cramped.

Spaces are dark and have no natural light. Surfaces are dirty and un-cleanable. There is no sound proofing.

## RATING STRATEGY PER CATEGORY: ENGINEERING

RANK	INFORMATION TECHNOLOGY	ELECTRICAL
<b>EXCELLENT/REQUIRES MINIMAL INVESTMENT</b>	 <p>Existing switch panels, cabling, control panels, and WIFI systems seem to be less than 3 years old and cabling is either Cat6 or cat6A type. Cat6 cable is listed for 10 Gbps at 550 meters (180 feet). Cat6A cable is listed for 10 Gbps at 100 meters (328 feet).</p>	<p>Existing equipment (switchboards, panelboards, transformers) seem to be less than 5 years old and there is no sign of missing parts or corrosion</p>
<b>REQUIRES MODERATE INVESTMENT</b>	 <p>Existing switch panels, cabling, control panels, and WIFI systems seem to be less than 10 years old and cabling is at least Cat5e type. Cat5e cable is listed for 1 Gbps at 50 meters (164 feet).</p>	<p>Existing equipment (switchboards, panelboards, transformers) seem to be less than 10 years old and there is no sign of missing parts or corrosion</p>
<b>REQUIRES SUBSTANTIAL INVESTMENT</b>	 <p>Existing panels found seem to be less than 15 years old and at least 10/100 Mbps switch. If existing cabling is seem to be less than 10 years old and cabling at least Cat5 type. Cat5 cable is listed for 100 Mbps at 100 meters (328 feet). If AV controls or WIFI systems seem to be less than 10 years old.</p>	<p>Existing equipment (switchboards, panelboards, transformers) seem to be less than 20 years old and / or there are sign of corrosion or there are some missing parts.</p>
<b>NEEDS REPLACEMENT</b>	 <p>Existing panels seem to be less than 20 years old. If cabling is seem to be Cat3 type. Cat3 cable is listed for 10 Mbps at 100 meters (328 feet). If AV controls and WIFI equipment seem to be more than 10 years old.</p>	<p>Existing equipment (switchboards, panelboards, transformers) seem to be more than 20 years old or there are significant of corrosion or there are substantial missing parts.</p>



## MECHANICAL (HVAC)

## PLUMBING

HVAC systems are under 10 years old, are in good operating condition and have no operating issues. The systems efficiency is at the level anticipated from the equipment provided. HVAC equipment is controlled by the BMS. Some system components such as controls may require repairs or upgrade. Environmental duct cleaning may need to be conducted in a near future.

Plumbing units, fixtures, and pipes are new or very clean and no issues. Look and function as new, if not new.

HVAC systems are under 15 years old and have no major issues associated with the systems performance. However, the equipment may show signs of rust and may require corrosion protection. No environmental duct cleaning has been conducted in the building. Potential code violations associated with some systems design, ADA noncompliance, poor temperature control in some areas are fixable and can be addressed with moderate improvements.

Plumbing units, fixtures, and pipes have minor cosmetic issues. Still functional as new.

HVAC systems are either approaching or have exceeded useful service life but are still in operating condition. The equipment is very energy inefficient and such equipment replacement severely impacts the energy bill. No environmental duct cleaning has been conducted in the building. The existing HVAC controls are used primarily for monitoring of the existing systems. Potential improvements may include equipment replacement with energy saving incorporated in the systems upgrade, connection to the central plant and controls upgrade.

Plumbing units, fixtures, and pipes are mostly functional but very worn out and aged. May soon require replacement.

HVAC systems have exceeded useful service life, require maintenance level exceeding normal scheduled procedures, and need to be replaced. The outdoor located equipment shows signs of severe corrosion, which has affected equipment housing, condenser coil fins, supports, etc. No environmental duct cleaning has been conducted in the building. System controls are either outdated or outdated and are not compliant with the Title 24 California Energy Efficiency Standards and ADA requirements.

For drains, it must be severely clogged. Fixture are very worn out and completely non-operational or limited flow of water or flush. Water heaters are very rusted and aged.



# **OVERVIEW BY CATEGORY**

# OVERVIEW BY CATEGORY: **SITE**

BUILDING #	BUILDING NAME	SITE CHARACTERISTICS	ACCESSIBILITY	WAYFINDING
1	ADMISSIONS			
2	COUNSELING ANNEX			
3	ART COMPLEX			
5	ENGLISH AS SECOND LANGUAGE			
6	BUSINESS			
8	GYMNASIUM			
10	LIBERAL ARTS			
11	LETTERS AND SCIENCE			
12	LIBRARY & MEDIA CENTER			
13	THEATER ARTS			
14	CORE PERFORMANCE CENTER			
17	MATH COMPLEX			
18	STADIUM/FACILITIES			
19	STU. HEALTH & ACTIVITIES			
20	SCIENCE			
21	HUMANITIES & SOCIAL SCI.			
22	DRESCHER HALL			
24	COUNSELING			
25	INTERNATIONAL COUNSELING			
26	OUTREACH			
27	CAMPUS POLICE			
28	CAMPUS POLICE ANNEX			
29	ENVIRONMENTAL CENTER			
30	AUXILIARY SERVICES			
32	CAMPUS AND ALUMNI RELATIONS			
33	FOUNDATION			
C	PARKING STRUCTURE 3 "C"			
A	PARKING STRUCTURE 4 "A"			
45	STUDENT SERVICES CENTER			
47	LEARNING GARDEN			N/A
48	IT BLDG			

- Excellent Condition / Minimal Investment
- Requires Moderate Investment
- Requires Substantial Investment
- Needs Replacement
- Not Assessed
- N/A

# OVERVIEW BY CATEGORY: ARCHITECTURE

BUILDING #	BUILDING NAME	ROOF	BUILDING ENVELOPE	ELEVATORS
1	ADMISSIONS	Yellow	Red	N/A
2	COUNSELING ANNEX	Grey	Grey	Grey
3	ART COMPLEX	Red	Red	Yellow
5	ENGLISH AS SECOND LANGUAGE	Red	Red	N/A
6	BUSINESS	Yellow	Yellow	Green
8	GYMNASIUM	Blue	Green	Green
10	LIBERAL ARTS	Grey	Grey	Grey
11	LETTERS AND SCIENCE	Grey	Grey	Grey
12	LIBRARY & MEDIA CENTER	Blue	Green	Blue
13	THEATER ARTS	Blue	Blue	Blue
14	CORE PERFORMANCE CENTER	Blue	Blue	Blue
17	MATH COMPLEX	Green	Yellow	N/A
18	STADIUM/FACILITIES	Red	Red	N/A
19	STU. HEALTH & ACTIVITIES	Yellow	Yellow	Yellow
20	SCIENCE	Green	Green	Blue
21	HUMANITIES & SOCIAL SCI.	Blue	Blue	Blue
22	DRESCHER HALL	Green	Green	Green
24	COUNSELING	Grey	Grey	Grey
25	INTERNATIONAL COUNSELING	Red	Red	N/A
26	OUTREACH	Red	Red	N/A
27	CAMPUS POLICE	Red	Red	N/A
28	CAMPUS POLICE ANNEX	Red	Red	N/A
29	ENVIRONMENTAL CENTER	Green	Green	N/A
30	AUXILIARY SERVICES	Red	Red	N/A
32	CAMPUS AND ALUMNI RELATIONS	Green	Green	N/A
33	FOUNDATION	Green	Blue	N/A
C	PARKING STRUCTURE 3 "C"	Blue	Green	Blue
A	PARKING STRUCTURE 4 "A"	Blue	Green	Blue
45	STUDENT SERVICES CENTER	Blue	Blue	Blue
47	LEARNING GARDEN	N/A	N/A	N/A
48	IT BLDG	Blue	Blue	Blue

- Excellent Condition / Minimal Investment
- Requires Moderate Investment
- Requires Substantial Investment
- Needs Replacement
- Not Assessed
- N/A

# OVERVIEW BY CATEGORY: INTERIORS

BUILDING #	BUILDING NAME	INTERIORS	BUILDING ACCESSIBILITY	SPECIALIZED SYSTEMS	LIGHTING FIXTURES
1	ADMISSIONS				
2	COUNSELING ANNEX				
3	ART COMPLEX				
5	ENGLISH AS SECOND LANGUAGE			N/A	
6	BUSINESS				
8	GYMNASIUM				
10	LIBERAL ARTS				
11	LETTERS AND SCIENCE				
12	LIBRARY & MEDIA CENTER				
13	THEATER ARTS				
14	CORE PERFORMANCE CENTER				
17	MATH COMPLEX			N/A	
18	STADIUM/FACILITIES				
19	STU. HEALTH & ACTIVITIES				
20	SCIENCE				
21	HUMANITIES & SOCIAL SCI.				
22	DRESCHER HALL				
24	COUNSELING				
25	INTERNATIONAL COUNSELING			N/A	
26	OUTREACH			N/A	
27	CAMPUS POLICE				
28	CAMPUS POLICE ANNEX				
29	ENVIRONMENTAL CENTER				
30	AUXILIARY SERVICES			N/A	
32	CAMPUS AND ALUMNI RELATIONS			N/A	
33	FOUNDATION			N/A	
C	PARKING STRUCTURE 3 "C"	N/A	N/A	N/A	
A	PARKING STRUCTURE 4 "A"	N/A	N/A	N/A	
45	STUDENT SERVICES CENTER				
47	LEARNING GARDEN	N/A	N/A	N/A	N/A
48	IT BLDG				



# OVERVIEW BY CATEGORY: ENVIRONMENTAL QUALITY

BUILDING #	BUILDING NAME	ACOUSTICS	NATURAL DAYLIGHT	VIEWS TO OUTDOORS	THERMAL COMFORT
1	ADMISSIONS				
2	COUNSELING ANNEX				
3	ART COMPLEX				
5	ENGLISH AS SECOND LANGUAGE				
6	BUSINESS				
8	GYMNASIUM			N/A	
10	LIBERAL ARTS				
11	LETTERS AND SCIENCE				
12	LIBRARY & MEDIA CENTER				
13	THEATER ARTS				
14	CORE PERFORMANCE CENTER				
17	MATH COMPLEX				
18	STADIUM/FACILITIES				
19	STU. HEALTH & ACTIVITIES				
20	SCIENCE				
21	HUMANITIES & SOCIAL SCI.				
22	DRESCHER HALL				
24	COUNSELING				
25	INTERNATIONAL COUNSELING				
26	OUTREACH				
27	CAMPUS POLICE				
28	CAMPUS POLICE ANNEX				
29	ENVIRONMENTAL CENTER				
30	AUXILIARY SERVICES				
32	CAMPUS AND ALUMNI RELATIONS				
33	FOUNDATION				
C	PARKING STRUCTURE 3 "C"	N/A	N/A	N/A	N/A
A	PARKING STRUCTURE 4 "A"	N/A	N/A	N/A	N/A
45	STUDENT SERVICES CENTER				
47	LEARNING GARDEN	N/A	N/A	N/A	N/A
48	IT BLDG				



## OVERVIEW BY CATEGORY: **FURNISHINGS AND EQUIPMENT**

BUILDING #	BUILDING NAME	TRANSPARENCY	COLLABORATION CAPACITY	LAYOUT FLEXIBILITY	WRITEABLE SURFACES
1	ADMISSIONS				
2	COUNSELING ANNEX				
3	ART COMPLEX				
5	ENGLISH AS SECOND LANGUAGE				
6	BUSINESS				
8	GYMNASIUM	N/A	N/A	N/A	N/A
10	LIBERAL ARTS				
11	LETTERS AND SCIENCE				
12	LIBRARY & MEDIA CENTER				
13	THEATER ARTS	N/A	N/A	N/A	N/A
14	CORE PERFORMANCE CENTER	N/A	N/A	N/A	N/A
17	MATH COMPLEX				
18	STADIUM/FACILITIES				N/A
19	STU. HEALTH & ACTIVITIES				N/A
20	SCIENCE				
21	HUMANITIES & SOCIAL SCI.				
22	DRESCHER HALL				
24	COUNSELING				
25	INTERNATIONAL COUNSELING				
26	OUTREACH				
27	CAMPUS POLICE				
28	CAMPUS POLICE ANNEX				
29	ENVIRONMENTAL CENTER				
30	AUXILIARY SERVICES				
32	CAMPUS AND ALUMNI RELATIONS				
33	FOUNDATION				
C	PARKING STRUCTURE 3 "C"	N/A	N/A	N/A	N/A
A	PARKING STRUCTURE 4 "A"	N/A	N/A	N/A	N/A
45	STUDENT SERVICES CENTER				
47	LEARNING GARDEN	N/A	N/A	N/A	N/A
48	IT BLDG				

## OVERVIEW BY CATEGORY: **TECHNOLOGY AND AV**

BUILDING #	BUILDING NAME	SWITCH/PATCH PANELS	CABLING	A/V CONTROL	WIFI
1	ADMISSIONS			N/A	N/A
2	COUNSELING ANNEX				
3	ART COMPLEX			N/A	
5	ENGLISH AS SECOND LANGUAGE				
6	BUSINESS			N/A	
8	GYMNASIUM			N/A	
10	LIBERAL ARTS				
11	LETTERS AND SCIENCE				
12	LIBRARY & MEDIA CENTER			N/A	
13	THEATER ARTS			N/A	
14	CORE PERFORMANCE CENTER			N/A	N/A
17	MATH COMPLEX				
18	STADIUM/FACILITIES			N/A	
19	STU. HEALTH & ACTIVITIES			N/A	
20	SCIENCE				
21	HUMANITIES & SOCIAL SCI.				
22	DRESCHER HALL			N/A	
24	COUNSELING				
25	INTERNATIONAL COUNSELING			N/A	
26	OUTREACH			N/A	N/A
27	CAMPUS POLICE			N/A	
28	CAMPUS POLICE ANNEX			N/A	
29	ENVIRONMENTAL CENTER			N/A	N/A
30	AUXILIARY SERVICES			N/A	N/A
32	CAMPUS AND ALUMNI RELATIONS				
33	FOUNDATION				
C	PARKING STRUCTURE 3 "C"	N/A	N/A	N/A	N/A
A	PARKING STRUCTURE 4 "A"	N/A	N/A	N/A	N/A
45	STUDENT SERVICES CENTER				
47	LEARNING GARDEN	N/A	N/A	N/A	N/A
48	IT BLDG				

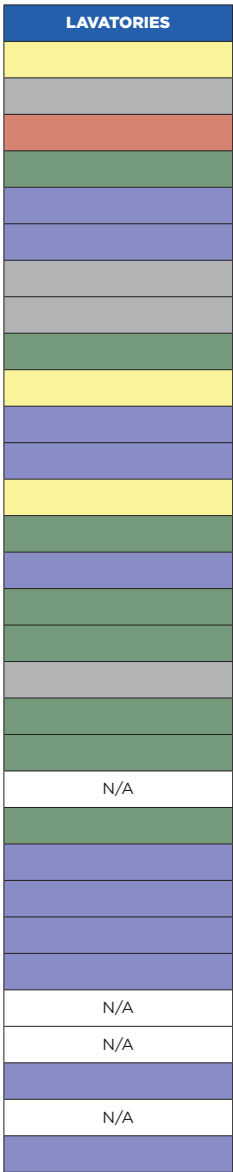
# OVERVIEW BY CATEGORY: **ELECTRICAL**

BUILDING #	BUILDING NAME	SWITCHBOARDS	PANELBOARDS	TRANSFORMERS
1	ADMISSIONS	N/A		N/A
2	COUNSELING ANNEX			
3	ART COMPLEX	N/A		N/A
5	ENGLISH AS SECOND LANGUAGE	N/A		N/A
6	BUSINESS			
8	GYMNASIUM			
10	LIBERAL ARTS			
11	LETTERS AND SCIENCE			
12	LIBRARY & MEDIA CENTER			
13	THEATER ARTS			
14	CORE PERFORMANCE CENTER			
17	MATH COMPLEX			
18	STADIUM/FACILITIES	N/A		N/A
19	STU. HEALTH & ACTIVITIES			
20	SCIENCE			
21	HUMANITIES & SOCIAL SCI.			
22	DRESCHER HALL			
24	COUNSELING			
25	INTERNATIONAL COUNSELING	N/A		N/A
26	OUTREACH	N/A		N/A
27	CAMPUS POLICE	N/A		N/A
28	CAMPUS POLICE ANNEX	N/A		N/A
29	ENVIRONMENTAL CENTER	N/A		N/A
30	AUXILIARY SERVICES	N/A		N/A
32	CAMPUS AND ALUMNI RELATIONS	N/A		N/A
33	FOUNDATION	N/A		N/A
C	PARKING STRUCTURE 3 "C"			
A	PARKING STRUCTURE 4 "A"			
45	STUDENT SERVICES CENTER			
47	LEARNING GARDEN	N/A	N/A	N/A
48	IT BLDG			

-  Excellent Condition / Minimal Investment
-  Requires Moderate Investment
-  Requires Substantial Investment
-  Needs Replacement
-  Not Assessed
-  N/A

# OVERVIEW BY CATEGORY: **PLUMBING**

BUILDING #	BUILDING NAME	DOMESTIC HOT WATER	SPECIALIZED PLUMBING	WATER CLOSETS	URINALS
1	ADMISSIONS		N/A		
2	COUNSELING ANNEX				
3	ART COMPLEX				
5	ENGLISH AS SECOND LANGUAGE				
6	BUSINESS		N/A		
8	GYMNASIUM		N/A		
10	LIBERAL ARTS				
11	LETTERS AND SCIENCE				
12	LIBRARY & MEDIA CENTER		N/A		
13	THEATER ARTS		N/A		
14	CORE PERFORMANCE CENTER		N/A		
17	MATH COMPLEX		N/A		
18	STADIUM/FACILITIES		N/A		
19	STU. HEALTH & ACTIVITIES		N/A		
20	SCIENCE				
21	HUMANITIES & SOCIAL SCI.		N/A		
22	DRESCHER HALL		N/A		
24	COUNSELING				
25	INTERNATIONAL COUNSELING	N/A	N/A		N/A
26	OUTREACH	N/A	N/A		N/A
27	CAMPUS POLICE	N/A	N/A	N/A	N/A
28	CAMPUS POLICE ANNEX		N/A		
29	ENVIRONMENTAL CENTER		N/A		N/A
30	AUXILIARY SERVICES		N/A		N/A
32	CAMPUS AND ALUMNI RELATIONS		N/A		N/A
33	FOUNDATION		N/A		N/A
C	PARKING STRUCTURE 3 "C"	N/A	N/A	N/A	N/A
A	PARKING STRUCTURE 4 "A"	N/A	N/A	N/A	N/A
45	STUDENT SERVICES CENTER				
47	LEARNING GARDEN	N/A	N/A	N/A	N/A
48	IT BLDG				



- Excellent Condition / Minimal Investment
- Requires Moderate Investment
- Requires Substantial Investment
- Needs Replacement
- Not Assessed
- N/A

## OVERVIEW BY CATEGORY: MECHANICAL (HVAC)

BUILDING #	BUILDING NAME	ROOFTOP PACKAGE	SPECIALIZED MECH.	SPLIT AC SYSTEM	AIR HANDLING UNITS
1	ADMISSIONS	N/A	N/A		N/A
2	COUNSELING ANNEX				
3	ART COMPLEX			N/A	N/A
5	ENGLISH AS SECOND LANGUAGE		N/A	N/A	N/A
6	BUSINESS	N/A		N/A	
8	GYMNASIUM	N/A	N/A	N/A	
10	LIBERAL ARTS				
11	LETTERS AND SCIENCE				
12	LIBRARY & MEDIA CENTER				
13	THEATER ARTS				N/A
14	CORE PERFORMANCE CENTER	N/A		N/A	N/A
17	MATH COMPLEX		N/A	N/A	N/A
18	STADIUM/FACILITIES	N/A		N/A	N/A
19	STU. HEALTH & ACTIVITIES		N/A		
20	SCIENCE	N/A	N/A	N/A	
21	HUMANITIES & SOCIAL SCI.		N/A		
22	DRESCHER HALL	N/A			
24	COUNSELING				
25	INTERNATIONAL COUNSELING	N/A	N/A		N/A
26	OUTREACH	N/A	N/A		N/A
27	CAMPUS POLICE	N/A	N/A		N/A
28	CAMPUS POLICE ANNEX	N/A	N/A		N/A
29	ENVIRONMENTAL CENTER	N/A	N/A		N/A
30	AUXILIARY SERVICES	N/A	N/A		N/A
32	CAMPUS AND ALUMNI RELATIONS		N/A	N/A	N/A
33	FOUNDATION		N/A	N/A	N/A
C	PARKING STRUCTURE 3 "C"	N/A	N/A	N/A	N/A
A	PARKING STRUCTURE 4 "A"	N/A	N/A	N/A	N/A
45	STUDENT SERVICES CENTER				
47	LEARNING GARDEN	N/A	N/A	N/A	N/A
48	IT BLDG				

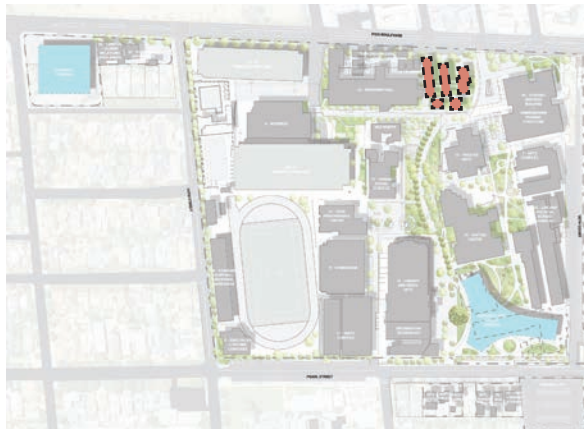






# **BUILDING COMMENTS AND RECOMMENDATIONS**

# BUILDING 1 - STUDENT SERVICES/ ADMISSIONS



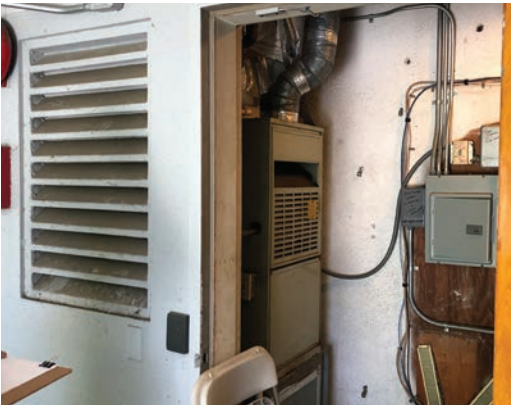
## BUILDING INFORMATION

Constructed	1957
Last Renovation	2002
Building Size	18,014 SF
Number of Stories	1
Construction Type	V
Primary Use	Academic
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish

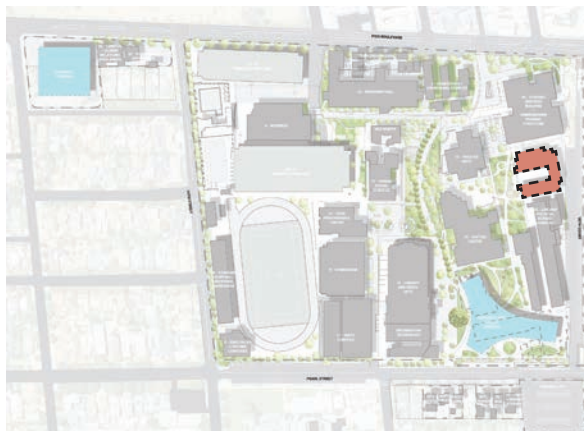
### Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>Admissions complex consist of 6 buildings. Building is wood framing with painted stucco finish. Roof system is sloped wood structure. Doors are metal and wood with metal frame, and aluminum/glass sliding automatic door. Windows are dual pane with aluminum frame. Carpet flooring. Window treatments require replacement. Gutters require replacement.</p> <p>At the time of the survey the roof was not accessible. Protective tarp observed over low roof for possible water protection. Restrooms need upgrade; i.e. Insulation for the sinks. Overall spacial quality: small/cramped divided rooms, narrow corridors, no flexibility of space use, old infrastructure. Significant technology upgrades required. Existence of multiple ceiling and wall fans, indicate that the HVAC system is inadequate for proper cooling.</p>	<p>Replace roof and potential substrate/substructure due to existing water intrusion; access and accessibility are deficient and all areas will need renovation to bring to current compliance; building services are deficient and must be replaced; restrooms need to be added/upgraded to the facility; windows and exterior doors to be replaced for energy compliance; likely require exterior wall/roof insulation for energy compliance; replace gutters for proper drainage.</p>
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017. "The building rests on a slab on grade using wood framing with a painted stucco finish." Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>This complex contains a number of small (under 2000 CFM) split Air Conditioning systems. Most of the systems are consisted vertical constant volume gas furnaces retrofitted with DX cooling coils. One of the systems is a split heat pump. The system controls are outdated and the systems do not employ economizers, which is useful in areas with the cool climate conditions and not compliant with T24 Energy Efficiency Standards. Systems start/stop is provided from the time clock. It appears, there was no environmental cleaning provided for the air distribution systems and it might be feasible simply to replace entire systems.</p>	<p>All split AC equipment have exceeded useful service life should be replaced with new. The new units shall be retrofitted with economizer and connected to BMS for control and maintenance program implementation.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>PLUMBING</b>	<p>The domestic hot water is served to this building from a 1992 AO Smith Energy Saver 38,000 BTU gas-fired storage-type water heater with 38.9 gallon storage capacity. Although this water heater is still functioning, it is well past its expected service life and should be replaced in the near future. The water closet fixtures are in moderate condition and of moderate age, but they still function properly with minimal cosmetic issues. The flush valves have the most wear as there is discoloration from small leaks over time. The urinals appear to be much older and are the floor-mount type, representing their age. The urinal flushometers are fairly new with sensor activation to meet the latest codes. The lavatory fixtures are in moderate condition with some wear, however, not all faucets are ADA-compliant. The p-traps also show small leaks over time with discoloration. In general, although all fixtures are functioning properly, it is recommended that all fixtures be replaced with newer types to improve the conditions, functioning and meet the latest codes.</p>	<p>Add padding to the lavatory P-traps. Replace lavatory faucets with ADA. Replace water heater in the near future. Consider replacing all fixtures if matching conditions desired.</p>
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was observed to be per original construction. They were observed to be in bad condition. This building was served from a 225 KVA transformer, 4160 to 120/208 volt, 3 <math>\phi</math>, 4W. Main distribution panel was observed to be 800 amps. Lighting in this building were observed to be fluorescent type. This building was observed to be using regular wall switches for lighting control. Any future electrical work that involves lighting will require new lighting controls compliant with the California Title 24 energy code and other applicable codes, for this building.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or 10Gbps switches.</p>
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>There was no smoke detector nor heat detector found in these building. Only fire alarm horns and strobe were found within this building. There was no Emergency Voice/Alarm Communication System (EV/ACS) found in this building.</p>	<p>A fire alarm upgrade is recommended for the building.</p>



# BUILDING 3 - ART COMPLEX



## BUILDING INFORMATION

Constructed	1952
Last Renovation	2002
Building Size	22,127 SF
Number of Stories	2
Construction Type	
Primary Use	Academic
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish

### Description

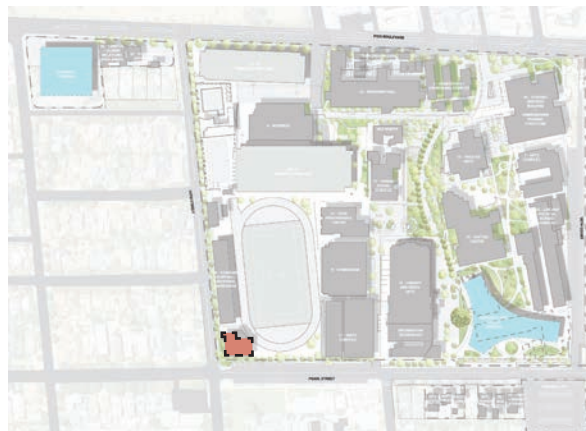
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>Exterior walls are Cast-in-place concrete. Metal doors with panic hardware. Metal and aluminum windows with double or single pane. At the kiln yard, there is significant leakage through the temporary roof structure. Portions of the roof are broken. Entry door for fork lift is too small and inadequate. Floor drains are clogged. Kilns are old and unsafe to use. Air compressor condensates and blows water instead of air. No air circulation at Kiln yard. No student restroom in the building. Circuits are constantly tripping due to overload. Space is not conducive to student observation of instruction in the kiln and glass blowing areas.</p>	<p>Replace roof and potential substrate/substructure due to existing water intrusion; access and accessibility are deficient and all areas will need renovation to bring to current compliance; building services are deficient and must be replaced; restrooms need to be added to the facility; windows and exterior doors to be replaced for energy compliance; likely require exterior wall/roof insulation for energy compliance; potential to replace gutters for proper drainage</p>
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017. "The building rests on a slab on/below grade using spread footings at the exterior walls with a partial basement using cast in place concrete walls." Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>The single-story buildings have only heating and ventilating systems, which are provided by space heaters installed in the individual classrooms. There are two existing boilers installed in 2012 in the basement mechanical room. However, the gravity flue vent has excessive numbers of elbows in violation of mechanical code and it needs to be corrected. The existing air conditioning system were installed in 2015 and they are in good operating condition. The existing process area dealing with wood dust, ceramics dust and glass, etc. have no dust collection systems intended to evacuate dust from the space. The ceramic shop has no doors separating from the staircase and combustion openings in the boiler room. The staircase and the boiler room is covered with thick layer of dust. This presents environmental hazard and need to be corrected. People working near kilns complained about poor temperature control associated with hot temperature radiating from equipment. There is also no venting system provided for the kilns from what we observed during site visit.</p>	<p>Provide new dust collection system and local exhaust in front of the kilns. Repair or replace kilns emitting excessive amount of heat creating discomfort for people working near them. Modify flue vent as required to bring it in compliance with the code. As an option provide fan assist at the top of the flue vent. Replace outdated HVAC controls. Provide door in the ceramic shop in order to prevent dust spread to other building areas.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>PLUMBING</b>	<p>This building has multiple plumbing issues. There are two (2) large floor drains on each side of the ceramics / glass area that have been disconnected and filled in. These drains are essential for cleanup as the floors are washed weekly and water should discharge to these drains. Without these drains, cleanup is far more difficult for the staff and students. The chisels, compressed air reels, and sand blaster machines all cannot function properly as water is quickly introduced into the compressed air system. Filters have been added in multiple places, but they cannot keep up with the amount of water entering the system; water is continuously present in the system. The ceramics sink is fitted with an Eemax storage water heater below the sink along with a clay trap. The sink functions, but it should be replaced with a newer model with a new clay trap. The paint room sinks are well covered in paint as expected, but they function properly with Eemax water heaters.</p>	<p>Replace clogged floor drains. Replace worn out but functional sinks and clay trap. Fix or repair air compressor from accumulating water. Due to the age and longterm use, sinks at paint room should also be replaced.</p>
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was replaced in 1998, They were observed to be in fair condition. This building was served from a 150 KVA transformer, 4160 to 120/208 volt, 3 ø, 4W. Main distribution panel was observed to be 600 amps. Lighting in this building were observed to be fluorescent type. There was no observable lighting control found in this building during the visit. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code and other applicable codes, for this building.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or 10Gbps switches.</p>
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have smoke/heat detectors but don't have Emergency Voice/Alarm Communication System (EV/ACS).</p>	





# BUILDING 5 - ESL



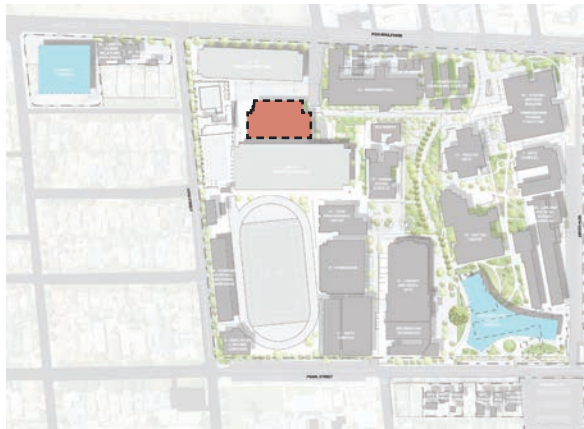
BUILDING INFORMATION	
Constructed	1975
Last Renovation	1996
Building Size	6,450 SF
Number of Stories	1
Construction Type	MODULAR
Primary Use	Academic
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish
Description	

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>This is a modular wood framed building with T1-11 siding. Windows are single pane aluminum frame. Exterior doors are wood in aluminum frame. Interior walls are painted stucco. Ceilings are acoustic tiles in metal grid. Flooring is Carpet that are old. Ceilings show water damage. Lighting is dim. Hallways are narrow. Furniture is old and seating layout is not flexible. There is strong mold odor inside the building.</p>	<p>Replace roof and potential substrate/substructure due to existing water intrusion; access and accessibility are deficient and all areas will need renovation to bring to current compliance; building services are deficient and must be replaced; restrooms need to be added to the facility; windows and exterior doors to be replaced for energy compliance; likely require exterior wall/ roof insulation for energy compliance; potential to replace gutters for proper drainage; mold/mildew remediation; replace all interior finishes and systems; replace exterior siding; repair damaged concrete.</p>
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.          “The building rests on perimeter concrete footings supporting a metal frame.          The roof system is mono foam of 1986 vintage,per staff. “          Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>The existing building is a single story structure provided with (6) six rooftop packaged units each serving a part of the building. The units are of the original installation, have substantially exceeded useful service life and should be replaced. The systems have not been environmentally cleaned.</p>	<p>The units should be replaced with new rooftop packaged units equipped with the economizers and painted with corrosion protective coating. The duct systems shall be environmentally cleaned. Duct supports on the roof should be designed to comply with the current structural code requirements.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<p><b>PLUMBING</b></p>	<p>The water closets, urinals and lavatories with accompanying flushometers and faucets are all in good condition. All are automatic sensor type with minimal to no cosmetic wear and function properly. Some toilets are tank type. Bath tub are sealed and not used. Recommend to remove or replace. Recommend to replace electric water heater, and service sink.</p>	<p>Replace water heater and service sink. Replace bath tub or demolish if not to be used.</p>
<p><b>ELECTRICAL</b></p>	<p>Electrical distribution equipment was observed to be per original construction. We recommend having electrical distribution equipment to be replaced. Service for this building was observed to be 400 amps, 120/240 volt, 1 ø, 3W. Lighting in this building were observed to be fluorescent type. We observed absence of motion sensors for lighting control within rooms and hallways. We also observed presence of fire life safety devices such as pull station and notification appliance. But there was no smoke detector found during the visit. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. Etc.) and other applicable codes, for this building. We also recommending updating fire life safety system for compliance to latest code.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or10Gbps switches.</p>
<p><b>FIRE SPRINKLERS/ FIRE ALARM</b></p>		



# BUILDING 6 - BUSINESS



## BUILDING INFORMATION

Constructed	1980
Last Renovation	2002
Building Size	18,014 SF
Number of Stories	1
Construction Type	V
Primary Use	Academic
Overall Condition	Requires substantial investment
Long-Term Recommendation	Demolish

Description

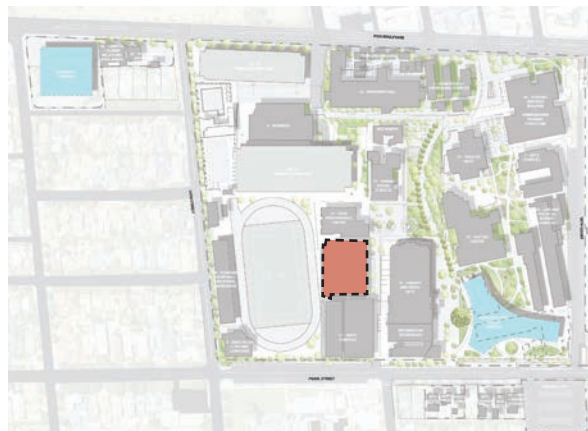
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>The exterior walls at Business building are cast concrete. Façade is mostly large panels of glass storefront system with metal frames to the roof. Roofing system is rolled asphalt. Interior walls are painted drywall and CMU. Ceilings are suspended acoustic tiles. Flooring is VCT vinyl tiles or carpet. Doors are wood, metal, or aluminum with metal and aluminum frames.</p> <p>Some rooms have water damage from ceiling. Corridor paint is in good condition. Exterior glass walls need cleaning. Carpets need to be replaced. Seating layouts generally open and flexible. Second floor courtyard balcony floor needs to be painted. Some ceiling tiles showed water damage from the roof. Restroom sink pipes were not insulated. Some hallway ceilings showed water damage.</p> <p>Cosmotology building was treated for Bed bugs.</p>	<p>Replace roof and potential substrate/substructure due to existing water intrusion; access and accessibility are deficient in some areas and will need renovation to bring to current compliance; interior finishes to be replaced (flooring, ceiling tiles, some painted walls, etc); signage may need replacing</p>
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.</p> <p>“The building rests on a slab on grade using wood framing with a painted stucco finish.”</p> <p>Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>The building is provided with variable air volume air conditioning systems delivering air to the individual comfort zones via VAV boxes with terminal reheat. Three roof mounted air handling units serve the majority of spaces in the building. Two heating hot water gas fired boilers, installed in 2012, are located in the penthouse and provide heating for the terminal reheat. Boiler-2 primary circulating pump has water leak and it needs to be repaired. Chilled water for the building is provided from the central plant.</p> <p>Although the building went through renovation in some areas, the majority of VAV boxes are existing and may need to be retrofitted with new controls. Environmental exhaust is provided by several roof mounted exhaust fans. The building controls are by the Automated Logic and interconnected with the campus BMS.</p>	

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>PLUMBING</b>	<p>The water closets, urinals and lavatories with accompanying flushometers and faucets are all in good condition having been replaced in recent years. All are automatic sensor type with minimal to no cosmetic wear and function properly. The domestic water heating system consists of two (2) 1998 American Standard storage-type gas-fired water heaters with 100 gallon storage capacity each, 270,000 BTU input. While these water heaters are still operating properly, they have passed their expected service life and should be replaced in the near future with more-efficient types.</p>	<p>Replace only the water heater in the near future. No other repairs or replacement needed.</p>
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was observed to be per original construction. They were observed to be in fair condition. This building was observed to have its own service from SCE. Existing service equipment was observed to be 1600 amps, 277/208 volts, 3 ø, 4W. Lighting in this building were observed to be fluorescent type. This building was observed to be using motion sensors for lighting control. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors, etc.) and other applicable codes, for this building.</p>	
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have smoke/heat detectors but don't have Emergency Voice/Alarm Communication System (EV/ACS).</p>	





# BUILDING 8 - GYMNASIUM



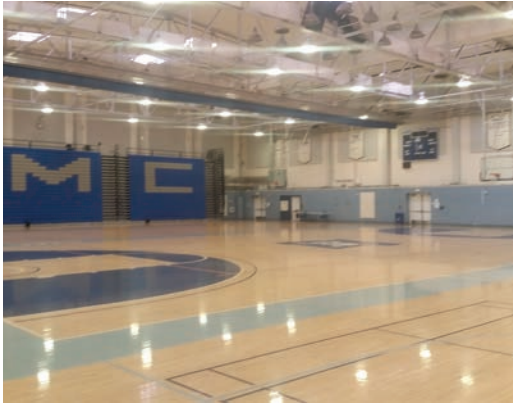
## BUILDING INFORMATION

Constructed	1958
Last Renovation	2004
Building Size	48,618 SF
Number of Stories	1
Construction Type	Type II - Non rated (Original), Type I (Remodeled)
Primary Use	Athletics
Overall Condition	Requires Moderate Investment
Long-Term Recommendation	Maintain

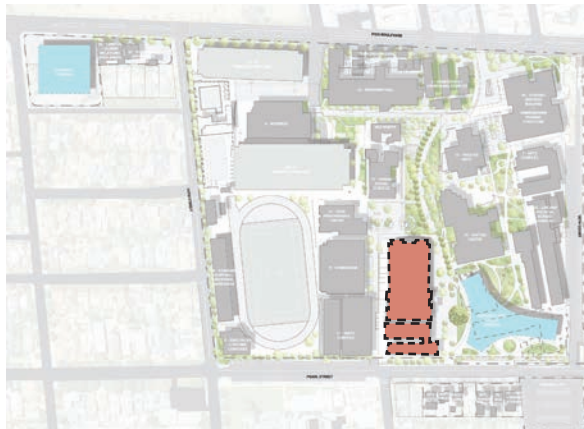
Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>The walls of the gymnasium are cast concrete. Roofing system is rolled asphalt. Exterior doors are metal with panic hardware. Walls at the gymnasium space are covered partially with acoustical panels. Floors, walls, and retractable seating is generally in good condition. The large gymnasium space had good lighting with skylights throughout. Hallway walls were in good shape. Building in general did not show any indication of damage.</p>	
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017. "The building rests on a concrete slab on and below grade using cast in place concrete spread footings and walls. The main structure is cast concrete using metal truss and metal frame and pan deck."</p>	
<b>MECHANICAL</b>	<p>The building is consisted of a gymnasium, offices for the gym staff, Shower/locker facility and classrooms. The building areas are heated and ventilated only and there is no air conditioning provided to maintain comfort level in the rooms during the summer time. The gymnasium ventilation air is exhausted by roof mounted exhaust fans. Ventilation air in the rest of the occupied spaces is exhausted by wall mounted fans. All HVAC systems and equipment have exceeded useful service life and should be replaced with air conditioning systems. Additionally, since all HVAC equipment is of a constant volume type, the energy waste is high due to the absence of air modulation. Air flow reduction during the time of part load conditions can reduce the energy consumption by about 30 to 40%. Chilled water for the building should be provided by a newly built central plant. The building is connected to the BMS, but the building controls are limited to the monitoring of the HVAC systems.</p>	<p>Replace the existing HVAC heating ventilating units with new equipped with cooling and heating coils. Provide fans with variable frequency drives to modulate supply air CFM. Provide chilled water system connected to the central plant. Modify the HVAC controls to accommodate the change in the equipment functions. Provide environmental ducts cleaning.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>PLUMBING</b>	<p>The drinking fountains in the gym space are of mixed ages and types. One group is very old and should be replaced while the other set is rather new, but needs maintenance repairs. It is suggested that both be replaced. The locker rooms and restroom areas are newer and in good operating condition with automatic sensor-type flushometers and faucets; all fixtures have minimal cosmetic wear. No suggestions for upgrades are suggested in these areas.</p>	<p>Only replace drinking fountains at this time.</p>
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was observed to be per original construction. They were observed to be in fair condition. This building was served from a 500 KVA transformer, 4160 to 120/208 volt, 3 ø, 4W. Main distribution panel was observed to be 1400 amps. Lighting in this building were observed to be high bay hid type. Lighting control for this building were also from original built-out using lighting contractors and time clocks. We recommend installing new lighting controls compliant with the California Title 24 energy code and other applicable codes, for this building.</p>	
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>There was no smoke detector nor heat detector found in these building. Only fire alarm horns and strobe were found within this building. There was no Emergency Voice/Alarm Communication System (EV/ACS) found in this building. We are recommending for a fire alarm upgrade for this building.</p>	



# BUILDING 12 - LIBRARY & MEDIA CENTER



## BUILDING INFORMATION

Constructed	1980
Last Renovation	2014
Building Size	108,673 SF
Number of Stories	4
Construction Type	
Primary Use	Library
Overall Condition	Requires Moderate Investment
Long-Term Recommendation	Renovate

### Description

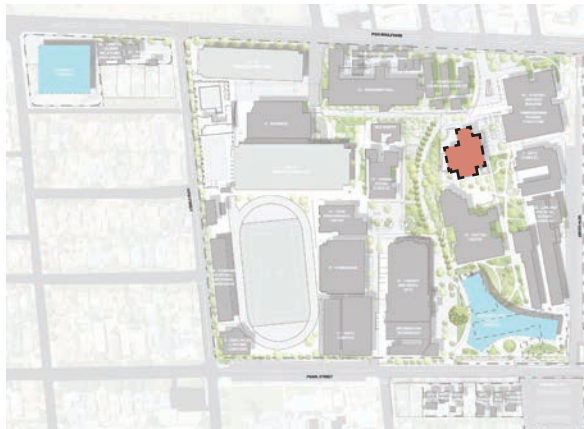
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>The library building is cast concrete. Main entrance doors are aluminum framed store front. Windows are fixed dual pane. Interior walls are mostly concrete and some painted gypsum. Interior doors are metal and wood in metal and wood frames. Study rooms Ceilings are painted gypsum with acoustic tiles in study areas, otherwise exposed concrete in the main open areas. Majority of floor finish is carpet which is old and needs maintenance. Carpet in areas near stair landings was loose and could result in tripping hazard. Roof is in generally good condition. Solar panels need cleaning. Overall acoustic and temperature is adequate. Lighting is poor in open study areas. Metal penthouse wall siding has areas of peeling paint. Steel canopy structure at the entrance is rusted. In general the building and finishes are in good condition.</p>	<p>Some maintenance and upkeep of finishes; sand and paint canopy, mechanical penthouse walls, and other metal structures to arrest and inhibit rust; clean carpeting; repair areas of loose or damaged carpeting; some exterior ductwork may need to be painted to address rusting.</p>
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.          “The building rests on a concrete slab on and below grade with spread footings at exterior walls. The main structure is cast concrete with metal framing and pan deck.”</p>	
<b>MECHANICAL</b>	<p>Library and Media center is approximately 40 years old and within the last ten years it went through a number of remodeling. The building is served by two large VAV custom built air handling units located on the building roof and delivering supply air to the individual comfort zones via VAV boxes with terminal reheat. The units are approximately 10 years old they are in good operating condition, but the units’ exterior shows signs of rust. The building has large thermal mass, which helps with storing cooling during the night time. Two existing 90-ton chillers have been reconnected into the booster loop operation at the time of the library building connection to the new central plant. This allows the use of the chillers when the central plant is not running. The majority of VAV boxes are existing and may need to be retrofitted with new controls.</p>	<p>Provide environmental ducts cleaning. Retrofit the existing VAV boxes with new controls. Remove rust and repaint portions of the frames and unit housing.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>PLUMBING</b>	<p>The age and condition of the water closets differ from restroom to restroom within the library area. Most are in good condition with automatic sensor-type flushometers while some are older with discolored seats. The urinals are in good condition also with automatic sensor-type flushometers. Some restrooms have lavatory faucets that are manual while others have the automatic sensor-type. Despite the variances, the lavatories and faucets are all in good condition. Some restrooms are served by small electric AO Smith 19 gallon, 6,000 W water heaters, all of which are identical and new. The other section of the building hot water is served by a 2017 Bradford White 48 gallon, 55,000 BTU gas-fired storage type water heater. Only minor upgrades are recommended for the water closets.</p>	<p>Review water closet individually for replacement. No other work needed at this time.</p>
<b>ELECTRICAL</b>	<p>This building was remodeled around 2014. Electrical distribution equipment was observed to be replaced during that construction. They were observed to be in good condition. Electrical building service was found to be 3000 amps, 277/480 volt, 3 ø, 4W. Lighting in this building were observed to be fluorescent type. Lighting control for this building was observed to have combination of lighting control panel and motion sensors. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors, etc.) and other applicable codes, for this building.</p>	
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have smoke/heat detectors but don't have Emergency Voice/Alarm Communication System (EV/ACS).</p>	





# BUILDING 13 - THEATER ARTS



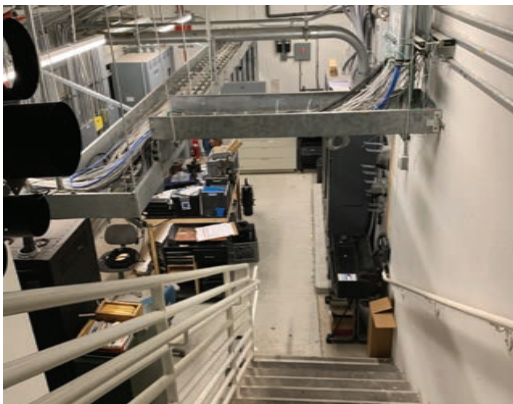
## BUILDING INFORMATION

Constructed	1952
Last Renovation	2006
Building Size	27,423 SF
Number of Stories	2
Construction Type	II - 1 HR
Primary Use	Academics
Overall Condition	Excellent/Requires Minimal Investment
Long-Term Recommendation	Maintain

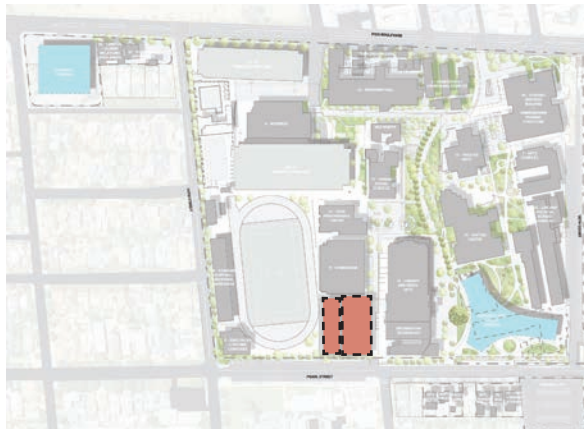
### Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>Exterior walls of the Theater Arts building are tilt-up concrete with corrugated metal finish. Interior walls are painted gypsum. Exterior doors are aluminum frame store front system with single pane glass. Interior doors are metal in metal frame. Windows are dual pane glass. Flooring is a combination of carpet, concrete, terrazzo, hardwood, and VCT. Theater area has acoustic walls and ceiling panels. Overall lighting, temperature, and acoustics are adequate in the building. Architectural elements are in good condition.</p>	<p>Areas of interior paint (handrails); bathroom mirrors replace due to etched tags.</p>
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.          “The building is a concrete slab on and below grade using metal framing and pan deck and the exterior walls are tilt-up type concrete construction with corrugated metal and concrete wall finishes.”</p>	
<b>MECHANICAL</b>	<p>The existing HVAC systems went through major renovation approximately 15 years ago, with new rooftop packaged gas/electric units provided as a replacement to the existing HVAC equipment. The units serve individual comfort zones. The majority of the units are constant volume with the exception of the AC-2 serving studios 2 &amp; 3. There are also four split system located on the roof and serving support areas. All units are at the end of useful service life and should be replaced.          The existing HVAC controls are provided by Automated Logic controls.</p>	<p>Replace rooftop packaged units with VFDs and outdoor condensing units. Provide environmental ducts cleaning.</p>
<b>PLUMBING</b>	<p>The water closets, urinals and lavatories are all in moderate condition fitted with primarily automatic sensor-type flushometers and lavatories. Some wear is seen on the water closets and lavatories. Upgrades are suggested, but not required.</p>	<p>No repairs needed at this time but consider and/or revisit in the near future.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>This building was remodeled around 2013. Electrical distribution equipment was observed to be fairly new and in very good condition. Electrical building service was observed to be 1600 amps, 277/480 volt, 3 ø, 4W. Lighting in this building were observed to be fluorescent type for general and house lighting and professional theatrical lighting for performance stage. Lighting control for theatrical portion of the building was observed to be professional dimming racks with lighting console. For other room lighting controls, it was observed to have motion sensors.</p>	
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have smoke/heat detectors but don't have Emergency Voice/Alarm Communication System (EV/ACS).</p>	



# BUILDING 17 - MATH COMPLEX



## BUILDING INFORMATION

Constructed	1995
Last Renovation	2004
Building Size	44,872 SF
Number of Stories	1
Construction Type	Modular
Primary Use	Academic
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish

### Description

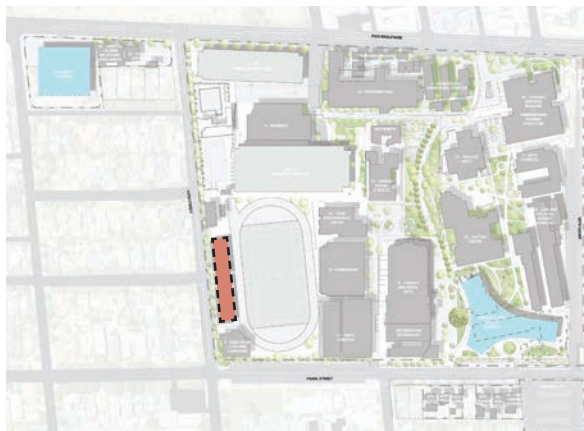
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	The Math complex consists of 2 separate buildings sharing a wood/trex raised deck outdoor corridor on metal frame. Walls are wood and stucco siding. Doors are wood and metal in metal frame. Windows are single pane in aluminum frame. Walls and ceilings need maintenance, fixing and painting. Carpets are old and have mold smell. Lighting is insufficient. There is no acoustical surfaces. Rooms are small and cramped. Furniture is old and layouts are not flexible.	Windows and exterior doors to be replaced for energy compliance; likely require exterior wall/roof insulation for energy compliance; finishes need updating or replacing; mold/mildew remediation; replace lighting; given these buildings were meant to be temporary, they should be replaced.
<b>STRUCTURE</b>	Structural Assessment noted here is data reported on Fusion, 2017. “(The buildings) rest on concrete stem walls using metal framing supporting a wood sub floor.”	
<b>MECHANICAL</b>	The building was retrofitted less than a year ago with rooftop packaged heat pump units intended to serve individual spaces.	Provide environmental ducts cleaning.
<b>PLUMBING</b>	The domestic water heater, water closets, urinals and lavatories are all in good operating condition. No recommendations are suggested.	No worked needed

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was observed to be per original construction. Main distribution equipment is all located outdoors. Equipment enclosure were observed to have small amount metal corrosion, but equipment is in fair condition. It was observed that this building have a 225 amp panelboard, 120/240 volt, 1 ø, 3W Lighting in this building were observed to be fluorescent type. This building was observed to be using motion sensors for lighting control. "We recommend upgrading the light fixtures to LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors, etc.) and other applicable codes, for this building.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or10Gbps switches.</p>
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have code complaint smoke/heat detectors but don't have Emergency Voice/Alarm Communication System (EV/ACS).</p>	





# BUILDING 18 - STADIUM/ FACILITIES



## BUILDING INFORMATION

Constructed	1947
Last Renovation	
Building Size	23,236 SF
Number of Stories	2
Construction Type	II - 1 HR
Primary Use	Sports/M & O
Overall Condition	Requires Substantial Investment
Long-Term Recommendation	Renovate

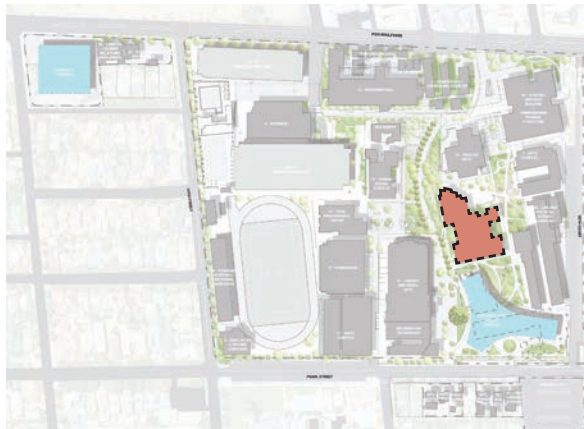
### Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>Stadium facilities consist of permanent and modular buildings. These buildings house offices, shops, bleachers, press box, storage, and ticket booth. Small buildings are wood framing with wood siding. Doors are metal with metal frame. Windows are wood, metal, and aluminum framed single pane. Roofing is built-up rolled asphalt. Back of office building is filled with combustible material such as Refrigerants, R11, R22, etc. Structure is rusted and the roof leaks. The exhaust fan was permitted in 1980. Spray booth is very old. The Ceiling in Men's bathroom at stadium has large cracks and pieces of concrete fall out. In the past, raw sewage came out of pipes in driveway. Water heater in shops is old and exposed. Doors are rusted aluminum with holes. They do not have accessible hardware. Water in Bathroom pipe is brown. Many pipes are old and exposed.</p> <p>Storage space under bleachers is underused and not utilized fully. There is no Eyewash station for storage area. There is no A/C. There is no ventilation. Circulation is poor with only one access door for the space. There is no exhaust in the Bathrooms. Floors are unfinished concrete and many areas have cracks. Concrete beams are damaged. There is no floor drainage. Interior doors are wood or metal, in wood or aluminum frames using a combination of level and knob type hardware.</p> <p>Bleachers are old and some are broken. There are no accessible path or seating areas. No FLS strobes. Stairs leak into space below.</p>	
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.</p> <p>“Some buildings are slab on grade cast in place concrete and concrete block construction and others are metal frame resting on green plate on asphalt.”</p> <p>Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>The building has no air conditioning to provide comfort for the users or to maintain space temperature for the stored materials. No ventilation is available when the exterior doors are closed. Flue vents and environmental exhaust are located adjacent to operable windows in violation of the Mechanical Code.</p>	<p>Demolish all obsolete HVAC systems and replace with split HEAT pump systems and functional exhaust systems. Provide OA intakes required by code.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<p><b>PLUMBING</b></p>	<p>The Gym restrooms appear to be very old and the fixtures age matches overall architectural conditions. Although most fixtures function properly, it remains cosmetically outdated. Drinking Fountains are located inside the restroom, should be outside and some do not work. Lavatories should be replaced with ADA compliant padding on the P-Traps. HVAC shop has water heater in ceiling and appears old but functioning. Recommend replacing. Services sinks are old and should be replaced. Eye Wash Station works but it not is locations outside the shops where it is not easily accessible in case of emergency. Should be replaced with new and put inside the shop rooms. The rest of the fixtures are in mixed conditions and should be replaced on a case by case basis.</p>	<p>Provide new drinking fountain currently in restroom but relocate them outside. Provide new lavatories with ADA compliant. Piping under lavatories are not padded. Replace Urinals with partitions for privacy. Water closets are functional. Replace if matching with new restroom desired to have same overall clean look. Replace service sink. Replace eye wash and shower but relocate to where its easily accessible in shop rooms. Replace service sink and heater in shop.</p>
<p><b>ELECTRICAL</b></p>	<p>Electrical distribution equipment was observed to be per original construction. We recommend having electrical distribution equipment to be replaced. Service for this building was observed to be 600 amps, 120/240 volt, 1 ø, 3W. Lighting in this building were observed to be fluorescent type. We observed absence of motion sensors for lighting control within rooms and hallways. We also observed the absence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. Etc.) and other applicable codes, for this building. We also recommending updating fire life safety system for compliance to latest code.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or 10Gbps switches.</p>
<p><b>FIRE SPRINKLERS/ FIRE ALARM</b></p>		



# BUILDING 19 - STUDENT HEALTH & ACTIVITIES



## BUILDING INFORMATION

Constructed	1952
Last Renovation	2001
Building Size	59,644 SF
Number of Stories	1
Construction Type	II - 1 HR
Primary Use	Student Space
Overall Condition	Requires Substantial Investment
Long-Term Recommendation	Demolish

Description

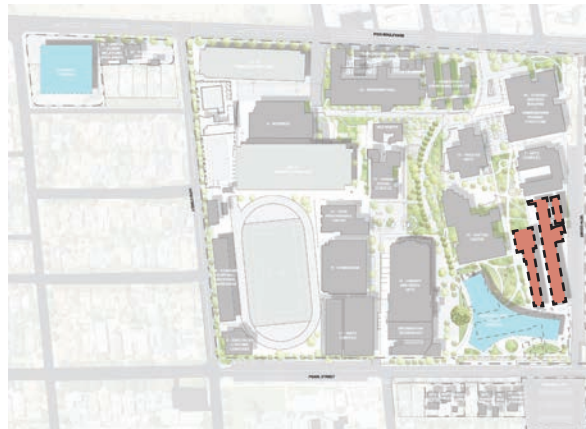
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>Students Activities building contains classrooms, offices, health center, cafeteria, dining hall, student study center, and the bookstore. Various portions have been remodeled or added over time. The second floor was added in 1990. The main structure is cast concrete. Exterior doors are aluminum frame storefront system. Windows are aluminum frame double and single pane. Interior walls are painted drywall or concrete. Ceilings are acoustic tile. Interior doors are wood with metal frame.</p> <p>The student store is generally in good condition. The bookstore interior needs update. Ceiling tiles are loose or missing. Floors and ceilings need repair. Walls need painting. There is poor security for visibility. Lighting is dim. Casework is damaged and needs repair. There is no permanent AC at the dining hall. Large windows provide good view to the outdoor courtyard. There is no acoustic panels in ceiling. Floors are easily cleanable. Seating layout is outdated and not flexible. Flooring needs buffing.</p>	
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.</p> <p>“The building rests on a slab on and below grade and spread footings using cast in place concrete exterior walls, with columns and interior load bearing walls. The main structure is cast concrete with a steel frame. The roof system looks like built up rolled asphalt of 2003 vintage.”</p>	
<b>MECHANICAL</b>	<p>The complex is consisted of single-story bookstore, cafeteria and two-story student activities space. The student cafeteria and activity center have heating ventilation system provided from the units located on the roof. The unit is installed in 1950’s and has reached the end of its service life. Inside second floor student activity center, the elevation of thermostat is a code violation.</p> <p>For the bookstore area, there is a heating ventilation system in the janitor room serving the bookstore and it is beyond its useful life. The bookstore only has several window type AC units to provide cooling.</p> <p>During the site visit, the temporary air conditioning units were operating with majority of spaces being unoccupied. It appears the temporary units are rented every summer for a number of years.</p> <p>In summary, all units appear to be over 20 years and have exceeded useful service life. The HVAC control system in the building is outdated and needs to be replaced.</p>	<p>Remove and replace all HVAC systems with rooftop packaged units. Redesign the systems as required utilizing variable air volume systems with economizers and terminal reheat in order to achieve sustainable and energy efficient environment. Provide new HVAC controls and connect to the campus BMS. Provide environmental ducts cleaning for the portion of ductwork to remain.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>MECHANICAL</b>	<p>The complex is consisted of single-story bookstore, cafeteria and two-story student activities space. The student cafeteria and activity center have heating ventilation system provided from the units located on the roof. The unit is installed in 1950's and has reached the end of its service life. Inside second floor student activity center, the elevation of thermostat is a code violation.</p> <p>For the bookstore area, there is a heating ventilation system in the janitor room serving the bookstore and it is beyond its useful life. The bookstore only has several window type AC units to provide cooling.</p> <p>During the site visit, the temporary air conditioning units were operating with majority of spaces being unoccupied. It appears the temporary units are rented every summer for a number of years.</p> <p>In summary, all units appear to be over 20 years and have exceeded useful service life. The HVAC control system in the building is outdated and needs to be replaced.</p>	<p>Remove and replace all HVAC systems with rooftop packaged units. Redesign the systems as required utilizing variable air volume systems with economizers and terminal reheat in order to achieve sustainable and energy efficient environment. Provide new HVAC controls and connect to the campus BMS. Provide environmental ducts cleaning for the portion of ductwork to remain.</p>
<b>PLUMBING</b>	<p>The water closets, urinals and lavatories are all in decent operating condition with some cosmetic wear. Minimal upgrades are suggested.</p>	<p>No repairs needed at this time but consider and/or revisit in the near future.</p>
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was observed to be good condition except the equipment within book store. We recommend replacement for this equipment within the bookstore. This building also has an existing backup generator. This building was served from two 300 KVA transformer, 4160 to 120/208 volt, 3 ø, 4W. Main distribution panel was observed to be 1600 amps, typical of two. Lighting in this building were observed to be fluorescent type. This building was observed to be using motion sensors for lighting control. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. Etc.) and other applicable codes, for this building.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or 10Gbps switches.</p>
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have smoke/heat detectors but don't have Emergency Voice/ Alarm Communication System (EV/ACS).</p>	





# BUILDING 20 - SCIENCE



## BUILDING INFORMATION

Constructed	1999
Last Renovation	
Building Size	98,400 SF
Number of Stories	3 (LABS), 2 (OFFICES)
Construction Type	
Primary Use	Academic
Overall Condition	Requires Moderate Investment
Long-Term Recommendation	Renovate

### Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
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<p><b>ARCHITECTURE/ INTERIORS</b></p>	<p>The Science building consists of 2 separate buildings connected with bridge pathways. The east building contains the labs and classrooms. The West building contains the lecture halls and Offices.</p> <p>The main structure for both buildings is cast concrete. Exterior doors are metal with metal frame. Windows are single pane in aluminum frame. Interior doors are a combination of wood in metal jambs, metal in metal jambs and metal in aluminum jambs. Interior walls are painted drywall and CMU. Ceilings are acoustic tile or painted gypsum. Offices have carpet flooring which needs repair and cleaning. There is no AC at the offices. Some areas of the roof leak in the office building. Ceiling tiles in labs are loose and show signs of structural deflection and water damage. Lecture halls are in overall good condition. Labs lack natural lighting. There are no views to outside. No writable surfaces. Projectors are too small for the size of the labs. Concrete floor at some labs is cracked. Bathroom sinks require pipe insulation. AC does not function well at labs. Furniture is generally in good shape and seating is flexible.</p>	
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<p><b>STRUCTURE</b></p>	<p>Structural Assessment noted here is data reported on Fusion, 2017.</p> <p>“The building is of brick and steel frame construction with exterior window walls and architectural metal siding resting on a slab on grade and spread footings at exterior walls. The main structure is cast concrete. The roof system looks like built up rolled asphalt and metal standing seam that is original to construction.”</p>	
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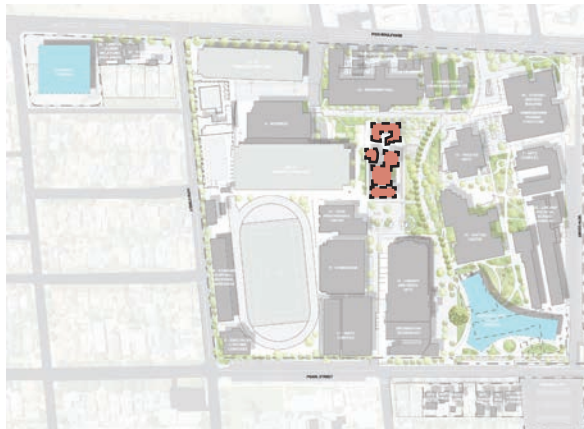
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<p><b>MECHANICAL</b></p>	<p>The Life and Physical Science building is consisted of a two-story and three-story building. The three-story portion is consisted of lab, auditorium, computer learn/ research space and is served by several variable air volume air handling units located on the roof. Chilled water is provided from central plant and the connection was implemented in 2015 to the new tertiary pumps provided at the same time. The existing cooling tower located on the roof was demolished and the chillers were removed from the basement mechanical equipment room. The chemical exhaust systems are manifolded on the roof into a common duct. The air handling units AHU-1, AHU-2, which were built approximately twenty years ago. The air handling units and exhaust fans show severe signs of rust and are approaching the end of its service life. The insulation on AHU-2 supply duct has largely peeled off. The condensate drainage appears to be not very affective and it contributes to the units corrosion problem</p> <p>Three heating hot water boilers provided with circulating pumps installed approximately 10 years ago in the penthouse mechanical room.</p> <p>The two-story building wings, which consist of faculty offices and classrooms do not have air-conditioning. Temporary AC unit are provided to the classrooms to maintain proper level of comfort.</p> <p>The three story building portion only has existing HVAC controls modified in relationship to the central plant project conducted in 2015. The remaining controls are over 20 years old and should be replaced.</p>	<p>Provide air conditioning for the 2-story building portion utilizing air handling units and VAV systems. Replace AHU-1 and AHU-2 approaching the end of useful service life. Replace the existing fume hood exhaust fans with the new equipped with the variable geometry air discharge dampers in order to maintain approximately 3,000 - 3,500 fpm outlet air velocity. Replace 20-years old HVAC controls to match campus standards. Remove and replace damaged duct insulation. Fix the condensate drainage by cleaning the pipe and verify if it has been properly sloped. Consider replacing the existing boilers and pumps with new condensing type boilers configured into primary/secondary loop with the secondary pumps equipped with VFDs. Provide environmental ducts cleaning.</p>
<p><b>PLUMBING</b></p>	<p>The restroom fixtures (water closets, urinals, and lavatories) are all in good condition with automatic sensor-type fixtures with minimal cosmetic wear. No upgrades are suggested. The science classrooms have a variety of lab sinks and chemical ware-washing sinks. These are all in good condition with some typical wear. Upgrades or replacements are suggested in the near future to bring them up to current standards, but this is not seen as critical from a code or operation perspective.</p>	<p>No action needed at this time but consider in the near future.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was observed to be good condition. This building was served from a 2500 KVA transformer, 4160 to 120/208 volt, 3 ø, 4W. Main distribution panel was observed to be 3000 amps. Lighting in this building were observed to be fluorescent type. This building was observed to be using motion sensors for lighting control. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. Etc.) and other applicable codes, for this building.</p>	
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have smoke/heat detectors but don't have Emergency Voice/Alarm Communication System (EV/ACS).</p>	



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# BUILDING 21 - HUMANITIES & SOCIAL SCIENCE



## BUILDING INFORMATION

Constructed 2006

Last Renovation 2007

Building Size 65,747 SF

Number of Stories 3

Construction Type

Primary Use Academic

Overall Condition Requires Moderate Investment

Long-Term Recommendation Maintain

Description

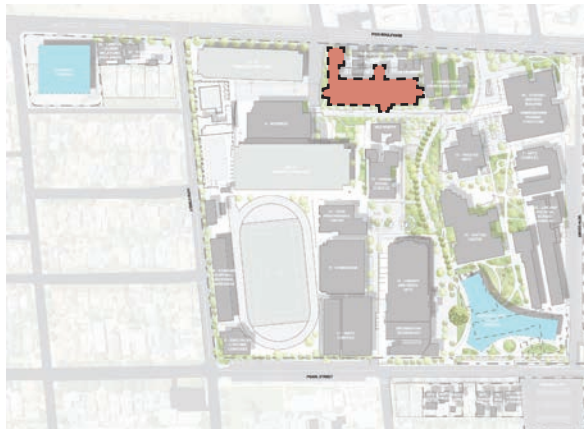


SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	HSS is a cast in place concrete structure. Exterior walls are finished with Stucco, metal panels, and brick veneer. Exterior doors are metal with metal or aluminum frame. Windows are dual pane aluminum frame, fixed an operational with motorized shading system. The building (Interior and Exterior finishes) is in overall great condition. There is adequate natural lighting in classrooms. Furniture is in good condition and seating layout is flexible. Rooms are open and large.	
<b>STRUCTURE</b>	Structural Assessment noted here is data reported on Fusion, 2017. "The building structure is cast in place concrete with steel structure and exterior finishes of brick, stucco, and metal cladding. The roof is a single ply rolled rubberized roof system that is original to construction."	
<b>MECHANICAL</b>	The building has AHU-B2 installed three years ago and it is in good operating condition. The chilled water to the unit is provided from the central plant. There is also a split system provided in the building twelve years ago. The condensing unit on the roof shows in relatively good condition.	Consider replacing the existing outdoor condensing unit approaching the end of useful service life. Provide environmental ducts cleaning.
<b>PLUMBING</b>	The water closets, urinals and lavatories are all in moderate condition fitted with primarily automatic sensor-type flushometers and lavatories. Some wear is seen on the water closets and lavatories. Upgrades are suggested, but not required.	Suggest replacing restroom fixtures but not urgent. No other work needed,

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was observed to be good condition.</p> <p>Electrical building service was observed to be 1600 amps, 277/480 volt, 3 ø, 4W. Lighting in this building were observed to be fluorescent type. This building was observed to be using motion sensors for lighting control. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors, etc.) and other applicable codes, for this building</p>	
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have smoke/heat detectors but don't have Emergency Voice/Alarm Communication System (EV/ACS).</p>	



# BUILDING 22 - DRESCHER HALL



## BUILDING INFORMATION

Constructed	1969
Last Renovation	1997
Building Size	111,145 SF
Number of Stories	3
Construction Type	I-FR
Primary Use	Academic
Overall Condition	Requires Substantial Investment
Long-Term Recommendation	Demolish

### Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>Drescher Hall is a cast in place concrete structure. The entire 3rd floor was added in 1994. Exterior walls are finished with plaster, Aluminum panels, or painted concrete. Exterior doors are metal with metal frame, and aluminum storefront. Windows are generally double pane with aluminum frame. Interior walls are painted plaster and drywall. Ceilings are suspended acoustical tile, or exposed to metal pan deck. Floor finishes are carpet, vinyl tile, and concrete. Interior doors are wood with aluminum frame or metal with metal frame.</p> <p>Mechanical room requires maintenance. There is no seismic bracing for water pipes. Doors have no label. Ramp outside seems to exceed 2% slope. Floor at electrical room on ground floors shows signs of water damage at door.</p> <p>Wall bases at first floor need repair. Floor in some rooms and hallways on first floor needs to be painted. Some faucets are not accessible. Accessible fixtures in restrooms are not all up to code. There is no accessible parking stall in staff lot on Pico. Potential roof issue on canopy behind building on Pico due to apparent leaking damage. Main electrical room requires 2 doors - only one provided. Water damage seen on some floors. Carpet on 3rd floor needs repair and maintenance. Classrooms have poor natural daylight. Short throw projectors not powerful enough for the size of room. Screens are old. Speaker systems not adequate for size of room. Acoustic panels in Ceilings need repair. Walls and floors in hallways are generally in good condition. Roof is generally in good shape. Old equipment (including acid batteries) to be removed.</p>	

<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.</p> <p>“The building rests on a concrete slab on and below grade with concrete footings and exterior walls, with columns and interior load bearing walls. The main structure is cast in place concrete using metal frame and pan deck. The roof was installed in 1994 when the 3rd floor was added.”</p>	
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SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>MECHANICAL</b>	<p>The building air conditioning is provided by several built-up air handling units equipped with supply and return fans retrofitted with variable frequency drives and serving variable volume systems. Several constant volume fan coil units serving photo labs.</p> <p>Two existing air-cooled chillers are mounted on the building roof. 100-ton existing chiller has exceeded useful service life, has completely oxidized fins on the condenser coils. The newer 125-ton chiller is of more recent installation (18 years old), but it shows signs of corrosion.</p> <p>There are four gas fired boilers and two hot water pumps in the basement boiler room. The boilers were installed in 2010 and are in good operating condition. The building is controlled by Automated Logic provided building management system (BMS).</p> <p>Existing photo lab exhaust is served by single constant volume Strobic fan operating during occupied building hours.</p>	<p>Replace the existing air handling units with the new custom built. Replace the existing chillers with new air cooled chillers equipped with turbocore compressors Provide photo lab exhaust air system with modulating control valves as required to achieve the system variable air flow. Supply air flow to the photo lab as well as the entire system should be VAV type. Replace the existing Strobic fan with epoxy coated centrifugal fan with VFD driven motor and mounted on the fan air discharge to outside variable geometry damper. Provide environmental ducts cleaning. Set the HVAC controls and the sequence of operation to accommodate the required space functions.</p>
<b>PLUMBING</b>	<p>The first level restrooms have older water closets, urinals and lavatories with aged flushometers. Some water closets are tank-type that are unconventional for commercial spaces. The urinals are the older floor-mount type. These fixtures on the first level should be replaced. The upper floors have restroom fixtures that are in good condition with minimal wear and age; these fixtures do not need to be replaced. The domestic water heaters in the lower basement level are older gas-fired storage-type and show leaks, rust, and deterioration. One water heater is sitting directly on the concrete floor without a drain pan. The water heaters were constructed in early 2000's and are beyond their expected service life. These heaters should be replaced with newer gas-fired heaters with new recirculation pump and interconnected plumbing assembly.</p>	<p>Replace water closet, urinals and lavatories in the first level. Replace all water heater in the lower basement</p>

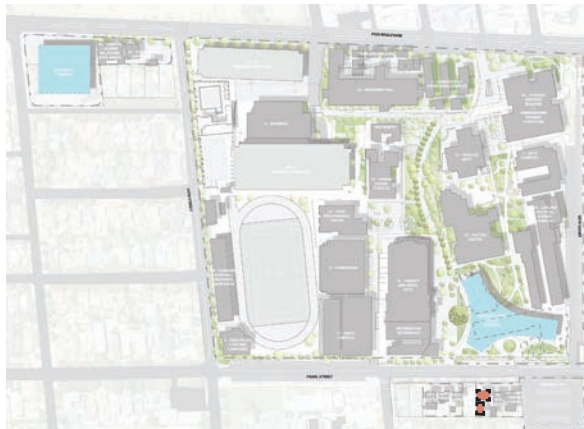
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>Electrical distribution equipment was observed to be per original construction. They were observed to be in fair condition, except equipment found within level 1 mechanical pump room. Equipment found in this pump room was found to have signs of metal corrosion. This building was observed to have its own service from SCE. It was observed to be 3000 amps, 277/480 volt, 3 <math>\phi</math>, 4W. It was also observed that this building have a non-operation back-up generator. Lighting in this building were observed to be fluorescent type. It was observed that motion sensors were used for lighting control. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. Etc.) and other applicable codes, for this building.</p>	
<b>FIRE SPRINKLERS/ FIRE ALARM</b>	<p>This building was observed to have smoke/heat detectors but don't have Emergency Voice/Alarm Communication System (EV/ACS).</p>	





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# BUILDING 25 - INTERNATIONAL COUNSELING



## BUILDING INFORMATION

Constructed	1941
Last Renovation	1982
Building Size	1,400 SF
Number of Stories	1
Construction Type	
Primary Use	
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish

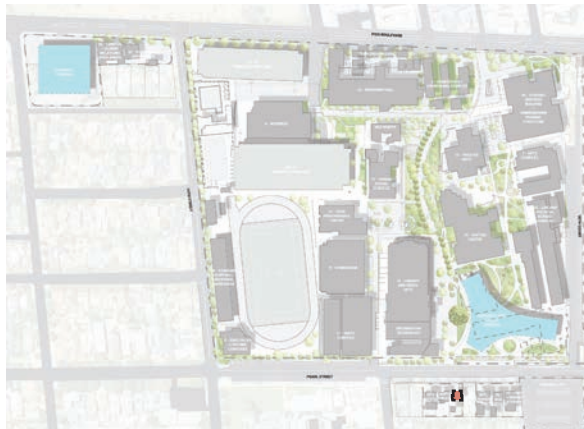
Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>This residential building was converted for office use. The house is wood framing with wood doors, frames, and single pane windows. Interior walls are painted drywall. A concrete ramp leads up to the house as well as wood stairs. This unit is old and currently not fully utilized. Site is overgrown with plants which raises safety issues. There are not enough space for cars or visitors. There are no electrical charging stations for electrical police cars. No room for police emergency mobile trailer, which is currently parked at the Bundy campus.</p>	
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017. "The building uses a concrete perimeter foundation with post and beam wood construction. The roof is composition 3 tab asphalt roof of 1996 vintage,per staff. " Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>Residential space converted for commercial use. The split 3-ton air conditioning system has exceeded useful service life and shall be replaced with the energy efficient equipment. Duct cleaning will help to improve the indoor air quality.</p>	<p>Revise the HVAC system to deliver the code required minimum amount of outside air during the occupied building hours. Provide building connection to the campus BMS for monitoring.</p>
<b>PLUMBING</b>	<p>The lavatories and water closets are in average condition. No regent repairs need.</p>	<p>If hot water is desired for the kitchen sink, provide insta hot water heater. No other work needed.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>We observed this building or structure to be within residential zone. Electrical distribution equipment was observed to be per original construction. We found electrical service equipment to be in fair condition. Service for this building was observed to be 200 amps, 120/240 volt, 1 ø, 3W. Lighting in this building were observed to be fluorescent type. We observed absence of motion sensors for lighting control within rooms and hallways. We also observed the absence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. Etc.) and other applicable codes, for this building. We also recommending updating fire life safety system for compliance to latest code.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or10Gbps switches.</p>



# BUILDING 26 - OUTREACH



## BUILDING INFORMATION

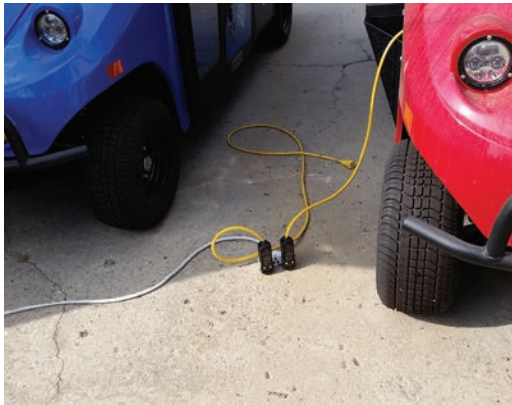
Constructed	1941
Last Renovation	1982
Building Size	1,600 SF
Number of Stories	1
Construction Type	
Primary Use	
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish

Description

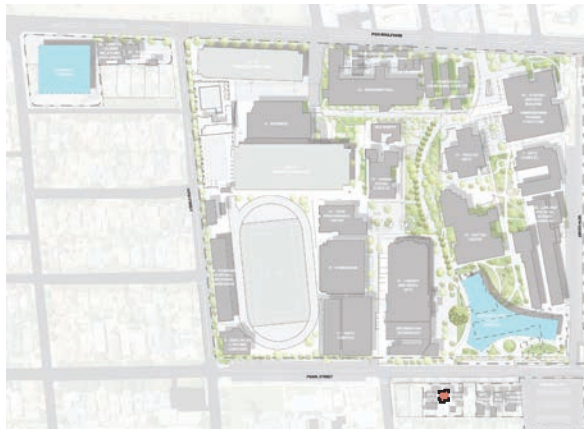
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>This residential unit is reconfigured to be used as office space. The unit is wood framing, with wood doors, frames, and single pane aluminum windows.</p> <p>The building is currently vacant. The structure is old and has an old odor. Interiors are not in good condition with old finishes and carpet. A concrete ramp leads up to the house as well as wood stairs. Hallways are narrow, and lighting is dim. The bathroom is used as storage space.</p>	
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.</p> <p>“The building has a concrete perimeter foundation using post and beam wood construction. The roof is composition 3 tab asphalt roof of 2011 vintage, per staff.”</p> <p>Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>Residential space converted for commercial use. The split 3-ton air conditioning system has exceeded useful service life and shall be replaced with the energy efficient equipment. Duct cleaning will help to improve the indoor air quality.</p>	<p>Revise the HVAC system to deliver the code required minimum amount of outside air during the occupied building hours. Provide building connection to the campus BMS for monitoring.</p>
<b>PLUMBING</b>	<p>The lavatories and water closets are in average condition. No regent repairs need. Kitchen sink does not provide hot water. If water heater exist, should be reviewed and replace if not in good condition. Other option, provide point of use heater.</p>	

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>We observed this building or structure to be within residential zone. Electrical distribution equipment was observed to be per original construction. We found electrical service equipment to be in fair condition. Service for this building was observed to be 200 amps, 120/240 volt, 1 ø, 3W. Lighting in this building were observed to be fluorescent type. We observed absence of motion sensors for lighting control within rooms and hallways. We also observed the absence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. Etc.) and other applicable codes, for this building. We also recommending updating fire life safety system for compliance to latest code.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or10Gbps switches.</p>





# BUILDING 27 - CAMPUS POLICE



## BUILDING INFORMATION

Constructed	1941
Last Renovation	1992
Building Size	2,000 SF
Number of Stories	1
Construction Type	
Primary Use	
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish

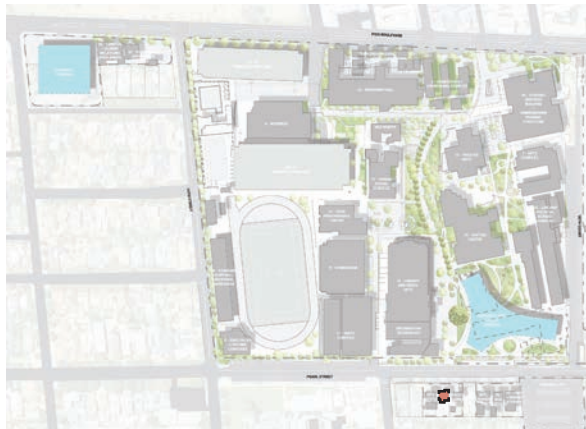
Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>This residential type home was built in 1941 and has not been remodeled since. The house is typical wood frame with wood doors, painted drywalls, and aluminum single pane windows. Floor finishes are carpet. This unit is very old and in terrible conditions. The building has strong odor. Lighting is dim. There is no A/C. Hallways are narrow. There is no room for finger printing. The building does not fulfill student learning opportunity purposes.</p>	
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.          “The building structure is cast in place concrete with steel structure and exterior finishes of brick, stucco, and metal cladding. The roof is a single ply rolled rubberized roof system that is original to construction.”          Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>Residential space converted for commercial use. The split 3-ton air conditioning system has exceeded useful service life and shall be replaced with the energy efficient equipment. Duct cleaning will help to improve the indoor air quality.</p>	<p>Revise the HVAC system to deliver the code required minimum amount of outside air during the occupied building hours. Provide building connection to the campus BMS for monitoring.</p>
<b>PLUMBING</b>		

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>We observed this building or structure to be within residential zone. Electrical distribution equipment was observed to be per original construction. We found electrical service equipment to be in fair condition. Service for this building was observed to be 200 amps, 120/240 volt, 1 ø, 3W. Lighting in this building were observed to be fluorescent type. We observed absence of motion sensors for lighting control within rooms and hallways. We also observed the absence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors, etc.) and other applicable codes, for this building. We also recommending updating fire life safety system for compliance to latest code.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or10Gbps switches.</p>



# BUILDING 28 - CAMPUS POLICE ANNEX



## BUILDING INFORMATION

Constructed	1941
Last Renovation	1992
Building Size	2,000 SF
Number of Stories	1
Construction Type	
Primary Use	
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish

Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>This residential type home was built in 1941 and has not been remodeled since. The house is typical wood frame with wood doors, painted drywalls, and aluminum single pane windows. Floors are carpet finish. The unit is in very poor condition. It is termite infested and termite damage can be seen in ceilings. At the modular building in the back, walls show termite damage. Walls do not support TVs. Walls are broken. Floors are broken. Space is packed with old furniture and not flexible. There is not enough room for staff. There is strong odor in both the house and the modular unit. Doors don not have electronic card readers. Locker rooms are small. Ceiling leaks inside locker rooms resulting in puddling on the floor. There is holes in women's bathroom. Bathrooms are not accessible. Door is difficult to close. Hot water does not work. There is no proper storage room for guns, bullets, etc. There is not enough room for all staff to gather for training or meetings. There is no flow inside the residential unit. Poor acoustical for confidentiality purposes. There is no room for bike storage and parking. Not enough room for parking. No power for electric vehicles or charging tools.</p>	

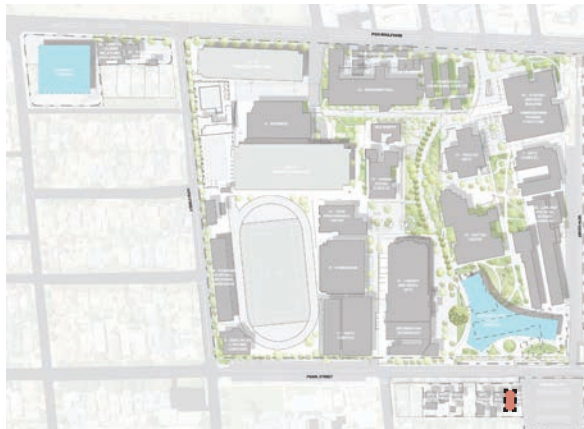
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.          “The house uses a concrete perimeter foundation with post and beam wood construction. The house is wood framed with a stucco finish. The roof is composition 3 tab asphalt roof of 1996 vintage, per staff. The modular building is mounted on a concrete perimeter foundation. The building has T-111 siding and a standing seam metal roof original to construction. Both are accessed by wood/concrete steps.”          Further assessment requires more in-depth investigation.</p>	
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SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>MECHANICAL</b>	Residential space converted for commercial use. The split 3-ton air conditioning system has exceeded useful service life and shall be replaced with the energy efficient equipment. Duct cleaning will help to improve the indoor air quality.	Revise the HVAC system to deliver the code required minimum amount of outside air during the occupied building hours. Provide building connection to the campus BMS for monitoring.
<b>PLUMBING</b>	The 2 kitchen sink do not have hot water and they should also be replaced. Urinal appear in good condition. The lavatories and water closet work but mixed individual conditions. (1) water closet did not have a working sensor and should be replaced. Others on a case by case basis	Replace 2 kitchen sink and provide hot water. Inspect each water closet and replace if not functioning. Not all water closet need replacing so each one needs to be inspected.
<b>ELECTRICAL</b>	We observed this building or structure to be within residential zone. Electrical distribution equipment was observed to be per original construction. We found electrical service equipment to be in fair condition. Service for this building was observed to be 200 amps, 120/240 volt, 1 ø, 3W. Lighting in this building were observed to be fluorescent type. We observed absence of motion sensors for lighting control within rooms and hallways. We also observed the absence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. Etc.) and other applicable codes, for this building. We are also recommending to have minimum number of smoke detectors and pull station for code compliance.	It was observed that this building still utilizes Cat3 & Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or10Gbps switches.





# BUILDING 29 - ENVIRONMENTAL CENTER



## BUILDING INFORMATION

Constructed	1941
Last Renovation	2008
Building Size	1,400 SF
Number of Stories	1
Construction Type	
Primary Use	Academic
Overall Condition	Requires Moderate Investment
Long-Term Recommendation	Demolish

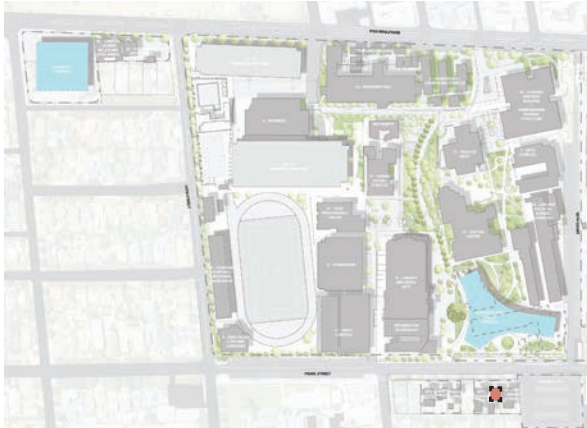
Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>This residential unit was renovated in 2008 to a center for environmental/sustainability design. It utilizes many sustainable practices. The building is generally in great shape, and systems put in place for sustainable purposes work well. The interior elements are in good condition. The unit as a whole requires low maintenance.</p>	
<b>STRUCTURE</b>		
<b>MECHANICAL</b>	<p>The space is very energy efficient due to the space using controls for heat removal. However, not taken into account is the code required minimum amount of fresh air not provided when the exterior doors are closed.</p>	<p>Revise the HVAC system to deliver the code required minimum amount of outside air during the occupied building hours. Provide exterior doors with end switch to close outside air damper when the doors are open for more than 2 minutes (adjustable). .Provide building connection to the campus BMS for monitoring.</p>
<b>PLUMBING</b>	<p>All fixtures are in great condition. No work need in this building</p>	<p>No work needed</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>We observed this building or structure to be within residential zone.</p> <p>We observed this building or structure had been recently remodeled approximately within 10 - 12 years. Electrical distribution equipment was observed to be per original construction. We found electrical service equipment to be in fair condition. Service for this building was observed to be 60 amps, 120/240 volt, 1 ø, 3W. Lighting in this building were observed recently updated with LED fixtures and 'SOLAR' Tubes to bring sunlight to interior spaces. We observed advance energy management controls for lighting and energy controls. We also observed the absence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We are also recommending having minimum number of smoke detectors and pull station for code compliance.</p>	



# BUILDING 30 - AUXILIARY SERVICES



## BUILDING INFORMATION

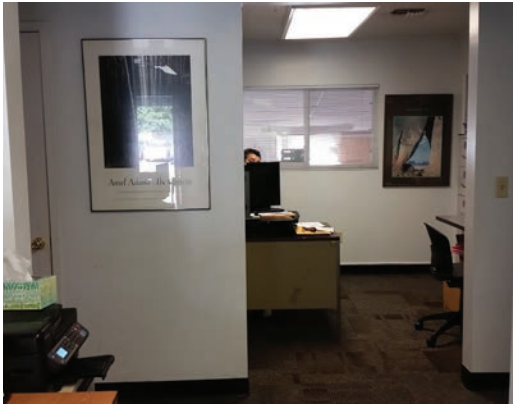
Constructed	1941
Last Renovation	2004
Building Size	1,890 SF
Number of Stories	1
Construction Type	
Primary Use	
Overall Condition	Needs Replacement
Long-Term Recommendation	Demolish

Description

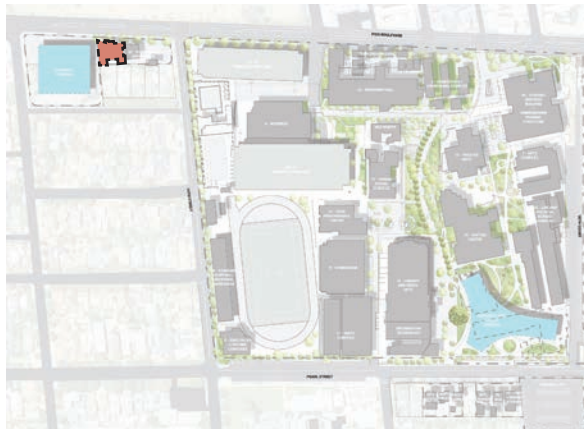
SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	This residential building was converted for office use. The house is wood framing with wood doors, frames, and dual pane windows. Interior walls are painted drywall. A concrete ramp leads up to the house as well as wood stairs. This unit is generally in stable condition.	
<b>STRUCTURE</b>	Structural Assessment noted here is data reported on Fusion, 2017. "The building uses a concrete perimeter foundation with post and beam wood construction. The roof is composition 3 tab asphalt roof of unknown vintage, per staff. " Further assessment requires more in-depth investigation.	
<b>MECHANICAL</b>	Residential space converted for commercial use. The split 3-ton air conditioning system has exceeded useful service life and shall be replaced with the energy efficient equipment. Duct cleaning will help to improve the indoor air quality.	Revise the HVAC system to deliver the code required minimum amount of outside air during the occupied building hours. Provide building connection to the campus BMS for monitoring.
<b>PLUMBING</b>	Lavatories and water closet area in good condition and need no replacement. Water heater should be considered for replacement and. Kitchen sink is acceptable but not great.	Consider replacing water heater and kitchen sink.

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>We observed this building or structure to be within residential zone. Electrical distribution equipment was observed to be per original construction. We found electrical service equipment to be in fair condition. Service for this building was observed to be 200 amps, 120/240 volt, 1 ø, 3W. Lighting in this building were observed to be fluorescent type. We observed absence of motion sensors for lighting control within rooms and hallways. We also observed the absence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. etc.) and other applicable codes, for this building. We are also recommending to have minimum number of smoke detectors and pull station for code compliance.</p>	<p>It was observed that this building still utilizes Cat3 &amp; Cat5 cabling for information technology. It was also found that this building still have 10/100 Mbps switches. We recommend to provide new Cat6A cabling and to provide new 1Gbps or10Gbps switches.</p>





# BUILDING 32 - CAMPUS AND ALUMNI RELATIONS



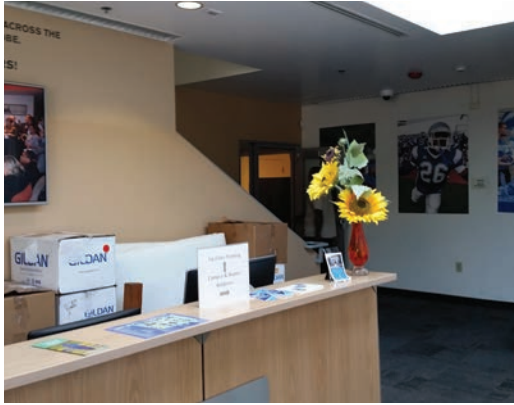
## BUILDING INFORMATION

Constructed	1991
Last Renovation	
Building Size	2,825 SF
Number of Stories	2
Construction Type	
Primary Use	Administration
Overall Condition	Requires Moderate Investment
Long-Term Recommendation	Demolish

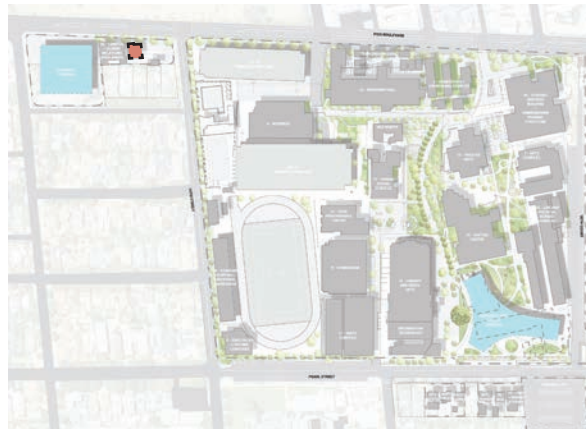
Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>The foundation is a 2 story building that sits over ground level parking. Exterior walls are concrete and store front system. Exterior doors and windows are aluminum framed. Interior walls are painted drywall. Ceilings are acoustical tiles. The building is generally in good condition. There is some ceiling damage on level 1 conference room. Main space on second floor is open and bright. There is open layout and great visual access throughout the room.</p>	
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017. "The building rest on a concrete side walls using cast in place concrete/CMU walls with metal framing" Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>The building is served by several RTUs and it appears the comfort level is well maintained. No issues with the HVAC except for not easy roof access.</p>	No work needed
<b>PLUMBING</b>	<p>Lavatories and water closet area in good condition and need no replacement. Hot water delivery is acceptable with no issues.</p>	No work needed

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>We observed this building or structure had been recently remodeled approximately within 10 - 12 years. Electrical distribution equipment was observed to be in good condition. Service for this building was observed to be 400 amps, 120/208 volt, 3 ø, 4W. Lighting in this building were observed to be using fluorescent type luminaries. We observed advance energy management controls for lighting and energy controls. We also observed presence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. etc.) and other applicable codes, for this building.</p>	



# BUILDING 33 - FOUNDATION



## BUILDING INFORMATION

Constructed 2002

Last Renovation

Building Size 14,970 SF

Number of Stories 2

Construction Type

Primary Use Administration

Overall Condition Requires Substantial Investment

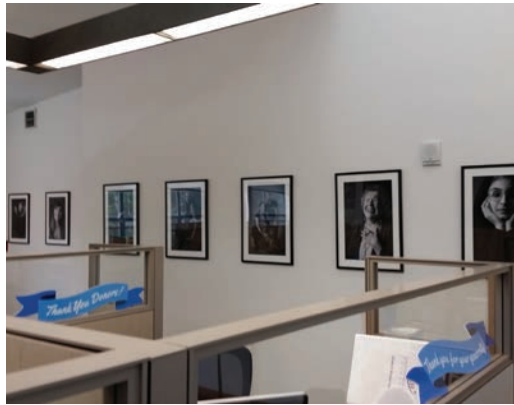
Long-Term Recommendation Demolish

Description

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ARCHITECTURE/ INTERIORS</b>	<p>This building is a 2 story building that sits on top of an underground parking. Exterior walls are concrete and store front system. Doors and windows are aluminum frame. Interior doors are metal in metal frame. Interior walls are painted drywall. Ceilings are acoustic tiles. In general the building is in good condition. 2 major sewage leaks took place in the last 5 years. Floor and wall damages have been fixed since.</p>	
<b>STRUCTURE</b>	<p>Structural Assessment noted here is data reported on Fusion, 2017.          “The building rest on a concrete slab on and below grade using cast in place concrete walls.”          Further assessment requires more in-depth investigation.</p>	
<b>MECHANICAL</b>	<p>The HVAC systems are well maintained and are in good operating condition. Each floor is served by a dedicated single zone rooftop packaged unit. There is only one thermostat on each floor that may cause poor comfort in other areas of the floor experiencing different cooling peak time. No issues with the HVAC except for not easy roof access.</p>	<p>We recommend the system retrofit with the Variable Volume/Viable Temperature system (VVT). It will allow better temperature control on the individual floors.</p>
<b>PLUMBING</b>	<p>Lavatories and water closet area in good condition and need no replacement. Hot water delivery is acceptable with no issues.</p>	<p>No work needed.</p>

SYSTEM	COMMENTS (CONDITION)	SHORT-TERM RECOMMENDATIONS
<b>ELECTRICAL</b>	<p>We observed this building or structure had been recently remodeled approximately within 10 - 12 years. Electrical distribution equipment was observed to be in good condition. Service for this building was observed to be 600 amps, 120/208 volt, 3 ø, 4W. Lighting in this building were observed to be using fluorescent type luminaries. We observed energy management controls for lighting and energy controls. We also observed presence of fire life safety devices such as smoke detectors, and fire alarm pull stations. We recommend upgrading the light fixtures to more efficient LED type and providing a new lighting control system compliant with the California Title 24 energy code (which would require additional lighting control devices such as dimmers, daylight harvesting sensors. etc.) and other applicable codes, for this building.</p>	







# GLOSSARY

TERM	DEFINITION
<b>ADA</b>	Americans with Disability Act - a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the general public.
<b>AMP</b>	Short for ampere, is a unit of electrical current which the International Systems of Units defines in terms of other base units by measuring the electromagnetic force between electrical conductors carrying electric current.
<b>BMS</b>	A Building Management System (BMS) is a computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipments such as ventilation, lighting, power systems, fire systems, and security systems.
<b>BTU</b>	British thermal unit (BTU), a measure of the quantity of heat, defined since 1956 as approximately equal to 1,055 joules, or 252 gram calories. It was defined formerly as the amount of heat required to raise the temperature of one pound of water 1° F.
<b>CALIFORNIA TITLE 24 ENERGY CODE</b>	Building Energy Efficiency Standards, designed to reduce wasteful and unnecessary energy consumption in newly constructed and existing buildings. The California Energy Commission updates the Building Energy Efficiency Standards every three years.
<b>CAT3</b>	Category 3 cable, commonly known as Cat 3 or station wire, and less commonly known as VG or voice-grade (as, for example, in 100BaseVG), is an unshielded twisted pair (UTP) cable used in telephone wiring. It is part of a family of standards defined jointly by the Electronic Industries Alliance (EIA) and the Telecommunications Industry Association (TIA) and published in TIA/EIA-568-B.

TERM	DEFINITION
<b>CAT5 (AND CAT5E)</b>	<p>Category 5 cable (Cat 5 and since 2001, Cat5e) is a twisted pair cable for computer networks. The cable standard provides performance of up to 100 MHz and is suitable for most varieties of Ethernet over twisted pair up to 1000BASE-T (Gigabit Ethernet). Cat 5 is also used to carry other signals such as telephony and video.</p> <p>This cable is commonly connected using punch-down blocks and modular connectors. Most Category 5 cables are unshielded, relying on the balanced line twisted pair design and differential signaling for noise rejection.</p>
<b>CAT6 (AND CAT6A)</b>	<p>Category 6 cable (Cat 6), is a standardized twisted pair cable for Ethernet and other network physical layers that is backward compatible with the Category 5/5e and Category 3 cable standards.</p> <p>Cat 6 has to meet more stringent specifications for crosstalk and system noise than Cat 5 and Cat 5e. The cable standard specifies performance of up to 250 MHz, compared to 100 MHz for Cat 5 and Cat 5e.[1]</p> <p>Whereas Category 6 cable has a reduced maximum length of 55 metres (180 ft) when used for 10GBASE-T, Category 6A cable is characterized to 500 MHz and has improved alien crosstalk characteristics, allowing 10GBASE-T to be run for the same 100-metre (330 ft) maximum distance as previous Ethernet variants.</p>
<b>CFM</b>	Cubic feet per minute. It describes a volumetric flow of a substance. In the case of a blower or fan, it indicates how much air it can move per minute.
<b>DX</b>	Direct expansion.
<b>FIT TO PROGRAM</b>	
<b>GBPS</b>	Gigabits per second.
<b>KVA</b>	Kilo Volt Ampere - simply 1,000 volt amperes.

TERM	DEFINITION
<b>MBPS</b>	Megabits per second. Bits are tiny units of data, with a megabit representing a million of them.
<b>P-TRAPS</b>	Plumbing fixtures that connect to the drainage system and holds water to create a liquid barrier between the drainage system and indoor spaces.
<b>T24 ENERGY EFFICIENT STANDARDS</b>	California T24 Compliant Lighting from Maxim Lighting. Since 1978, all new homes, additions and alterations to existing homes, and most commercial buildings within California are required to meet the minimum energy efficiency standards contained in Title 24, Part 6 of the California Code of Regulations.
<b>VOLTS</b>	Unit of electrical potential, potential difference and electromotive force in the metre-kilogram-second system (SI); it is equal to the difference in potential between two points in a conductor carrying one ampere current when the power dissipated between the points is one watt.





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