



PERALTA COMMUNITY COLLEGE DISTRICT

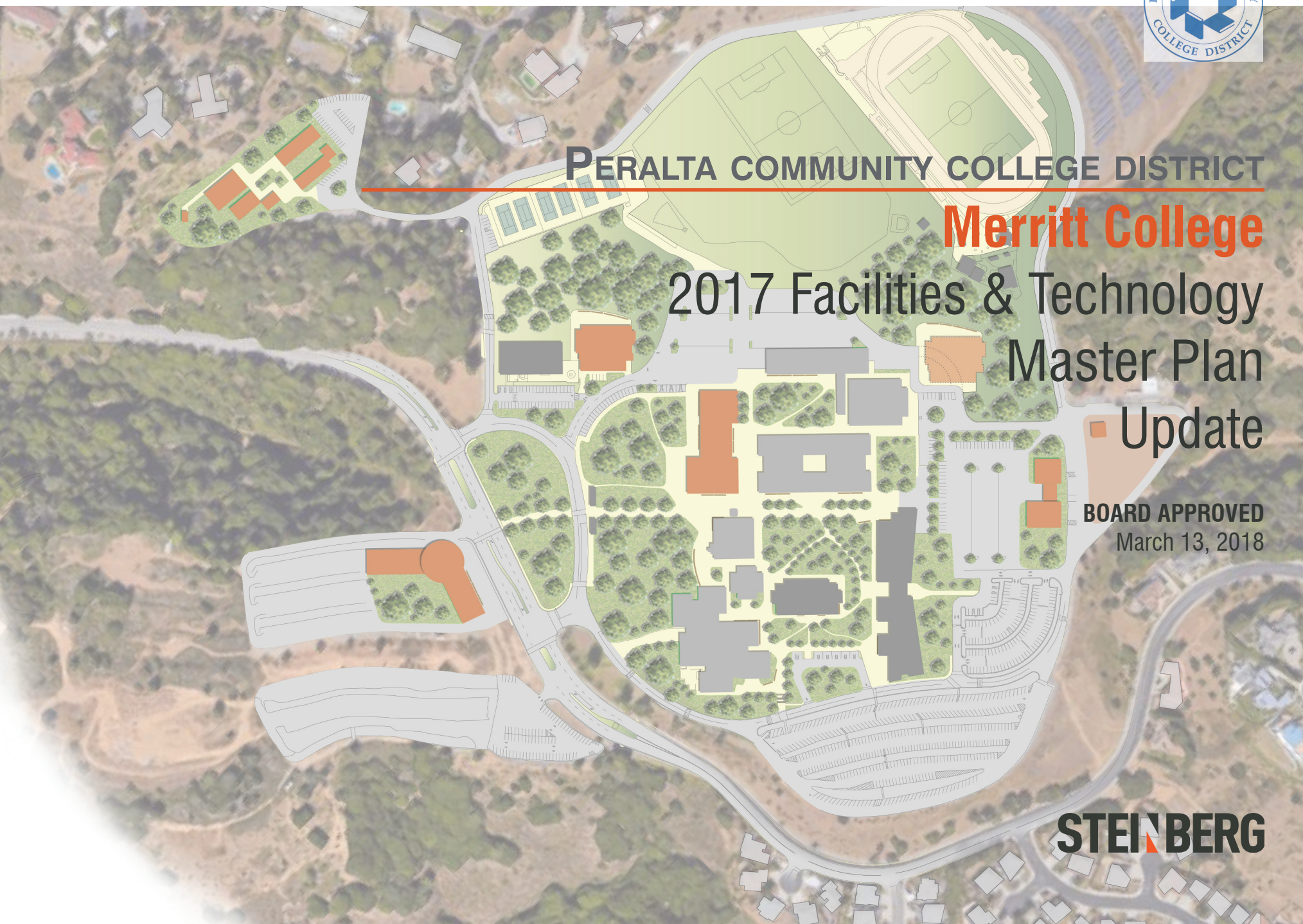
Merritt College

**2017 Facilities & Technology
Master Plan**

Update

**BOARD APPROVED
March 13, 2018**

STEINBERG



ACKNOWLEDGMENTS

The District and the Board of Trustees would like to thank all the participants. These include all the participants from the surveys, campus workshops, interviews, and campus shared governance committees. A special thank you to the Facilities Planning Committee and College President who provided the necessary leadership and outreach in gaining consensus and approvals of the plan.

MASTER PLAN TEAM



Facilities Master Plan Architect



Technology Master Planner



Infrastructure Master Planner



Mechanical, Electrical, Plumbing



Preliminary Costing



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A NOTE FROM THE PRESIDENT

As the College plans for its future, we reviewed our Educational Master Plan and developed the 2017 Facilities and Technology Master Plan Update, an extension of our planning. The plan was developed through a shared governance process, and I would like to thank all of the faculty, staff and administrators who participated in the process.

Given the age of Merritt College buildings, renovations and upgrades to technology and the physical infrastructure are necessary to ensure the health and safety of our students, faculty, and staff. The upgrades are vital to the College's ability to provide state of the art facilities that prepare our students for constantly evolving job market. In addition to renovations, it is also necessary to demolish a multidisciplinary building and construct a replacement. Enhanced facilities are inviting to our students, the community, business and industry partners, and our faculty and staff. Improved facilities cause students to feel valued and increase retention and persistence.

Our Facilities and Technology Master Plan supports the Merritt College mission, vision and core values as detailed in our Educational Master Plan and our motto, "We Change Lives!" It is a roadmap that guides how the College should develop its facilities and technology infrastructure to support the goals of the Education Master Plan and the needs of the community.

Sincerely,
Dr. Marie-Elaine Burns
President



Executive Summary

OVERVIEW

Merritt College (Merritt) is one of four colleges in the Peralta Community College District, located at 12500 Campus Drive, Oakland, California, in the Oakland Hills. It is bordered by topographic bluffs on two sides and the Campus Drive roadway. The College also has an off-site shared facility at 860 Atlantic that houses the College's Medical Genomics program.

As an update to the 2009 Facilities Master Plan, the purpose of this Facilities Technology Master Plan Update (FTMP) is to analyze existing facilities and technology, and outline development goals that align with the current and future needs of Merritt College, as identified in the College's 2016 Educational Master Plan.

To fully understand Merritt College's needs and issues, A large and diverse set of stakeholders - students, faculty, staff and facilities personnel - participated in the Facilities & Technology Master Plan process through Online surveys, workshop discussions, meetings, campus forums, and presentations. The results of this extensive, investigative, and collaborative planning process are documented here, as follows:

Chapter One documents the FTMP purpose, process, vision, mission, and Merritt's Educational Master Plan Goals. **Chapter Two** documents the existing conditions analysis, stakeholder feedback, and summarizes the facilities needs. **Chapter Three** documents the opportunities and constraints, the Facilities Master Plan, the complete Master Plan projects, and Priority projects.

The 2017 District-Wide Facilities and Technology Master Plan (*available under separate cover*) documents the Technology needs and projects (Technology Master Plan), the preliminary cost estimates (Cost Information), and the proposed Implementation Plan.

An **Appendix** (*available under separate cover*) documents back up materials from the Merritt College process.

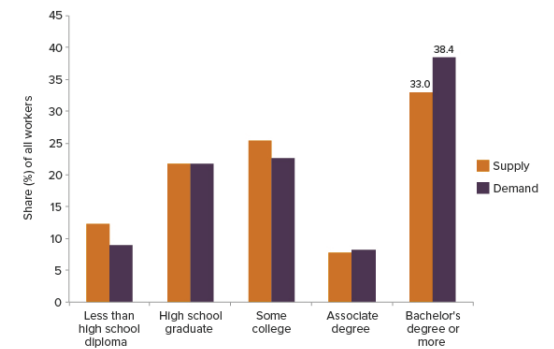
KEY DRIVERS FOR THE FTMP

The key drivers for the FTMP Update are:

- The needs arising out of the 2016 Educational Master Plan (EMP);
- In particular the need to increase student success, retention, transfer and completion;
- Also from the EMP, the needs arising out of 21st Century changing teaching and learning pedagogies;
- And the need to increase recruitment, and retention, of faculty since 50% of PCCD faculty and staff are within retirement age;
- The needs arising out of the existing condition of facilities and infrastructure at Merritt College;
- The needs arising out of the existing condition of technology; and
- Lack of Library and Office space capacity for *current* demand.

KEY FINDINGS FROM 2016 EMPS

The 2016 Educational Master Plans' main focus/goal is to **augment and further strengthen programs and services for student success** in alignment with State Student Success Act (SB 1456). This is also the top strategic goal for the District, as identified in the 2015 PCCD Strategic Plan, and reflects the concern that by 2030, California will be short by 1.1 million college graduates if current trends persist (according to the Public Policy Institute of California (PPIC) Higher Education Center).



Source: Johnson, Cueller Mejia, and Bohn, *Will California Run Out of College Graduates?* (PPIC 2015)

The 2016 EMPS identify a 1.1% per year college area population growth rate, and a decline in students less than 25 years old, which means that for the **next five years the College is growth neutral**.

However, growth in the 24 - 34 age group offer opportunities for the PCCD colleges to enhance and re-design **existing career technical education (CTE) programs and complementary CTE programming** to cater to this population segment's needs for professional growth and career changes.

Other program enhancements/re-designs are needed to address the PCCD 2016 EMP **Labor Market Gap Analysis Report**, which identifies gaps between district's educational programs and high-wage/high-skill jobs available in the region.

There is also a need to develop **non-credit to credit pathways for 16% of the adult population** that is in need of career

KEY FINDINGS FROM EXISTING CONDITIONS

The existing conditions analysis process identified that the **existing facilities, technology and infrastructure are unable to support the 2016 Educational Master Plan goals** due to:

- There is no need to increase capacity in the classrooms, and class labs space categories, BUT classrooms and class labs are outdated and cannot support the 21st century instruction and learning necessary for student success, retention, transfer and completion;
- There is a need to increase library and office space capacity;
- Aging facilities with failing systems requiring repair or replacement, like electrical and air-conditioning;
- Significant number of instructional and student spaces located in buildings past their useful life;
- Student services impaired by dispersed locations and inadequate space to accommodate functions;
- Science programs located off-campus creating obstacles to student success and retention; and
- Underground infrastructure in poor condition.

*Per the Chancellor's FUSION
Facilities Condition Index
(FCI) ratings,*

82%

of buildings at Merritt require renovation or replacement.

FACILITIES TECHNOLOGY MASTER PLAN DEVELOPMENT

Based on the 2016 Education Master Plan, Institutional Goals, and Facilities Assessments, campus stakeholders identified the following as their key priorities for the 2017 Facilities and Technology Master Plan:

- Replace/repair and address all infrastructure issues
- Address Safety, Security, and Emergency Evacuation from Campus
- Reconfigure, renovate and relocate instructional spaces as necessary to meet 21st Century Teaching Pedagogies
- Address Student Services needs for Counseling, Career Center, Veterans Center, Immigration Resource Center, Health Services, etc.
- Address long identified needs for Child Development Center and Horticulture Complex
- Enhance resources/connections with the Community

These priorities helped guide the development of the master plan, as did all data gathered and analyzed. The 2017 Facilities and Technology Master Plan Update recommends demolitions, new construction, modernizations, technology projects, as well as infrastructure and site improvement projects. The majority of these projects were identified in the previous master plan, although some of the details for them may be different in this FTMP update. A graphic depiction of the 2017 Facilities Master Plan (showing all projects) may be found on page 31. On the right you will find the Priority Projects list, and its corresponding graphic Master Plan on the following page.

SUSTAINABILITY AND RESILIENCY

Both Peralta CCD and Merritt College are deeply committed to sustainability and total cost of ownership. To that effect, Peralta CCD has created a **2017 Sustainability and Resiliency Master Plan (SRMP)** that will guide the execution of all future facilities and infrastructure projects, to achieve District Sustainability and Resiliency Goals. All FTMP projects, from infrastructure replacement, site improvements, demolitions, renovations, and new construction will need to be developed utilizing the guidelines and recommendations within the SRMP.

FTMP PRIORITY PROJECTS

The campus stakeholders prioritized Facilities Projects as listed below and shown on the opposite page:

	INFRASTRUCTURE
M1	Replace All Campus Major Electrical Equipment
M2	Civil Infrastructure Replacements
	FACILITIES*
M3	Replacement Building A
M4	Renovate Building D
M5	Renovate Building E and F
M9A	Combined Child Care Center & Child Development Center
M10	Horticulture Complex Replacement
M11	Kinesiology Physical Fitness Addition
M12	Site Improvement Projects
M15	Renovate Partial Building R
	TECHNOLOGY
M13	Main Campus Complete Wi-Fi Deployment
M14	Main Campus Complete Network Upgrade Project

* Bolded Projects are depicted on the Master Plan

FTMP PROJECT COSTS AND IMPLEMENTATION

Please see District-Wide FTMP for complete details.

2017 Facilities Master Plan Priority Projects



1.0 Introduction

PURPOSE

The purpose of the Merritt College 2017 Facilities and Technology Master Plan Update (FTMP) is to update the previous Campus Facilities Master Plan (FMP) for:

- Alignment with the 2016 Educational Master Plan
- Alignment with the District Strategic Goals
- Changes experienced by the College since the last facilities master plan was developed
- Identify and integrate Infrastructure needs
- Identify and integrate Technology needs
- Prioritize projects for a first phase of implementation

THIS 2017 FTMP AND PREVIOUS FMPS

The 2017 Facilities and Technology Master Plan Update works in conjunction with the Merritt College 2009 Facilities Master Plan in that aspects not covered in this update are still applicable.

The 2017 FTMP Update does supersede the previous FMP in the following aspects:

- Master plan projects defined here supersede previous master plan projects
- The infrastructure and building assessments from 2009 and the State provided FUSION 2016 assessments were re-analyzed, so the assessments ranking provided here supersedes previous rankings
- Space Capacity analysis is based on 2016 data, and therefore supersedes previous space capacity data

PROCESS

The 2017 FTMP process was a shared governance process led by Steinberg from March 2017 through December 2017. The process included Online surveys to reach a diversity of stakeholders, meetings with Facilities Planning Committees and Technology Committees, and multiple campus forums open to students, staff, faculty and administration.

MISSION

The mission of Merritt College is to enhance the quality of life in the communities we serve by helping students to attain knowledge, master skills, and develop the appreciation, attitudes and values needed to succeed and participate responsibly in a democratic society and a global economy.

VISION

Merritt inspires students to create meaningful lives including fulfilling careers, community participation, self-expression, and a love of learning.

2016 EDUCATIONAL MASTER PLAN GOALS

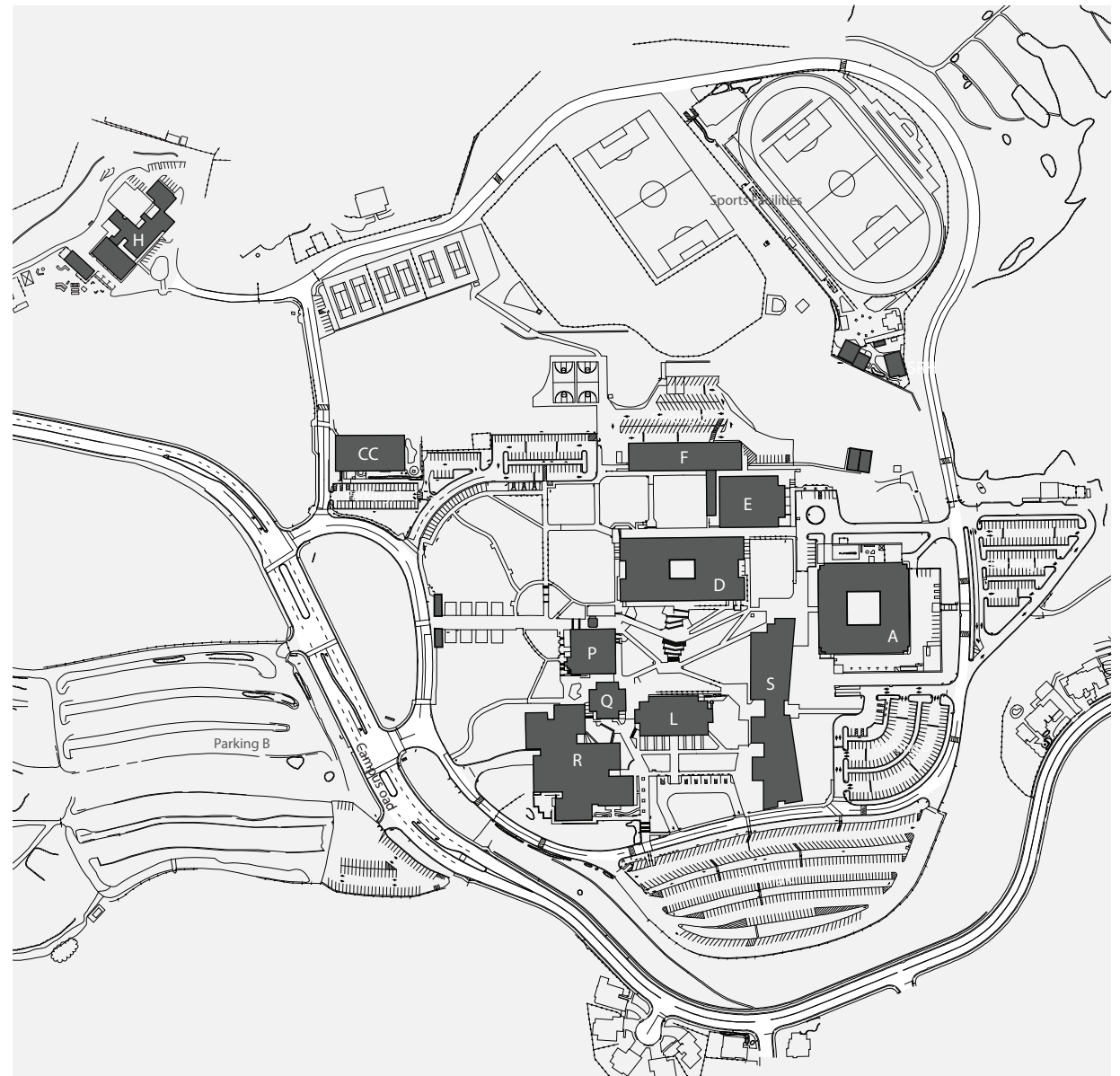
- **Goal One:** create an environment of exceptional student access, equity and success.
- **Goal Two:** engage our community through respectful dialogue to create partnerships and opportunities for our students.
- **Goal Three:** create and implement effective innovative programs that meet the diverse needs of our community.
- **Goal Four:** through collegiate governance, support institutional communication, innovation and interdisciplinary collaboration.
- **Goal Five:** develop human, fiscal and technological resources to advance and sustain our mission.

2.0 Data Analysis & Needs

PROCESS

There are three types of information required to make informed decisions on master planning and future facilities improvements: reliable data, first hand feedback from the users of the facilities, and industry established trends in the delivery of education. To that effect, this first phase involved three concurrent efforts which informed one another: space capacity analysis, campus condition analysis, and a multi-faceted approach for gathering stakeholder feedback. The process and outcomes of these three efforts are documented in the following pages.

Figure 2.1: Existing Campus Site Plan



CAPACITY LOAD ANALYSIS

What Does the State Monitor?

Although there are a variety of spaces on a college campus, the State has established sizing¹ criteria and capacity² calculations for only six categories of spaces. These criteria are described in the Title 5 California Code of Regulations³ (often abbreviated to just Title 5).

The Title 5 six categories are:

- **Classrooms** (the State gives these spaces Room Use codes in the 100s)
- **Class Laboratories** (Room Use codes in the 200s)
- **Office** (Room Use codes in the 300s)
- **Library** (Room Use codes in the 400s)
- **Audiovisual/Television**, known as AV/TV (Room Use code 530 and 535 only)
- **Child Development Centers**

Five of the categories have criteria that is tied to student enrollment and quantity of faculty and staff, and is monitored annually by the State. The sixth category, Child Development Centers requires program approval by the State, and the approval stipulates the criteria for the size and capacity of the Child Development Center.

- 1 Sizing refers to the total amount of ASF that the College can have of that type of space category. ASF stands for Assignable Square Feet, and it is the square footage of a space (or room) for assignment to occupants for a specific functional purpose. It includes the circulation space within the room but not the walls, in other words the clear inside dimensions of the room/space.
- 2 Capacity refers to the how many students the room can accommodate for Classrooms, Class Laboratories, Library and AV/TV, and how many Faculty/Staff/Administrators and Counselors for Offices. The State uses different mechanisms to calculate these, some of which are discussed later in this Chapter.
- 3 The California Community College's Board of Governors is responsible for approving Title 5 regulations, and the California Community Colleges Chancellor's Office (CCCCO) is responsible for implementation and compliance.

CAPACITY LOAD ANALYSIS

How Does the College Fare?

Based on the State Title 5 Criteria, the State's projected student enrollments for Merritt College, and the College's faculty and staff forecasting, Merritt College is overbuilt by a total of 22,102 ASF¹ in 2023. Given the length of time facilities projects take, a District always needs to be looking at the required campus capacities five - six years from now.

Per the projected enrollment and forecasting, the 2023 space needs shows:

- Overbuilt in Lecture Classrooms (abbr. Classrooms)
- Overbuilt in Class Laboratories (abbr. Class Lab)
- On target with Offices
- Under-built in Library spaces
- Significantly under in Audiovisual/TV (abbr. AV/TV)

Note, the State is concerned with District totals, not the individual campus totals, which leaves some discretion for the District to offset overages and/or allocate missing capacity according to the campus location where it is most needed.

Figure 2.2: Capacity Load Analysis

MERRITT	Lecture ASF	Lab ASF	Office ASF	Library ASF	AV/TV ASF
EXISTING ASF	41,651	62,603	29,406	21,289	1,141
Fall 2017 NEEDED ASF	16,744	43,335	27,580	24,471	7,292
ASF Difference	24,907	19,268	1,826	-3,182	-6,151
Percentage Difference	249%	144%	107%	87%	16%
Fall 2023 NEEDED ASF	20,431	53,650	31,360	26,198	7,444
2023 ASF Difference	21,220	8,953	-1,954	-4,909	-6,303
2023 Percentage Difference	204%	117%	94%	81%	15%

CAPACITY LOAD ANALYSIS

Considerations Regarding the State Data

It is important to understand that the State has not revised its Title 5 criteria regarding sizing and capacity for these five categories in over 40 years. In that time frame very significant changes have happened:

LECTURE CLASSROOMS

Lecture Classroom¹ sizing criteria provides a range of 11.5 to 25 ASF per student, however the State capacity computation is based on an average of 15 ASF/student. As such, the range results in fewer classrooms if a campus chooses to use anything above 15 ASF/student, which impacts the number of concurrent classes that can be held.

Realities the State Computation does not address:

- Current California Building Code requires a minimum of 20 ASF per student per classroom, anything below this is not complying with the Code.
- Standard tablet arm lecture spaces and tiered lecture spaces (that result in 15 ASF or less per student) are no longer the norm. Most programs require group work; many require flexibility to have students sit individually and grouped; others require some computers, or other equipment, within the room. The ability to accommodate these needs requires all classrooms to be in the 20 - 25 ASF per student range.
- ADA regulations apply, requiring larger aisles between rows of seating, in addition to seating areas large enough to accommodate wheelchairs.
- Regarding capacity, the State computations do not align with community college student enrollment patterns – they expect to see rooms occupied from 8 am till 10 pm Monday through Friday, yet majority of Community College students are part-time coming either in the mornings or evenings, and not in the afternoon.

Per State calculations Merritt College is over in lecture classrooms. **The expectation is that while there will be some reduction in total number of classrooms, new classrooms and many existing classrooms need to be reconfigured to address the multiple issues outlined above, and as such they will be sized larger.**

¹ Classroom is a space used for classes that do not require special purpose equipment for student use.

CLASS LABORATORIES

Class Laboratories¹ sizing criteria is based on the program, so as an example Mathematics (computer) labs get 35 ASF per student, Physics gets 60 ASF and Automotive Technology gets 200 ASF. Furthermore, the areas for the support spaces such as Physics prep and stock rooms, and Automotive tool rooms and painting booths, are calculated within the 60 ASF for Physics, and the 200 ASF for Automotive.

Changes in the last 40 years since criteria was developed:

- Most disciplines have more, and often larger, equipment both within the lab, and the support spaces.
- ADA regulations apply to class laboratories as well.
- Some programs need to conduct the lecture portion of their course within the lab itself, or in a dedicated room adjacent to the lab, due to equipment and materials required for the instructor's demonstration. This means that the class lab needs to not only accommodate one student per equipment item, but also an area within the room where all students can sit together around a whiteboard/projection screen and listen to the instructor's lecture. The State's sizing does not account such space.
- Many disciplines now have computer based instruction in addition to the traditional methods of teaching that program. Examples include Art, Photography, Music.
- Other disciplines were previously taught in lecture classrooms only, but now use computers periodically as well. Examples include Journalism, Mathematics, Foreign Languages etc.
- Regarding capacity, the State computations do not align with community college student enrollment patterns see last bullet under classrooms.

Per State calculations Merritt College is slightly over in class labs and, **the expectation is that there will be some net small increases due to resizing of replacement class labs to address the issues outlined above.**

¹ Class Laboratory is a space designed for and/or furnished with special purpose equipment (including computers for student use) to serve the needs of a particular discipline for group instruction in regularly scheduled classes.

OFFICE

Office category sizing criteria was based on a time when there were no computers, a significant amount of occupants were in cubicles, which in turn were not sized with disabled access requirements in mind (now a code requirement).

Changes in the last 40 years since criteria was developed:

- We have computers and more equipment to house (printers, copiers etc.) in offices.
- Most faculty and staff require private offices to maintain student confidentiality, due to State privacy regulations.
- Both cubicles and offices have to be larger to accommodate wheelchairs, per California Building Code ADA (American Disabilities Act) regulations.
- Faculty hiring has changed, with a movement away from predominantly full-time faculty to less full-time and more adjunct part-time faculty. While it is feasible for part-time faculty to share offices while they work on campus, the issue is when their office hours for students overlap. Aside from the noise issues with having two different sets of faculty and students talking in the same office, the more significant issue is that with the existing State criteria there is not enough space to accommodate the two different sets of faculty and students in the same space.
- There are far more counselors needed today (related to both student success and support programs and mental health specialists).

Merritt College is slightly under with office space, and **the expectation is that it will need to add some additional offices and meeting/support spaces to address the issues outlined above.**

CAPACITY LOAD ANALYSIS

Considerations Regarding the State Data

LIBRARY

Library category sizing criteria is based on traditional book libraries with no computers (one of the library sub categories was called “Carrels” and the State only revised the terminology to “Electronic Carrels”), and before tutoring and cohort groups came into existence.

Changes in the last 40 years since criteria was developed:

- Libraries are heavily computer based.
- There has been a dramatic increase in the need for tutoring services driven by State mandates focused on student success¹, basic skills and student equity.
- There has been a decline in student preparedness for College resulting in increased demand for basic skills and associated tutoring.
- There has also been an increased need to have decentralized study areas dedicated to particular cohort groups, located adjacent to the support services provided to that group (e.g. STEM Center, Veterans Center etc.). Studies have shown that doing so significantly increases the chances for student success.
- Changes in teaching pedagogy has also resulted in a sharp rise in group project assignments requiring more group study rooms for students to meet and complete these assignments while on campus (having no residential halls as an alternative place to meet).

Merritt College is under-built in library space and **the expectation is that it will add some library space.**

AV/TV - AUDIOVISUAL TELEVISION

AV/TV category sizing criteria is based on both Radio/TV teaching programs, and AV rooms that housed overhead projectors and TVs and VCRs on rolling carts.

Changes in the last 40 years since criteria was developed:

- Radio/TV programs are in decline and typically require smaller footprints due to digitalization and smaller equipment.
- Overhead projectors, TVs and VCRs have been replaced with ceiling mounted projectors within teaching spaces.

Given the above, it is not a surprise that Merritt College is significantly under in this category, and **the expectation is that it will not need to build any significant amount of space in this category.**

¹ Student Success is defined by how many students complete their college courses, persist to the next academic term, and achieve their educational objectives. The goal of the Student Success and Support Program & Student Equity Plan is to ensure that all students are able to achieve this through the assistance of student support programs offered by the College.

SPACE ANALYSIS

Teaching Pedagogies affecting Classrooms

There have been many changes in teaching pedagogies over the last several decades. Some of it is driven by technology (which continues to evolve at an ever-changing rapid pace) but, it is also driven by research into the ways students learn best. That research shows that students learn when they not only read, hear and see, but when they also experience and teach. The combination of these is often called “active learning” which is defined as “those instructional activities involving students in doing and thinking about what they are doing.”¹ The FTMP update Online survey respondents echo this research, with 69% of respondents saying they learn and teach best with a combination of lecture, small group and hands on activities.

The 2016 Educational Master Plan indicated the need for Merritt College’s facilities to accommodate both current and future teaching pedagogies. Although future teaching pedagogies and future technology can be hard to predict, one method of preparing for the future is to build flexible spaces. Luckily, active learning spaces that are needed now are all about flexibility: the ability to reconfigure the room for multiple different activities. To do this they require more space per student (20 - 26 ASF per student), more writable surfaces (that can double up as projectable surfaces), and furniture that can be versatile. Very few existing classrooms at Merritt College meet these requirements.

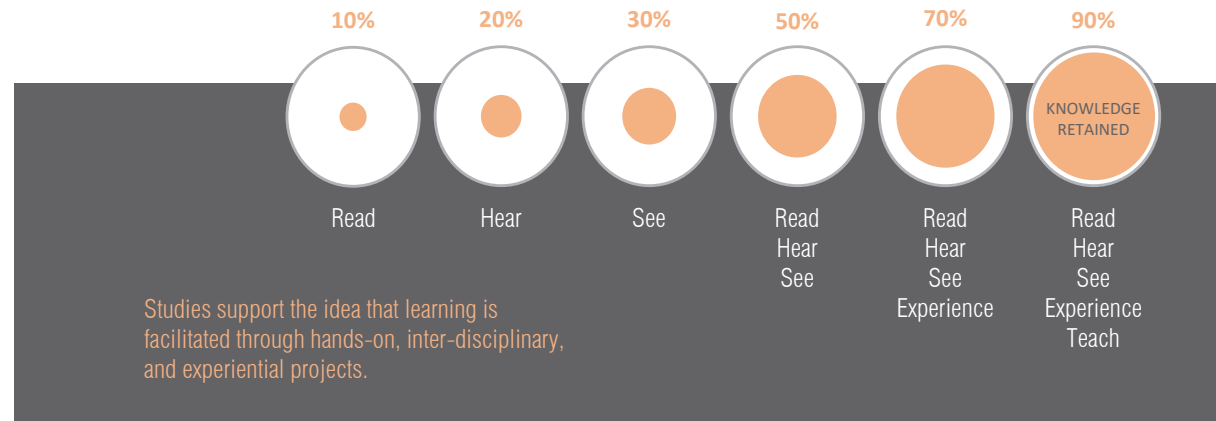
The majority of the classrooms and class labs at Merritt College are in need of reconfiguration and modernization for:

- Technology
- Sizing – area / per student, disabled access and appropriate code clearances at lab equipment
- Sizing – # of student chairs
- New lab equipment & more writing Surfaces
- Furniture - comfortable and flexible
- Flexibility / Adaptability to accommodate Hands On, Lecture and Group work.

On the next pages we outline some examples of how modern teaching pedagogies have impacted campus spaces.

¹ Active Learning definition by Bowell, C., & Eison, J. (1991) Active learning: Creating excitement in the classroom AEHE-ERIC higher education report No. 1.

SETTING THE STAGE FOR INNOVATION Today’s Learners



Hands On Lecture Small Group

69%

of respondents think that these three methods are the most effective way of teaching and learning

SPACE ANALYSIS

Tiered Lecture Classrooms

Semi-circle layout facilitates class discussion, but to accommodate group work, the lecture classroom needs tables (versus tablet chairs and there needs to be two tables per tier (students in front row of tier turn around and collaborate with students in row behind them).

Layout requires 20 to 25 square feet per student.

Modern audiovisual systems means that these rooms can have daylighting, which research indicates improves student learning.

Typical for Today's Teaching Pedagogies (below)



SPACE ANALYSIS

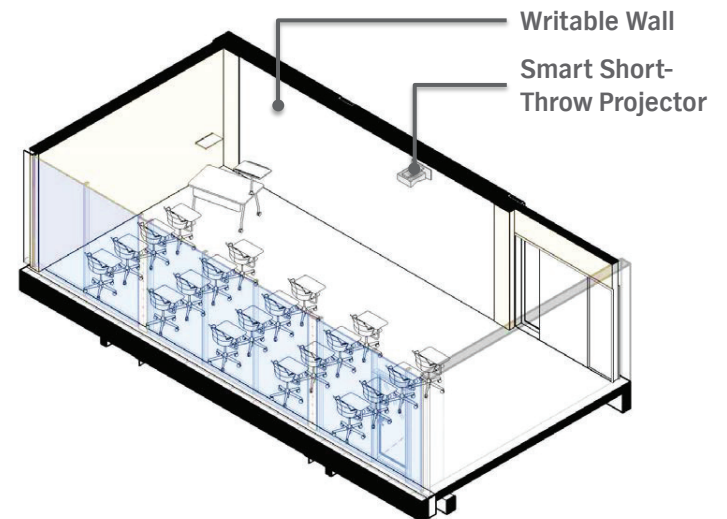
Tablet Arm Classrooms

Again reflecting the need for interactive classrooms, tablet arm chair classrooms have changed in that the tablet arm chairs are now mobile, permitting collaboration as well as lectures. Modern tablet arm chairs are also sized bigger in both the chair (reflecting the change in people's sizes) and tablet (to accommodate digital devices in addition to notebook).

Rooms typically have writable walls all around for both projection and collaboration in different classroom formations.

Layout requires 20 to 24 square feet per student.
Typically used for small class sizes (20 - 25 students)

Typical for Today's Teaching Pedagogies (below)



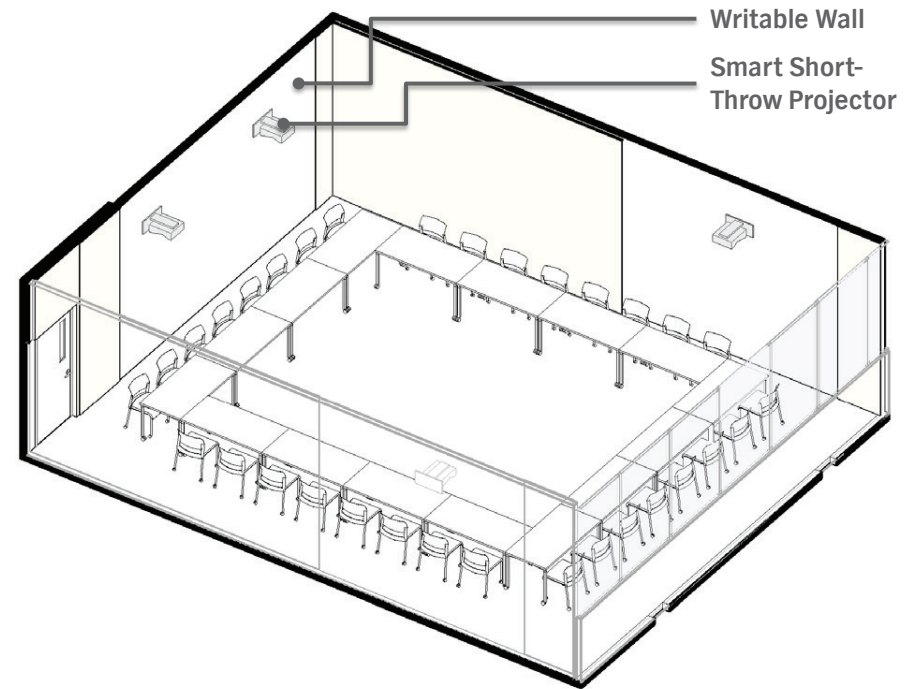
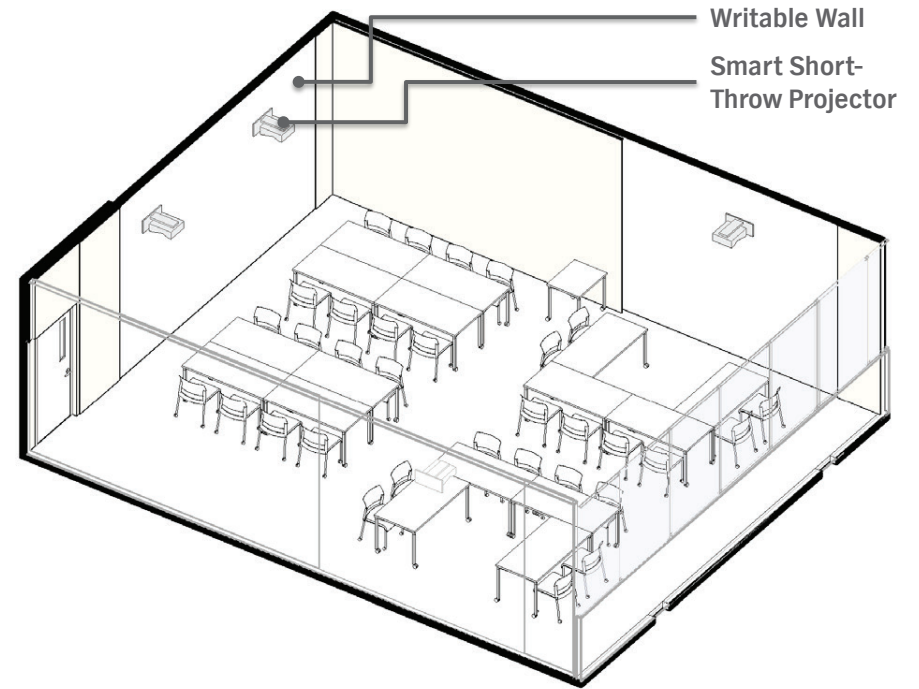
SPACE ANALYSIS

Table Chair Classrooms

Quickly move between class discussion & group work. Mobile tables and chairs accommodate different teaching style set ups with relative ease. Interactive projectors & writable walls for group work.

Layout requires 26 square feet per student.
Typically used for small to medium class sizes.

Typical for Today's Teaching Pedagogies
(below)



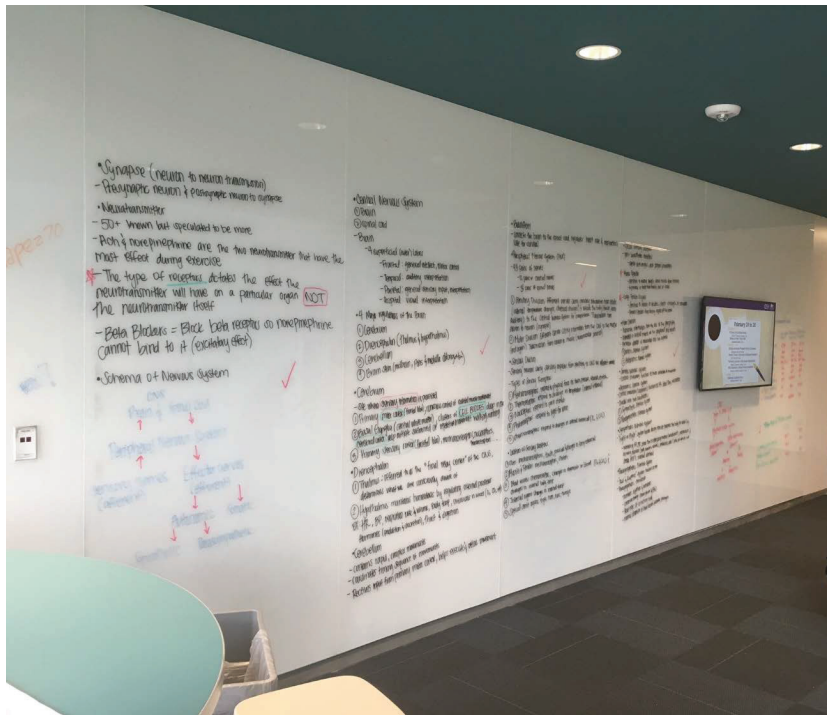
SPACE ANALYSIS

Collaboration Spaces near Classrooms & Offices

Longstanding research has shown that the majority of student learning happens outside of the classroom setting, with a fair amount arising from peer to peer learning. Fairly recent research has shown that locating collaboration spaces in close proximity to classrooms and faculty offices enhances this type of learning by providing immediate opportunities to continue classroom discussions and faculty assistance.

These spaces feature expansive writable walls and comfortable seating.

Typical for Today's Teaching Pedagogies (below)



CAMPUS CONDITION ANALYSIS

Buildings

To understand the condition of the buildings the master planning team:

- Reviewed State provided data (via FUSION) on Facilities Conditions. This includes written assessments from 2016 and a Facilities Condition Index from 2017
- Reviewed the District provided 2009 Building Assessments (no new site or building observations were made by this team)
- Reviewed the September 2017 District provided Roof Replacement and Leaks documentation
- Reviewed the March 2017 District provided Accessibility Reports (where available) for big picture condition (i.e. not room by room as detailed in reports)
- Performed selective review of Structural Assessments based on the District provided 2009 Structural Assessments

*Per the Chancellor's FUSION
Facilities Condition Index
(FCI) ratings,*

82%

*of buildings at Merritt require
renovation or replacement.*

STATE FACILITIES CONDITION INDEX

The State Facilities Condition Index (FCI) is a measure of the condition of a building relative to the replacement cost of the building. FCI does not measure the suitability or functionality of spaces.

$$\text{FCI \%} = \frac{\text{current repair cost}}{\text{replacement cost}}$$

Image on the right, the colors represent:

- Blue = Good (Repair Costs less than 10% of Replacement)
- Green = Fair (Repair Costs between 10 - 50% of Replacement)
- Yellow = Poor (Repair Costs between 50 - 90% of Replacement)
- Red = Very Poor (Repair Costs over 90% of Replacement)

Figure 2.3: State Facility Condition Index

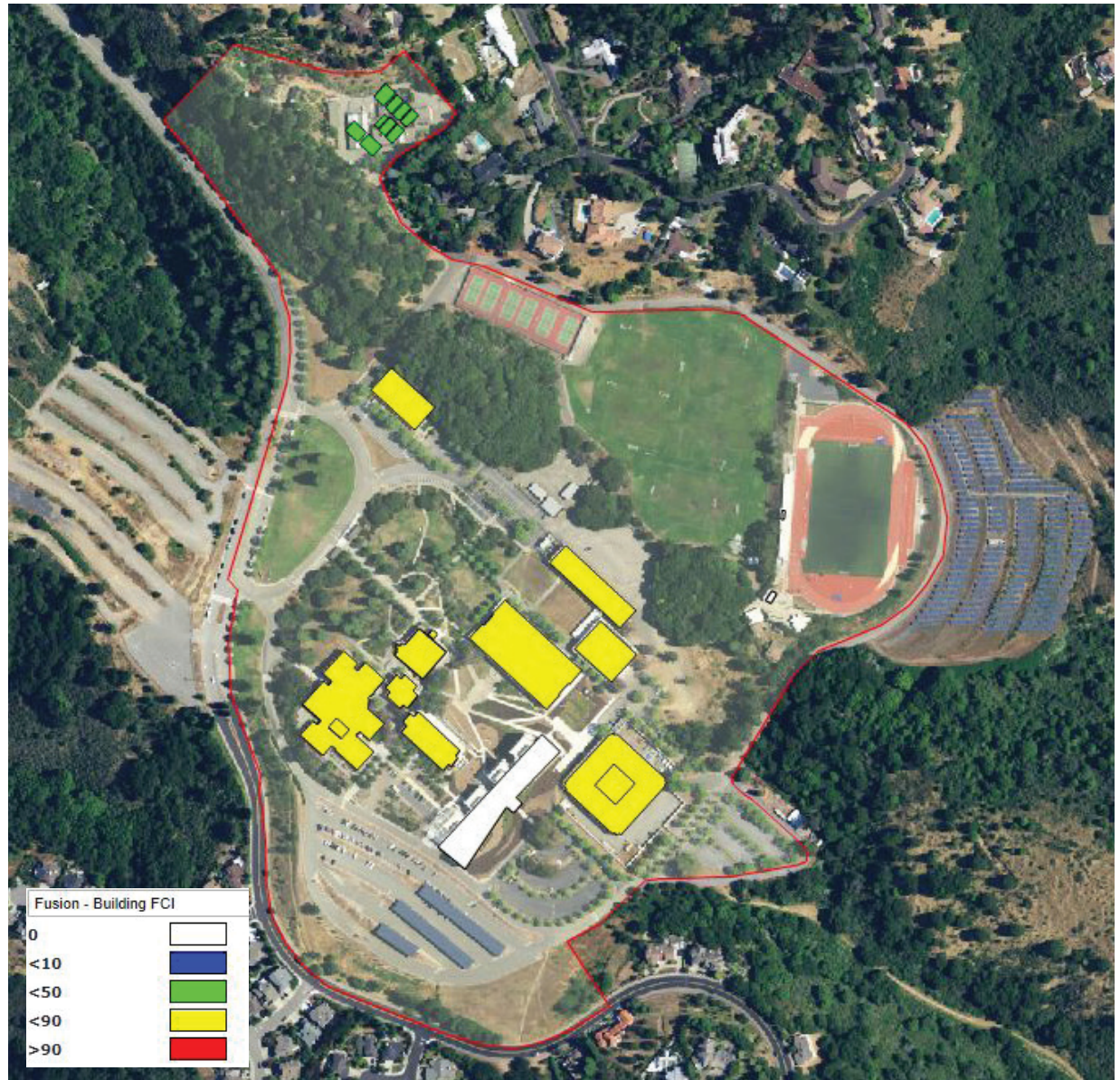


Figure 2.4: Building Assessments Analysis

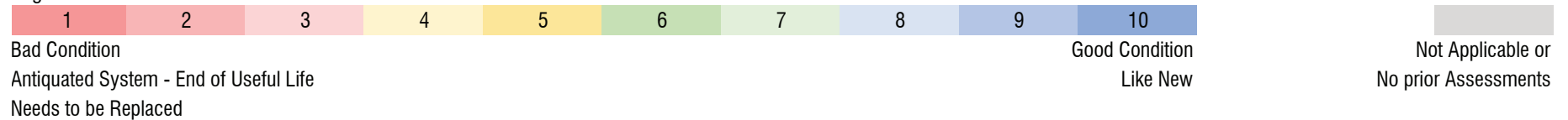
	Electrical Distribution System	Emergency Distribution System	Lighting Systems	Fire Alarm System	HVAC Equipment	HVAC Ducts & Air Distribution	HVAC Piping	Plumbing Fixtures	Plumbing Piping	Architectural ¹	Roofing ²
860 Atlantic Avenue ³	8	8	8		3	3	3				
Building A	3	3	4	4	3	1	2	3	6	4	1
Child Care Center	3		3	5	5	5	5	4	7	6	1
Building D ³	3	3	4	5	3	3	3	1	1		
Building E	2	3	2	5	1	2	1	4	6	4	5
Building F	1	3	4	5	2	1	3	7	6	4	1
Horticulture	3		4	5	1	3	2	5	5	4	1
Building L	3	3	4	4	1	3	2	5	7	7	8
Building P	3	3	4	4	5	5	5	5	5	8	2
Building Q	3	3	4	4	2	1	1	5	5	6	7
Building R	3	3	4	4	3	3	3	7	7	7	2
Building S											

¹ Architectural ranking does not include teaching/learning set up of rooms: See separate discussion regarding teaching/learning observations

² Roofing information per District Vendor Information

³ No 2009 Assessments, only 2016 FUSION Assessments to go on

Legend



CAMPUS CONDITION ANALYSIS

Buildings Assessments

OVERALL BUILDINGS ANALYSIS OVERVIEW

Our team analyzed previous assessments provided by the District: facilities assessments from 2009, and State (FUSION) facilities assessment from 2016. Taking into consideration any information provided by the District with regards to any improvements that were done since 2009, the team factored in the additional age and wear in updating the assessments. The results are depicted in the table to the left. The scale goes from 1 (red) to 10 (blue), with “1” being bad condition, end of useful life, needing to be replaced; to “10” being in good condition, like new.

The assessments indicate that all buildings except the Child Care Center and Building P have mechanical systems at, or near, the end of their useful life. The electrical, lighting and plumbing systems are also in poor condition in the majority of these buildings. Keeping and repairing these antiquated systems (which often no longer have available parts) costs the District more money than necessary in capital operating costs. Replacing these systems with ones that are not only less taxing on maintenance resources, but are also more energy and water efficient will contribute to a more sustainable management of resources, which is both a District-wide and a College goal.

ELECTRICAL MAJOR FINDINGS

Assessments from 2009 still apply, summarized below.

Applies to both Aviation and Main Campus: electrical equipment is over 40 years old and exceeds the Manufacturer’s recommended service life of 25 years. Most of the original electrical equipment, while in working condition, is antiquated and without the capacity to accommodate additional loads. Working clearances around most electrical distribution equipment do not comply with the current electrical codes, and the interior lighting utilizes fluorescent luminaries with T12 lamps that are not energy efficient. Lighting switches are installed at +54” AFF (non-ADA complaint). No GFCI receptacles installed at all sink locations or rooftops, and no receptacles installed within 25 feet of all HVAC equipment as required by the current electrical codes.

See Appendix for more detailed information.

ELECTRICAL MAJOR NEEDS

In light of the assessments we recommend:

- Replacement of all antiquated distribution equipment (including five existing unit substations) with new equipment. New distribution equipment to accommodate remodeled and new program spaces.
- Replacement of existing lighting with new energy-efficient luminaries and add occupancy sensors and lighting controls.
- Upgrade of egress lighting system as necessary to meet current codes.
- All new lighting switches and occupancy sensors to be located at 48” AFF (above finish floor) to meet ADA requirements.
- Installation of systems to accurately monitor energy use and system performance.

In addition, stakeholders informed us that the recent storms led to prolonged electrical power outages due to electrical equipment placed within underground manholes that were flooded and not accessible for repair during the storm. Furthermore, this campus is darker than others during evening hours given that the area is less densely populated. To address these concerns we recommend:

- Installation of a back-up generator.
- Relocation of the electrical equipment above ground when it is replaced during renovations.

MECHANICAL & PLUMBING MAJOR FINDINGS

Assessments from 2009 still apply, summarized below.

Merritt College has campus-wide primary, secondary and tertiary heating hot water system (hydronic) that originates from the Central Plant located in Building F. The central plant running this system looks to be in good condition.

In addition, stakeholders indicated that the existing Chillers were due for replacement.

See Appendix for more detailed information.

MECHANICAL MAJOR NEEDS

Based on stakeholder input we recommend:

- Replacement of Chillers.

Based on the assessments within the existing old buildings, the needs are:

- Demolition of all existing HVAC systems in mechanical penthouses and replacement of air handlers; ductwork; hot and chilled water piping/connections; diffusers; and, controls.

PLUMBING MAJOR NEEDS

In light of the assessments we recommend:

- Demolition and replacement of all existing older plumbing fixtures within buildings with low water consumption fixtures.

CAMPUS CONDITION ANALYSIS

Buildings Assessments

ARCHITECTURAL

Although numerous spaces within buildings are in need of floor, wall, and ceiling repairs/replacements, the driving force behind architectural needs are the current teaching pedagogies that require a number of teaching spaces to be overhauled (see previous section), and accessibility issues. Almost all restrooms have accessibility concerns.

ROOFING

Based on a roof installation/warranty report provided by the District, more than half of buildings at Merritt College are due to have their roofs replaced. The aged condition of these roofs may explain some of the leaks being encountered at some of these buildings on the campus. Additionally, Building D (roofing status undetermined) has some leaks and Building E which has a roof rating of 5, has leaks at the skylights and walls. The replacement of roofing should be coordinated with the structural roof work required, as indicated in the structural assessments that follow. Note that sustained leaks in any building can lead to structural integrity issues, and should therefore be addressed promptly.

ACCESSIBILITY

The accessibility report identified access issues for all buildings and the site. The issues are across a range of items from doors to restrooms, to drinking fountains, sinks, handrails, regrading/replacing ramps, enlarging elevators and regrading/surfacing parking stalls and pathways.

CAMPUS CONDITION ANALYSIS

Technology Assessments & Needs

Please refer to the District-Wide FTMP for detail on technology assessments, needs, telecommunications standards, and audiovisual systems design guidelines as they apply to Merritt College, and to the District as a whole. Inclusive of all the needs are the Audiovisual components for various spaces and most importantly classroom technologies for a variety of classroom types.

CAMPUS CONDITION ANALYSIS

Way-finding and Signage

Way-finding at Merritt College is very challenging: a number of buildings are similar looking, buildings do not have clear entries, and the signage is lacking both in quantity, clarity and consistency. The District should develop and implement a district wide signage program that is consistent across the District for many Peralta CCD students attend more than one campus, and a consistent standard would help way-finding.

Figure 2.5: Proposed Audiovisual Capabilities per Room Type

	Single Display	Multiple Display	Projector and Screen	Laptop / BYOD Presentation	Local Dedicated Computer Presentation	Video Capture / Recording	Distance Education	Overflow to Adjacency or Huddle Space	Voice Amplification / Audience Participation	Assisted Listening	Control Touch Panel / Keypad	Room Scheduler / Roster	Local AV Furniture / Lectern / Teaching Station	Annotation Board	Wireless Microphones	Beamforming Microphone	Broadcasting Connectivity
Room Type																	
Small Classrooms	x			x		x	x			x	x	x	x	x			
Medium Classrooms		x	x	x		x	x			x	x	x	x	x			
Large Classrooms		x	x	x		x	x	x	x	x	x	x	x	x	x		
Breakout/Huddle/Overflow	x			x		x				x	x						
Auditoriums/Lecture Halls			x	x		x	x		x	x	x	x	x	x	x		
All-Hands Spaces		x		x		x	x		x	x	x		x	x	x		
Conference / Meeting	x			x	x	x				x	x	x	x			x	
Athletic Facility		x	x	x	x	x	x	x	x	x	x			x	x	x	x

Summary of Capabilities per Room Type

CAMPUS CONDITION ANALYSIS

Structural Assessments

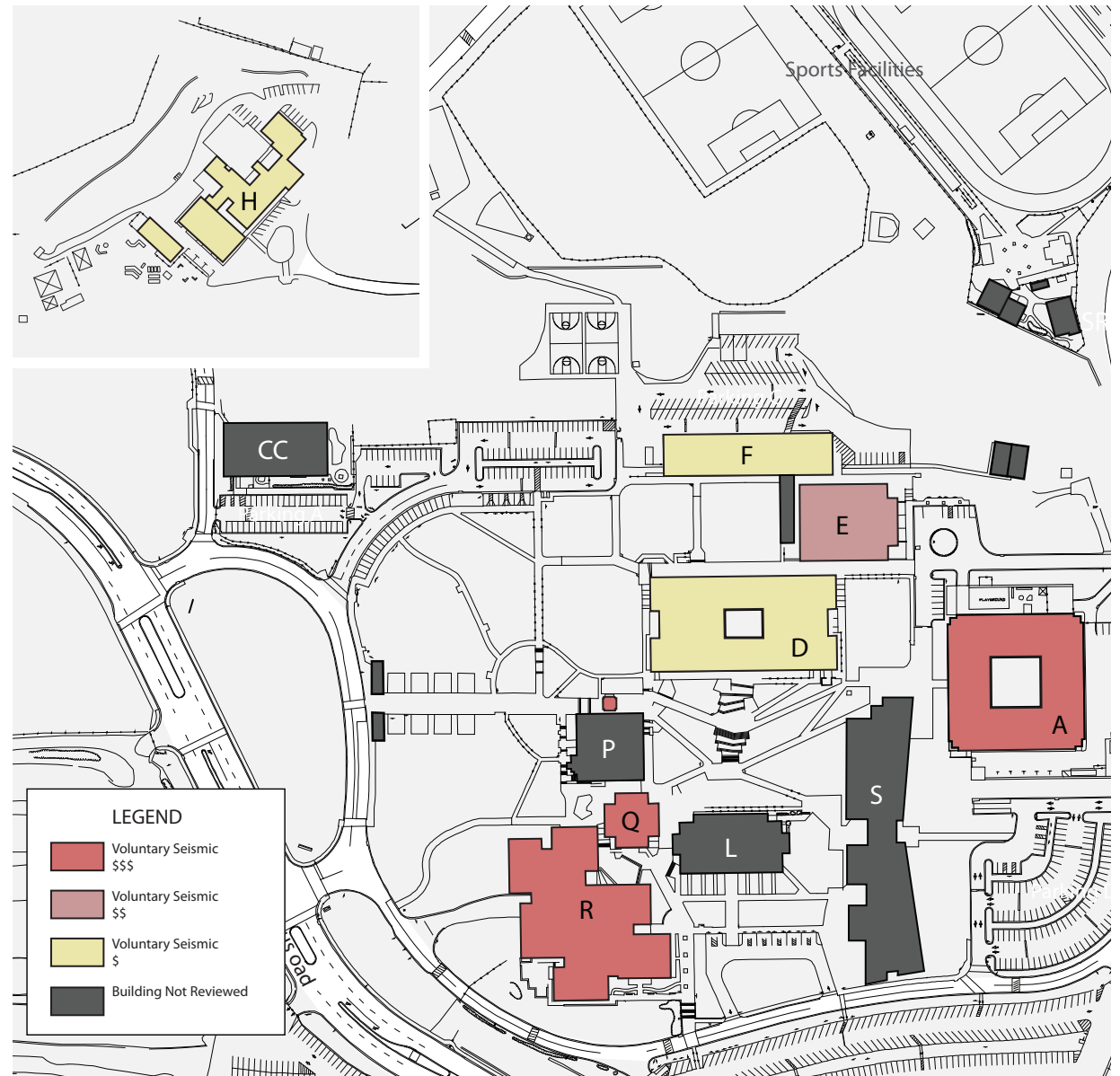
The Master Plan for the Merritt College campus includes both renovation and replacement of existing structures. The existing inventory of buildings includes a variety of structural systems, and the specific structures included within our scope of work for the District were primarily reinforced concrete buildings designed in the 1960's and 1970's, with the exception of the buildings at the Horticulture Center. This structural assessment,¹ in collaboration with other disciplines' assessments, is intended to assist the District's team in preparing for the future of this campus.

Our approach to this structural assessment began with the review of the existing as-built structural plans, the review of the structural assessment report from 2008 by WLC architects and KPW structural engineers, and site visits to the Merritt campus. Once the existing conditions were assessed, collaboration with the District's team enabled us to provide structural recommendations for future planning. Structural analysis will be required for each future project to identify specific deficiencies and retrofit requirements.

The attached diagram indicates which buildings were investigated and the estimated effort required to upgrade the structure with **voluntary retrofits** (see discussion on next page for mandatory versus voluntary upgrades).

¹ This report does not express or imply any warranty of the existing structure(s) and was developed based solely on visual observations made during site visits and a review of available construction documents and reports for the existing structures. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable engineers practicing in the structural field in this or similar localities at this time. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for the Peralta Community College District to be used solely for its evaluation of the subject properties, and may not contain sufficient information for the purposes of other parties or other uses.

Figure 2.6: Structural Voluntary Upgrade Analysis



CAMPUS CONDITION ANALYSIS

Structural Assessments

MANDATORY AND VOLUNTARY STRUCTURAL UPGRADES

The California Administrative Code (CAC) Section 4-306 through Section 4-309 regulates the structural requirements for altering existing buildings in public schools, including when a full structural evaluation to the lateral force resisting system (LFRS) is required. For projects with a cost over \$100,000 that include structural work, and all projects that exceed \$250,000, there are four primary factors to be considered to determine if an upgrade is required. These triggers are summarized below, and in the flow chart to the right (larger version available in appendix).

Financial: If the cost of the reconstruction, alteration, or addition of the project exceeds 50 percent of the replacement value of the existing building, then a required rehabilitation is triggered.

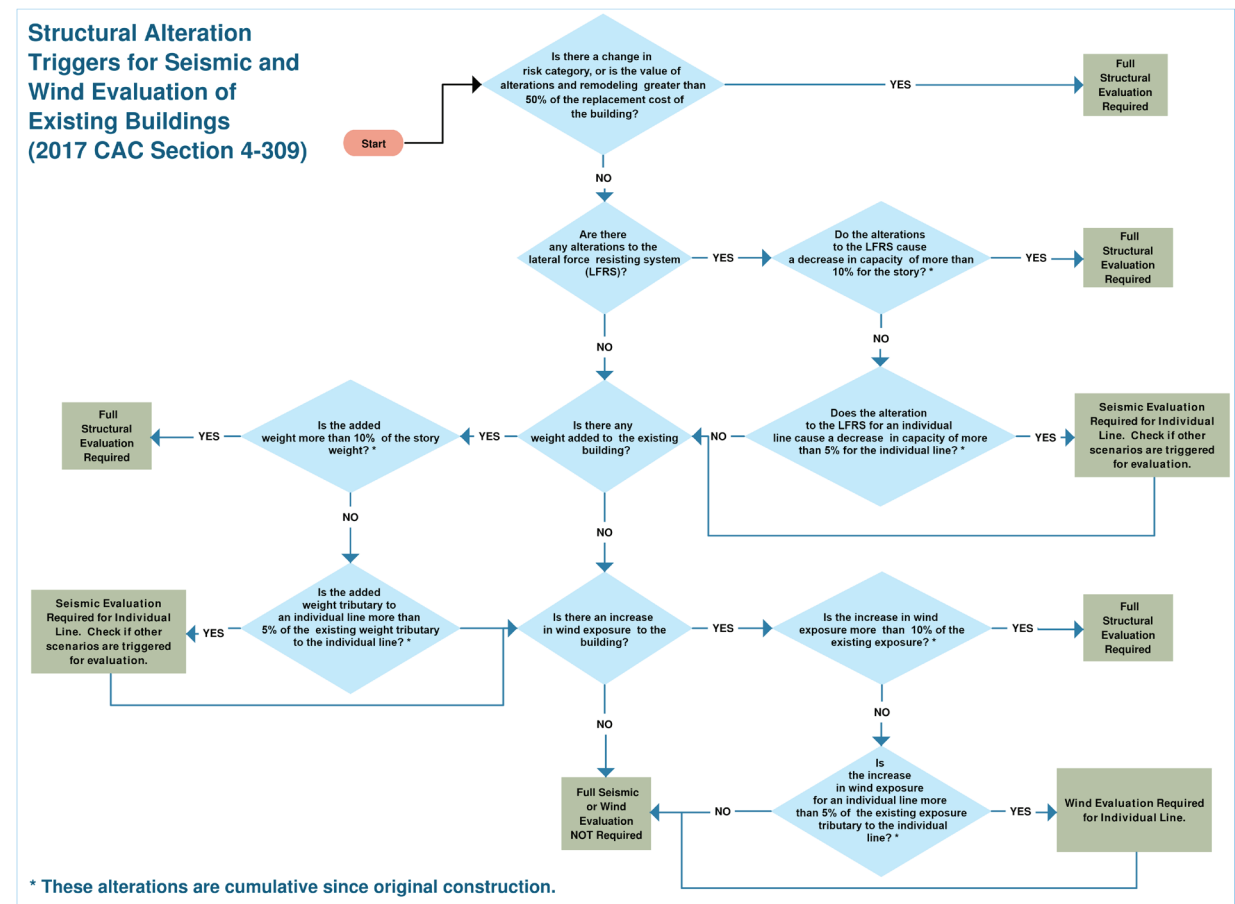
Occupancy: If there is a change of occupancy that results in a structure being reclassified to a higher risk category, then a required rehabilitation is triggered. Risk categories are defined in the California Building Code, Table 1604.5, and allows for a greater degree of resilience in certain structures.

Demand: If there is a 10% increase in lateral demand to the structure, usually incurred by increased mass or wind area, then a required rehabilitation is triggered. If there is a 5% demand increase to a lateral force resisting element or wall line, then that element is required to be analyzed, though it does not trigger a full building evaluation. These percent load increases are cumulative since the original construction.

Capacity: If there is a 10% decrease in lateral capacity of the original structure, usually incurred by removing part of the lateral system, then a required rehabilitation is triggered. If there is a 5% capacity decrease of a lateral force resisting element or wall line, then that element is required to be analyzed, though it does not trigger a full building evaluation. These capacity decreases are cumulative since the original construction.

If one of the above triggers is met, and a full mandatory evaluation is required, the existing building must be analyzed, and retrofitted if necessary, to meet current code. If the above triggers above are avoided, then a mandatory evaluation is not required. However, the District has the option of providing a voluntary seismic upgrade to address any deficiencies that are not otherwise triggered.

Figure 2.7: Mandatory Structural Triggers Flow-Chart



CAMPUS CONDITION ANALYSIS

Structural Assessments

Findings and Recommended Voluntary Upgrades

The following is a general summary of the buildings reviewed, and Figure 2.6 is a campus graphic illustrating the approximate effort required to rehabilitate the structure.

BUILDING A

Building A, built circa 1968, is a two story, square building that houses a variety of classrooms, including Art, Child Development, Administration of Justice, Music, and a Fitness Center. The roof consists of bare metal deck over open web steel trusses, and is open at the middle to a courtyard below. The second floor is partially filled with concrete over metal deck, over steel wide flange beam framing. Vertically, the framing is supported by concrete walls at the perimeter, and steel columns at the interior. The lateral system consists of concrete shear walls at the perimeter corners of the building, and steel plate X-bracing below the second floor. The foundations are traditional pad footings. Both the concrete shear wall lateral system around the perimeter of the building, and the braced frames at the first floor are likely inadequate. Additional structural elements may be required below the second floor if the cantilevered diaphragm is deficient. Out-of-plane anchorage of the walls to the roof is likely inadequate for tying the concrete walls to the roof diaphragm.

BUILDING D

Building D, built circa 1968, is primarily a two story building, with an additional third story at the building ends for mechanical units. There are two square regions of the building connected by a central stairway and courtyard. The floor and roof systems consist of reinforced concrete slabs and beams, which are supported by reinforced concrete columns and walls. The lateral system is a concrete shear wall system. The foundations are traditional pad footings. There are concrete shearwalls surrounding the structure that appear to be sufficient to support the building. Analysis of the structure will be required to confirm this.

BUILDING E

Building E, built circa 1968, is a one-story gymnasium. The roof consists of steel pipe trusses and a wood diaphragm.

The gravity system consists of steel columns and concrete walls and beams, supported on a traditional pad foundation. There is a concrete mezzanine on the south, west and east sides of the structure. There are also several rows of skylights along the north and south side of the roof, resulting in a diaphragm discontinuity. Structural analysis will need to be performed to determine the extent of this deficiency, and it may be remediated by reinforcing of the skylight openings with additional roof structure. Additionally, the out-of-plane anchorage at the roof is likely inadequate.

BUILDING F

Building F, built circa 1968, is a two-story building that primarily houses locker rooms, and also houses some mechanical equipment. The roof and floor systems are reinforced concrete slabs and beams which are supported by concrete columns and walls. The lateral system consists of reinforced concrete shear walls. The foundations are traditional concrete pad foundations. There are concrete shear walls surrounding the structure and the building appears to have substantial seismic resistance. Additional analysis is required to confirm this.

HORTICULTURE

The Building H complex, built circa 1978, consists of several one-story structures built with varying materials. The structures include a Headhouse, Greenhouse, Landscape Design Workshop, a Lathhouse, Flowershop Lab, a Classroom, and a Restroom building. The Headhouse and Flowershop have wood open web joists at the roof, and are supported on wood framing, with plywood shear walls for the lateral system. The restroom and classroom buildings were relocated and appear to also be wood framed shear wall structures. The landscape design building consists of a wood joist roof bearing on wood shear walls. The greenhouse structure is a glass house that sits on a concrete pony walls round the perimeter of the building. The Lathhouse is a large structure consisting of wood posts and wood beams, with no diaphragm. Structural analysis of the greenhouse and Lathhouse may show that additional lateral systems are required at the roof and walls.

BUILDING Q

Building Q, built circa 1968, is a three story building complex, and has a smaller structure and a larger structure adjoined by a seismically isolated pedestrian bridge. There are also utility tunnels below Building Q and the adjacent structures. The south end of the structure is separated from Building R with a seismic gap. The roof and floor diaphragms consist of reinforced concrete slabs and waffle slabs supported by concrete beams, walls, and concrete columns. The foundation system is a traditional pad footing system. The lateral system utilizes reinforced concrete shear walls. Much of the upper story is glass and the existing shear walls are likely inadequate and may be retrofitted with additional lateral force-resisting elements such as additional shear walls or braced frames.

BUILDING R

Building R, built circa 1968, is cluster of four one-story buildings surrounding a central courtyard, and interconnected with pedestrian walkways. This building serves as the student center, which includes the bookstore, dining room, and student lounge. The north end of the structure is connected to Building Q, separated with a seismic gap. The roof diaphragm consists of reinforced concrete slabs and waffle slabs supported by concrete beams, walls, and concrete columns. The foundation system is a traditional pad footing system. The lateral system utilizes reinforced concrete shear walls. It is likely there are deficiencies in the lateral force-resisting systems. Additional shear walls or braced frames may be added to relieve the existing lateral elements. Additionally, there are several pop-up concrete roof structures with windows on all four sides. The legs of these pop-ups should be analyzed to determine if they are deficient.

TOWER

The Tower (perhaps once a clock tower) located on the north side of Building P is roughly 3 stories tall. There were no structural drawings available for review of this structure, however it appears to consist of concrete walls on all sides at the upper stories, and is supported by concrete columns at the bottom story. There is concern that this is a tall and heavy structure with a soft-story at the base. The concrete moment frame columns at the base of the structure should be analyzed to determine if deficient.

CAMPUS CONDITION ANALYSIS

Infrastructure Assessments

To understand the condition of the infrastructure the master planning team:

- Reviewed and updated the 2009 Infrastructure Assessments (no new site utilities observations)
- Stakeholder feedback during the master planning process

INFRASTRUCTURE NEEDS¹

In light of the 2009 assessments we recommend:

- Corrections and replacements at multiple sanitary sewer locations.
- Corrections and replacements at multiple storm drain locations.
- Domestic Water System: exercise older gate valves that were not replaced in 2001 and replace any that are stuck or broken.
- Verify 2" Fire Water System line at Children's Center is adequate size for fire flow.
- Electrical manhole in Parking Lot G extends 1 foot above surrounding grades (tripping hazard) - overlay pavement around manhole and create flush condition.

INFRASTRUCTURE FINDINGS CONCLUSION

The review of the 2009 Infrastructure Assessments, which the list above is based on, is located in the Appendix. **The Infrastructure review process resulted in a recommendation that the District create a more reliable infrastructure database so that the Infrastructure needs could be more comprehensively understood, and defined.** The District followed this recommendation and authorized this work in mid-December 2017. The results of that process will expand the items identified herein, and will be captured as an amendment to the District-Wide FTMP.

See Appendix for more detailed information.

¹ See Infrastructure Findings Conclusion & Follow-Up Infrastructure Assessments.

CAMPUS STAKEHOLDER DATA

Facilities Projects

The stakeholder process validated that in addition to addressing campus-wide infrastructure, lighting, safety and accessibility issues, and upgrading and replacing building and technology infrastructure (as identified by the preceding assessments), the following are the facilities needs for the campus by initial prioritization order:

- Building A Demolition and Replacement
- Renovate Building D
- Renovate Buildings E and F
- New Regional Public Safety Training Center
- Combined Child Care Center / Child Development Center
- Horticulture Replacement
- Renovate partial Building P
- Renovate partial Building Q
- Kinesiology Physical Fitness Addition
- Renovate partial Building R
- Complete Shell Space in Building S
- Site Improvements
- Conference Center

The majority of these projects were identified in the previous 2009 Facilities Master Plan. The exceptions are the replacement of Building A (the previous plan proposed these functions be moved into Building D, which is no longer feasible due to the leasing of the upper level to a Middle School), the partial renovation of Building P, and the New Regional Public Safety Training Center which is a need arising out of possible partnerships with Oakland Fire Department and Oakland Police Department.

DATA FINDINGS

Summary

The prioritization outcomes helped guide the development of the master plan, as did all data gathered and analyzed. The cumulative findings from this data are:

- The electrical equipment and lighting systems throughout the campus needs to be replaced and upgraded.
- Mechanical, Electrical, Plumbing and Roofing elements within the majority of buildings needs to be replaced.
- The building condition and structural upgrades of Building A makes it a good candidate for demolition.
- Renovating versus replacing Buildings Q and R needs to be evaluated with respect to the amount of program reconfigurations being proposed within those buildings, based on structural assessments, and viewed in conjunction with the mechanical, electrical, plumbing, roofing and infrastructure replacements required for those buildings.
- If replacement projects are proposed, these should be balanced with removal of buildings to address overages in space by State criteria.
- However, the expectation is that the College will net an increase in area to address multiple deficiencies: all classrooms need to be sized 20-26 ASF per student; class labs need to be sized for lab equipment clearances and code related items; existing buildings lack student collaboration spaces in the vicinity of classrooms that are essential to improved learning outcomes; and impacts of designing dual use spaces.

3.0 The Facilities Master Plan

PROCESS

Based on the data collection and analysis, the master planning team developed a few options for the future development of the campus in response to the needs identified. The option chosen was revised per shared governance feedback received through multiple campus forums. This was an iterative process of refinement, and the results of that process are shared within this chapter.

GOALS

The facilities master plan goals are rooted in the five 2016 Educational Master Plan Goals (repeated here for convenience):

- **Goal One:** create an environment of exceptional student access, equity and success.
- **Goal Two:** engage our community through respectful dialogue to create partnerships and opportunities for our students.
- **Goal Three:** create and implement effective innovative programs that meet the diverse needs of our community.
- **Goal Four:** through collegiate governance, support institutional communication, innovation and interdisciplinary collaboration.
- **Goal Five:** develop human, fiscal and technological resources to advance and sustain our mission.

OPPORTUNITIES & CHALLENGES

OPPORTUNITIES

Merritt College is fortunate to have enough land and parking to build replacement facilities without having to create major swing space needs. Certain parts of the campus also have great views of the Bay, and with the abundance of parking this presents opportunities to offer community resources that can bring in additional revenues to support educational programs.

CONSTRAINTS

The major constraint for Merritt College is the topography that positions buildings at different elevations making accessible navigation challenging. Some buildings like the Horticulture Complex and the Self Reliant House are also remote from the campus center, and Lot B is across Campus Road. The other constraints are due to lack of sufficient public transportation, especially connections to other Peralta Colleges (a majority of Peralta College students are enrolled at more than one campus at a time).

THE MASTER PLAN

The Master Plan aims to address all the needs identified in the previous chapter. The first step entails demolishing and replacing Building A. This building is located at the “back” of the campus, cut off from the main campus area, in poor condition and more expensive to upgrade structurally. As such Building A will be replaced with a smaller facility (M3) located at the front of the campus. This new facility helps cluster the academic functions of the college together, provides a new look along Campus Drive, and encloses the exterior space (North Quad) between it, Buildings D, E and F to create a new accessible outdoor space.

Building D will be renovated (M4) to maintain the Middle College on the upper level and accommodate a Student Health Center, Veteran’s Resource Center, Immigration Resource Center, and Career Job Placement Center on the first level.

Buildings E and F will also be renovated (M5) for outdated building infrastructure, and the relocation of the Fitness Center from Building A into Building F. To accommodate the expansion of the Athletic/Kinesiology programs an addition (M11) is needed. The placement of this addition is dependent on the location of the Child Development Center (CDC). The CDC project has the potential of State Matching Funds, and the location submitted to the State is per M9B, however the College wishes to co-locate the CDC with the existing Child Care Center (per M9A) for laboratory instructional needs for Child Development students. If the CDC can be relocated per M9A, then the Kinesiology Physical Fitness Addition can be placed adjacent to Buildings E and F, and the campus loop road connector would be routed around this addition.

The Master Plan proposes to address numerous Site Improvements (M12). The first concerns the ability to drive all around the campus, something that is currently not possible between Buildings E and F. To facilitate this “Campus Loop” (note, Margie Lane which currently completes the Loop Road is closed off except for Fire Emergencies), and to address parking inefficiencies, the Parking Lots G and A will be reconfigured to allow smooth vehicular traffic flow around the campus, and for soccer drop-off.

Additionally, a road connection near the Tennis courts connecting to Bacon Road is proposed to provide an additional evacuation option for the campus in case of emergencies. Other improvements include improving the South Quad, Central Quad, and North Quad to address accessibility issues, and to create a diversity of social gathering spaces.

The Horticulture Complex is another project with potential State Matching Funds, and it is proposed to be re-built (M10) on its current site in a configuration that accommodates modern teaching pedagogies for Horticulture/Landscape Design programs.

Building A will be demolished to house a new Regional Public Safety Training Center (M6) for Fire Science, Paramedics, Emergency Medical Technicians, Administration of Justice and Law Enforcement. This facility has the potential of partnerships with the Oakland Fire Department, Oakland Police Department and possibly other local fire and law enforcement agencies. Lot E parking will be relocated to the former Building A site as well, for Lot E will be used by the Regional Public Safety Training Center for training exercises. The placement of parking in this location provides more parking (including accessible parking) closer to the center of campus.

Buildings P, Q and R (M7, M8, M15) had some renovations in the past, but portions within each still require reconfigurations and renovations, and some building infrastructure replacements.

Medical Genomics is proposed to be moved back on campus, from its off campus site at 860 Atlantic Avenue in Alameda, by fitting out the shell space in Building S (M16).

Completing the Master Plan is a proposed Conference Center (M17) on the upper side of Lot B. The views and adjacent parking make this an ideal location to provide conference facilities.

PROJECTS

INFRASTRUCTURE	
M1	Replace All Campus Major Electrical Equipment
M2	Civil Infrastructure Replacements

FACILITIES*	
M3	Replacement Building A
M4	Renovate Building D
M5	Renovate Building E and F
M6	Regional Public Safety Training Center
M7	Renovate Partial Building P
M8	Renovate Partial Building Q
M9A	Combined Child Care Center & Child Development Center
M9B	Child Development Center - State FPP location (not preferred, see M9A)
M10	Horticulture Complex Replacement
M11	Kinesiology Physical Fitness Addition
M12	Site Improvement Projects
M15	Renovate Partial Building R
M16	Finish Out Shell in Building S
M17	Conference Center

TECHNOLOGY	
M13	Main Campus Complete Wi-Fi Deployment
M14	Main Campus Complete Network Upgrade Project

* Bolded Projects are depicted on the Master Plan (Fig. 3.1)

Figure 3.1: 2017 Facilities Master Plan



Figure 3.2: 2017 Facilities Master Plan (No Labels)

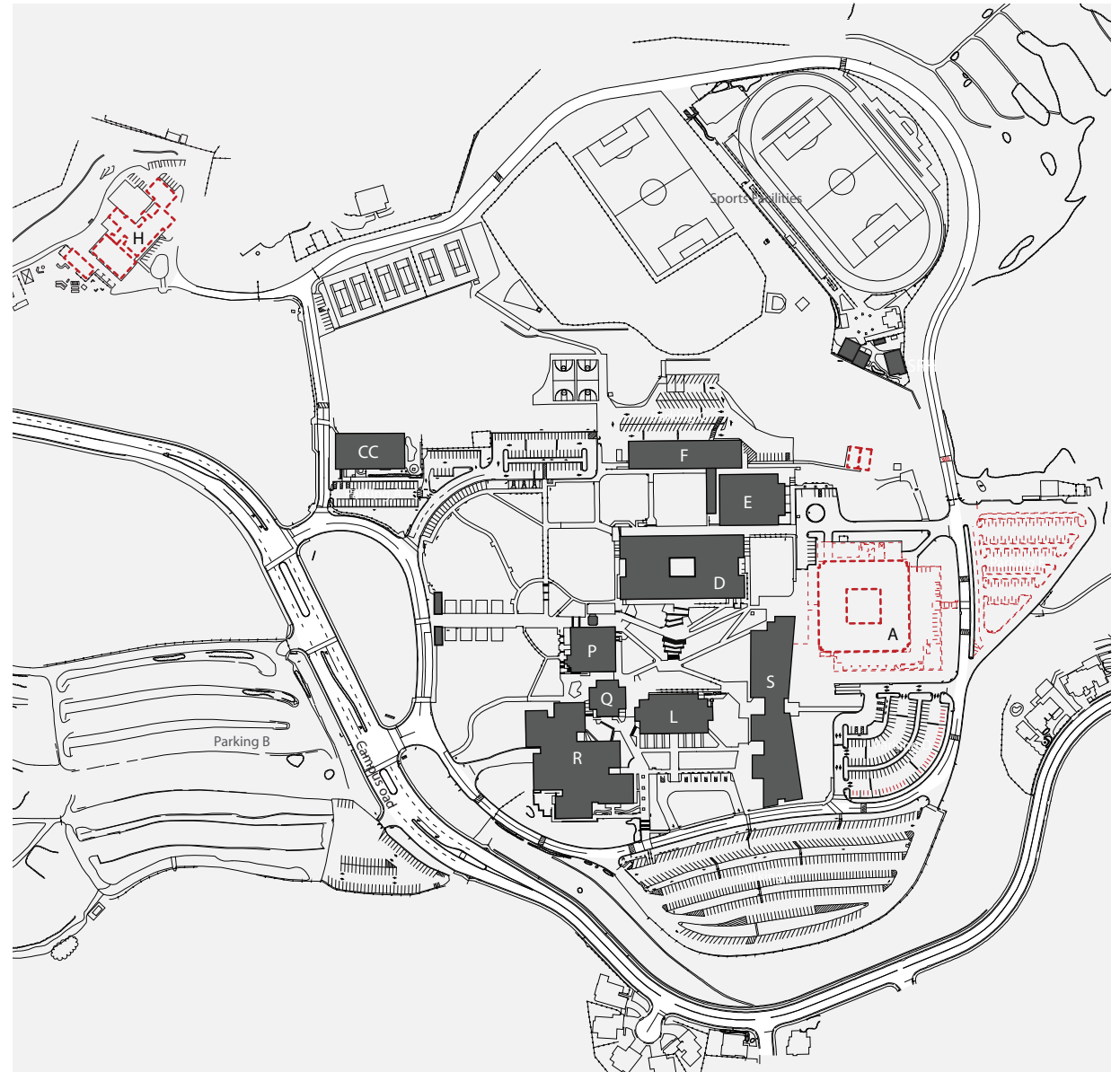


PROPOSED DEMOLITION

The Master Plan proposes to demolish the following buildings (shown as dashed red outlines in Figure 3.3) for their associated reasons:

	RATIONALE FOR DEMOLITION
A	More expensive building to retrofit; remote from rest of campus
Hort	Buildings are end of life; configuration does not serve current teaching pedagogies for Horticulture

Figure 3.3: Draft Facilities Master Plan Buildings to be Demolished



PRIORITIZATION

After the Draft FMP Site Plan was refined through a series of campus forums, the stakeholders confirmed priorities to be as follows:

- Building A Demolition and Replacement
- Site Improvements
- Renovate Building D¹
- Renovate Buildings E and F
- Kinesiology Physical Fitness Addition
- Horticulture Replacement
- Renovate partial Building R
- Combined Child Care Center/Child Development Center
- Renovate partial Building P
- Renovate partial Building Q
- New Regional Public Safety Training Center
- Conference Center
- Complete Shell Space in Building S

¹ Not Prioritized but if some occupants from Building A need to move into Building D, then this project must be done sooner than later

The College also identified the following items that need to be integrated into the projects:

- Accessibility
- Sustainability¹
- Lighting & Security
- Provide a *complete* Campus Loop Road
- Provide more than one way to get off Campus
- Enhance Quad between Buildings R & S
- Signage & Wayfinding, including Electronic Marquee
- Address Tunnels
- Main Campus Cabling (Building D)
- Spare Conduits from Campus to Outside
- Large Displays & Video Capture for Athletics
- Revamp Relay of Radio Systems
- Access Control: Robust Electronic Card Readers
- Cameras in Public Spaces
- Blue Phones Fixed
- Mass Notification PA System
- Connected to Digital Signage

¹ The District was engaged in a concurrent effort to develop a Sustainability and Resiliency Master Plan (SRMP) that captured Sustainability Goals, Recommendations etc.

The priority projects selected are shown in Figure 3.5 and listed below:

- Building A Demolition and Replacement (M3)
- Site Improvements (M12)
- Renovate Building D (M4)
- Renovate Buildings E and F (M5)
- Kinesiology Physical Fitness Addition (M11)
- Horticulture Replacement (M10)
- Renovate partial Building R (M15)
- Combined Child Care Center/Child Development Center (M9A)

To assist the District in evaluating the myriad needs across its five campuses, the master planning team created an evaluation matrix. Below in Figure 3.4 is the excerpt as it applies to most of Merritt College projects (see District-wide FTMP for footnotes and detail).

Figure 3.4: Prioritization Evaluation Matrix based on 2017 Draft Facilities Master Plan Proposed Projects

		Overall Score	Meets PCCD Strategic Goals ¹	Meets Some Goals from College 2016 EIMP	Rectifies Life Safety Concerns	Rectifies Accessibility Barriers	Has State Match Funding Potential or Approval	State Facilities Condition Index ²	FMP Team Assessments Index ²	Rectifies Multiple Aged Infrastructure Issues	Improves the Teaching & Learning Conditions in More than 1 Building	Improves the Teaching & Learning Conditions in One Building	Essential Student Service/Support	Improves Student Retention & Success	Improves Sustainability Energy & Water	Consolidates Space and Improves Efficiency	Was Identified as a Need in Previous EIMP/FIMP	Other
M1	Merritt College Upgrade and Replace all Major Electrical Unit Substations	TOP																
M2	Merritt College Civil Infrastructure High Priority Projects	TOP																
M3	Merritt College Demolish Building A / New Replacement Building	16	1	1	1	1	2	4	1	1			1	1	1	1		
M4	Merritt College Renovate Building D	15	1	1	1	1	2	2	1	1			1	1	1	1		
M5	Merritt College Renovate Building E and F	16	1	1	1	1	2	3	1	1			1	1	1	1		
M6	Merritt College Regional Public Safety Training Center	6	1	1			n/a	n/a	n/a	1			1				2	Regional Partnership
M7	Merritt College Renovate Building P	12	1	1	1	1	2	1	1	1			1	1		1		
M8	Merritt College Renovate Building Q	8	1				2	2	1				1	1				
M9	Merritt College Combined Child Care Center / Child Development Center	13	1	1	1	1	2	1		1	1	1	1	1	1			
M10	Merritt College Horticulture Replacement	12				1	1	3	1	1	1		1	1	1	1		
M11	Merritt College Kinesiology Physical Fitness Addition	5	1	1		1	n/a	n/a	n/a				1			1		
M12	Merritt College Site Improvement Projects	9	1	1	1		n/a	n/a	n/a		2	1	1	1		1	1	Engages Community

Figure 3.5: 2017 Facilities Master Plan for Priority Projects Only



PRIORITY PROJECTS

Facilities Project Descriptions

M3: REPLACEMENT BUILDING A

is a new smaller facility that will replace the existing Building A, housing modern music and art class laboratories, modern multi-use classrooms, and divisible meeting rooms. Preliminary Assumptions:

- **Size:** 30,000 GSF / 21,000 ASF
- **Height:** 2 stories
- **Programs:** Art, Ceramics, Music labs, Multi-Use Classrooms, Tiered Lecture Hall, Collaboration Spaces, Divisible Meeting Rooms, Regular Meeting Rooms, Offices and Support Spaces
- **Site Improvements:** Merritt Walk, Plaza and landscaping around new building and North Quad

Other Considerations:

- **Demolition/Relocation:** Demolition of Building A after projects M3, M4 & M5

M12: SITE IMPROVEMENTS

includes numerous Site Improvements (M12) such as the completion of a campus road loop, drop off and parking lot improvements and Quad improvements.

Site Improvement: continuity of road access all around the campus by providing a road connection from Building E to Building F, something that is currently not possible. The road transition to make this connection will be greatly improved if the proposed new CDC can be located at the M9A location in lieu of the M9B Improvements (M12). The location of the campus road loop completion should be coordinated with the optimum placement for an addition to Buildings E and F (see Kinesiology Physical Fitness Addition project M11).

Site Improvement: parking lots G and A will be reconfigured to allow smooth vehicular traffic flow around the campus, and to improve both parking efficiencies and the soccer drop-off.

Site Improvement: a road connection near the Tennis courts connecting to Bacon Road is proposed to provide an additional evacuation option for the campus in case of emergencies.

Site Improvement: improving the South Quad, Central Quad and North Quad to address accessibility issues, and to create a diversity of social gathering spaces (shade, seating, clusters, quiet spaces, congregating spaces etc.)

M4: RENOVATION OF BUILDING D

for aged infrastructure, and to collocate essential student services on the first floor, and to accommodate programs from Building A (which will be demolished), while maintaining the COVAH Middle College on the second floor.

- **Size:** 75,493 GSF / 56,000 ASF
- **Height:** 2 stories
- **Programs:** Student Health Center, Veteran's Resource Center, Immigration Resource Center, Career Job Placement Center, Bookstore, Institutional Research, and Information Technology on the first level, COVAH Middle School on upper level
- **Renovation:** roof, HVAC, electrical, lighting and windows/doors replacement; technology upgrades; new restrooms; interior finishes replacement and reconfigurations; furniture replacement; structural voluntary upgrades
- **Project requires:** possibly phased or summer construction to allow COVAH to remain open during construction

Other Considerations:

- **Demolition/Relocation:** Existing Buildings A, B and C
- **Swing Needs:** COVAH (Middle College) and Student Services on first floor
- **Structural Comments:** this project appears to be feasible without triggering a mandatory structural upgrade



PRIORITY PROJECTS

Facilities Project Descriptions

M5: RENOVATION OF BUILDING E AND F

to address aged infrastructure, modernization of teaching spaces and to reconfigure Building F to accommodate the Fitness Center currently located in Building A.

- **Size:** 24,617 GSF / 12,809 ASF and 29,585 GSF / 15,603 ASF
- **Height:** 1 1/2 story and 2 stories
- **Programs:** Gymnasium, Fitness Center, Locker Rooms
- **Renovation:** roof, HVAC, electrical, lighting and windows/doors replacement; technology upgrades; new restrooms; gymnasium flooring replacement, interior finishes replacement and reconfigurations; furniture and equipment replacement; structural voluntary upgrades
- **Site Improvements:** ideal to address Site Improvements (M12) for Campus Loop, Parking Lot G & A and Soccer Drop-off reconfiguration at same time

Other Considerations:

- **Demolition:** Building A
- **Structural Comments:** this project appears to be feasible without triggering a mandatory structural upgrade. However, we recommend analyzing the existing structure to determine the extent of the existing deficiencies found in Building E.



M11: KINESIOLOGY PHYSICAL FITNESS ADDITION

will be an addition to Building E and F for Kinesiology programs. Exact placement to be determined once location of proposed Child Development Center (M9) is moved to desired location in State submission. Location also needs to be coordinated with the campus loop road completion design (see M12). Preliminary Assumptions:

- **Size:** 20,000 GSF / 17,000 ASF
- **Height:** 2 stories
- **Programs:** Kinesiology Teaching Spaces and Offices

M10: HORTICULTURE REPLACEMENT

will replace the 11 separate Horticulture structures with 6 structures, totally the same size as the original aged complex, but configured for modern teaching pedagogies in Horticulture and Landscape Design.

Detail per State approved FPP:

- **Size:** 19,032GSF / 18,213 ASF
- **Height:** 1 story
- **Programs:** Horticulture and Landscape Design
- **Site improvements:** landscaped outdoor instructional areas
- **Project requires:** demolition of Existing Horticulture Complex, may need to be phased to keep program operational

Other Considerations:

- **Demolition/Relocation:** demolition of Existing Horticulture Complex
- **Swing:** Horticulture unless it can be phased



PRIORITY PROJECTS

Facilities Project Descriptions

M15: PARTIAL RENOVATION OF BUILDING R

to address aged infrastructure, intermittent water intrusion, and reconfigurations of specific departments within each of these three buildings. For example more counseling offices, and relocating Assessment Center. Preliminary Assumptions:

- Size: 53,889 GSF / 28,492 ASF
- Height: 1 1/2 stories
- Programs: Student Services in R
- Renovation: roof, HVAC, electrical, lighting and windows/doors replacement; technology upgrades; new restrooms; selective interior finishes replacement and reconfigurations; furniture replacement; structural voluntary upgrades

Other Considerations:

- Swing: affected departments will need to swing
- Structural Comments: project appears to be feasible without triggering a mandatory structural upgrade. However, we recommend to address the existing deficiencies found in Building R.

M9: CHILD DEVELOPMENT CENTER

is a new small facility for the Child Care Development program, currently housed inadequately in Building A. The Master Plan proposes to locate this building closer to the existing Child Care Center so that students can observe these rooms for class lab purposes. This location will also facilitate a smoother completion of the requested Campus Loop Road under Site Improvements Project M12.

Detail per State approved FPP:

- Size: 12,532 GSF / 8,661 ASF
- Height: 1 stories + 2,000 ASF Covered Play Yard
- Programs: Child Development Center Childcare Class Labs, Classrooms, and Offices, and New Play Yard
- Site improvements: landscaping around building; covered outdoor area, and pathway connections to Child Care Center

OTHER MASTER PLAN PROJECTS

Facilities Project Descriptions

M7 AND M8: PARTIAL RENOVATION OF BUILDINGS P & Q

to address aged infrastructure and reconfigurations of specific departments within each of these three buildings. For example, designated areas for EOPS offices, an Assessment lab with computers and office, enlargement of Transfer Center, and Welcome Center, and more counseling offices in Building R.

Preliminary Assumptions:

- Size: 44,537 GSF / 19,641 ASF, 14,326 GSF / 7,714 ASF
- Height: 3 stories each
- Programs: classrooms, Puente, DSPS, and Computer Labs in P; Administration, and Production in Q
- Renovation: roof, HVAC, electrical, lighting and windows/doors replacement; technology upgrades; new restrooms; selective interior finishes replacement and reconfigurations; furniture replacement; structural voluntary upgrades

Other Considerations:

- Swing: affected departments will need to swing
- Structural Comments (M8): project appears to be feasible without triggering a mandatory structural upgrade. However, we recommend to address the existing deficiencies found in building Q.



M6: REGIONAL PUBLIC SAFETY TRAINING CENTER

will be a dual use facility for the campus and local fire and law enforcement agencies to train students in Fire Science, Paramedics, Emergency Medical Technicians (EMT), Administration of Justice and Law Enforcement. Preliminary Assumptions:

- Size: 30,000 GSF / 22,500 ASF
- Height: 2 stories plus basement and small structures
- Programs: Underground Gun Firing Range, Class Labs for Fire, Police, Paramedics, EMT, and Administration of Justice, Multi-Use Classrooms, Meeting Rooms, Offices, Lockers, Equipment Storage, and Support Spaces
- Other: dormitory with bedrooms, restrooms, offices; Free Standing 60' Ladder and Rescue Tower; Free Standing Drill Tower; Strength and Conditioning Pavilion (not all ancillary buildings shown on plan)
- Site improvements: landscaping around new building; Lot E for Yard (truck exercises) and smaller structures; underground water retention and recycling system for fire
- Project requires: demolition of Building A and relocation of Lot E

Other Considerations:

- Secondary Effects: vacated spaces from Fire Science and EMT in Building F



M17: NEW CONFERENCE CENTER

for both campus and community use. Preliminary Assumptions:

- Size: to be determined
- Height: 2 stories
- Programs: Meeting Rooms, Lounges, Kitchen and Support Spaces



M16: FIT OUT OF BUILDING S SHELL SPACE

for Medical Genomics currently residing at 860 Atlantic Avenue in Alameda. Preliminary Assumptions:

- Size: per image below

Other Considerations:

- Secondary Effects: Building 860 Atlantic Avenue will be vacated after this project and College of Alameda Science and Administration project. See District-Wide FTMP for future plans for 860 Atlantic Avenue.

