



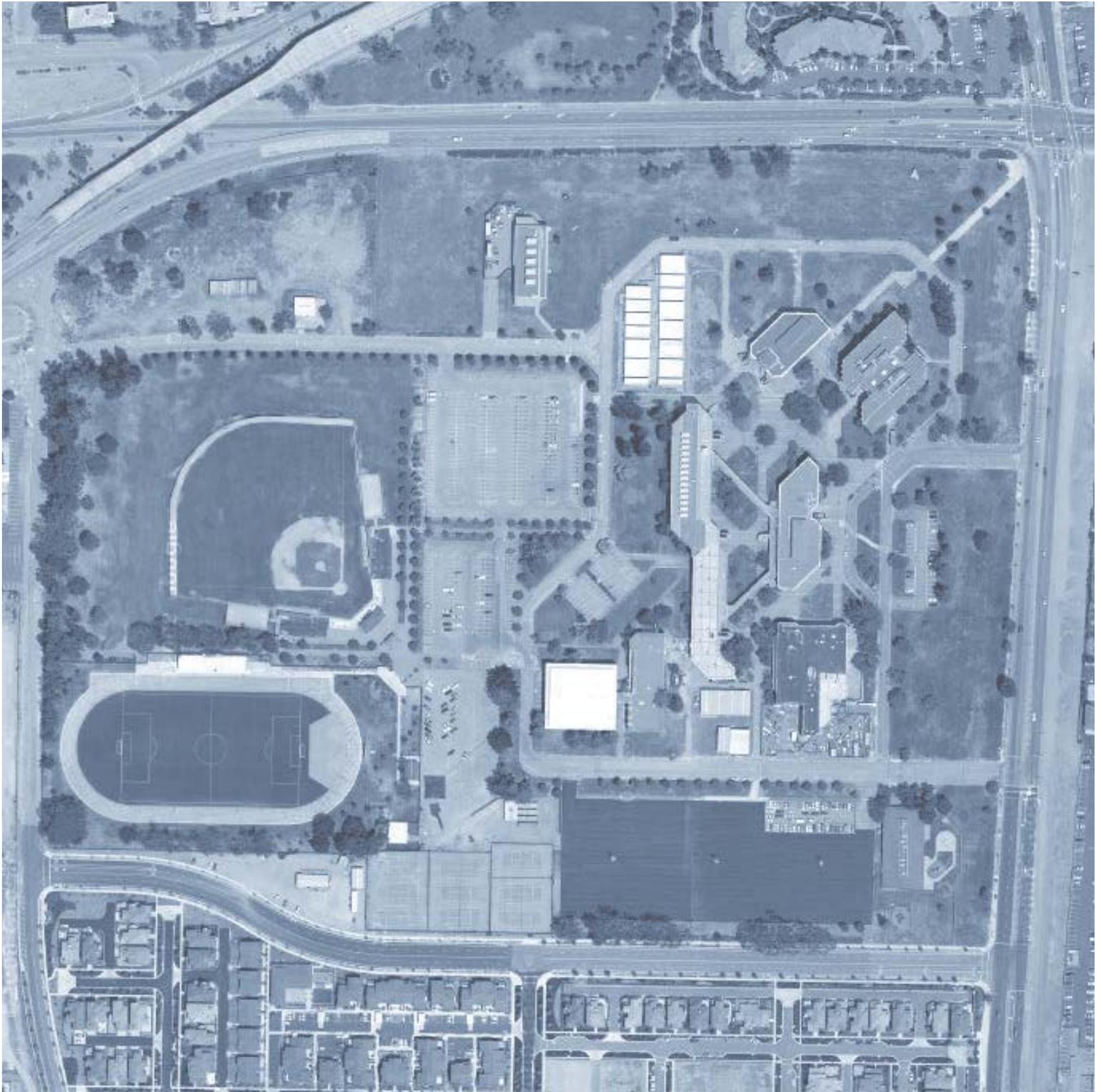
Peralta Community College District
DEPARTMENT OF GENERAL SERVICES

COLLEGE OF ALAMEDA

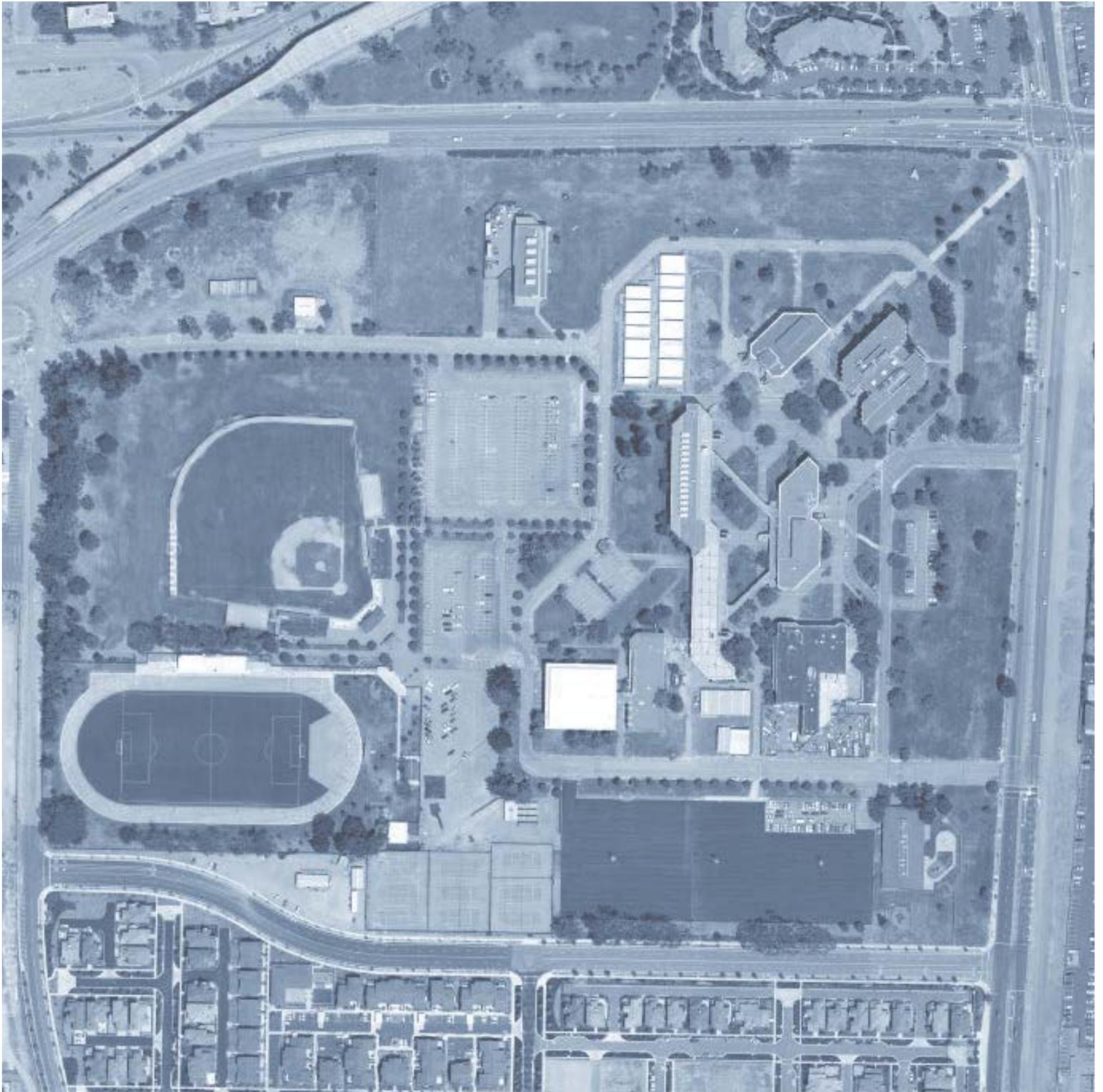
FACILITIES MASTER PLAN



Master Planning Team: WLC Architects / Beverly Prior Architects / WRT Design / BKF Engineers / KPW Structural Engineers / Interface Engineering



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INTRODUCTION





College of Alameda

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February 24, 2009

More than four decades ago, Peralta Community College District proudly opened College of Alameda, which is now recognized regionally among the best community colleges in the State. College of Alameda was initially designed and constructed in the late 1960's and has changed very little over the years. Thanks to the passage of Measure "A" for \$390 million, the District and College are looking forward to renewing the campus' original luster by renovating and replacing outdated facilities.

We believe that this bond measure provides a wonderful opportunity to begin an extensive planning process early on that not only looked at the college's immediate needs but also at future use. The excellent facilities and equipment that will result from the needed renovation and construction program will support the high-quality academic programs required of a premier college such as ours.

We endeavored to involve all stakeholders of the College: Faculty Staff and Students to be certain their concerns and ideas was a central part of the Facilities Master Planning recommendations. This planning phase is now drawing to a close with the presentation of the plan you have before you.

While this plan emphasizes the renovation of most of the campus facilities, there is also new construction proposed. Key among these new buildings is the replacement for buildings "C" and "D" which will house state-of-the-art academic buildings, complete with "smart classrooms," student services programs, and science laboratories. It will also provide a prominent "gateway" to the campus, giving a new and more prominent face to our community.

This plan also discusses future ideas for landscaping, security, infrastructure and possible future public-private opportunities. With this plan in place the community and the college are assured that the facilities at the College will be capable of housing quality programs that fully accomplish the College's mission of education, service, and leadership for generations to come.

George Herring
President, College of Alameda

Peralta Community College District

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PURPOSE OF PLAN

Over the past two years, representatives of Peralta Community College District faculty, staff and administrators at the College of Alameda have undertaken a series of master planning activities. The results of these activities include the following planning documents:

- District Strategic Plan
- Educational Master Plan for the College of Alameda
- Integrated Educational and Facilities Master Plan for the District and the Colleges
- Facilities Master Plan for the District and the College

The 2008 Educational Master Plan was developed over the past twelve months with contributions from an educational team consisting of the administration, faculty and staff of the College of Alameda. The final document was completed by the same educational team with editorial assistance from consultants.

The 2009 College of Alameda Integrated Educational and Facilities Master Plan provides specific direction and parameters for the implementation of programs and activities relating to the educational, support service and facility programs of the College. The Plan is meant to be the “bridging document” between the Educational Master Plan and the Facilities Master Plan for the College of Alameda.

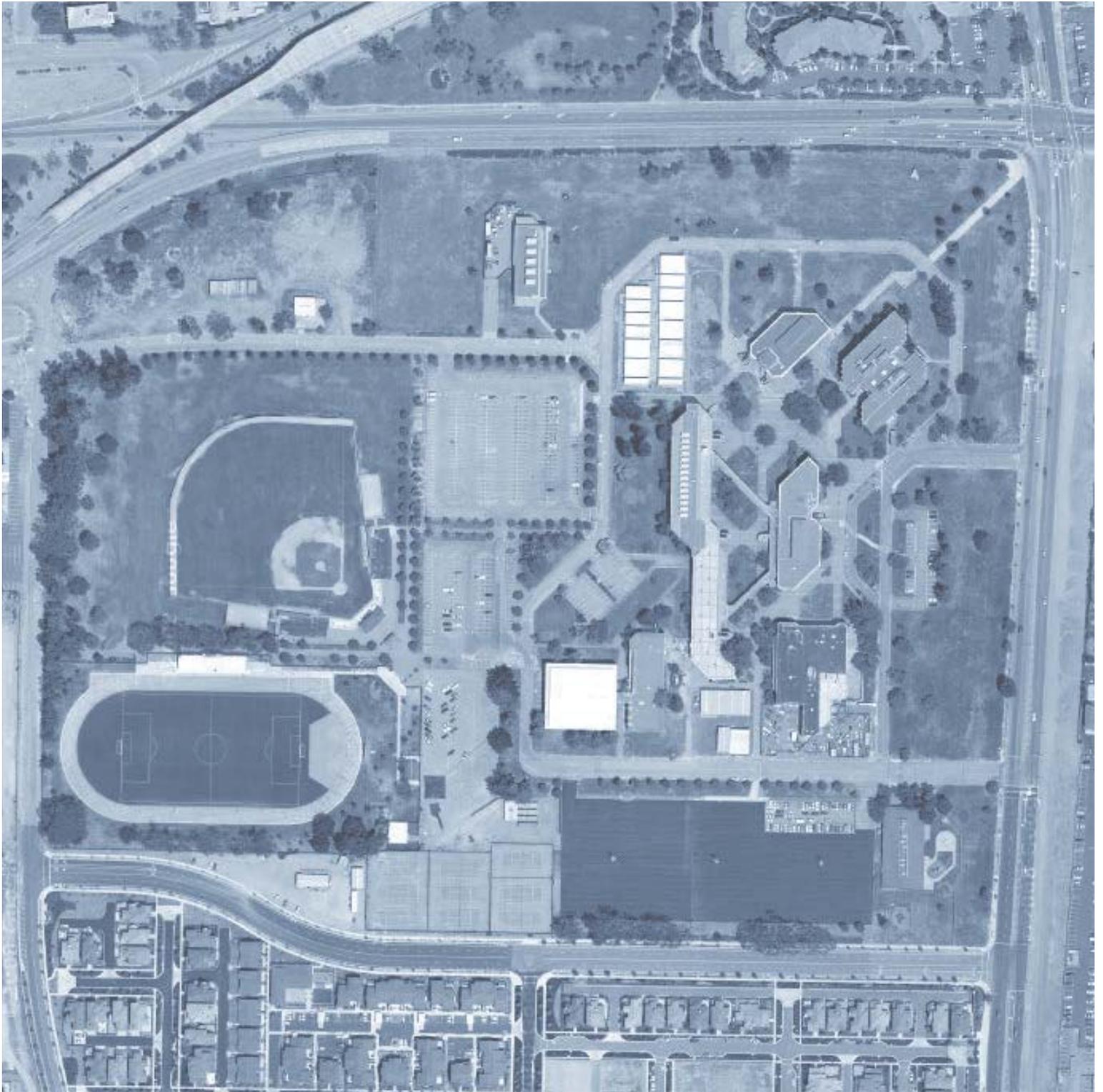
The purpose of the 2009 College of Alameda Facilities Master Plan is to integrate the results of the aforementioned planning documents into a visual and quantitative representation of facilities, needed to support the comprehensive planning efforts of the College through the year 2022. The Plan provides direction for improving the College’s facilities and is a dynamic document, flexible enough to adjust to new space requirements and potential instructional needs, while at the same time, providing parameters for future development of the campus.

The 2009 College of Alameda Facilities Master Plan has its roots in both qualitative input and quantitative data. This data derives from a physical assessment and analysis of: the college facilities, existing utility infrastructure, sustainability goals, energy conservation goals and educational operation needs.

As previously discussed, the Plan is also based on a series of planning efforts emanating from the faculty, staff and administrators at the College. The Plan is grounded in, and supports, the instructional and support services provided by the College with the intent being that the proposed facilities will provide for a quality learning environment for all segments of the College.

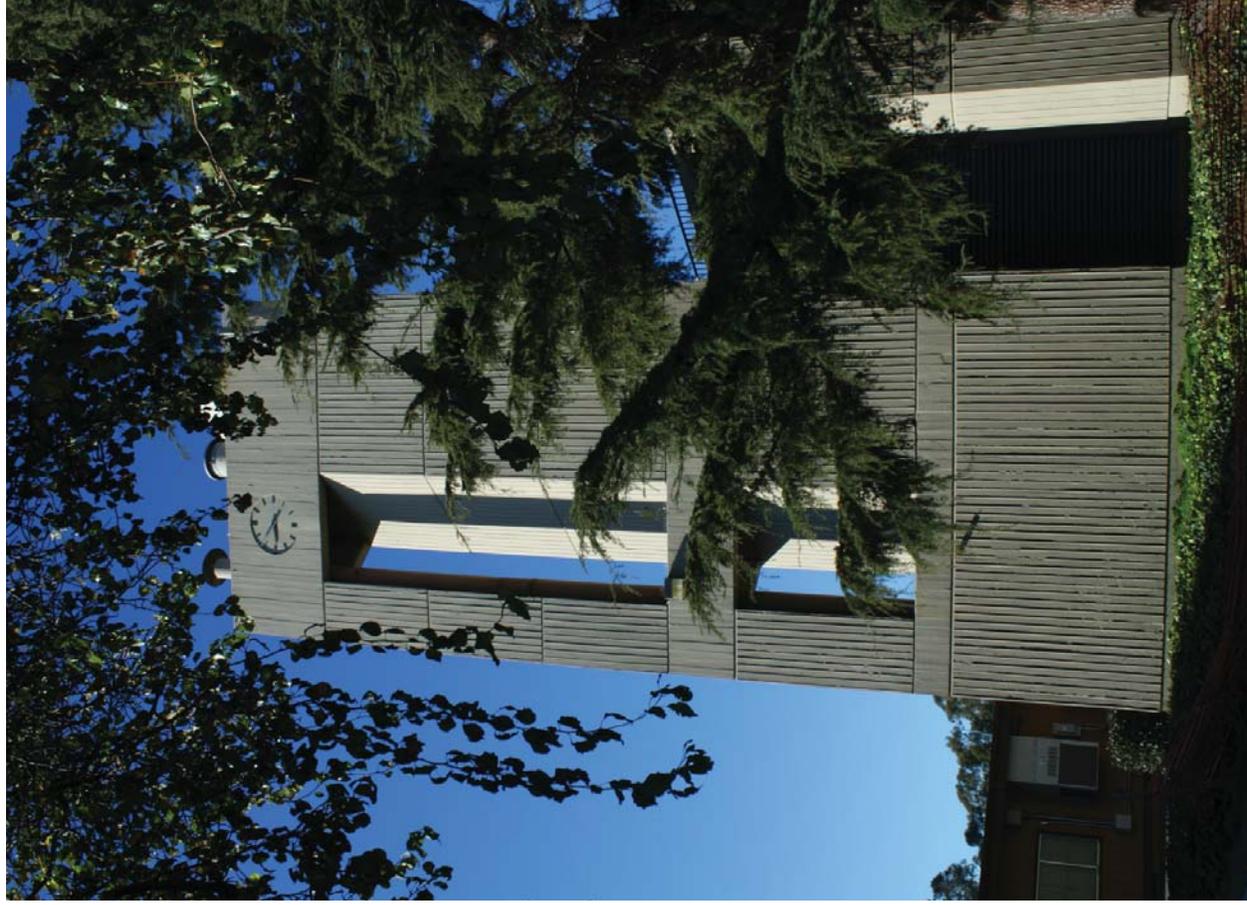
Recommendations from the Educational Master Plan and also the Integrated Educational and Facilities Master Plan were used to forecast the facility needs for the College through the year 2022. As part of the planning process, smaller stakeholder meetings were held with the College to gain additional insight regarding facilities from faculty, staff, neighborhood community groups and students; to ensure input from the user community.

During these meetings, information extracted from the smaller stakeholder, educational and financing meetings in the planning process, was shared with the stakeholders via the Town Hall meeting; with the intent being to validate how this information translates to facilities. Using this input, the Architects then developed a draft Master Facilities Plan for the campus along with appropriate quantification of space requirements and presented to all stakeholders for their review. The final Facilities Master Plan for the College of Alameda is the result of this process.



PLANNING CONTEXT





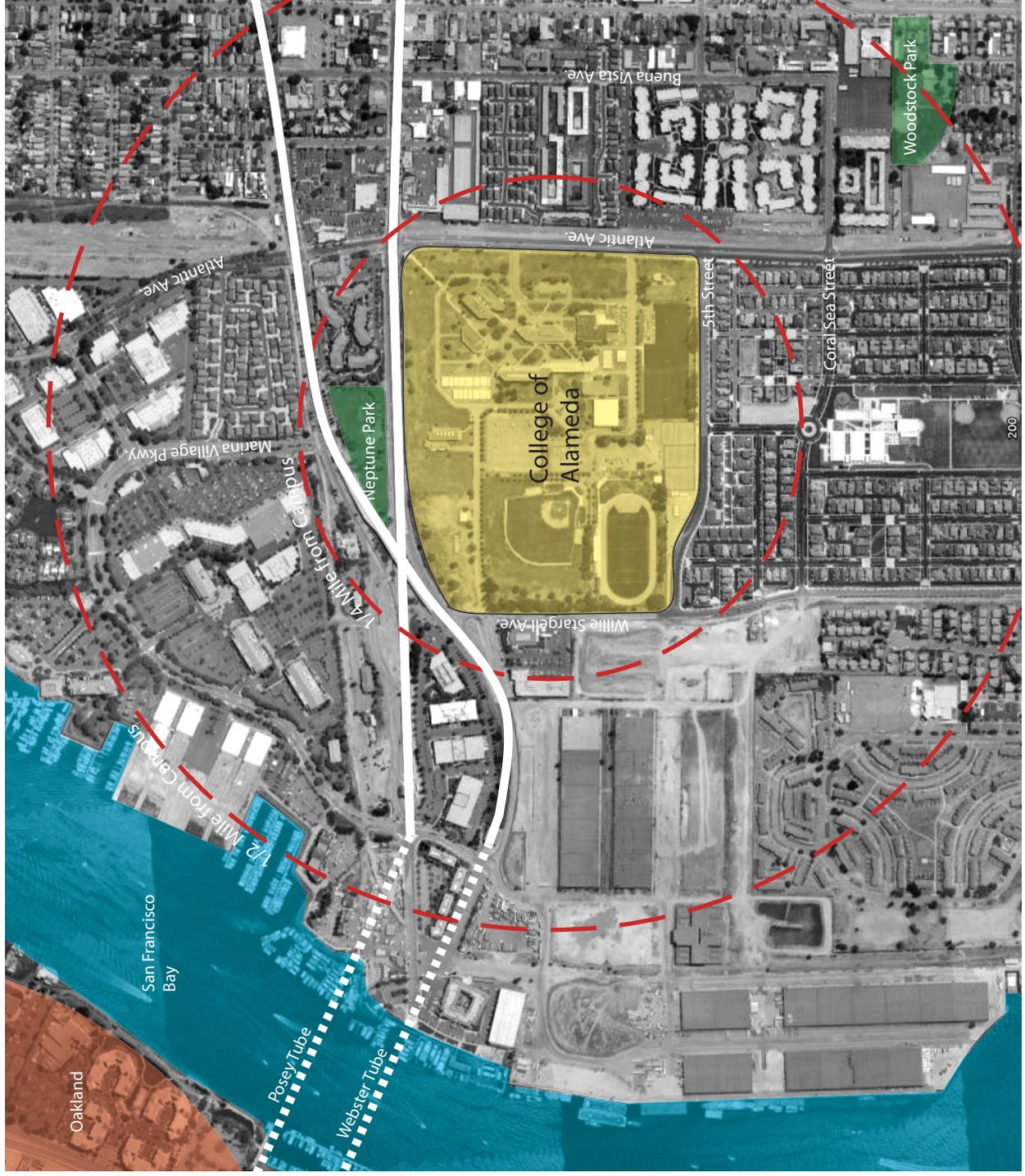
The College of Alameda (COA) is one of four colleges in the Peralta Community College District, located in the California East Bay Region, on the Island of Alameda. It has a main campus located at 555 Ralph Appenzato Parkway (Atlantic Avenue) with a satellite campus, The College of Alameda Aviation Maintenance Training Facility located at 970 Harbor Bay Parkway at the North Field of Oakland Airport, .3 miles from the intersection of Harbor Bay Parkway and Dolittle Drive. The main campus is located in a slightly urban setting near the Historic US Naval Aviation Facilities.

The main campus houses eight permanent buildings and approximately twenty two portable buildings for approximately 290,600 sq. ft. of building area on 61 acres of land.

The Aviation Facility houses two permanent buildings and one storage shed, for a total of 28,400 sq. ft. on 2 acres of land.

CAMPUS NEIGHBORHOOD ADJACENCIES

EXISTING CAMPUS OVERVIEW



NEIGHBORHOOD ADJACENCIES

OUTSIDE AGENCY CONSIDERATIONS

The College of Alameda's surrounding areas are regulated by the City of Alameda's Planning and Zoning Department. These zoning regulations are in place to make sure the appropriate scale is maintained with the adjacent neighborhoods.

The zoning/existing uses are as follows:

The College of Alameda campus is zoned R-4, neighborhood residential. The adjacent areas north of the campus are zoned M-2-PD, general industrial with planned development overlay and M-X, mixed use planned development. Adjacent areas south of the campus are zoned R-4-PD, general residential with planned development overlay and C-C, community commercial. Areas east of the campus are zoned M-2, general industrial, M-1-PD, general industrial with planned development and R-5-PD, general residential with planned development overlay. Areas west of the campus are M-X, mixed use planned development.

All of the districts contain height and density restrictions that must be adhered to when planning new developments and buildings.



View from campus looking west



View from campus looking south



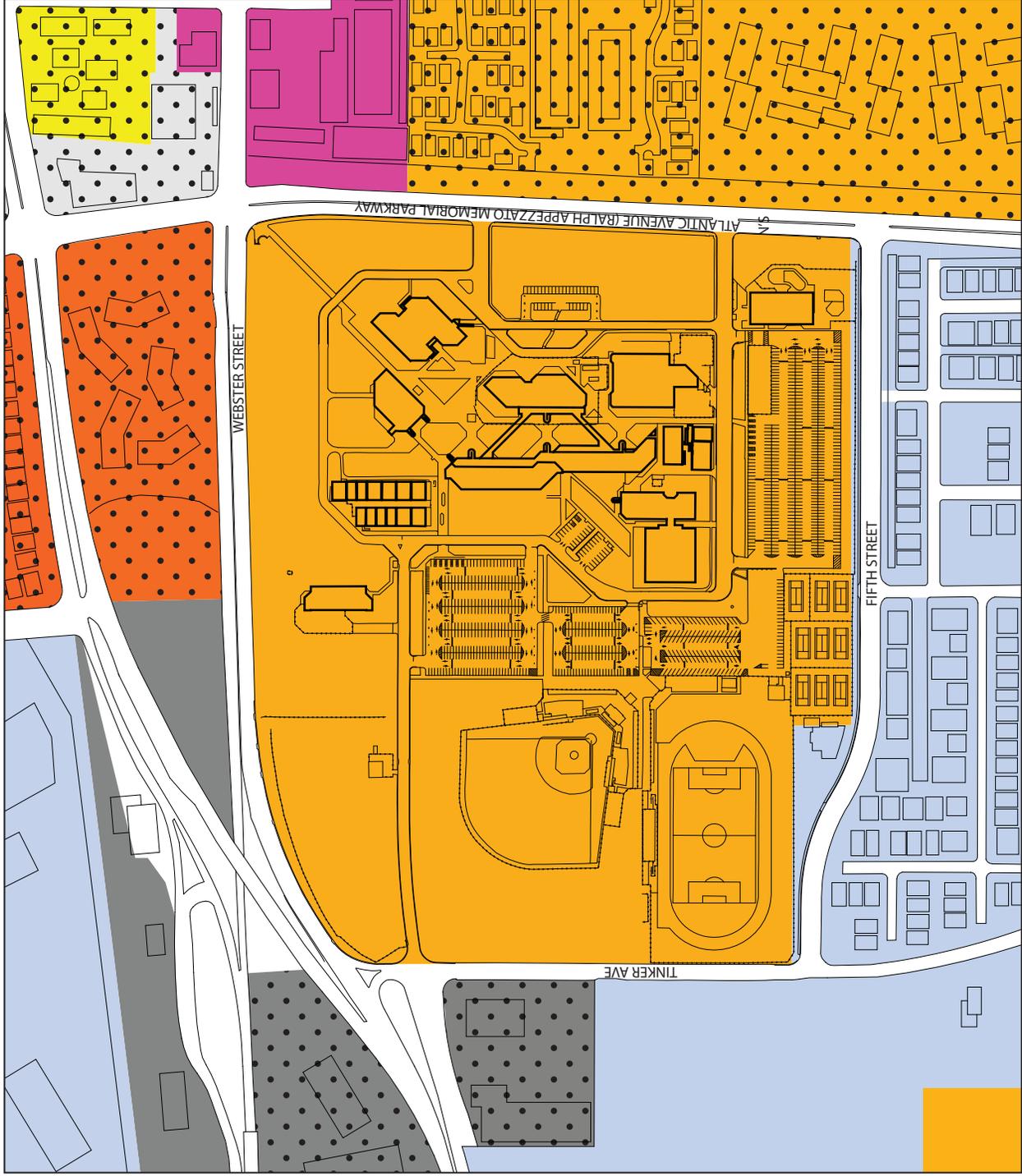
View from campus looking south



Commercial district south of campus

NEIGHBORHOOD ZONING

EXISTING CAMPUS OVERVIEW



LEGEND

- Garden Residential
- Neighborhood Residential
- General Residential
- Intermediate Industrial
- General Industrial
- Mixed Use Planned Development
- Community Commercial



NEIGHBORHOOD ZONING PLAN



The main campus is comprised of four original buildings constructed between 1967 and 1970: Building A, which contains administrative offices, classrooms and instructional labs; Building B, which contains the Auto Body and Paint program as well as the Automotive Technology Program; Building F, containing the Student Center, student services offices, cafeteria and bookstore; and the connected Buildings C and D, which contain classrooms, science and computer labs. Buildings constructed since the original construction are: the Gymnasium, 1976; the Library/Learning Resource, 1976-77; the Child Care Center, 1977; and Building E, containing the Diesel Mechanics program, 1989. Additionally, the college has nine tennis courts, an all-weather track and a baseball field built in 1996.

To complete the educational programming goals, the Master Plan will reflect construction of an Auditorium/Conference Center. Two modular buildings adjacent to Building C have been installed to serve City/County supported One Stop Career Center and Early College High School in Partnership with the Alameda Unified School District.

The following are campus improvement projects that are scheduled for completion:

Building A is currently being modernized. Once the modernization is completed, Building C and D will be demolished and replaced. The new buildings will house science, art, apparel and Merchandising programs, as well as faculty and administrative office. After Building C and D is replaced, Building L will be renovated, housing the Library and Learning Resource Center.

The City of Alameda, with the cooperation of the Peralta Community College District plans to extend Willie Stargell Avenue through the north portion of the campus. Construction of the roadway will begin sometime in the first half of 2009 with completion scheduled for approximately one year later.



Building B - View from deck of Building C

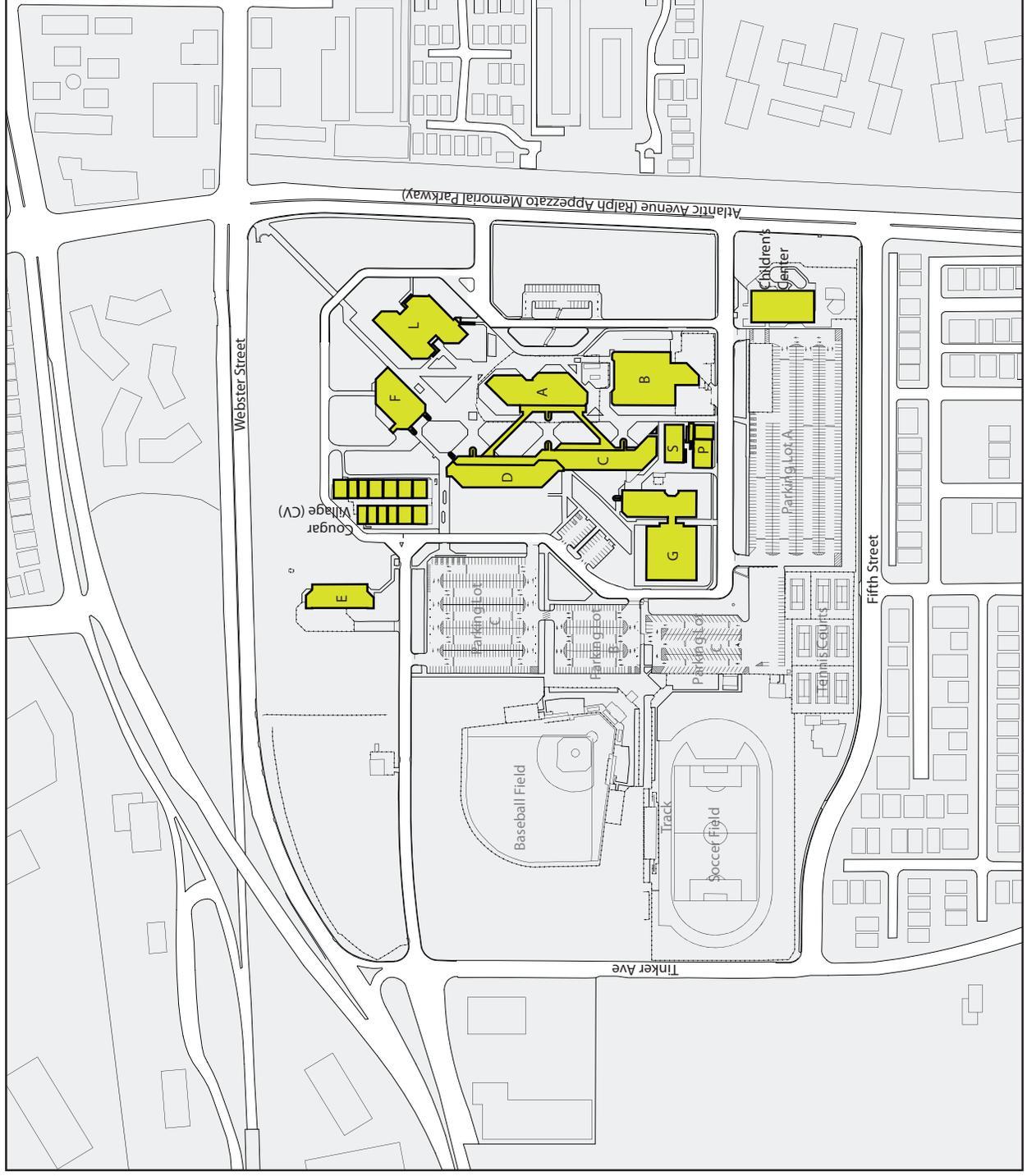


Building C - Exterior Detail

CAMPUS BUILDINGS

EXISTING CAMPUS OVERVIEW

- B Auto Body
Automotive Technology
- C Biological & Social Sciences
Liberal Arts & Offices
- D Chemistry & Physics
Services for Students with
Disabilities; Liberal Arts,
Language, Apparel Design
& Merchandising, Art, EOPS
& Offices
- E Diesel Mechanics
- F Student Services, Bookstore
Cafeteria
- G Gymnasium, Music & Locker
Rooms
- L Library, Learning Resource
Center & Administration
- P One-Stop Career Center
- S Alameda Science &
Technology Institute
- Cougar Admissions & Records
Village Financial Aid, Staff Offices
(CVA) Classrooms/Dental Program



EXISTING CAMPUS BUILDINGS

EXISTING CAMPUS OVERVIEW

CAMPUS USE AND FACILITIES

The College of Alameda has the following general categories:

- Academic - instructional facilities such as classrooms and labs.
- Academic Support - such as libraries, computer labs, audio-visual, and learning centers.
- Student Services - such as health services, counseling, support for student development and financial aid.
- Administration - supports district management, staff, and community relations.
- Athletics and Recreation - such as athletic tracks, soccer and baseball fields, and gymnasiums.
- Parking - staff and students.

The College of Alameda academic buildings are dispersed throughout the campus. Buildings that house academic and student support and services are located at the perimeter of the academic buildings on the south side of campus.

Parking lots separate the academic buildings from the athletic recreation complex. The athletic recreation complex is located at the rear (north) of the campus which is comprised of the track, soccer field, baseball field, and tennis courts.

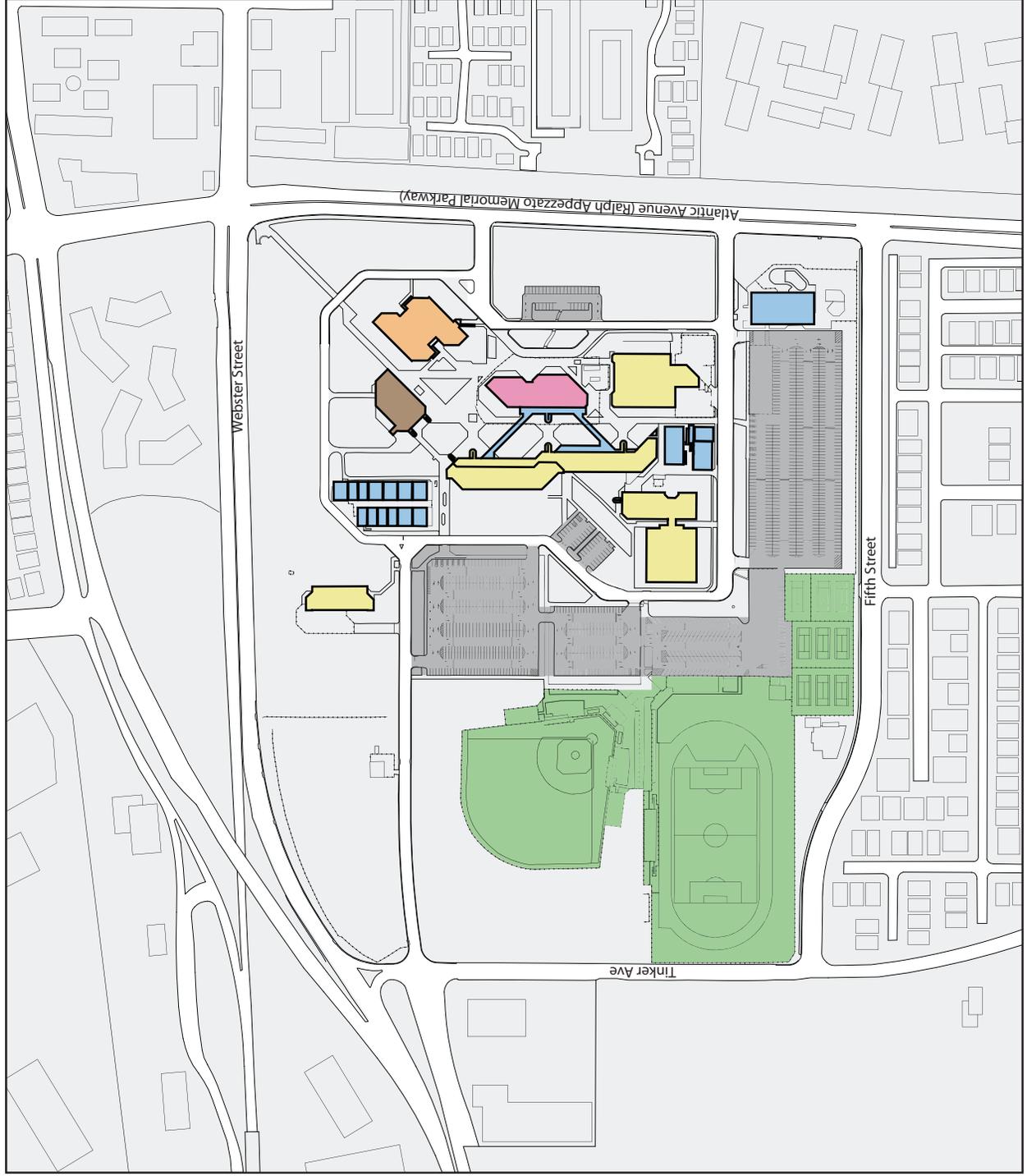


Building L (Library)



Building L - Exterior Detail

Building C



LEGEND

- Academic
- Academic Support
- Student Services
- Administration
- Sports Field and Facilities
- Other
- Parking



EXISTING CAMPUS OVERVIEW

The analysis has identified the characteristics and issues of the buildings and campus components that must be addressed. Additionally, the District's Educational Master Plan and the campus vision from the College President, Faculty, Staff and students were critical factors; that helped to quantify and create a revised priority ranking for each building. The design team listed possible opportunities for consideration that will be streamlined to one recommendation in the final master plan.

The revised building rankings reflect the level of construction each building requires when criteria such as District Standards, Educational Programming and College Campus Visions are applied. A brief summary are as follows:

Building "A" was not included in the rating system because it is currently under construction.

Building "L" has a below average rating of (4): the enhancement or replacement of more vibrant educational programs will require limited building infrastructure modifications; those modifications can be accommodated within the existing facilities.

Buildings "B," "C," "D," "E," "F," and "G" have a poor rating of (3): the enhancement or replacement of more vibrant educational programs will require structural and/or utility building modifications; some of those modifications may be accommodated within the existing facilities. While others may require the need for new construction.

Aviation Buildings "A and B" has a poor rating of (3): the enhancement or replacement of more vibrant educational programs will require major structural and/or utility building modifications; those modifications may be accommodated within the existing facilities.

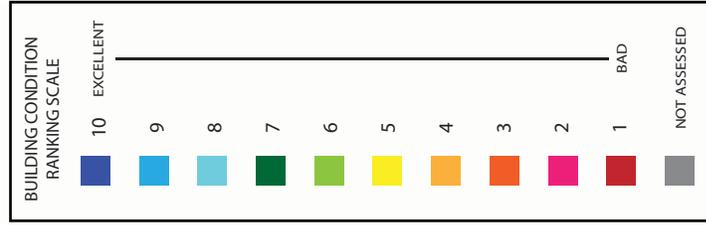
Restroom Building has a rating of (3): routine maintenance and cleaning is required.

FACILITIES ANALYSIS CONCLUSIONS

Concession Building reflects a rating of (5): the building is in fair condition and is maintained by the City of Alameda.

The Campus "Programs of Distinction" will have the following impact on the campus: Aviation Buildings "A and B" will be modified to accommodate the Transportation/Logistics Program; a renovated or new Child Care Center building is required. If new, the actual buildings location to be determined during the actual design phase. The Green Technology Program will require building modifications to accommodate lab work and community joint venture projects. Library renovations are planned; which will enhance a learning center approach for students.

The District will require sustainable methods of construction and recycled materials in all operations and construction projects. Existing boilers are being replaced with new energy efficient boilers and controls. Electrical energy consumption can be offset by installation of photovoltaic solar panels atop canopies at parking areas and or building roofs.



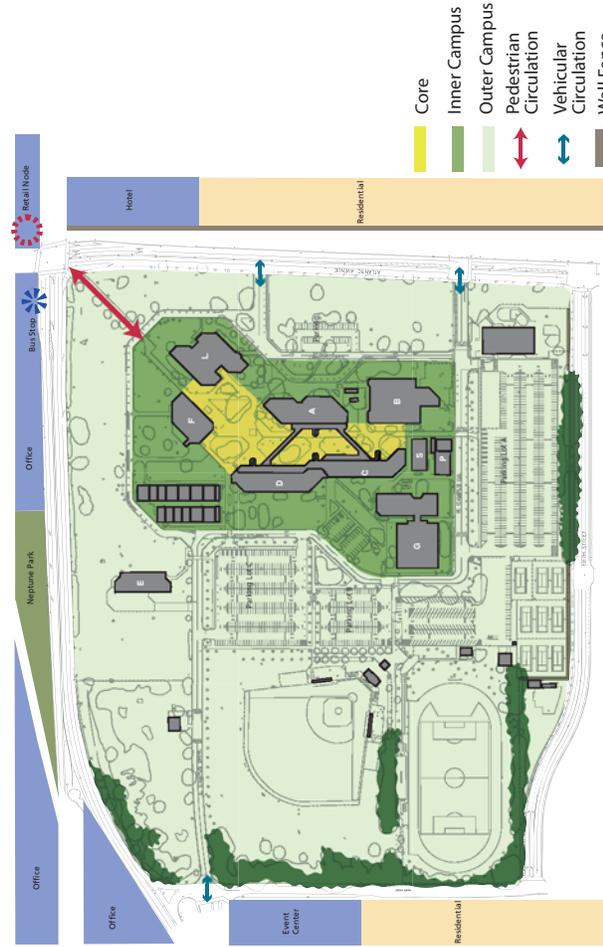
EXISTING BUILDING CONDITIONS

Adjacent Connections

The College of Alameda campus is isolated from the fabric of the City of Alameda. It follows the tradition of the campus as a green oasis separate from the city. This offers the benefit of providing a quiet place to focus on studies; however, it also disconnects the campus from amenities that are offered by the city. A new pedestrian connection between the campus core and the Webster/Atlantic intersection serves an important need by providing a strong functional and symbolic link to the shops across Webster Street and Atlantic Ave. and to the bus stops that serve the campus. The current arrangement of campus buildings and the land uses surrounding the campus do not offer additional opportunities to provide connections between the campus and city.

The campus frontage lacks character as viewed by the public from Webster Street and Atlantic Avenue. If the campus is to retain its character as an oasis in the city, the landscape character along these public frontages should be enhanced to reinforce the campus identity.

The future Tinker Avenue/Webster Street intersection redesign will have significant impacts on the northeast portion of the campus. The interface between the campus, the new street alignment, and the new developments that are planned north of the campus will need to be considered in the campus planning process.



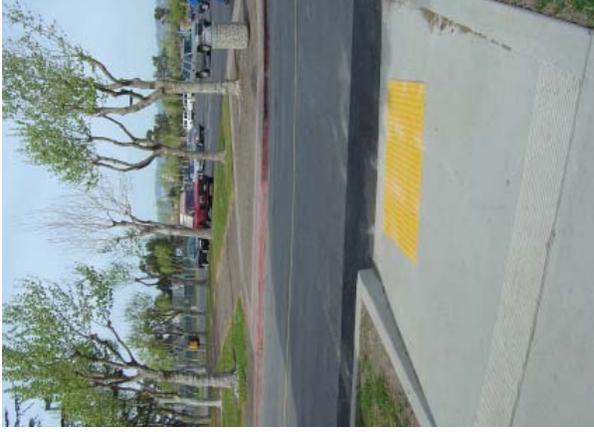
Campus Context

Connection and Gateways

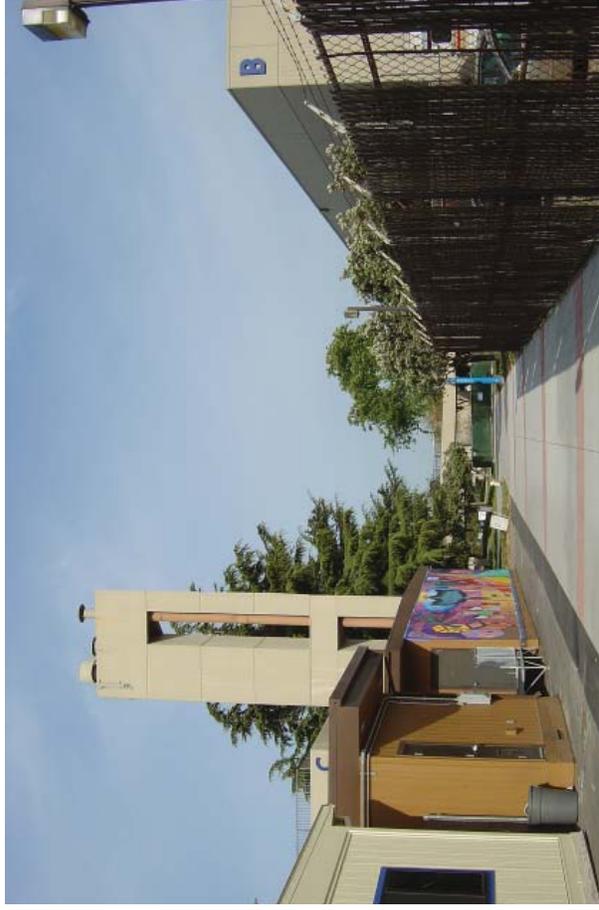
The main access to the inner campus for most students is from the parking lots to the north and west. The entries into the campus are undistinguished and unpleasant. From the north, access through the narrow Building C & D passageway is dark and uninviting. From the west, the main entrance to the campus from the parking lot is framed by a barbed-wire-topped chain link fence with broken-down cars behind it on one side and unattractive portable structures on the other. The entry sequence from the southeast corner is improved, however the sense of arrival could be enhanced with a stronger planting design.



Access to the inner campus



Access from parking lots



Access from parking lots



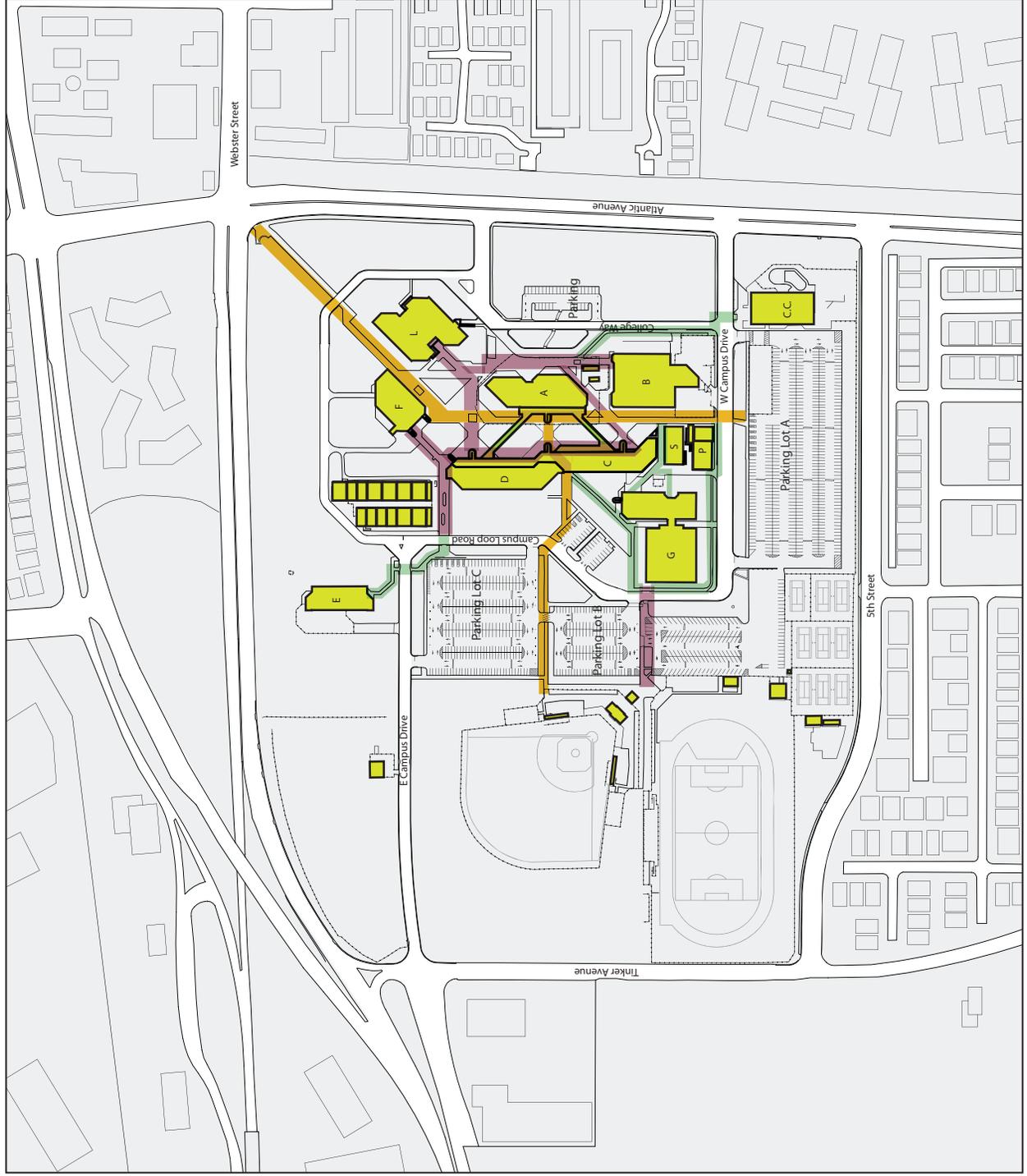
Entry way between Bldg C and D



Entry way from Atlantic Ave

Pedestrian Circulation and Access

Accessibility is generally accommodated throughout the campus because the topography is essentially flat. The main circulation issues pertain to wayfinding and a sense of arrival at the campus. The entryway from the north parking lots between Buildings C and D is unpleasent because it is a small, nondescript, dark tunnel, and does not create a positive sense of arrival. Similarly, the entry from the western parking lot lacks a sense of arrival, as it is marked by the chain-link fence bounding the auto-repair facility to the south and the portable buildings to the north. The new pedestrian connection to the Webster/Atlantic intersection does provide a strong functional and symbolic axis. This model could be extended to other key circulation axes throughout the campus, mainly from the parking lots to the north and reinforcing the east-west spine through the campus core.



- Major
- Moderate
- Minor





College Way



Campus Loop Road

Vehicular Circulation

The central elements of the automobile circulation system at the College of Alameda are two streets; “Campus Loop Road”, and “College Way”; that surround the main campus area and connect large parking fields on the west and north sides of campus with the main campus entrances on Ralph Appezzato Memorial Parkway. There is an additional connection to Wilver “Willie” Stargell Avenue to the north of the campus that is heavily used by students entering the campus from Oakland, to the north, through the Webster Tube that crosses the Oakland Estuary. The eastern portion of the Campus Loop Road is one-way, in a counter-clockwise direction.

While the system is functional, there are several features and items that warrant detailed review when considering improvements to the campus:

- Several lots and street sections have damaged pavement, insufficient street lighting, non-compliant ADA accessibility and damaged or blocked surface drainage facilities.
- The Campus Loop Road is too narrow to accommodate parallel parking and be considered adequate for fire access in case of an emergency.
- The intersection of the Campus Loop Road and the Main Entrance Road is awkward and should be reconsidered.

VEHICULAR CIRCULATION

SITE ACCESS



VEHICULAR CIRCULATION

Landscape Charcter

The College of Alameda campus is dominated by a vast outer landscape zone of lawn and assorted randomly spaced trees. There is no distinguishing character to this landscape. The inner campus and campus core are similarly homogeneous and undistinguished. Because the paving and plant palette is uniform throughout the campus, there is not a clear hierarchy of circulation routes or spaces.

Some specimen trees and tree groupings, such as the large paperbark trees south of Building B, the Hollywood junipers around the Library, the pear trees to the northeast of the library, the small grove of trees north of the library, and the redwoods near the parking area south of Building A, provide the beginnings of a strong landscape character.



Campus Core



Parking and lawn



- Core
- Inner Campus
- Outer Campus
- Pedestrian Circulation
- Vehicular Circulation
- Wall / Fence



Open Space Program

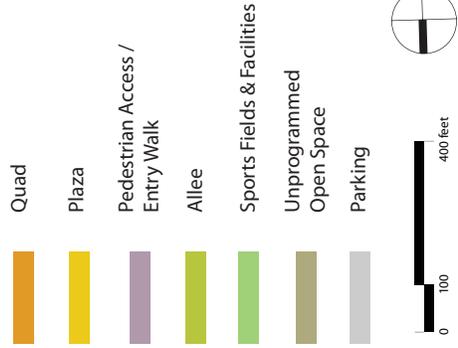
The open space program of the outer campus includes large parking areas, sports facilities and large unprogrammed lawn areas. The inner campus is dominated by undefined plaza spaces that do not provide enough shade or seating to be comfortable. Outdoor furnishings are of poor quality and are uncomfortable. Secondary spaces do not have clear uses, either as circulation routes or as outdoor seating areas.



Outdoor seating area



Typical secondary space





Plaza



Perimeter of Bldg



Topped plane tree



Typical perimeter planting

Planting

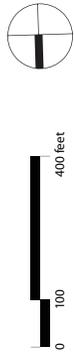
The planting concept is strong in certain locations on the campus, but the concept is not carried throughout the campus. Strong plantings include redwood trees to the south, allees of London Plane trees to the north, Hollywood Junipers around the library building, pear trees to the east of the library, and paperbark trees south of Building B. The planting framework should be expanded to create a campus identity and distinguish various use areas, such as the central plaza adjacent to Building F, the central east-west axis, the connection to the Webster/Atlantic intersection, and the campus perimeter.

All London Plane trees have been topped. This is damaging to the health of the tree and may cause unsafe branching conditions.

The large perimeter lawns require large quantities of water; replacement with drought-tolerant or low-water-use plantings should be considered for environmental reasons. Pending further analysis, bioswales and other stormwater management facilities could be created in these large open areas, expanding the potential plant palette to incorporate wetland species.



- Undifferentiated
(Lawn & Associated Trees)
- Significant Character
Trees & Tree Groupings
- Undeveloped Landscape
- Lawn in poor condition





Bench



Trash Receptacle

Furnishings
 The existing benches and picnic tables are of poor quality, are antiquated, and are not comfortable. There is not enough outdoor seating to support a high level of outdoor use, such as eating near the cafeteria, studying outdoors, or socializing. The trash receptacles are inconsistent throughout and degrade the cohesive appearance of the campus.



Entrance/Gateway Marker Light



Building Exterior Lighting

Lighting

Distinctive new light fixtures have been installed along the path from the Webster/Atlantic intersection and on the roof of Building C, setting a precedent for high-quality fixtures; however the campus core relies on unattractive building-mounted lights for its exterior lighting. These building-mounted lights are not distinctive and do not add to the landscape character. When mounted high, access by maintenance staff is difficult. According to district staff, lighting in the parking lots is adequate, but there may be a need for additional lighting at the tennis courts. Light fixtures throughout the campus are in need of maintenance, such as replacing yellowing lenses and old gaskets where there is water intrusion.

Paving

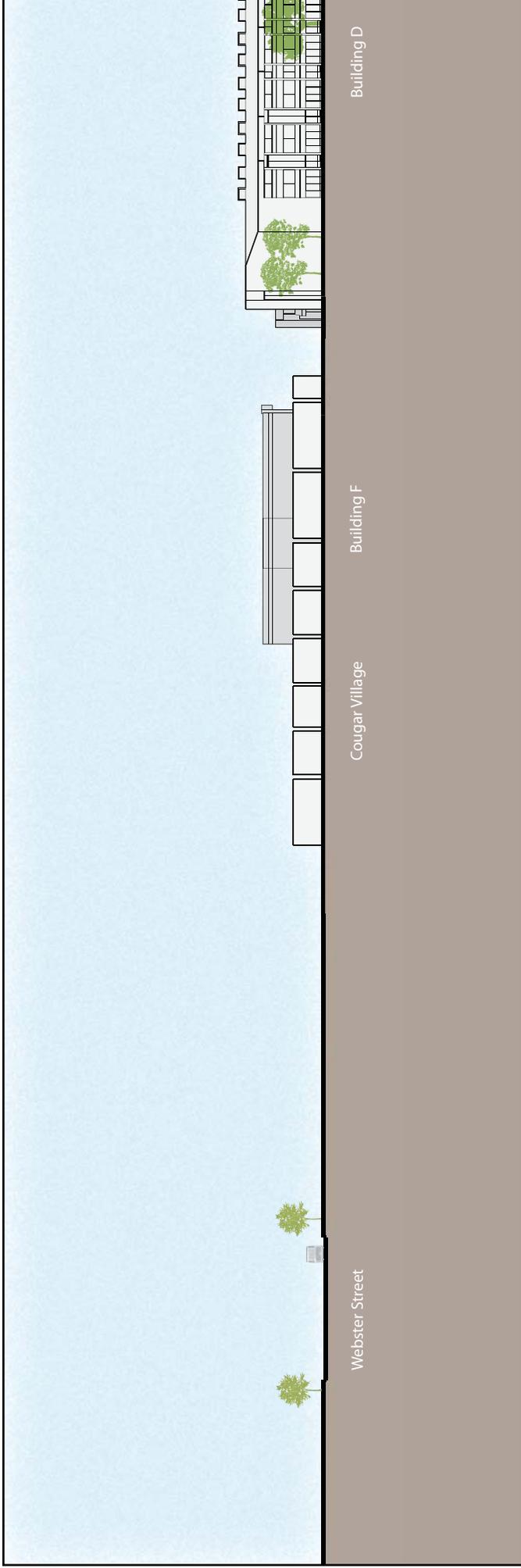
The pedestrian paving is being replaced and upgraded throughout the campus. However, the consistent paving pattern throughout the campus does not distinguish different use areas or circulation routes, such as the plaza near the cafeteria or the core east-west axis. The uniform paving also does not create a hierarchy of campus spaces or provide a sense of scale by subdividing the paved areas.



Typical campus paving

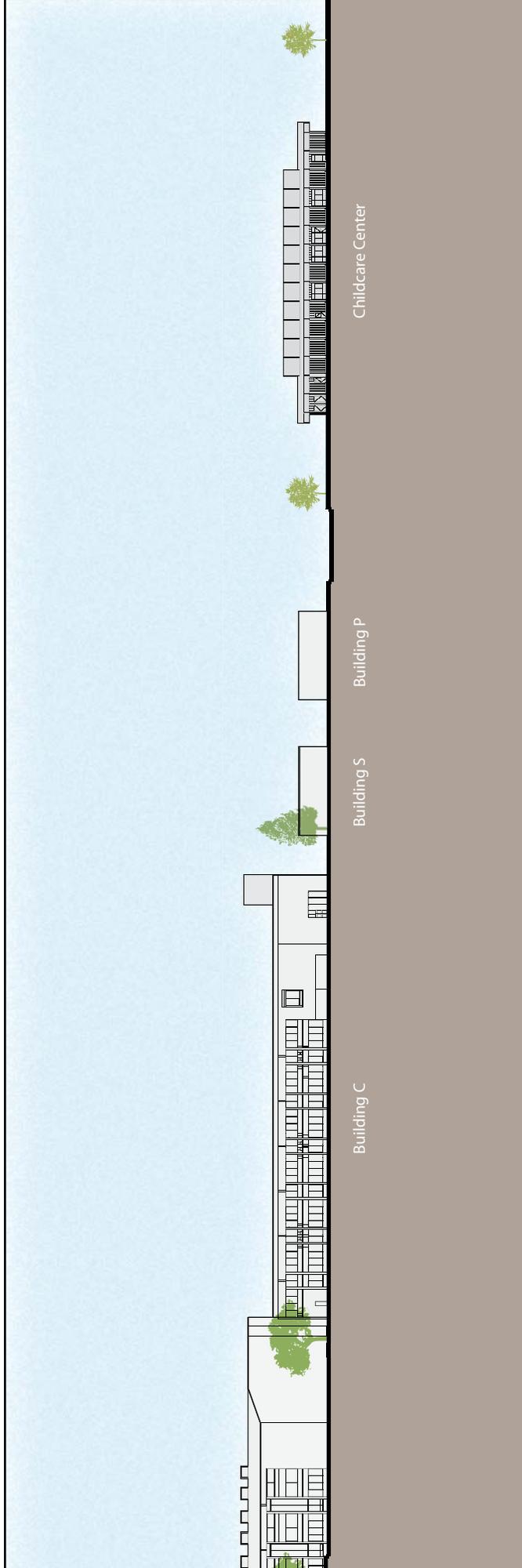
Irrigation

A new central controller has been installed. Mainlines, laterals and sprinkler heads are old. Sprinkler heads are spaced too far apart.

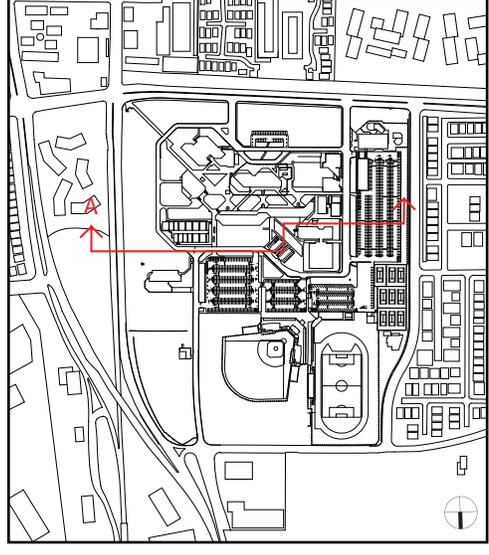


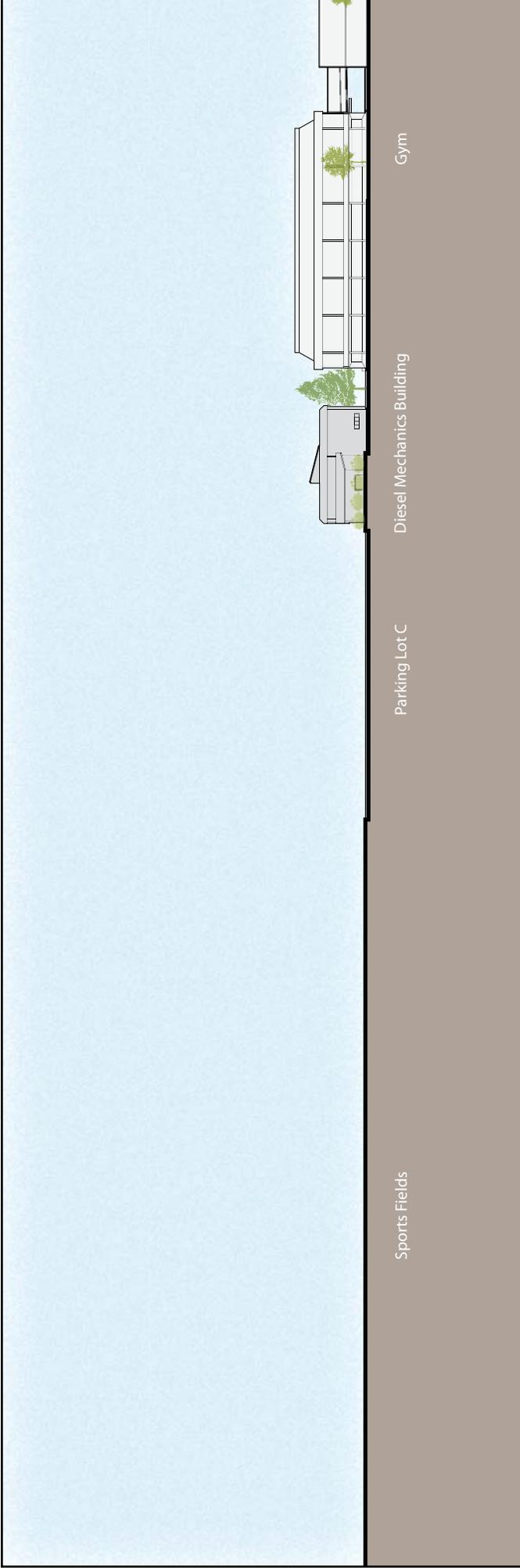
EXISTING SECTION A

The following section cuts through the existing buildings depict how the campus buildings relate to each other and to the existing site topography.



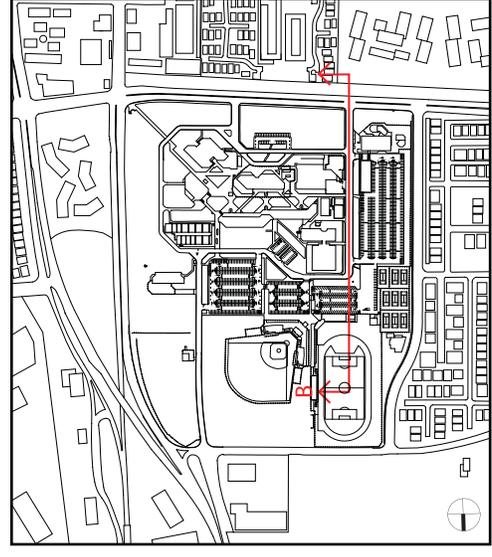
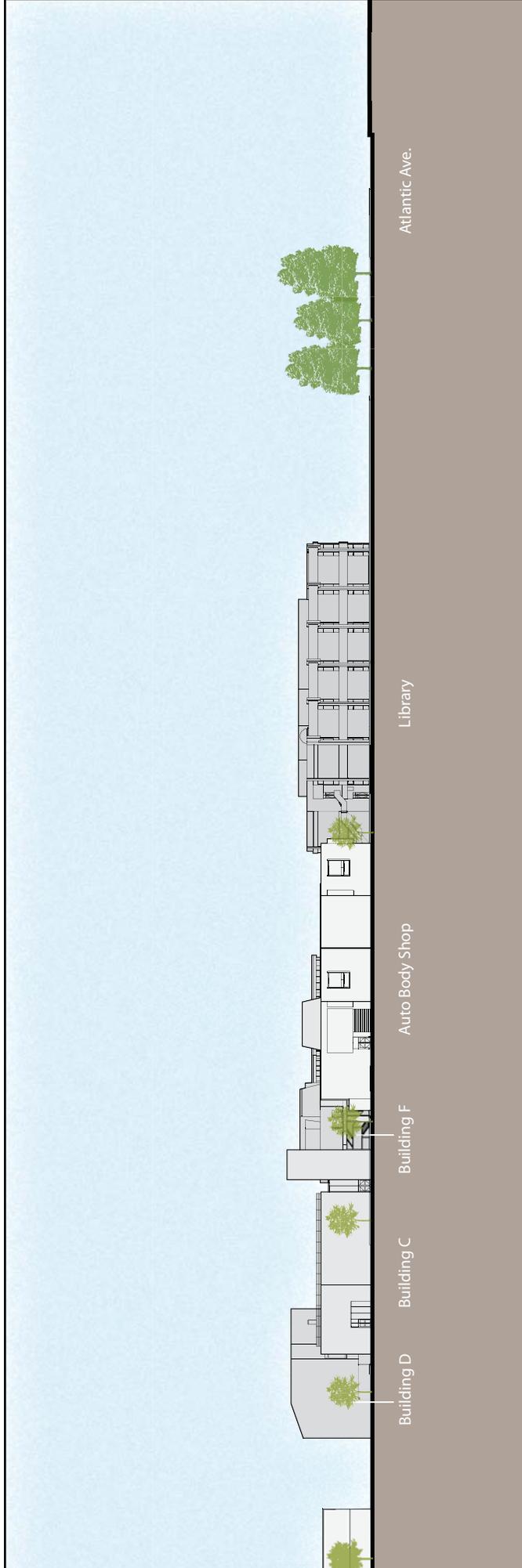
This south looking cross section illustrates the long span of the Building D and C. The rest of the campus is characterized by portable buildings including Cougar Village and Building S and P.





EXISTING SECTION B





This east looking cross-section illustrates the grouping of buildings around the central quad area including Building C, D, A, and F.

Neighborhood Adjacencies

The College of Alameda Aviation Maintenance Training Facility is the satellite campus located at 970 Harbor Bay Parkway, Oakland, CA. The main campus is located at 555 Ralph Appezato Parkway (Atlantic Avenue), Alameda, CA.

Campus Use and Facilities

The Aviation Facility trains students for Aviation Maintenance Technology. Credits earned count toward an A.S. Degree in Aviation Technology. Transfer credit agreements are with San Jose State University and Embry-Riddle Aeronautical University.

Existing Buildings

There are two one-story standard steel warehouse buildings with large open bays, which house large equipment, machine parts, airplane fuselage and small aircraft. The buildings also contain classrooms of workstations to allow students to work on specialized machine equipment. There are no student lounges or break rooms as this is a career technical education commuter facility.



Neighborhood Adjacency

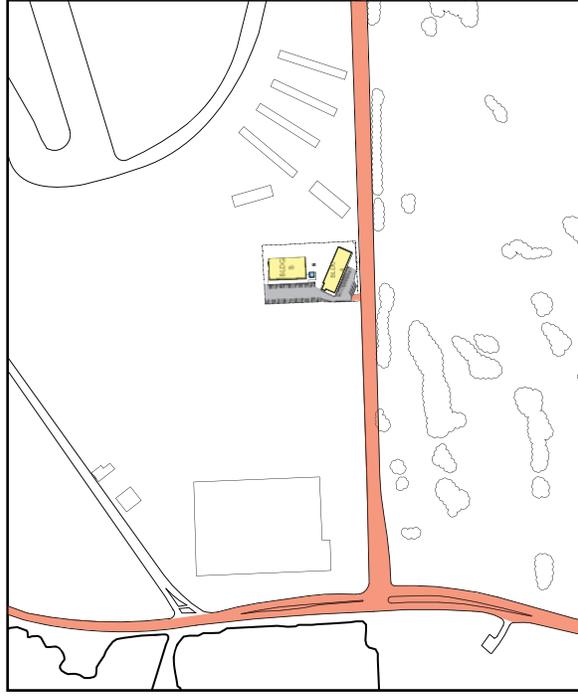


Existing Buildings

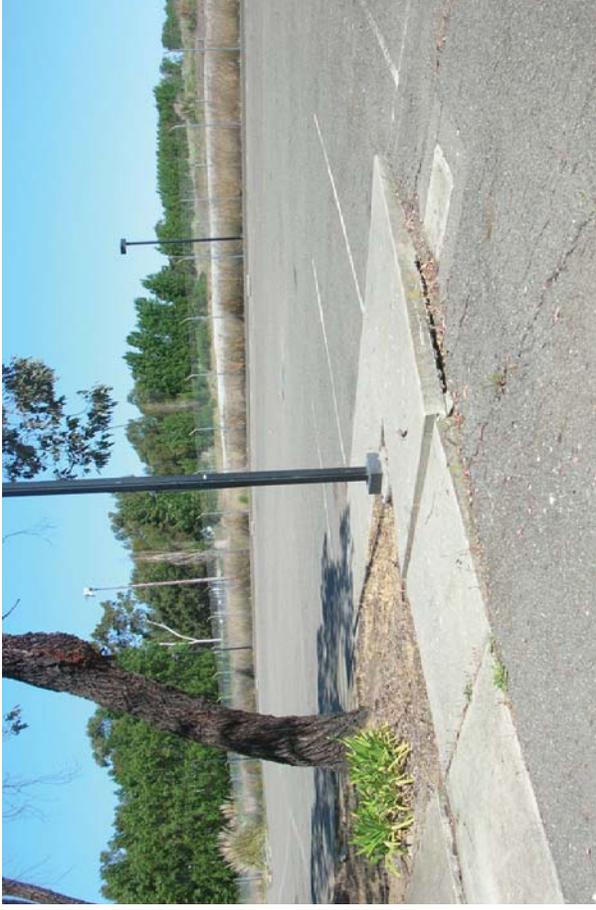
Pedestrian Circulation and Access

The site access for faculty, students and visitors is remote. Located away from urban centers, vehicle access is from Highway-61, with sporadic bus transportation located approximately 1/4 mile away from the facility. Pedestrian traffic to the campus is minimal.

Pedestrian access to the buildings is via the parking areas, which are in disrepair with subsequent non-conforming ADA accessibility. Sidewalk upheaval and cracking is creating tripping hazards and impedes handicap accessibility.



Site Access



Concrete path and asphalt paving



Asphalt paving



Site furnishings



Concrete path and vegetation

Campus Open Space and Landscape

Furnishings

Trash receptacles and ash urns are inconsistent and degrade the cohesive appearance of the campus. There is no outdoor seating provided.

Lighting

Lighting appears to be adequate. Lights were observed to be on during the daytime.

Paving

The pedestrian and vehicular paving throughout the campus is in disrepair.

Planting

Shrubs and groundcovers are in poor condition or are nonexistent. Existing trees are in good condition and enhance the campus character.

Irrigation

The irrigation system is antiquated and is not in use.

The entire master planning process is predicated on developing a long-term plan (through the year 2022) for facilities that supports the proposed instructional and support services that will be provided by the College at that time. The basis of this information is the 2008 Educational Master Plan for the College and the 2009 Integrated Educational and Facilities Master Plan for the College. These two documents, when taken in total, provide the qualitative and the quantitative educational and financial information upon which the Facilities Master Plan for the College is based.

Enrollment Projections

Existing Curriculum

The current programs of instruction (fall 2007) are characterized as follows:

- Unduplicated, credit-enrollments of approximately 6,264 students
- WSCH—Credit weekly student contact hours of 51,025
- FTES—Full-time equivalent students of 2,564 for a given semester.

This “baseline” will be used as the initial benchmark for forecasting future capacities of the College. The existing program of instruction provides a starting point against which future growth can be forecast. Looking ahead for the next five years, curricular content will most likely not undergo wholesale changes or deviate far from where it is today. The existing program of instruction, therefore, provides a solid foundation from which the future program of instruction can be determined.

The Internal and External Elements of the College

In order to develop a growth model for the future program of instruction at the College, the consulting team paid close attention to the knowledge gained and input assimilated via the College’s Educational Master Plan. The team also utilized the internal and external environmental scans prepared by Chuck McIntyre. Additionally, data from the Maas Database was used for the forecasting process and ultimately, the calculation of future space needs.

GENERAL PROGRAM CONSIDERATIONS

Weekly Student Contact Hours (WSCH)

Changing trends on community college campuses across the state have often had the effect of creating higher levels of student enrollment but decreasing the amount of time that a student spends on-campus using the facilities. The gauge for measuring the need for space has shifted accordingly.

Where institutions once used enrollments to measure future needs for facilities, today's measurement centers around the number of hours that a student spends on campus pursuing his/her education. This measurement is referred to as contact hours, the number of hours a student is engaged in the program of instruction at the institution. This is the only measurement that accurately determines the total student demand on facilities. It is the key to determining the future program of instruction and the future capacities of the District.

Growth Rate WSCH and Target Enrollment

To address the capacities for future WSCH and enrollment growth, a planning model was created. The model used relied on credit-WSCH as the primary measure for determining growth. Projections were made consistent with the scope of the Plan, projecting growth out to the year 2022.

With all of the factors and key planning elements taken into consideration, credit-WSCH generation and student headcount is projected to grow at 2.8% annually. This growth is not expected to be linear. Specifically, credit-WSCH generation is anticipated to grow from the fall 2007 level of 51,025 to 76,909 by 2022. Student headcount, over this same period of time, is projected to grow from the current level of 6,264 at the College to 9,479 by 2022.

The most important outcome of the forecasting process was to assure that when a certain level of WSCH was achieved, the College had designated (or will have constructed) new or remodeled facilities in place to meet the space demands for academic and support services. Whether that level of WSCH is reached exactly in the year 2022 or is not of utmost importance. What is key is that to accommodate this future level of WSCH, the College knows what its space needs will be and has planned accordingly. The forecasting model that was used for the College meets this standard.

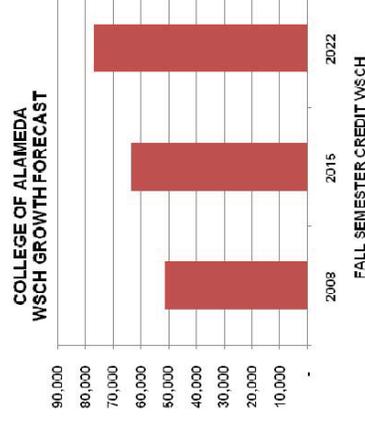
ENROLLMENT PROJECTIONS

Space needs for the future cannot be determined without first determining the capacity of the future program of instruction. To achieve this, College of Alameda's current program of instruction was used as the basis for the future forecast. The projections for the future program of instruction are not intended to dictate curricular content but rather to provide a perspective of what the current curriculum would look like if extended forward. It is very likely that the curriculum will change relative to its content over the next fifteen years.

The more important consideration and assumption, however, was that there will be a curriculum of some sort and that it will have a certain number of class sections, enrolled students, credit-WSCH, lecture hours and laboratory hours. While the program of instruction could be forecast forward using a generic curriculum and similar results obtained, the existing program of instruction at the College offered the most current and accurate form for the forecasting process. The College's forecast of its future programs of instruction also relied heavily on several references and planning documents. Some of the more critical documents reviewed include:

- The 2008 Peralta Community College District Report 17 ASF/OGSF Summary & Capacities Summary, a facilities inventory recorded annually with the State Chancellor's Office.
- The Peralta Community College District's 5-Year Construction Plan.
- The 2007 fall semester data reports depicting sections offered, WSCH generated, lecture/lab ratios, seatcount and full-time equivalent faculty loads as provided via Peralta Community College District, Office of Institutional Research.
- The Maas Companies database, containing data and information from 80 community colleges throughout the State of California.

The following chart illustrates the forecast for WSCH generation by the College through the year 2022.



POTENTIAL SPACE NEEDS

GENERAL PROGRAM CONSIDERATIONS

The following tables show the projected space needs for the academic program of instruction at College of Alameda for the target year 2022. The tables present the key elements that define the future programs of instruction and identify the assignable (usable) square feet (ASF) that will be required to meet the academic space demands. Though some of the calculations use the TOP Code instructional division format, the space needs data have been presented using the instructional departments of the College for convenience.

COLLEGE OF ALAMEDA - PROGRAM OF INSTRUCTION BY COLLEGE DEPARTMENT - FALL 2022										
DEPARTMENT	NET SEC	WSCH	FTES	FTEF	LEC WSCH	LAB WSCH	LEC ASF	LAB ASF	LAB ASF	LAB ASF
Apparel Design & Merchandising	18	2,120	70.7	4	1,249.8	870.1	591	2,236		
African American Studies	6	787	26.2	1	765.9	20.9	362	31		
Aviation Maintenance Tech	21	1,914	63.8	7	766.3	1,147.4	362	5,048		
Anthropology	12	1,481	49.4	2	1,441.7	39.3	682	59		
Art	11	1,698	56.6	2	696.7	1,001.8	330	2,575		
Asian/Asian-American Studies	3	335	11.2	1	325.7	8.9	154	13		
Astronomy	3	362	12.1	1	208.2	153.5	98	395		
Auto Tech	21	4,608	153.6	10	1,845.1	2,762.7	873	12,156		
Auto Body & Paint	5	1,784	59.5	3	714.4	1,069.6	338	4,706		
Aviation Operations	3	199	6.6	1	79.7	119.3	38	525		
Biology	23	4,990	166.3	7	1,306.3	3,684.0	618	7,884		
Business	30	3,330	111.0	6	3,318.1	11.9	1,569	15		
Chemistry	8	1,400	46.7	3	805.8	594.1	381	1,527		
Chinese	2	399	13.3	1	330.0	69.4	156	104		
Computer Information Systems	30	3,234	107.8	6	2,612.6	621.5	1,236	1,063		
Communications	18	1,880	62.7	3	1,088.4	791.1	515	1,693		
Cooperative Work Experience	3	366	12.2	1	254.8	111.5	121	287		
Counseling	9	667	22.2	1	464.2	203.1	220	522		
Dance	18	1,357	45.2	2	556.4	800.1	263	2,056		
Dental Assisting	14	665	22.2	3	174.0	490.6	82	1,050		
Diesel Mechanics	8	767	25.6	3	307.2	459.9	145	2,024		

COLLEGE OF ALAMEDA - PROGRAM OF INSTRUCTION BY COLLEGE DEPARTMENT - FALL 2022										
DEPARTMENT	NET SEC	WSCH	FTES	FTEF	LEC WSCH	LAB WSCH	LEC ASF	LAB ASF	LAB ASF	LAB ASF
Economics	18	1,780	59.3	3	1,732.8	47.3	820	71		
English	73	6,988	232.9	15	5,911.7	1,076.2	2,796	2,303		
English as a Second Language	39	4,830	161.0	9	3,359.9	1,470.4	1,589	3,779		
Geography	15	1,233	41.1	2	1,199.9	32.7	568	49		
Geology	2	118	3.9	0	67.7	49.9	32	128		
German	2	278	9.3	0	229.7	48.3	109	72		
History	17	2,124	70.8	3	2,067.9	56.4	978	85		
Health Education	2	105	3.5	0	45.4	60.1	21	193		
Health Professions & Occupations	8	645	21.5	1	168.9	476.4	80	1,019		
Humanities	17	1,437	47.9	3	1,216.1	221.4	575	474		
Library Science	2	-	-	-	-	-	-	-		
Learning Resources	20	2,240	74.7	6	2,240.3	-	1,060	-		
Mexican/Latin American Studies	2	134	4.5	0	130.8	3.6	62	5		
Mathematics	64	8,855	295.2	14	8,620.6	234.3	4,078	351		
Music	14	1,057	35.2	2	433.4	623.2	205	1,602		
Physical Education	48	2,652	88.4	5	1,140.6	1,511.6	540	-		
Philosophy	8	787	26.2	1	665.6	121.2	315	259		
Physics	3	295	9.8	1	170.0	125.4	80	322		
Political Science	14	1,221	40.7	2	1,188.8	32.4	562	49		
Psychology	29	3,245	108.2	5	3,159.3	86.2	1,494	129		
Sociology	9	935	31.2	2	910.1	24.8	430	37		
Spanish	9	1,319	44.0	3	1,090.2	229.3	516	344		
Vietnamese	2	286	9.5	0	236.6	49.8	112	75		
TOTAL	676	76,909	2,563.6	146	55,297.4	21,611.6	26,156	57,316		

Source: Peralta Community College District Office of Institutional Research



2022 Program Space Requirements

Using the allowable standards referenced in the California Code of Regulations Title 5 for calculating space (see Attachment A at the end of this Plan) and the College’s current space inventory (the Peralta Community College District Report 17, ASF/OGSF Summary & Capacities Summary, October 2008) the future space needs of the College have been determined for instructional and support service space categories.

The table shows the current inventory of existing facilities at the College, the future space qualification and the net need by space category. College of Alameda currently has 217,411 ASF (assignable or usable square feet of space) and by the year 2022 (or when WSCS reaches 76,909 for a given semester) the College will qualify for a total of 239,704 ASF of space. The total “net need” for space (22,293 ASF) through the year 2022 is relatively small.

COLLEGE OF ALAMEDA 2022 TARGET YEAR SPACE REQUIREMENTS				
SPACE CATEGORY	DESCRIPTION	CURRENT INVENTORY	2022 TITLE 5 QUALIFICATION	NET NEED
0	INACTIVE	0	0	-
100	CLASSROOM	25,472	26,156	684
210-230	LABORATORY	83,874	57,316	(26,558)
235-255	NON CLASS LABORATORY	178	900	722
300	OFFICE/CONFERENCE	26,224	20,509	(5,715)
400	LIBRARY	21,567	29,626	8,059
520-525	PHYS ED (INDOOR)	26,649	35,000	8,351
530-535	AV/TV	3,544	12,620	9,076
540-555	CLINIC/DEMONSTRATION	5,819	6,788	969
580	OTHER	590	2,996	2,406
610-625	ASSEMBLY/EXHIBITION	2,150	9,479	7,329
630-635	FOOD SERVICE	8,426	5,687	(2,739)
650-655	LOUNGE/LOUNGE SERVICE	4,120	3,435	(685)
660-665	MERCHANDISING	2,473	7,851	5,378
670-690	MEETING/RECREATION	1,381	3,156	1,775
710-715	DATA PROCESSING/COMP	1,324	5,000	3,676
720-770	PHYSICAL PLANT	3,115	11,985	8,870
800	HEALTH SERVICES	505	1,200	695
Total		217,411	239,704	22,293

Source: Peralta Community College District Report 17: Maas Companies projections - Calculations based on California Code of Regulations Title 5, Chapter 8, Section 57028

Automotive and Diesel Engineering Complex

The College has two exceptional programs: Automotive Mechanics and Diesel Mechanics; these programs utilize heavy machinery, requires extensive mechanical and technological equipment, and also requires large open space areas to work on cars and trucks.

The existing automotive facilities must be gutted and modernized to meet today's skill markets. The Diesel shop can also be modernized and could be relocated closer to the automotive facility to maximize resources. To develop this area into a complex, the project would consist of modernization and new construction to adequately meet these requirements. This new complex could also house related career technical curriculum such as mechanics and welding.

Transportation and Logistics Program

In business, logistics management most often refers to transportation, inventory management and storage issues related to the supply chain, among other factors: where are your parts or materials coming from, where do they need to get to and when.

Aside from lecture rooms, this program will require warehousing laboratories that can be combined with the College's operational deliveries of supplies. A loading dock and warehouse area must be provided for this training. An existing dock area on the main campus can be modernized for school use. Another strategy could be to modernize Building "A" at the Aviation Facility.

The City of Alameda has successfully negotiated with the Peralta Community College District to reroute an existing roadway north of the campus. COA is also interested in providing a transit stop at the campus and exploring the possibility of designating a portion of campus land to generate revenue.

Tinker Avenue Project

The City of Alameda will reroute Tinker Avenue north through the campus. The new extension will be named Willie Stargell Avenue. It is expected to be completed in 2010.

Transit

The College of Alameda is expected to meet with AC Transit Authority to discuss the feasibility of providing a Bus Stop at the Webster Street side of the campus.

Revenue Generating Land Use

Parking Lot A has been mentioned as a possible revenue generating site. The existing Childcare Center building that currently exists adjacent to the lot could be demolished and/or relocated to provide a parcel of land large enough to be used for a future public/private partnership development.

Vision

The College of Alameda sees itself as “a diverse, supportive, empowering learning community for seekers of knowledge.” It is committed to providing a creative, ethical, and inclusive environment in which students develop their abilities as thinkers, workers, and citizens of the world.

Mission

The College of Alameda’s mission is to serve the educational needs of its’ diverse community. It accomplishes this by providing comprehensive and flexible programs and resources that empower students to achieve their goals.

The COA achieves the following goals by meeting its mission:

- educational excellence
- accommodating and supporting student needs
- encouraging teamwork and active learning
- engaging the community
- empowering innovators
- extending opportunities in technology
- respecting diversity

CAMPUS MASTER PLAN



WLC Architects is committed to integrated communication with all stakeholders of Peralta Community College District. The District has a shared governance mandate, that require the District’s management operations and facility development planning considerations to have input from all college stakeholder groups.

We have conducted several meetings with the College President, the Vice President of Instruction, Vice President of Student Services and the Business Manager. Those meetings were held to get the vision and goals from the college leadership. The objective was to have focused workshops to solicit their views and perspectives, on the development of facilities as it relates to the educational delivery system and the image of the College. Similarly, we also met with academic faculty and student representatives to hear their concerns and vision for the future development of their college.

A critical component of stakeholder input was to learn from the users how they actually use the college facilities. We needed to know the facilities that worked as well as those that didn’t work. We needed to assess what facilities and amenities were missing, needed support for educational functions and future educational trends (i.e.: Smart Classrooms), without restricting the input of ideas due to operational and fiduciary concerns. Requests for suggestions and recommendations were not limited to buildings, it also included: campus grounds, athletic facilities, transportation needs, community participation and potential future development.

It is important to note that all stakeholders were encouraged to submit ideas that were visionary and “outside the box”; to enhance things that worked well and ideas that are currently not part of the college lexicon. We also sent out a survey to all faculty and staff at the college to get as much feedback as we could about the existing condition of the college’s facilities. The results of that survey is included in the Master plan.

We recorded the information from these groups, and extracted the concepts (“big ideas”) to discuss in the larger Town Hall Forum; whereas faculty, staff and students who may not have attended committee meetings, could voice their concerns and ideas to improve the college. This process attempted to form a consensus on the college’s Master Plan goals and ideas of the college.

An important part of integrated communication with all stakeholders is to also share ideas with the other colleges and the District administration. This can allow for cultivating ideas and fostering coordination with other colleges, as it relates to the District Wide Educational Master Plan.

Vice Chancellor Dr. Ikharo was our primary contact and was responsible for implementing the Chancellor’s vision in this process as well as coordinating the information from the District’s Maintenance and Operations Department.

To accomplish the exchange of communication, the educationally driven facility ideas were shared at the District Wide Facilities & Land Use Planning Committee. The objective was to give all College Presidents, Vice Presidents of Instruction and Business Managers an opportunity to view each of the College’s Master Plan goals and ideas, and compare them with the goals of the District Wide Educational Master Plan and collaborate with each other in areas of mutual interest. Where there may be possible redundancy, the opportunity was available to begin the conversation on potential solutions.

Additionally, those ideas were also shared at the District Wide Educational Master Plan Committee to gather their input on the Master Plan goals and ideas, as it relates to supporting the District’s educational priorities and educational delivery systems.

As the Master Plan was being developed, the Chancellor offered his guidance in the process, by directing his Strategic Management Team to coordinate all District Administrative Departments, Committees and Colleges with WLC to ensure required decisions were given and pertinent information was disseminated to WLC.

WLC attended monthly meetings with the Board of Trustees’ Facilities and Land Use Committee. This enabled WLC to keep pace with the District’s ongoing Capital Project Plans for the College and share our information from the Master Planning Process.

These meetings and information sharing, helped to ensure constant communication throughout the Master Planning Process.



SURVEY RESULTS SUMMARY

BUILDING	FACULTY AREAS	CLASSROOM	OFFICES	RESTROOMS	CORRIDORS	COURTYARD/ PUBLIC SPACES	OTHER AREAS
Building C							
Ranking	4	4	4	4	4	4	Parking Lot
Comments	Library/Meeting Room/Bookstore	Science Labs					
Pros	Library excellent, well utilized; Meeting Room: adequate; Bookstore: small but adequate.	Good light control	Office is conveniently located next to the lab		Protection from rain.	Adequate and the new walkways are an improvement. Like the grass and trees.	Easy access and adequate space for both students and faculty.
Cons	Should be permanently equipped with large TV screens						
Building D							
Ranking		2	3	2	2	3	
Comments		Portable A-231	Office D-227	Staff + Students			
Pros		Size of room and two large overhead screens	Good layout, excellent view, shades for windows, likes colleagues.	Conveniently located and ADA accessible.		Open spaces and trees	
Cons		No white boards; room temperature cannot be controlled; therefore, room is uncomfortable	Ballasts at overhead lighting hums continuously.	Sometimes locked. Sometimes need cleaning.	Not enough lighting at night making it unsafe for students and staff.	More trees	
		Specialty Classroom C110 and C112	Office	Staff + Students			

BUILDING	FACULTY AREAS	CLASSROOM	OFFICES	RESTROOMS	CORRIDORS	COURTYARD/ PUBLIC SPACES	OTHER AREAS
Building L							
Ranking	3	1	3	1	3	2	1
Comments		Library Classroom	Office	Staff + Student			General Building
Pros							
Cons		Classroom not enclosed; lights cannot be dimmed; projector not properly installed.		Fixtures need to be replaced; paint and ventilator needs to be redone; non ADA compliant.		Landscape needs better care.	Lack of adequate signage
Ranking							
Comments		Library Offices	Library	Library Staff			Library
Pros		natural light, new carpet and lots of windows.	open and light.	Single use		Open areas of landscaping trees at perimeter of campus.	Open layout, light and windows.
Cons		Group study room needs to go back to students instead of faculty offices.	Noisy	Dirty, outdated.		Need identify signage throughout campus and prominent marker at corner of Webster. Faculty offices, lack of security.	Lack of maintenance, lack of space or faculty offices, lack of security.
Ranking	3	3	2	1	2	3	1
Comments				Library Staff			Library
Pros							
Cons			Atrium area is noisy, less comfortable with Library.	Dated, lacks adequate ventilation; floor is worn, non ADA compliant.			Instructional area not enclosed, therefore, noise levels to quiet faculty offices; does not have basic smart technology.

MASTER PLAN CONCEPTS

BUILDING	FACULTY AREAS	CLASSROOM	OFFICES	RESTROOMS	CORRIDORS	COURTYARD/ PUBLIC SPACES	OTHER AREAS
Building E							
Ranking	1	3	3	2		4	
Comments		D205		Staff + Students			
Pros		Students like the conference tables to individual chairs.				Trees	
Cons	No office space lack of privacy; no secure space/files.	Some rooms do not have windows		Student Restrooms not clean. Frequent cleaning needed.			
Ranking							
Comments		Diesel Technology		Staff + Student			
Pros			Window in office allows visibility to lab area	There are locks on the doors.			
Cons	No faculty area exists; all appliances are brought from faculty member homes; a faculty member would like a place to prepare or put lunch.	Wants smart technology	Floor space in office lab area needs to be on same level; additional office space needed in offices.	Faculty and students use same restroom. There is no ventilation or fresh air.			Provide shelter over slab and benches, a break area and fresh air space for students and faculty.
Comments	The facility is old. It needs to be upgraded to meet current industry standards and have the ability for future upgrades.						

The Tables shown illustrate comments given by Faculty, Staff and Students. These comments and rankings were collected from the actual survey comments and listed here for quick viewing. The ranking pattern was 10 = best and 1 = bad. The colors were added to quickly view an area and decipher its condition. The text list specific problems as noted by the survey participant.

The following ideas and recommendations were generated at the town hall meetings.

Site

- COA has a very open campus that is sited in a semi-suburban setting, with deep lawn setbacks that surround the buildings within the campus.
- COA has multiple entrances that will require the clear demarcation of a main entry for the general public and visitors to the campus.
- The College determined the main public entry is on Ralph Appezato Memorial Parkway.
- COA would like to have campus entry signage and way finding signage strategically posted, to assist in identifying the campus and determining where classes are located.
- Better exterior security lighting is needed from parking areas and along campus walkways.
- After hours usage must not have obstructed views to destinations.
- Be careful to have entries, landscaping and/or site furnishings that are well lit and do not create dark areas along pedestrian routes.
- Campus Kiosks that also offered food and snacks were suggested.
- Planting more trees and creating a community garden.

Exterior and Interior Spaces

- The center of campus should be developed to create a quad courtyard that is inviting, provides campus identity and reinforces the college campus culture.
- Exterior and interior public spaces should take advantage of technology and offer wireless connectivity for students.
- Better utilization of outdoor areas was suggested such as increased seating and shade to encourage campus gathering.

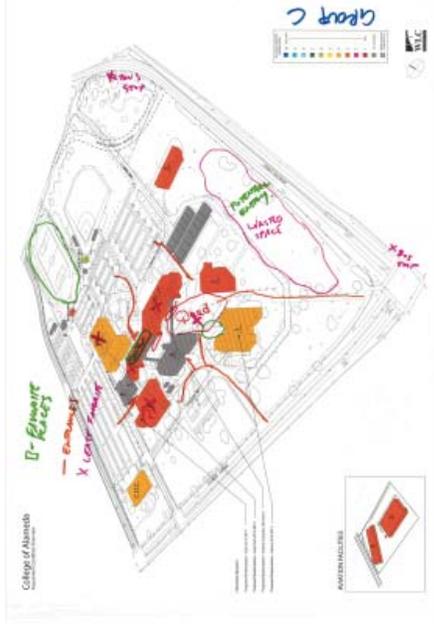
Buildings

- Concrete buildings have no building character or identity. Faculty, Staff and Students do not like the institutional feeling.
- Suggestions of color or different building materials were offered.
- ADA upgrades are needed in all buildings.
- Existing "C" & "D" Buildings have weathered walkup entries to all classrooms; lack of student lounge area within the building; and the precast concrete building layout presents challenges to upgrading the existing facility to accommodate new science classroom functions.
- A consensus was reached that buildings "C" & "D", should be replaced.

- The Student Center should have a ground floor Cyber Café' that can be used by students on the go.
- The main library is too small and should be modernized into a Learning Resource Center.
- Conference room spaces are very minimal throughout the campus. The college needs additional conference room space and an indoor event space that can seat approximately 600 people.

Sustainability and Energy Generation

- Provide photovoltaic solar panels at parking areas for shade and energy.
- Recycle geese poop for sustainability considerations.
- Provide gray watering of landscaping.



PRINCIPLES

The following principles are used to develop the Facilities Master Plan Concepts contained herein, they are as follows:

Parking and Pedestrian Access

Although parking is plentiful, a pedestrian friendly connection between the parking lots and the campus, must be created with handicapped accessibility to direct Faculty, Staff, Students and visitors to their destination.

Entrances

All entrances to the campus must be enhanced to create a sense of place and College identity. Establish a main entrance at the front of the campus. Create a connection to the community to encourage participation, that may increase District Community joint venture endeavors.

Way-Finding

As you transverse the campus “way-finding” directional signage must be added to give clear directions to buildings, that feature specific educational and administrative functions.

Campus Quad Area

A central campus core or “quad” area must be developed to encourage Students to remain on campus and create a sense of “college culture”. The quad will serve as the central focal point for all pedestrian circulation, which assists in way-finding. Landscaping and site furniture elements should be included to create liveliness to the overall campus environment and serve as a Student gathering point.

Courtyard Areas

Similar to “pull-out” areas within a building, courtyards allow for smaller exterior educational settings that encourage Student study groups. The spaces should create an inviting educational environment, with landscaping, site furnishings, shading and wireless internet.

MASTER PLAN CONCEPTS

- Define entry to the Campus
- Establish a core or heart of the campus
- Give College identity to the community
- Provide link between the community and the campus
- Provide way finding that allows the public to locate various programs on campus
- Provide sustainable solutions for new development and enhance energy generation capabilities
- Student retention & student success
- Identify main entry to campus
- Bus drop off at Webster Street
- Tear down buildings “C” & “D”
- Modernize Student Center
- Buildings have concrete institutional look
- Enhance center of campus
- Upgrade ADA access (elevators, etc.)
- Provide solar panels & sustainable features
- Campus kiosks
- Security lighting
- Need assembly event space
- Farmer’s market
- Exterior and interior student gathering areas

The Facilities Master Plan attempts to incorporate the District's Five Year Construction Plan into the recommendations for the college. The Five Year Plan is currently in construction on the modernization of the administrative offices Building "A". The Five Year Plan has proposed other projects which have been analyzed by the Master Planning Team. The analysis of all data supports the District's decision to demolish and replace buildings "C" & "D". This building will house classrooms, lecture rooms, chemistry laboratories, biology laboratories, art laboratories and fashion design laboratories.

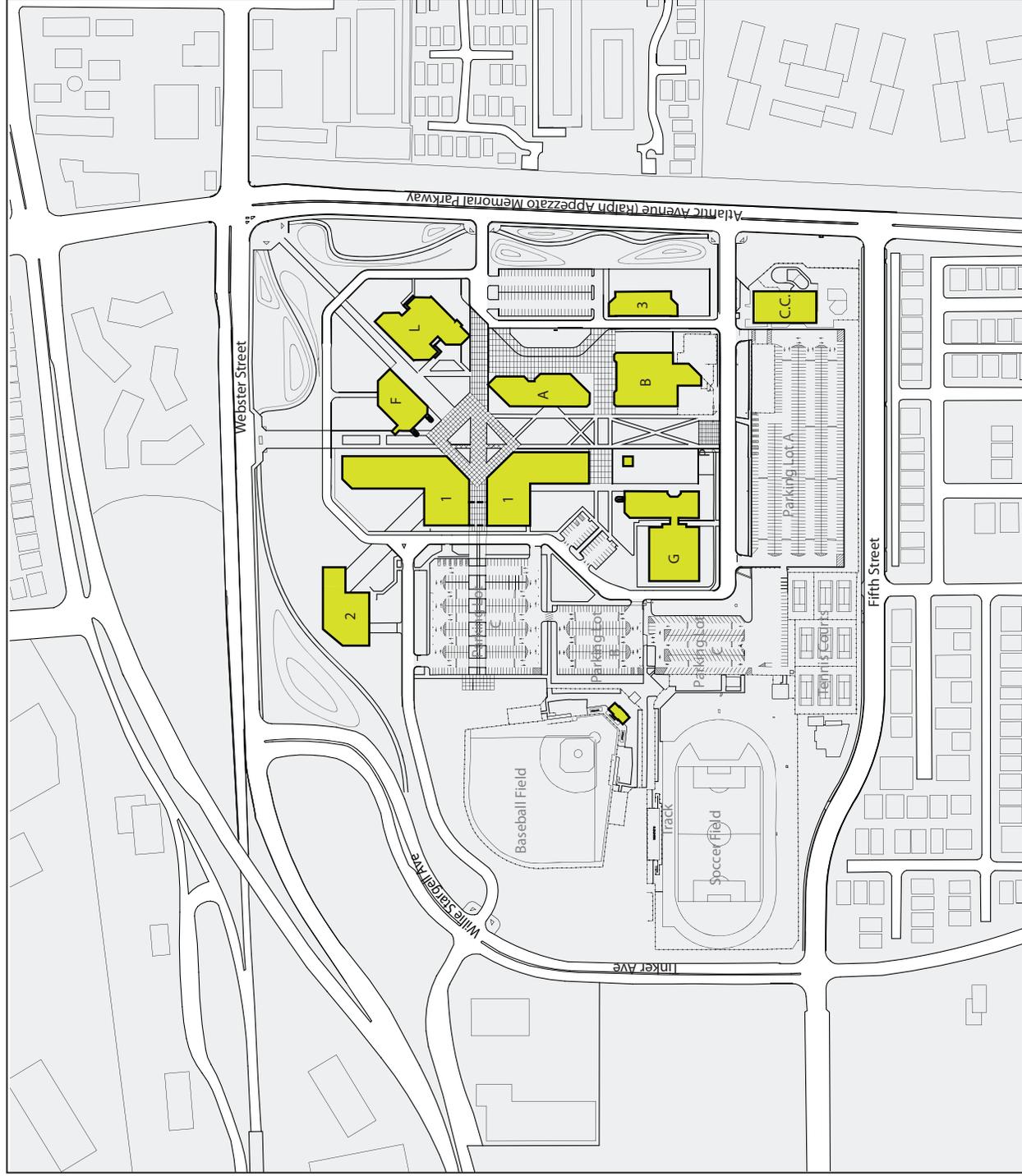
The District has an application for State funding of a library modernization project. Additionally, an application was filed for the modernization of the gymnasium building "G" and the modernization of the Automotive Technology building "B". The College is very passionate about revitalizing the career technical education programs and has pushed for a public private partnership with automotive manufacturers. The Master Plan recommends expanding the building "B" Five Year Plan application to integrate the Diesel Mechanics Technology curriculum. This will allow for consolidation of the program that strengthens the educational curriculum of both programs.

A critical element of the Facility Master Plan recommendations is to encourage and strengthen community-college relationships. Due to the urban nature of the area, it was determined an auditorium with meeting rooms and classrooms, could be an amenity to the community and offer an identity to the campus.

PROPOSED CAMPUS BUILDINGS

CAMPUS LAND USE

- 1 Replacement Building "C" and "D"
- 2 Auditorium Building
- 3 Relocation of Building E



PROPOSED CAMPUS BUILDINGS



The Campus Land Use site plan illustrates the various use regions throughout the campus and building functions. This is an aid to understanding the proximity of uses to its surrounding elements. The Athletic fields are located toward the North-West of the campus, along with the gymnasium building.

At the center core area you will see the new buildings "C" & "D" with a bridge between buildings. This helps to define the new pedestrian axis and center (core) of the campus.

The Student Services building helps to provide the activity at the campus core. The library although slightly set back from the campus core, helps to define an edge to the core, with a reading courtyard.

Throughout the campus, exterior spaces immediately adjacent to the buildings can become formal or informal courtyards.

Event spaces are being added to the campus and to the major pedestrian axis to encourage Student use. These spaces also serve as a community amenity, (i.e.: the event space node at the ballfield), can become an outdoor picnic area for athletic events. The event space node at the gymnasium can be used for outdoor student events.



LEGEND

- Academic
- Academic Support
- Student Services
- Administration
- Athletics & Open Spaces
- Other
- Parking
- Event Space
- Bioswales



In December of 2007, the Peralta Board of Trustees passed a progressive and aggressive policy that committed the District to adopting principles of sustainability in its daily operations and future planning.

The following LEED™ credits represent opportunities for sustainability:

Water Efficiency Credit 3: Water Use Reduction

This credit addresses maximizing water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Energy and Atmosphere Credit 2: On-Site Renewable Energy

Encourage and recognize increasing levels of on-site renewable energy self-supply in order to reduce environmental and economic impacts associated with fossil fuel energy use.

Materials and Resources Prerequisite 1: Storage and Collection of Recyclables

Facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills.

Indoor Environmental Quality Credit 4: Low-Emitting Materials

Reduce the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of installers and occupants.

Indoor Environmental Quality Credit 5: Indoor Chemical and Pollutant Source Control

This credit addresses minimizing exposure of building occupants to potentially hazardous particulates and chemical pollutants.

Indoor Environmental Quality Credit 6: Controllability of Systems

Provide a high level of lighting system control by individual occupants or multi-occupant spaces to promote productivity and comfort.

Indoor Environmental Quality Credit 7: Thermal Comfort

Provide a comfortable thermal environment that supports productivity and well being of building occupants.

Indoor Environmental Quality Credit 8: Daylight and Views

Provide a connection between indoor spaces and the outdoors through the introduction of daylight and views into regularly occupied areas.

The recommendations for sustainable and energy generation projects are:

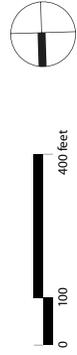
A canopy mounted solar photovoltaic array at the North-West Parking areas of the site. Building rooftops could also have solar photovoltaic panels installed to increase the number of panels.

Because of the land area surrounding the campus, the District has an opportunity to provide bio swales which alleviate a lot of storm water run off, but can also allow a feeding habitat for the geese which can help divert them from the people populated areas.



LEGEND

- Existing Buildings
- New Sustainability and Energy Development



Major Entries

The existing entries to the Alameda campus remain and are enhanced with gateway plazas, new signage, monuments, and tree plantings. The northern entry at the north parking lot is moved eastward with the proposed replacements for Buildings C and D so that it is on axis with the southern automobile entry. The proposed configuration of Buildings C and D creates a grand entry experience from the north parking lot. The east-west axis is extended eastward to Webster Street, where a new bus stop and gateway plaza are proposed. The northern automobile entry is realigned according to the plans for the realignment of Tinker Avenue. The southern automobile entrance leads to a curbless drop-off zone with bollards and enhanced, pedestrian-oriented paving.

Transit

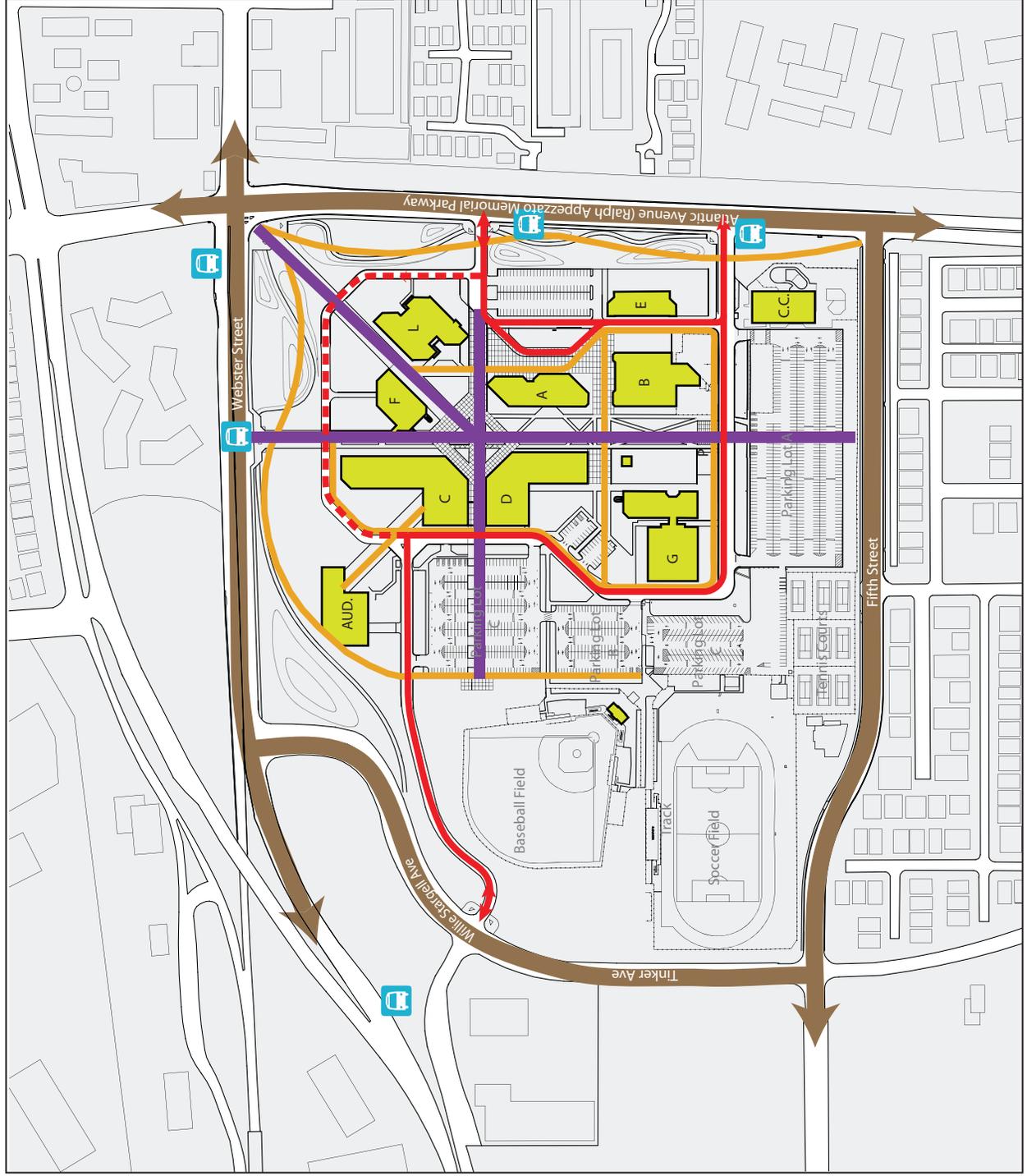
A new bus stop is proposed at the eastern end of the east-west axis. The bus stop at the southern end of the main north-south axis is aligned with the southern entry plaza.

Pedestrian

Pedestrian circulation is clarified with the emphasis on the north-south, east-west and diagonal axes. Students, staff and visitors are directed to the central quad, from which the rest of campus is easily accessed. Minor pedestrian routes provide access around the perimeter of the campus core and throughout the outer campus. The outer campus includes a multi-use path through a parklike setting that provides an amenity to the general public.

Vehicle and Parking

Changes to the vehicular circulation are: (1) realignment of the northern vehicular access point due to the realignment of Tinker Avenue; (2) creation of an important visual gateway point at the new intersection of Tinker Avenue and Webster Street; and (3) the closing of the eastern fire and service access road to public use. The eastern fire access route is not wide enough to allow for parking. The parking lot south of Building A is increased in size to accommodate more staff and visitors, and to make up for the loss of parking along the fire access road.



-  Arterial Road
-  Vehicular Access Route
-  Vehicular Service and Emergency
-  Vehicular Entry and Exit
-  Primary Pedestrian Circulation
-  Secondary Pedestrian Circulation
-  Bus Stop



PROPOSED CIRCULATION AND ACCESS

Open Space Goals

The Landscape Plan was developed to achieve five broad goals. These goals were developed based on an inventory and analysis of existing conditions, meetings with college and District administration and staff, and the "Town Hall Meetings." The goals and the ways they are achieved are as follow.

1. Provide functional and valuable open spaces that contribute to the college's programs.
 - Convert currently ornamental perimeter landscape (large lawn areas) to public uses such as a farmers' market, community gardens, par course, or multi-use path.
 - Convert currently ornamental perimeter landscape (large lawn areas) to provide for ecological function such as stormwater management and wildlife habitat.
 - Increase shade in plazas and habitat value and character of landscape areas by adding trees.
 - Increase use of plazas and quad by providing a café with outdoor seating. (Replace the food cart with a more upscale vendor.)
 - Improve outdoor gathering areas with high-quality furnishings and lighting.
 - Provide a variety of outdoor space types, accommodating a range of uses such as large civic events, small gatherings and solitary relaxation.
 - Provide an enhanced seating area in the Quad with shade and comfortable seating, including tables and chairs for dining and gathering.
 - Provide seating and shade in secondary spaces.
 - Integrate sustainable landscape features as outdoor classrooms for the Green Technology program of distinction.
2. Establish identifiable and proud presence in Alameda.
 - Improve image to the public through improved planting, building façade treatments and quality signage, lighting, furnishings and hardscape at the campus edge.
 - Increase the amount and content of signage around the campus perimeter.

- Create gateway experiences at entry points around the campus perimeter with enhanced entrance plazas, gateway markers, and entry planting character.
 - Distinguish campus "forecourt" south of Building A.
3. Connect the campus to the broader community.
 - Provide a bus drop-off that is connected to the campus.
 - Provide adequate faculty and staff parking.
 - Incorporate public uses into the outdoor spaces, including plazas and green spaces.
 4. Increase the clarity of the landscape structure.
 - Improve wayfinding through a design language that emphasizes a hierarchy of pathways and outdoor spaces.
 - Create the following distinctive landscape zones: perimeter/outer campus, inner campus, campus core, Quad, and secondary spaces.
 - Reconfigure outdoor auto-repair storage and workspaces. These spaces should not be an infringement on the campus experience.
 - Improve connections from parking to inner campus.
 5. Contribute to the campus's sustainability through landscape improvements and features.
 - Implement sustainable stormwater management.
 - Increase planting at parking lot to mitigate the heat-island effect.
 - Plant drought-tolerant species to reduce water use.
 - Install photovoltaic panels.
 - Increase biodiversity and habitat value.

Campus Framework

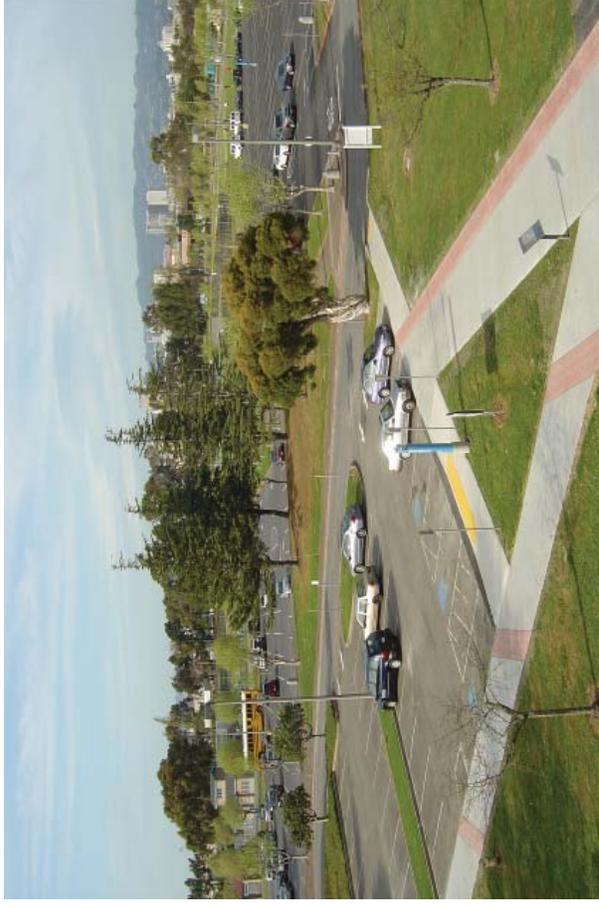
The College of Alameda campus is characterized by having an inner campus that is set apart from its context in the city of Alameda. An outer landscape surrounds the inner campus, which in turn surrounds the campus core. Each of these zones is characterized by a distinct design language and function, described in "Landscape Concept Plan," below.

The circulation system directs students and visitors from the campus edges along several radial axes through the outer landscape zone into the heart of the campus, from which point the campus buildings are accessed. A gateway plaza is located at the outer end of each entry axis.

The new Science Classroom Complex buildings (replacements for Buildings C & D) are located to create a strong gateway from the north parking lot and to frame the quad. The southern end of the main north-south axis is the main vehicular visitors' entry point, while students arriving by car will park in the north and west parking lots and arrive through the respective campus gateways. Students arriving by bus will arrive at a new bus drop-off, which is at the end of the extension of the east-west axis. The existing diagonal axis from the corner of Webster Street and Atlantic Avenue serves those arriving from that direction, and as the symbolic link with the City of Alameda.



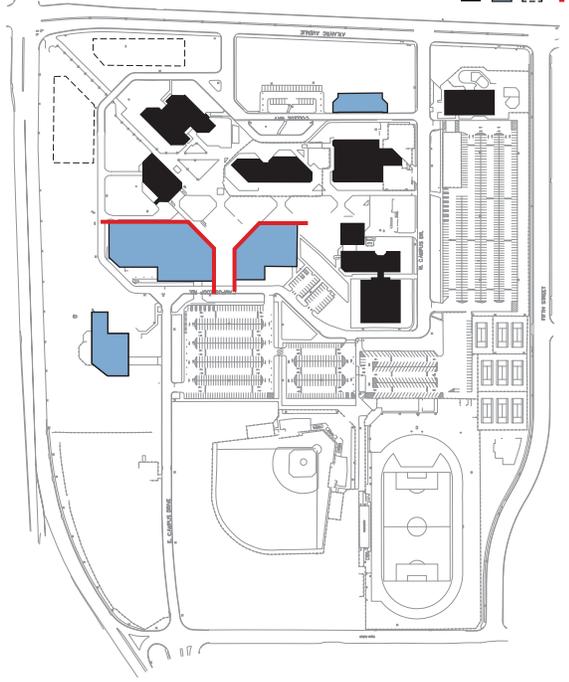
Inner campus



North parking lot

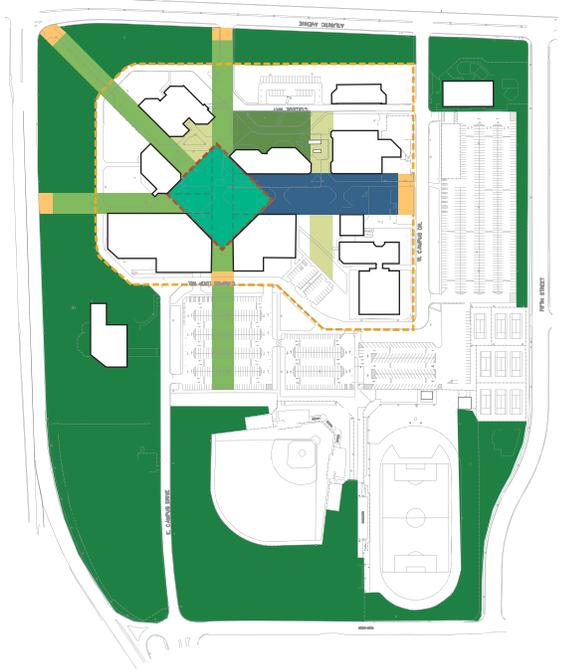
OPEN SPACE ELEMENT

LANDSCAPE PLAN



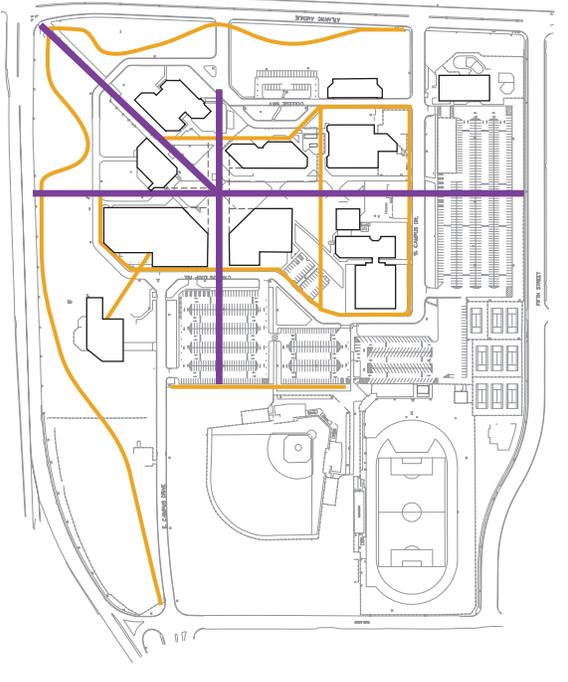
- Existing Building Footprint
- New Building Footprint
- Future Building Site
- Build To Lines

Built Form



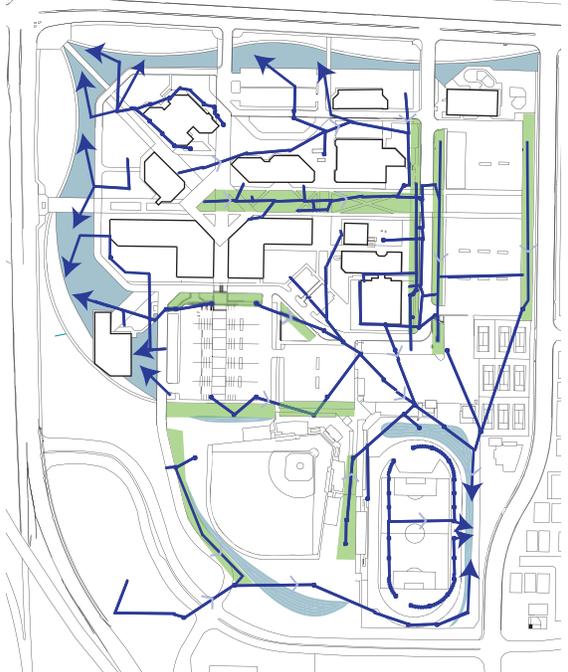
- Inner Campus
- Quad
- Mall
- Entry Axis
- Entry Plaza
- Courtyard
- Gateway Plaza
- Outer Campus

Open Space



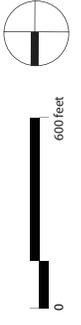
- Existing Storm Drain
- New Storm Drain Termination
- First Tier Stormwater Management
- Second Tier Bioswale or Detention/Retention Basin

Circulation



Stormwater Management

FRAMEWORK DIAGRAMS



Sustainability

The main environmental impacts of the Alameda campus's open spaces are due to the vast parking lots and vast lawn areas. The parking lots contribute to the urban heat island effect and produce polluted and increased stormwater runoff. The turf areas require large quantities of water and fertilizer and require energy for maintenance. The following sustainable design initiatives should be implemented:

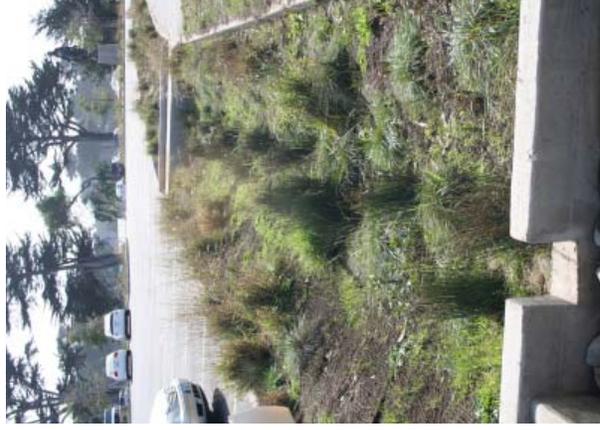
- **Stormwater management:** Best management practices (BMP's) such as bioswales, permeable paving, and retention/detention basins should be installed to handle the stormwater runoff from the parking lots.
- **Shade:** The parking lots should be shaded with trees.
- **Electricity generation:** Photovoltaic panels could be installed over the parking lots. This would have the dual value of shading the asphalt paving and producing electricity.
- **Lawns that are not actively used as sports fields or seating areas should be replaced with drought-tolerant and low-maintenance plant species.**
- **Increase biodiversity and habitat value of open-space areas, especially in the outer campus zones.** Bioswales and detention/retention basins should be planted with native wetland species and higher-ground areas with native plant communities.

Additional open-space sustainability measures that should be implemented include:

- Provide ample bicycle parking.
- Utilize recycled-content materials for paving and furnishings.
- Use high-albedo (light colored) paving materials to reduce the urban heat-island effect.



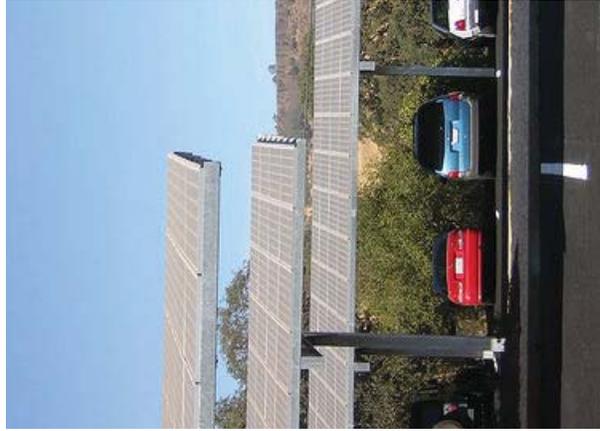
Stormwater management - Precedent



Bioswale at parking lot - Precedent



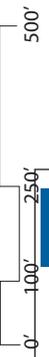
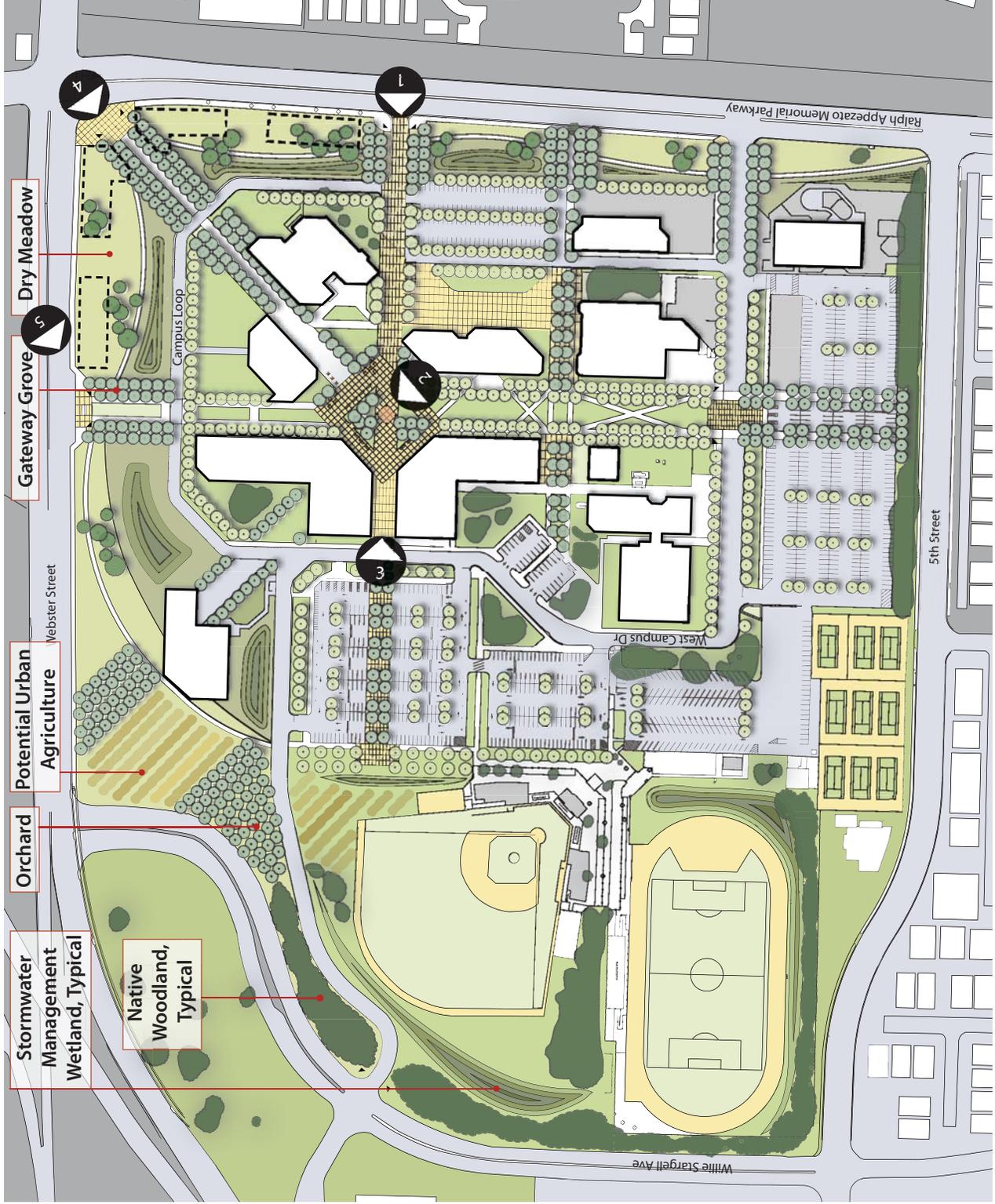
Stormwater management - Precedent



Photovoltaic panels at parking lot - Precedent

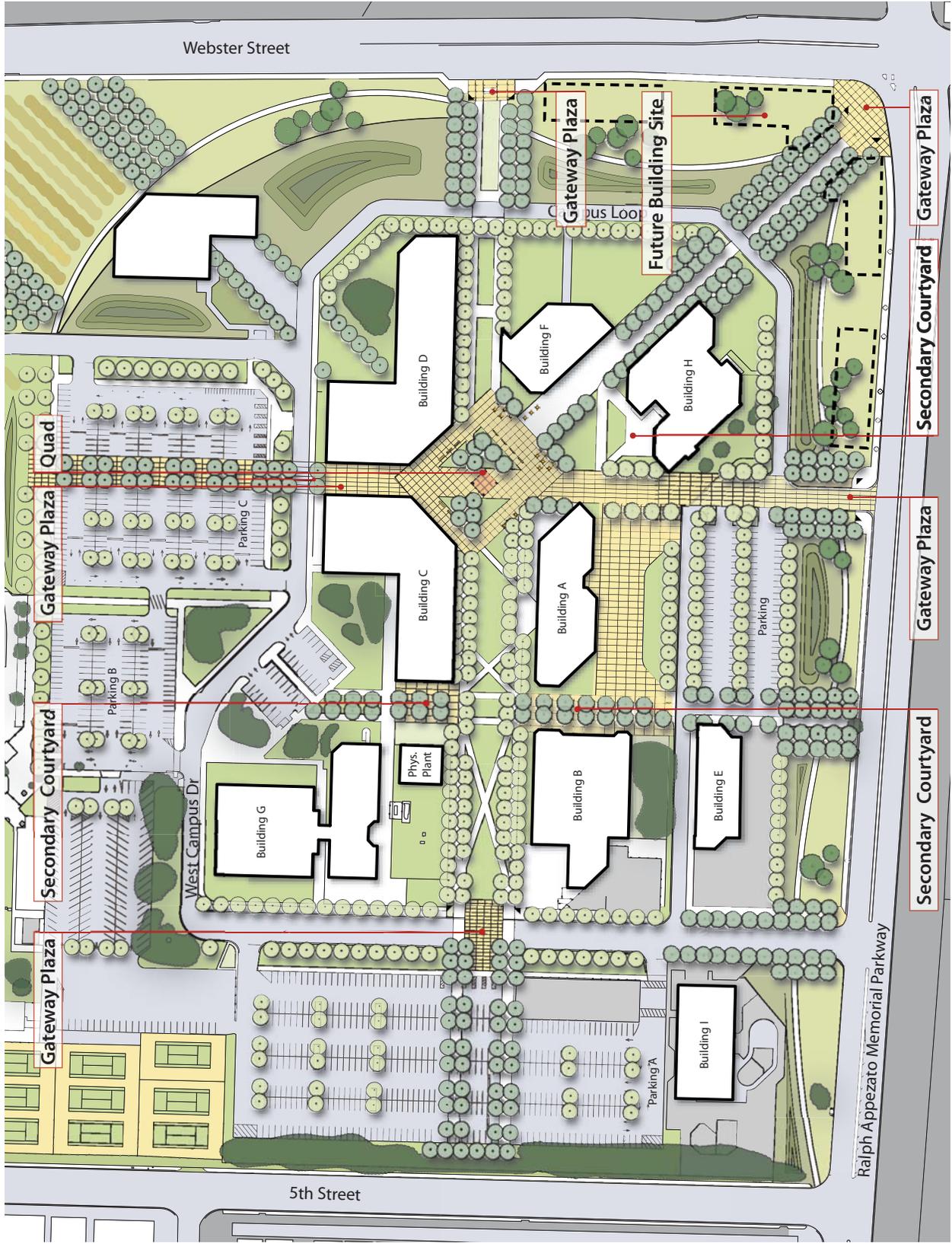
OPEN SPACE ELEMENT

LANDSCAPE PLAN



PROPOSED LANDSCAPE CONCEPT PLAN





PROPOSED LANDSCAPE CONCEPT PLAN - CORE CAMPUS AREA



Gateway Plaza - Precedent



East-West Axis - Precedent



1. South Gateway Plaza - Perspective

Landscape Concept Plan

Outer Campus

The outer campus should emphasize the “journey” from the rest of Alameda and the Bay Area into the inner campus. It should also serve to connect the city with the campus, improving the public’s perception of the college. As such, the outer campus is conceived as a landscape with a strong and identifiable character. To the north and east, the landscape is more naturalistic in character, with native woodlands serving as screens, while the southern and eastern areas are more formal in character, serving as the interface between the city and the college. Dense groves of trees frame views and create formal landscape gateways at each of the entry points along the outer landscape edge. Between these, the landscape accommodates sustainable stormwater management of the large parking areas through bioswales and detention/retention basins. These offer the opportunity to establish wetlands, while the dryer areas are drought-tolerant native habitat zones. A public walking path meanders through this landscape, offering Alameda residents a park experience. The outer campus could also offer the opportunity to establish public community gardens or agricultural areas for educational purposes associated with the campus. The entire outer campus should be conceived as an educational landscape, with opportunities for interpretive elements pertaining to habitat, stormwater management, drought-tolerant planting, and urban agriculture.

Gateway Plazas

At the outer end of each entry axis, gateway plazas are established. These are characterized by unique paving, lighting, hardscape elements such as seatwalls, and gateway markers. The western gateway plaza is combined with the bus drop-off and shelter.

North-South Axis

The northern axis connects the north parking lot to the quad via the passageway between the proposed buildings C and D. The axis continues through the parking lot as a tree-lined allee and ends at the northern end with a seating/picnic area.

The southern end of the axis at Atlantic Avenue serves as the main visitors’ vehicular entrance. The axis continues northward to the quad as a pedestrian walkway characterized by distinctive paving, lighting, and an allee of trees.

LANDSCAPE PLAN

OPEN SPACE ELEMENT

Visitors' Entry Plaza

The visitors' entry plaza south of Building A is distinguished with unique paving, bollards, and trees. From the visitors' vehicular entrance, traffic is directed westward through the Entry Plaza, where there is a curbless drop-off area. The parking area south of Building A is expanded to accommodate visitors, faculty and staff.

East-West Axis

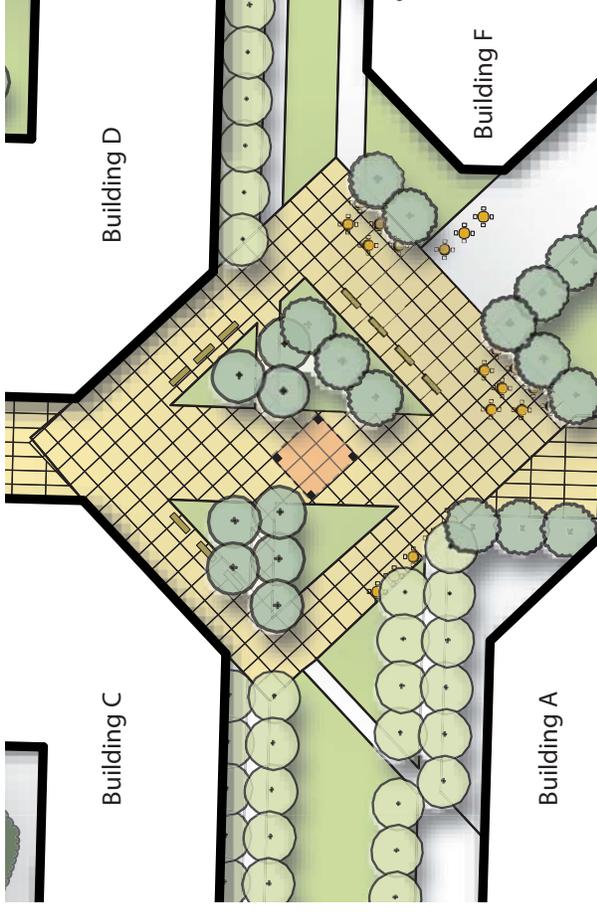
The western half of the east-west axis is an approximately 100-foot-wide pedestrian mall with broad lawns and allees of trees. The western axis continues through the western parking lot as a pedestrian connection. The eastern half is a narrower but similar pedestrian mall ending at the bus pull-out on Webster Street.

Quad

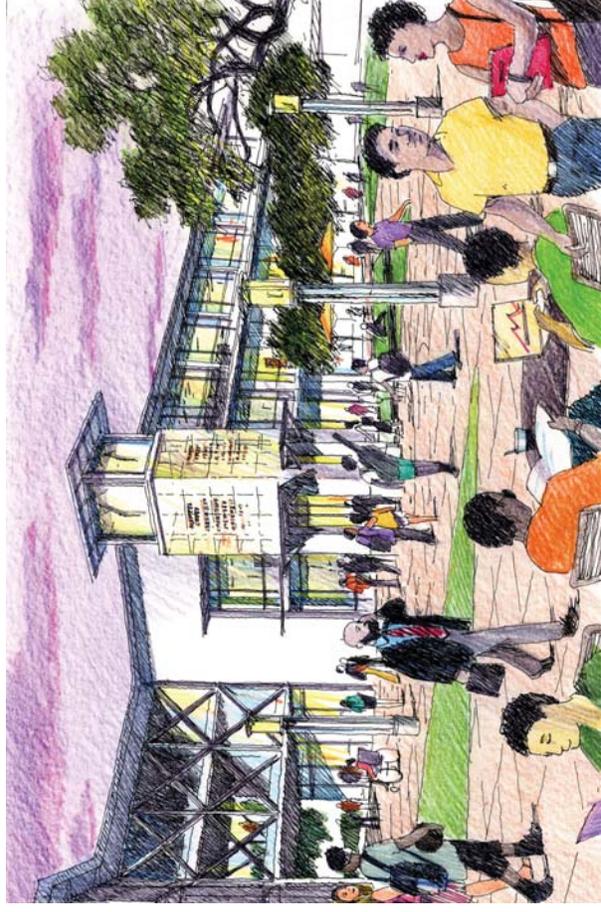
The quad space is delineated at a 45-degree angle, referencing the original organizing principle of the campus. The quad is subdivided into smaller spaces which serve as the entry forecourts to buildings C and D to the north and the main outdoor gathering space associated with the Student Center. Seating areas are located around the perimeter of the Quad, while a focal point may be placed at its center. Shade trees are located around the seating areas.

Secondary Courtyards

Secondary courtyards are defined between Buildings A and B, west of Building C, and north of the Library. These secondary courtyards serve as quiet gathering and resting spaces, with planting areas, shade trees and benches.



Quad: Plan View



2. Quad-Perspective View



3. North Gateway Plaza at Buildings C and D

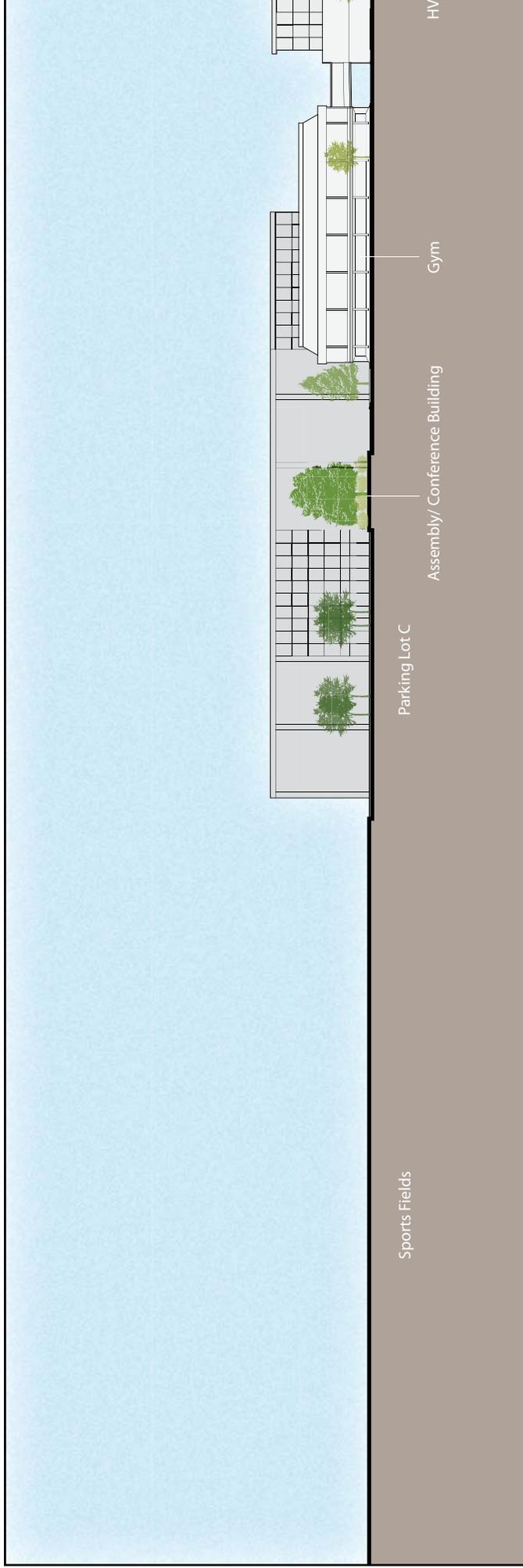




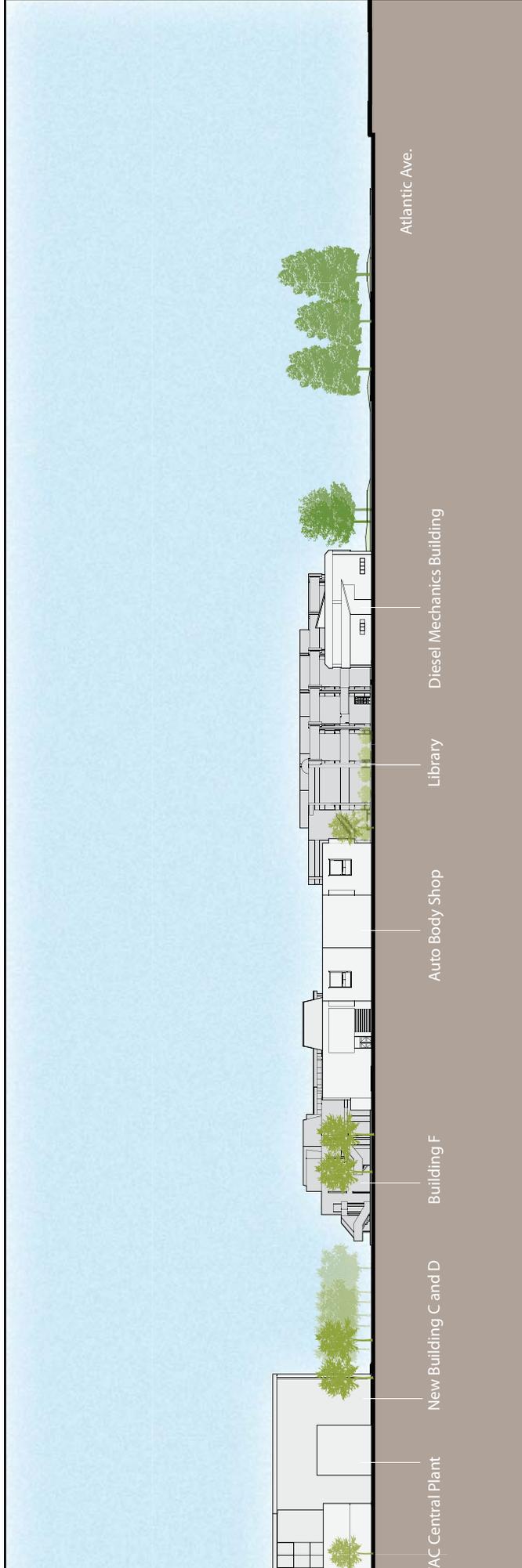
4. Gateway Plaza at Webster St. and Atlantic Avenue



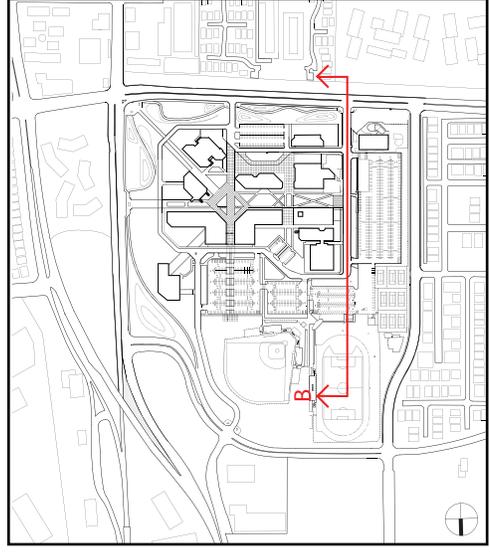
5. East Gateway Plaza and Bus Stop

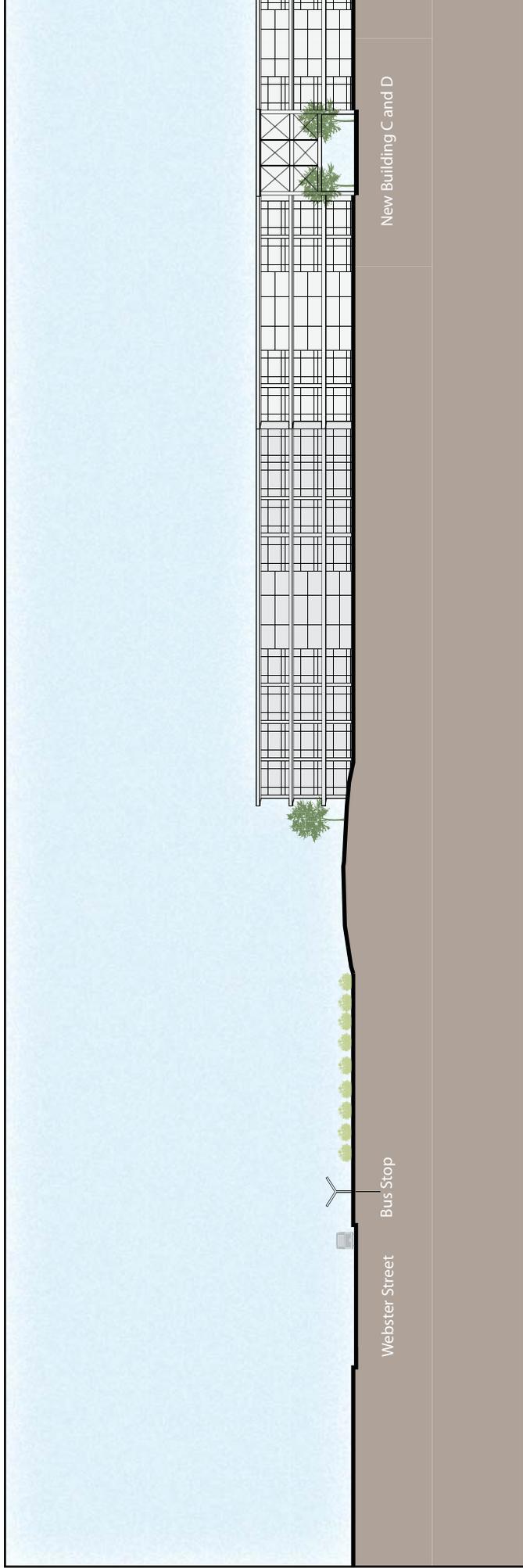


PROPOSED SECTION A



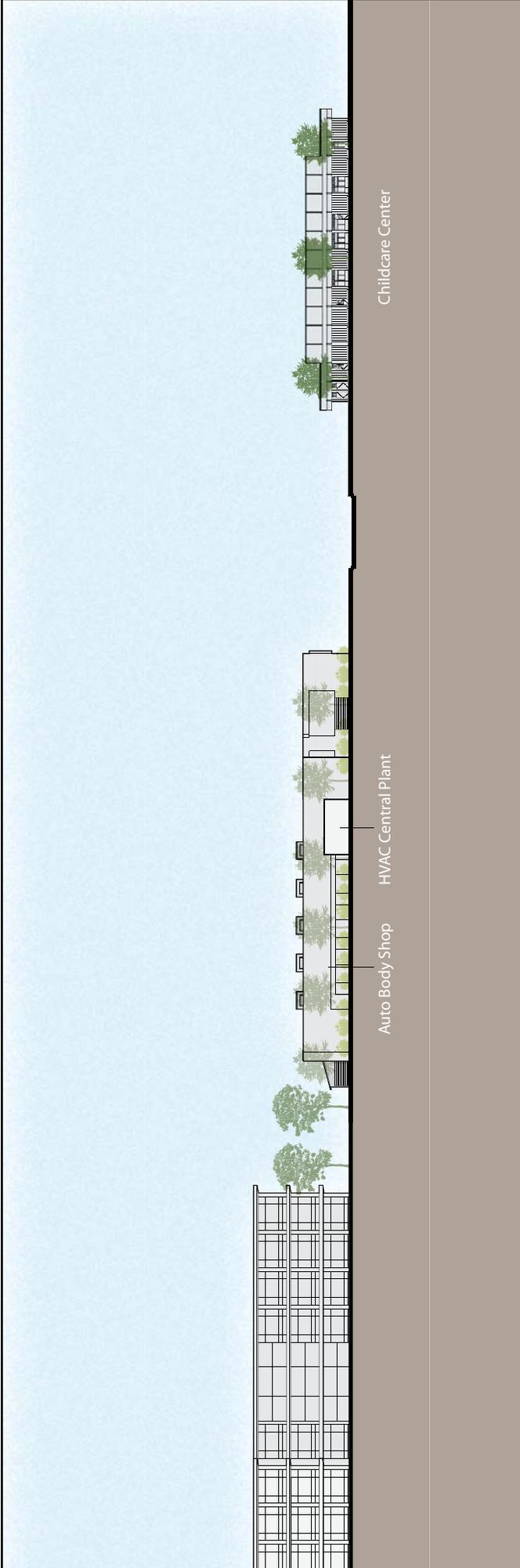
This east looking cross-section illustrates the new Assembly/Conference Building in the far background and the relocation of the Diesel Mechanics Building. Some future bioswales are shown on the right along the Atlantic Ave.



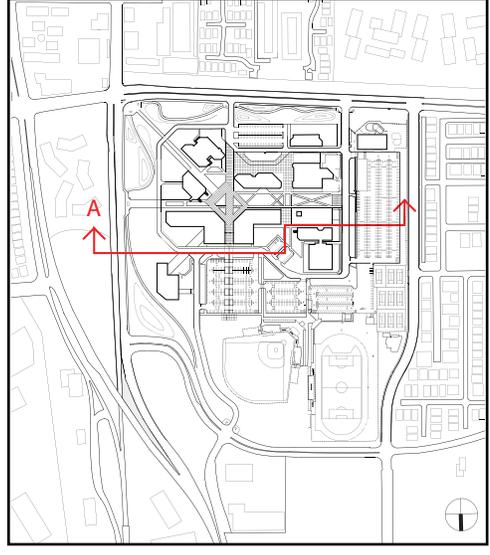


PROPOSED SECTION B





This south looking cross section illustrates the New Building C and D and the new bus stop on Webster Street on a near flat site with small mounds indicating the location of future bio-swales.





Site furnishings at plaza - Precedent



Site furnishings at plaza - Precedent

Landscape and Site Design Guidelines

Furnishings

The site furnishings throughout the Alameda campus are of poor quality and are uncomfortable. There is inadequate seating in the gathering spaces. Trash receptacles are inconsistent and placed haphazardly. Campus-wide furnishings standards should be developed and implemented. The furnishings standards should address the following:

- Seating, including benches and tables with chairs
- Trash and recycling containers
- Bicycle racks
- Bollards
- Drinking fountains
- Newspaper racks and kiosks

Lighting

New, high-quality light fixtures have been installed in certain areas of the campus, including the pedestrian path from the corner of Webster Street and Atlantic Avenue. Older fixtures on campus should be replaced over time with new fixtures of a similar quality. Like fixtures should be used throughout the campus in each outdoor space type (refer to Open Space Framework Diagram). For example, all of the courtyards should have the same model, all of the entry plazas and entry axes should have the same model, and the pedestrian malls should have a consistent model. The following are specific recommendations:

- Replace high-pressure sodium (HPS) fixtures with metal-halide fixtures.
- Maintain existing fixtures, replacing parts such as discolored lenses.
- Replace wall-mounted fixtures with models that are easier to maintain.

Paving

The paving materials should differentiate the different use areas, such as entry plazas, entry axes, the central quad, the entry plaza, and smaller courtyards. Distinctive paving materials such as concrete unit pavers or colored and exposed-aggregate paving should be installed.



Lighting - Precedent

Planting

The plant palette should be different for the different landscape character zones:

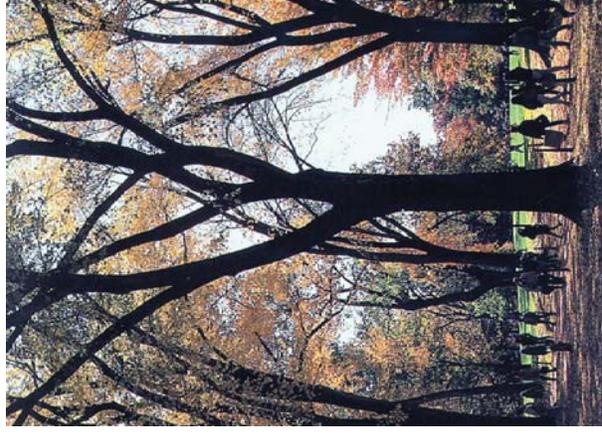
- Outer landscape zone: Native plantings in large masses, corresponding to the various habitat zones created by stormwater management and drought-tolerant areas. Orchards and urban agriculture areas are also a potential part of the outer landscape zone.
- Core campus: Distinctive plantings associated with different buildings and courtyards, in a formal arrangement.
- Quad: Shade trees of a single species should define the seating areas within the quad.
- Axes: Each axis should be distinguished by a consistent tree species.
- Courtyards: Ornamental and shade trees of distinct species for each courtyard.

Drought-tolerant species should replace the vast majority of the lawn areas. Only lawn that is actively used as sports fields or seating areas should remain. (See sustainability discussion below.)

All Plane trees should be replaced. Rather than remove and replant all at once, interplant immediately with 15 gallon or 24" box size specimens. As the trees grow over the next 5-10 years, remove the damaged trees. Prune new trees according to standard pruning practice as established by the American Society of Arboriculture and the American National Standards Institute; do not top the trees.



Distinguished planting character - Precedent



Naturalistic planting - Precedent



Entry plaza paving - Precedent

The Master Plan Perspective is an illustration of what the campus could look like with the recommendations applied that you have already discussed. The pedestrian axis for circulation has been embellished. The center of the campus has a clock tower that provides a focal point from any entry into the campus.

The new buildings clearly reinforce a new identity for the campus. Well designed exterior facades, integrate glazing and operable shading devices, and allow outdoor views that provide connection with the campus sites, as well as adjacent sites, thus creating a more integrated campus and neighborhood.

Community connection is a primary concern for the campus. A strong community connection is not just pedestrian pathways, it is also reflected with ease of access to the site such as the proposed bus drop-off. The college attempts to provide a better campus image by "tucking" its career technical programs to the far west of the campus. A new building is proposed at the new Willie Stargell Avenue entry from Webster St. This gives a new face to the campus, as new development to the North of the campus will be cause increased traffic along this route.

Pursuant to the Chancellor's directive, every campus of the Peralta Community College District must identify a portion of the campus that could be used in a public-private partnership. This can be revenue generating or joint use agreement projects. The analysis of data and discussions with the college, determined the Child Care Center could be moved and relocated elsewhere on campus. The resulting parking and vacated building area could become a public-private partnership parcel.



2022 PROPOSED AERIAL PERSPECTIVE

Storm Drainage

Existing Conditions

The campus is served by storm drain systems that tie directly to a private 48-inch storm drainage system in the northwestern corner of the campus, near the football field, and at three locations along Webster Street on the east side of campus. This 48-inch line runs in a private easement dedicated to and maintained by the College until it reaches the existing Navy/Coast Guard Housing Main northeast of the Bayport Stormwater Pump Station.

Based on record information, most of the onsite systems were constructed with the original campus construction in the 1960's. The system appears to have been designed to handle the 10-year storm event, however the off-site 48-inch appears undersized based on the drainage area boundaries. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) indicate that the Campus is in "an area of minimal flooding."

Within the campus, stormwater is conveyed to an existing 33-inch main located near Willie Stargell (formerly Tinker) Avenue at the northwestern corner of campus. This system consists of a network of pipes between 8-inch and 33-inch in diameter which collects the major parking areas, the sports fields, and most of the campus core area, including Buildings A, B, C, F, G and the Main Office.

The eastern portion of campus stormwater is collected and discharged to the City of Alameda public storm drain facilities at four (4) separate locations in Webster Street. Three small systems exist on the southern and eastern borders of the campus. These small systems use concrete catch basins, 12-inch and 15-inch reinforced concrete pipe, earthen swales, and a trench drain to collect stormwater and convey it into concrete catch basins along Webster Street.

At the Alameda Air Facility, all rainwater leaders from the buildings drain directly onto the asphalt, which then drains overland into catch basins within the paved areas. A system of 10-inch, 18-inch and 24-inch reinforced concrete pipe leads to an outfall just beyond the eastern fence line of the site. The outfall is to an offsite drainage ditch.

Master Plan Recommendations

The Master Plan proposes to add 7 new buildings: a new Building C, Building D, Diesel Building, Auditorium, building west of new Building C, Children Center Building, and building north of Children Center Building. The latter 5 are to be built on previously pervious surface area that if undetained could increase the flow rate (average and peak) to storm drain lines neighboring them.

Master Plan Building C and D: Services to the new Building C and new Building D should be serviced via new storm drain lines which will convey their stormwater runoff to swales located at the east end of the site before connecting to a storm drain main line in Webster Street.

Master Plan Diesel Building: There is a 12-inch storm drain line which runs west of the Diesel Building which should serve the rain water leaders for this building.

Master Plan Auditorium: The Auditorium's rain water leaders should be served by a new storm drain line which will convey its stormwater runoff into a nearby swale before connecting to a storm drain main in Webster Street.

Master Plan Building West of C: The rain water leaders for the building west of new Building C should be served by a new storm drain line which will convey its stormwater into a nearby swale before connecting to a 12-inch storm drain line which runs along the east end of the west parking lot.

Master Plan Children Center Building: The Children Center Building's rain water leaders should be served by a new storm drain line which will convey its stormwater into a nearby swale before connecting to a storm drain main in Webster Street.

Master Plan Building North of Children Center: The building north of the Children Center Building's rain water leaders should be serviced by a new storm drain line which will convey its stormwater into a nearby swale before connecting to a storm drain main in Webster Street.

Additional Recommendations

Storm drainage from all new surfaces should be treated either in surface bioswales or bioretention areas, or in sub-surface filtration structures before entering the existing 24-inch line to comply with Section C.3 of the City of Alameda's National Pollution Discharge Elimination System (NPDES) Permit with the State Water Board.

Develop a long term maintenance and inspection plan for the private off-site 48-inch main.

Cracked or uneven pavement resulting from erosion, tree root intrusion, or settlement, should be repaired so as to create positive drainage with standard minimum slopes.

Grates and rims that are rusted, broken, cracked or frozen, should be replaced.

Some elevations at key points on campus would be useful in determining whether run-off from heavy storms that might overwhelm the conveyance capacity of the underground piping system would be safely channeled away from the buildings.

A video inspection was performed between May 20 and May 31, 2008. A small sample of pipe was inspected. The inspection noted underwater debris, root intrusion and a 4-foot crack in the pipe system at the north side of Parking Lot C.

The line that drains the parking lot south of building A is constricted by a large root at a pipe joint. Additionally, there is a hole in the top of this pipe. Also noted in the video inspection was a "sag" in the line draining away from the northern edge of Parking Lot 'C'. Debris and standing water was noted in the "sag".

Because problems were noted in such a high percentage of the lines that were inspected, video inspection should be conducted on the balance of storm drain lines throughout the campus. Locations where sags are found in the lines should be cleared more frequently.

Sanitary Sewer*Existing Conditions*

The College of Alameda Campus discharges sewer flows into the City of Alameda conveyance system, which in turn delivers raw sewage flows to the East Bay Municipal Utility District (EBMUD) conveyance system, which carries flows under the Oakland Estuary and into the regional wastewater treatment facility.

There are currently two (2) points of discharge to the City of Alameda system. The entire campus, with the exception of Building E, flows out through a 12-inch line in West Campus Loop Road to Ralph J. Appezato Memorial Parkway (formerly Atlantic Avenue). The core of the campus discharges to this main line through a 12-inch line that runs west between Buildings A and D. A second 8-inch line that picks up Building G, the bathrooms at the baseball field, and the baseball field connects to the newly constructed (as part of the Bayport Project) sewer main in Fifth Street.

The Diesel Mechanics Building, Building E, has dedicated sanitary service that connects to an 8" lateral to a main located in Webster Street.

At the Alameda Air Facility, all sewage flows to a pump station located south of the Storage Shed. The pump station discharges the sewage through a 4-inch force main that exits the site to the east, across the Oakland Airport property. The force main enters the City of Oakland gravity system at a manhole at the intersection of Earhart Road and Grumman Street.

The campus was constructed on what are generally referred to as Bay Mud soils, which experience settlement over time under the placement of fills. This settlement can have the effect of flattening gravity pipe systems to the point that they no longer flow properly. When this occurs in a sewer system, solids can build up and cause regular blockages.

A sample video survey was performed during the week of May 19, 2008. Many of the segments sampled were noted to be flat and either holding debris, or just flowing slowly. Specific defects noted were: a severe break in the line between buildings A and C that appears to have occurred during the installation of fiber optic lines that run perpendicular to the sewer line; root intrusion in the line west of Building G; some debris build-up where the laterals from Buildings D, A and the Cougar Village complex enter the line between buildings A and D.

Additionally, the off-site sewer main in Ralph J. Appezato Memorial Parkway is in generally poor condition with numerous sags and deficiencies. Flows from this main are pumped into EBMUD's Alameda Siphon, which transmits them under the Oakland Estuary. Conversely, the new line installed in 5th Street is in good condition. It flows to Pump Station 6 near Main Street which redirects the flows northward towards EBMUD's Mitchell Interceptor

Master Plan Recommendations

Master Plan Buildings C and D: New Buildings C and D should both be serviced by the same sewer connections used by the original buildings before they are demolished. These lines may need to be modified to accommodate the new building footprints.

Master Plan Diesel Building: A 12-inch sewer line west of the Diesel Building should function as its sewer service with a new lateral connection.

Master Plan Auditorium: The Auditorium could connect to the existing main in Webster Street.

Master Plan Building West of C: The building should connect to the 12-inch sewer line west of the building.

Master Plan Building Children Center and Building North of Children Center: The sewer main east of these buildings in Webster Street could function as their new sewer connections. One or two separate laterals could be constructed to serve these buildings.

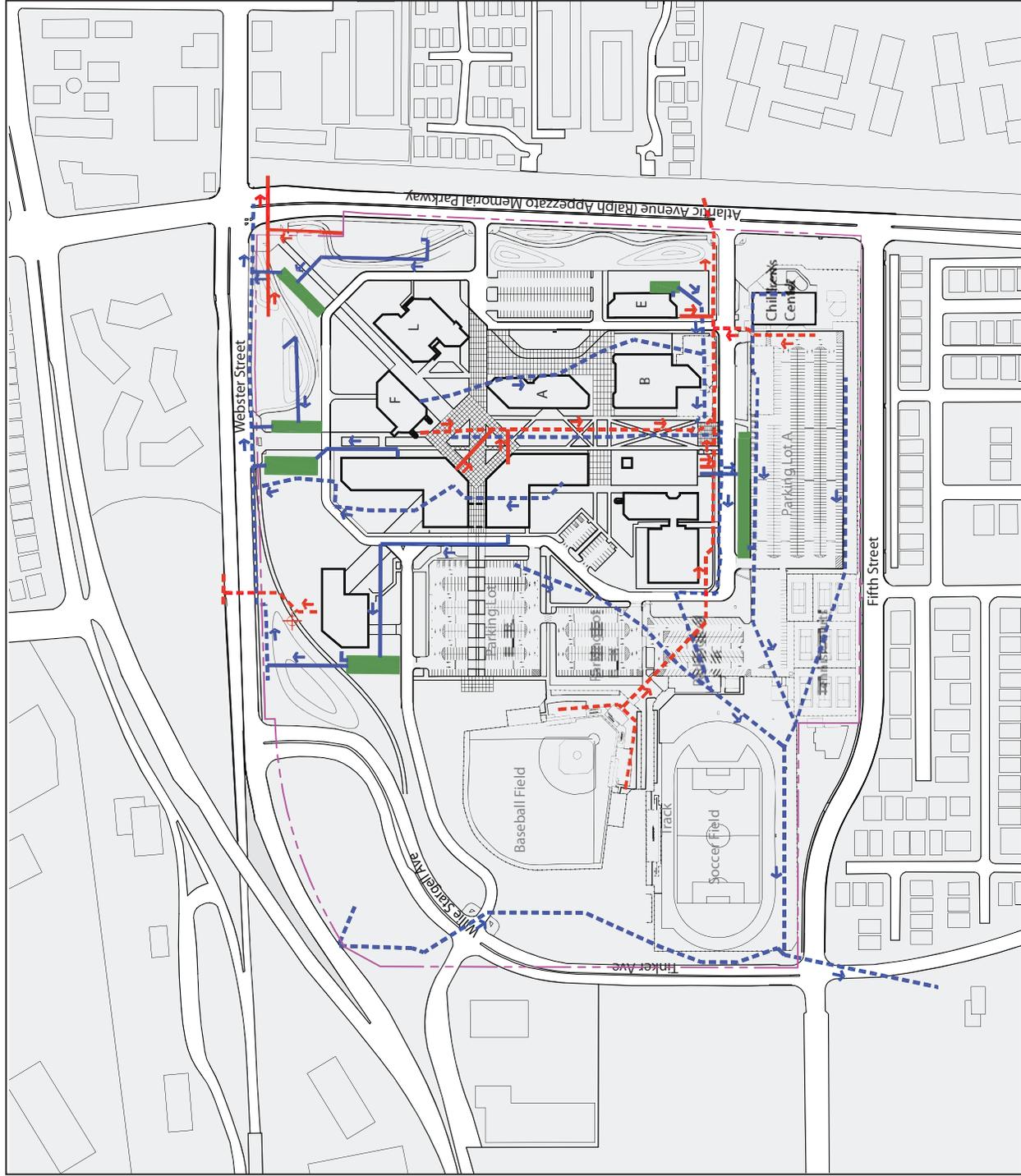
Additional Recommendations

A sample video survey was performed during the week of May 19, 2008. Many of the segments sampled were noted to be flat and either holding debris, or just flowing slowly. Specific defects noted include: a severe break in the line between buildings A and C that appears to have occurred when the fiber optic lines were installed; root intrusion in the line west of Building G; and debris build-up where the laterals from Buildings D, A and the Cougar Village complex enter the line between buildings A and D.

Flat sections of sewer line should be cleared frequently and evaluated annually for possible replacement.

Due to the deficiencies in the off-site main adjacent to Ralph J. Appezato Memorial Parkway, the City may require upgrades or replacement of the line with new connections or larger connections.

Due to the limited capacity of the Alameda Siphon and Mitchell Siphon, EBMUD has capped the amount of sewer allowed in the siphons. Additional capacity needed for the Master Plan implementation may need to be negotiated with the City and P and may require additional off-site/on-site improvements that reduce the flows to the Siphons.



-  New Storm Drain Line
 -  Existing Storm Drain Line
 -  New Sewer Line
 -  Existing Sewer Line
 -  Property Line
 -  Potential Stormwater Treatment Area
 -  Reroute Pipe Around Building
- 0 100 400 feet
- 

PROPOSED STORM DRAIN AND SANITARY SEWER SYSTEM

Water

Existing Conditions

The College of Alameda campus is served water (combined domestic and fire hydrants) through an 8-inch meter and 8-inch lateral that is tied to a 24-inch main in Webster Street, just north of Building F. East Bay MUD owns and maintains the 24-inch main.

A double loop system of polyvinylchloride (PVC) pipes serves the campus core and has branches along the north and south sides of Buildings A and B, and north of Buildings C and D. 3-inch or 4-inch laterals extend from these looped systems to serve all of the campus buildings, including the locker room and concession facilities at the sports fields.

Fire hydrants are served from the domestic water line. Nearly half of the hydrants are reported to be frozen and leaking.

At the 24-inch EBMUD Webster Main, a separate 6-inch dedicated connection provides fire suppression water to buildings A, B, and L. Directly adjacent to the domestic water meter, it enters the campus via a back flow preventer and double detector check assembly located behind the sidewalk. The line serves sprinklers in buildings A, B and L with a single fire department connection near Cougar Village.

At the Alameda Air Facility, the Port of Oakland provides water service through a 6-inch transit (asbestos) water line that comes from the east across the Oakland Airport property. A 2-inch meter was installed adjacent to the northwest face of the Aviation Mechanics Building. Domestic and fire water are served to the building in this location. During the original 1968 construction, a 3-inch Asbestos Cement stub was installed for future buildings. This stub was utilized during the 1977 additions. A line was installed around the north side of the Aviation Mechanics Building and

Master Plan Recommendations

Due to the corrosiveness of Bay Mud soils it appears that the water system appurtenances (valves and hydrants) are approaching the limit their service life. The District should consider replacing the valves and hydrants on the domestic and fire systems throughout the campus.

Alternately, provisional measures recommended are test valves and replace as needed and hydrants should be exercised to verify that they are operational.

GAS

Existing Conditions

At the corner of Atlantic Avenue and West Campus Loop, two (2) 6-inch gas lines run northerly into campus from PG&E facilities. As the two parallel lines pass Building B, one of the lines begins running to the east to serve Buildings B, A and C. The other line continues past the main office and then turns east between Buildings G and C, providing service for Building D and Cougar Village. The line then enters the gas meter just to the northwest of Cougar Village. From the meter, a 1.25-inch line runs northwest towards Building E.

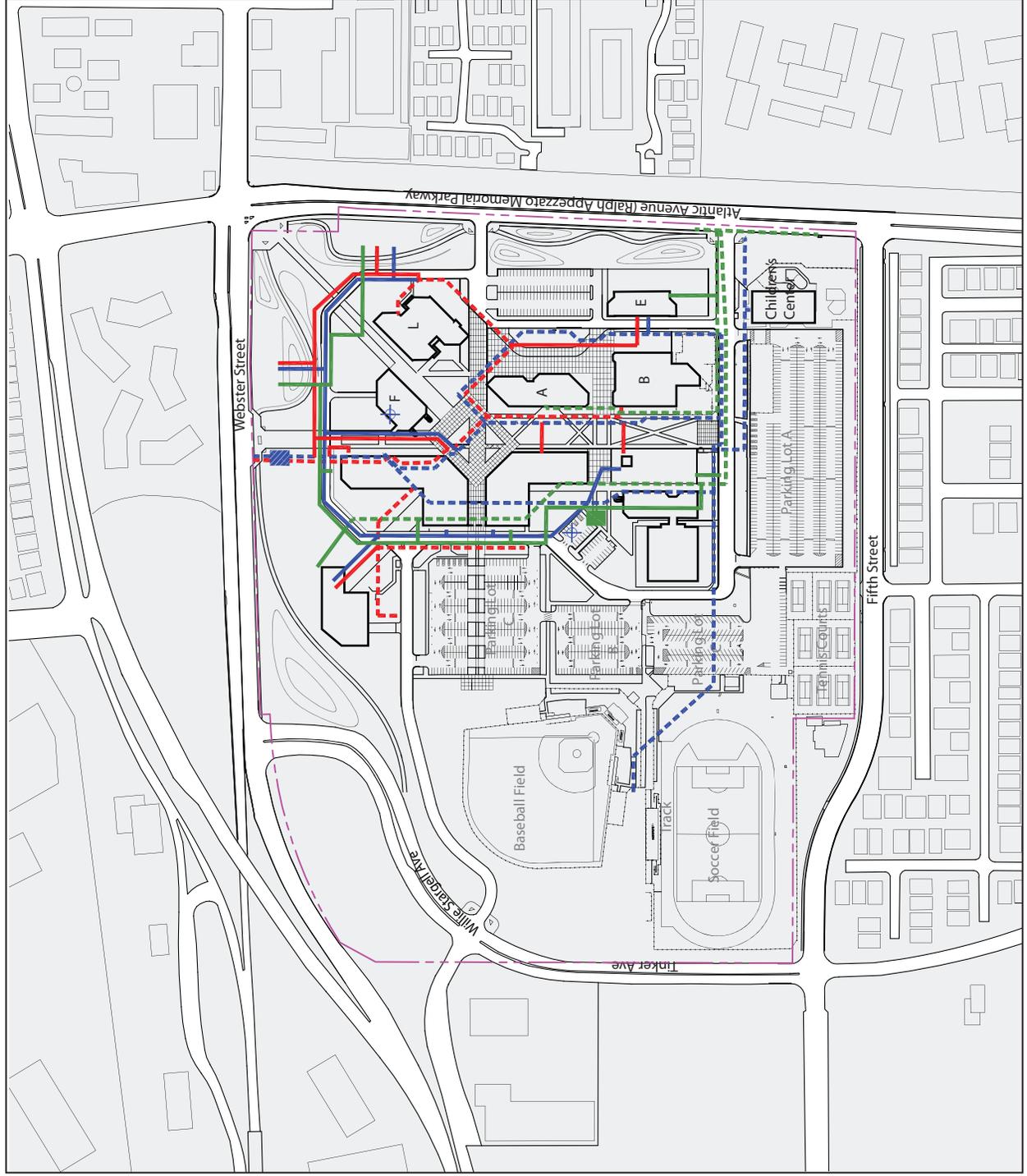
At the Alameda Air Facility, the gas meter is located west of the Aviation Mechanics Building along the fence adjacent to Harbor Bay Parkway. Service enters through the west face of the building. There is a 2.5-inch gas connection to the Air Frame Building.

Master Plan Recommendations

Master Plan Buildings C, D, West of C and the proposed Auditorium: Due to the new Building C and D footprints the 1.25-inch gas line should be rerouted north around these buildings prior to the construction of Buildings C, D, the building west of Building C, or the Auditorium. These buildings could then be connected to this newly rerouted line using short laterals.

Master Plan Diesel Building: There is a 2.5-inch gas line west of the Diesel Building which should function as the gas service for this building by installing a short lateral to it.

Master Plan Building Children Center and Building North of Children Center: A new gas line should be installed in the south eastern area of the campus. This line should be used to serve the Children Center Building as well as only proposed building north of the Children Center Building with gas.



-  New Domestic Water Line
-  Existing Domestic Water Line
-  New Fire Water Line
-  Existing Fire Water Line
-  New Gas Line
-  Existing Gas Line
-  Property Line
-  Existing Water Meter
-  Relocated Gas Meter
-  Reroute Pipe Around Building



Overview

Interface Engineering conducted a surface-based site investigation of the College of Alameda Campus for the purpose of assessing the Mechanical, Plumbing, Electrical and Technology Systems. The assessment of the campus led to an analysis of the existing conditions and recommendations on how to improve the state of each system.

The following pages outline the Masterplan of the Mechanical, Plumbing, Electrical and Technology systems based on the analysis of the existing conditions, programming changes, energy conservation measures, service life of equipment and code related issues.

Although there have been many discussions regarding a Central Chiller Plant, the District has not committed to air conditioning in all spaces. Therefore the recommendations are for a Central Heating Plant with individual building AC unit options for cooling. The performance requirements of the new units would lend themselves to connection from a Central Chiller Plant, if the District decides to offer that for all spaces. In the event Building “C” and “D” is demolished and replaced with a new building, a new Central Heating Plant must replace the existing Boiler room.

A graphical representation of the site is provided, showing the MEP infrastructure for new systems as well as a written description of recommendations for each individual building.

Mechanical/Plumbing Infrastructure

A campus-wide primary and secondary heating hot water system originates from the Boiler Room. A heating hot water supply/return pipes start from this Boiler Room and create a closed loop around the core buildings with the water pressure maintained at optimum pressure by a primary pumping system. The hydronic distribution for each building served is kept pressurized by the building's circulating pumps. In addition, the Boiler Room is the main source of plumbing utilities such as potable hot water, natural gas, compressed air for controls and shops. The equipment varied in ages and condition. As part of the Master Plan, the following is recommended for the Boiler Room:

1. Perform destructive tests of each existing piping system looped around the core buildings of the campus and main piping above ground serving these buildings.
2. If the destructive tests performed on each of the piping system results in upgrading or replacing the piping system, the addition of a chilled water system is recommended to provide cooling for the campus.
3. Replace the existing domestic hot water system components including the storage tanks, water heaters, circulating pumps, and piping system within the Boiler Room.
4. Install mechanical ventilation and exhaust system to serve the Boiler Room space.
5. Preventative maintenance program should be done periodically on the existing boilers and pumps.
6. Replace or convert all pneumatically-controlled mechanical system with Direct Digitally Controlled system.
7. Upgrade the existing boiler with Low NoX retrofit kit that is available from boiler manufacturer within the next 5 years in order to comply with the Bay Area Air Quality (BAAQMD) requirement. The District has replaced the existing boiler, but the remaining components must be upgraded or replaced.

Electrical Infrastructure

The campus is served from a 12kV underground line running along West Campus Drive owned by Alameda Power and Telephone. The service is a secondary service with the main utility transformer located adjacent to Building C. The Main Switchboard is located on the Second Floor in Building C and serves all existing Buildings on the campus via underground conduits. All equipment was installed over 30 years ago and is past its useful service life. As part of the Masterplan, it is recommended to:

1. Provide a new Main Switchboard located in the new Central Utility Plant installed in conformance with current codes. The utility transformer may require relocating depending on the final location of the new Science Building. Existing feeders are to be intercepted and extended to the location of the new Switchboard.
2. Examine the condition of existing underground feeders to ensure no lead cables are in place. Replace all lead cable and damaged conduits. Provide new pullboxes as required.
3. Perform load readings on the existing distribution system to determine available capacity to accommodate new loads .

4. The State of California is requiring reduced energy use in State-owned facilities and directing The Division of the State Architect (DSA) to encourage schools being built with State funds to be resource and energy efficient. To this end, DSA is calling out to all California school districts and community college districts to make their schools grid neutral: “a site that produces at least as much electricity as it consumes in a year.” As part of the Masterplan it is important to consider some steps to becoming grid neutral:
 - a. Based on load readings determine the size of Renewable Energy Systems required for “Grid Neutral” designs.
 - b. Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality either for the entire campus if space permits or on a building by building basis.
 - c. Implement a system to accurately monitor energy use and system performance.

Technology Infrastructure

In 1998, Project 152 addressed the need for upgrading the fire alarm and security systems. As part of this project, (4) 4” conduits were distributed in a star topology providing pathway from the campus Main Equipment Room (MER) to each Main Distribution Frame (MDF) in each building. From there conduits were distributed to Intermediate Distribution Frames (IDF’s) where needed. Fiber optic cable was installed at that time to provide connection between MER and the MDF’s/IDF’s. This project also added air conditioning units to each MDF/IDF to maintain constant temperature, imperative for sensitive electronic equipment.

In 2001, a new project was launched to install Emergency call phones providing a new level of security to students and staff on campus. Multi-pair copper cable was distributed from MDF’s/IDF’s to support connection to emergency services. During this improvement a backbone infrastructure was installed to provide a wireless network distribution system.

The existing Technology Infrastructure is in good condition; as part of the Masterplan, it is recommended to:

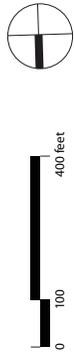
1. Provide seismic bracing for equipment racks in the all MDFs and IDF’s.
2. Provide proper grounding and bonding in all MDFs and IDF’s.
3. Assess existing capacity to support increased number of Interactive Learning Environment (Smart) Classrooms. Provide additional technology and electrical infrastructure based on those findings.





KEYNOTES

- 1** Location of new Central Plant.
- 2** Location of new Main Switchboard.
- 3** Location of existing utility transformer.
- 4** Connect new HVAC system to existing piping from Central Plant.
- 5** Provide new stand alone HVAC system.
- 6** Electrical served from new Main Switchboard.
- 7** Provide new electrical service for new Children's Center and new Assembly/Classroom Building.



RECOMMENDATIONS

Electrical Systems

Building B

- Replace antiquated electrical distribution equipment with new equipment.
- Provide additional electrical distribution equipment to accommodate remodel and new programming spaces.
- Upgrade installation of electrical equipment to conform to current Code requirements.
- Verify if the existing 800A, 277/480V, 3 phase, 4 wire electrical service is sufficient to provide power for the new programming spaces.
- Perform load readings on existing distribution system to determine available capacity to accommodate new loads.
- Determine based on load readings the size of Renewable Energy Systems required for a “Grid Neutral” design as defined by the Division of the State Architect (DSA).
- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality where possible given physical space constraints on the campus.
- A “Grid Neutral” design may not be achievable due to limitations in the existing conditions but a Photovoltaic System can be installed on the roof to supplement the incoming electrical service.
- Implement a system to accurately monitor energy use and system performance.
- Replace existing lighting with new energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.
- Evaluate egress lighting system and upgrade system as required to meet

- minimum one footcandle illumination at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.
- Provide automatic dimming of luminaires in daylight zones for energy conservation.

Building C

- Perform detailed load calculations to verify service size and provide electrical distribution equipment to accommodate all loads.
- Verify if the existing 800A, 277/480V, 3 phase, 4 wire electrical service is sufficient to provide power for the new Building
- Determine based on load calculations the size of Renewable Energy Systems required for a “Grid Neutral” design as defined by the Division of the State Architect (DSA).
- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality where possible given physical space constraints on the campus.
- A “Grid Neutral” design may not be achievable due to limitations in the existing conditions but a Photovoltaic System can be installed on the roof to supplement the incoming electrical service.
- Implement a system to accurately monitor energy use and system performance.
- Provide lighting with energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.

- Provide egress lighting system to meet minimum one footcandle illumination at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.
- Provide automatic dimming of luminaires in daylight zones for energy conservation.

Child Care Center

- No action required for existing Child Care Center due to demolition of existing building.
- Provide 1200A, 277/480V, 3 phase, 4 wire service for new Assembly/Classroom Building and new Child Care Center. Coordinate point of connection for new service with Alameda Power & Telephone. Perform detailed load calculations to verify service size and provide electrical distribution equipment to accommodate all loads.
- Determine based on load calculations the size of Renewable Energy Systems required for a “Grid Neutral” design as defined by the Division of the State Architect (DSA).
- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality.
- Implement a system to accurately monitor energy use and system performance.
- Provide lighting with energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.

- Provide egress lighting system to meet minimum one footcandle illumination at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.

Provide automatic dimming of luminaires in daylight zones for energy conservation.

Building D

- Perform detailed load calculations to verify service size and provide electrical distribution equipment to accommodate all loads.
- Verify if the existing 1000A, 277/480V, 3 phase, 4 wire electrical service is sufficient to provide power for the new Building
- Determine based on load calculations the size of Renewable Energy Systems required for a “Grid Neutral” design as defined by the Division of the State Architect (DSA).
- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality where possible given physical space constraints on the campus.
- A “Grid Neutral” design may not be achievable due to limitations in the existing conditions but a Photovoltaic System can be installed on the roof to supplement the incoming electrical service.
- Implement a system to accurately monitor energy use and system performance.
- Provide lighting with energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.
- Provide egress lighting system to meet minimum one footcandle illumination

- at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.
- Provide automatic dimming of luminaires in daylight zones for energy conservation.

Building E

- No action required due to demolition of existing building.

Building F

- Replace antiquated 800A, 277/480V, 3 phase, 4 wire distribution panel and downstream electrical equipment with new equipment.
- Upgrade installation of electrical equipment to conform to current Code requirements.
- Perform load readings to determine the size of Renewable Energy Systems required for a "Grid Neutral" design as defined by the Division of the State Architect (DSA).
- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality where possible given physical space constraints on the campus.
- A "Grid Neutral" design may not be achievable due to limitations in the existing conditions but a Photovoltaic System can be installed on the roof or to supplement the incoming electrical service.
- Implement a system to accurately monitor energy use and system performance.

- Replace existing lighting with new energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.
- Evaluate egress lighting system and upgrade system as required to meet minimum one footcandle illumination at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.
- Provide automatic dimming of luminaires in daylight zones for energy conservation.

Building G and Gymnasium

- Replace antiquated electrical distribution equipment with new equipment.
- Provide additional electrical distribution equipment to accommodate remodel and new programming spaces.
- Upgrade installation of electrical equipment to conform to current Code requirements.
- Verify if the existing 400A, 277/480V, 3 phase, 4 wire electrical service is sufficient to provide power for the new programming spaces.
- Perform load readings on existing distribution system to determine available capacity to accommodate new loads.
- Determine based on load readings the size of Renewable Energy Systems required for a "Grid Neutral" design as defined by the Division of the State Architect (DSA).

- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality where possible given physical space constraints on the campus.
- A "Grid Neutral" design may not be achievable due to limitations in the existing conditions but a Photovoltaic System can be installed on the roof or on the ground adjacent to the building to supplement the incoming electrical service.
- Implement a system to accurately monitor energy use and system performance.
- Replace existing lighting with new energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.
- Evaluate egress lighting system and upgrade system as required to meet minimum one footcandle illumination at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.
- Provide automatic dimming of luminaires in daylight zones for energy conservation.

Building L

- Replace antiquated electrical distribution equipment with new equipment.
- Provide additional electrical distribution equipment to accommodate remodel and new programming spaces.
- Upgrade installation of electrical equipment to conform to current Code requirements.
- Verify if the existing 1000A, 277/480V, 3 phase, 4 wire electrical service is sufficient to provide power for the new programming spaces.

- Perform load readings on existing distribution system to determine available capacity to accommodate new loads.
- Determine based on load readings the size of Renewable Energy Systems required for a "Grid Neutral" design as defined by the Division of the State Architect (DSA).
- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality where possible given physical space constraints on the campus.
- A "Grid Neutral" design may not be achievable due to limitations in the existing conditions but a Photovoltaic System can be installed on the roof to supplement the incoming electrical service.
- Implement a system to accurately monitor energy use and system performance.
- Replace existing lighting with new energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.
- Evaluate egress lighting system and upgrade system as required to meet minimum one footcandle illumination at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.
- Provide automatic dimming of luminaires in daylight zones for energy conservation.

Air Facility

- Replace antiquated 600A, 277/480V, 3 phase, 4 wire distribution panel and downstream electrical equipment with new equipment in Building A.

- Replace antiquated 400A, 277/480V, 3 phase, 4 wire distribution panel and downstream electrical equipment with new equipment in Building B.
- Upgrade installation of electrical equipment to conform to current Code requirements.
- Perform load readings to determine the size of Renewable Energy Systems required for a "Grid Neutral" design as defined by the Division of the State Architect (DSA).
- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality where possible given physical space constraints on the campus.
- A "Grid Neutral" design may not be achievable due to limitations in the existing conditions but a Photovoltaic System can be installed on the roof to supplement the incoming electrical service.
- Implement a system to accurately monitor energy use and system performance.
- Replace existing lighting with new energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.
- Evaluate egress lighting system and upgrade system as required to meet minimum one footcandle illumination at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.

- Provide automatic dimming of luminaires in daylight zones for energy conservation.

Auditorium/Classroom Building

- Provide 1200A, 277/480V, 3 phase, 4 wire service for new Assembly/Classroom Building and new Child Care Center. Coordinate point of connection for new service with Alameda Power & Telephone. Perform detailed load calculations to verify service size and provide electrical distribution equipment to accommodate all loads.
- Determine based on load calculations the size of Renewable Energy Systems required for a "Grid Neutral" design as defined by the Division of the State Architect (DSA).
- Install a Renewable Energy System such as a Photovoltaic System to achieve grid neutrality.
- Implement a system to accurately monitor energy use and system performance.
- Provide lighting with energy efficient luminaires using T5 lamps and integral emergency ballasts where generator power is unavailable.
- Provide egress lighting system to meet minimum one footcandle illumination at floor level.
- Provide lighting controls mounted in conformance with ADA requirements.
- Provide low voltage lighting control panels for control of exterior lighting, public spaces, and large open areas.
- Provide occupancy sensors in private offices, classrooms, storage rooms, and other small enclosed areas for energy conservation.
- Provide automatic dimming of luminaires in daylight zones for energy conservation.



*MECHANICAL AND PLUMBING SYSTEM RECOMMENDATIONS:***Building B**

- Remove and replace existing air handling units with new AHUs equipped with heating and cooling coils; integral economizer and VFD fan motors to serve the Classrooms/Lecture Rooms and Faculty Offices.
- Provide new 4-pipe fan coil system for each classroom.
- Remove and replace central laboratory exhaust fans with VFD fan motors. Exhaust fans to be mounted on the roof.
- Provide Phoenix control valves for each lab's welding hood.
- Provide dedicated exhaust for all chemical storage rooms.
- Provide new general exhaust systems fans for all public restrooms.
- Provide emergency combination eyewash and shower station for each classroom.
- Provide acid resistance lab sinks for each classroom.
- Provide separate acid waste piping systems.
- Provide acid neutralizer tank.
- Provide large capacity water storage tanks with circulating pumps for domestic hot water service.
- Provide low flow/low water consumption plumbing fixtures per District Standards and LEED requirements.

Building C and D

- Provide new high capacity air handling units with heating and cooling coils, integral economizer and VFD fan motors.
- Provide 4-pipe fan coil system for each classroom.
- Provide central laboratory exhaust fans with VFD fan motors. Exhaust fans to be mounted on the roof. Approximately (4) 10,000 CFM exhaust fans.
- Provide Phoenix control valves for each lab's hood.
- Provide dedicated exhaust for all chemical storage rooms.
- Provide emergency combination eyewash and shower station for each classroom.
- Provide acid resistance lab sinks for each classroom.
- Provide separate acid waste piping systems.
- Provide acid neutralizer tank.
- Provide large capacity water storage tanks with circulating pumps for domestic hot water service.
- Provide low flow/low water consumption plumbing fixtures per District Standards and LEED requirements.

Child Care Center

- Replace existing package rooftop units (RTUs) new high efficiency RTUs with gas heating and electric cooling.
- Provide DDC control system.
- Provide general exhaust systems fans for all public restrooms.
- Provide exhaust systems for food preparation services.
- Provide gas powered domestic water heaters with circulating pumps.
- Provide low flow/low water consumption plumbing fixtures per District Standards and LEED requirements.

Building E

- No action required due to proposed demolition of existing building.

Building F

- Replace existing constant volume AHUs with new 100% outside air AHUs.
- New air handling units (AHUs) to be equipped with heating and cooling coils, integral economizer and Variable Frequency Drive (VFD) fan motors.
- Perimeter zones/areas to be provided with VAV boxes equipped with reheat coils and Direct Digital Controls (DDC).
- Provide all new hydronic piping system with VFD hydronic pumping systems.
- Provide new exhaust systems for food preparation services.
- Replace all existing general exhaust fans (EF) with new.
- Implement LEED design for schools.
- Install airflow monitoring systems.

- Provide large capacity water storage tanks with circulating pumps for domestic hot water service.
- Provide low flow/low water consumption plumbing fixtures per District Standards and LEED requirements.

Building G AND Gymnasium

- Replace existing AHU with new 100% outside air AHUs equipped with DDC controls and VFD fan motors.
- New air handling units (AHUs) to be equipped with heating and cooling coils, integral economizer and Variable Frequency Drive (VFD) fan motors.
- Upgrade existing hydronic piping and pumping systems
- Replace all existing fans (EF) serving the Locker Rooms and Public Restrooms with new.
- Replace existing pneumatic controls with new DDC system.
- Install airflow monitoring systems.
- Implement LEED design for school.
- Provide large capacity water storage tanks with circulating pumps for domestic hot water service.
- Replace all existing plumbing fixtures with new low flow, low water consumption per District Standards and LEED requirements.

Building L

- Replace existing air handling units (AHUs) with new AHUs equipped with heating and cooling coils, integral economizer and Variable Frequency Drive (VFD) fan motors.
- Demolish all existing HVAC system in each of the mechanical penthouses, including exhaust fans, ductwork and miscellaneous piping
- Implement LEED design for schools.
- Install airflow monitoring systems.
- Install new VAV boxes with reheat coils for all perimeter zones with Direct Digital Controls (DDC)
- Provide all new hydronic piping system
- Install new hydronic pumps.
- Provide all new ductwork
- Replace all existing exhaust fans (EF) with new.
- Provide large capacity water storage tanks with circulating pumps for domestic hot water service.
- Replace all existing plumbing fixtures with new low flow, low water consumption per District Standards and LEED requirements.

Air Facility

- Replace existing constant volume AHUs with new 100% outside air AHUs.
- New air handling units (AHUs) to be equipped with heating and cooling coils, integral economizer and Variable Frequency Drive (VFD) fan motors.
- Perimeter zones/areas to be provided with radiant heat panels.
- Provide all new hydronic piping system with VFD hydronic pumping systems.
- Provide new exhaust systems for food preparation services.

- Replace all existing general exhaust fans (EF) with new.
- Implement LEED design for schools.
- Install airflow monitoring systems.
- Provide large capacity water storage tanks with circulating pumps for domestic hot water service.
- Provide low flow/low water consumption plumbing fixtures per District Standards and LEED requirements.

Auditorium / Classroom Building

- New air handling units (AHUs) equipped with heating and cooling coils, integral economizer and Variable Frequency Drive (VFD) fan motors.
- Perimeter zones or areas to be provided with VAV boxes equipped with reheat coils and Direct Digital Controls (DDC).
- Provide all new hydronic piping system with VFD hydronic pumping systems.
- Provide radiant heating
- Implement LEED design for schools.
- Install airflow monitoring systems.
- Provide large capacity water storage tanks with circulating pumps for domestic hot water service.
- Provide low flow/low water consumption plumbing fixtures per District Standards and LEED requirements.

TECHNOLOGY SYSTEMS RECOMMENDATIONS:

Building A

- Provide centralized clock system
- Provide emergency announcement system
- Provide closed circuit television cameras (CCTV) where appropriate
- Sever Room and MDF located in building "A" (Bldg. "A" Remodel in Progress during Survey)
- Provide IDF closets:
 - Equipment racks to be seismically braced to zone 4 standards
 - Provide wire management at equipment racks
 - Dedicated cooling 24/7
 - Bonding and grounding to Telecommunication Standards
- Provide access control system for MDF/IDF rooms
- Provide new tele/data backbone cabling to accommodate remodeled and new programming

Building B

- Provide centralized clock system
- Provide emergency announcement system
- Provide closed circuit television cameras (CCTV) where appropriate
- Prepare backbone cable (fiber/copper) for demolition phase
- All classrooms to be smart classrooms including:
 - Permanently installed projector and projector screen
 - Permanently installed SMART boards
 - Permanent installation of audio equipment for supporting visual presentation systems
- Standardized source selection switch for audio/visual source inputs

- Provide IDF closets:
 - Equipment racks to be seismically braced to zone 4 standards
 - Provide wire management at equipment racks
 - Dedicated cooling 24/7
- Provide access control system for IDF room
- Provide new tele/data devices to accommodate remodeled and new programming

Buildings "C" and "D"

- Provide centralized clock system
- Provide emergency announcement system
- Provide closed circuit television cameras (CCTV) where appropriate
- Prepare backbone cable (fiber/copper) for demolition phase
- All classrooms to be smart classrooms including:
 - Permanently installed projector and projector screen
 - Permanently installed SMART boards
 - Permanent installation of audio equipment for supporting visual presentation systems
- Standardized source selection switch for audio/visual source inputs
- Provide IDF closets:
 - Equipment racks to be seismically braced to zone 4 standards
 - Provide wire management at equipment racks
 - Dedicated cooling 24/7
- Provide access control system for IDF room
- Provide new tele/data devices to accommodate remodeled and new programming

Building E

- Prepare backbone cable (fiber/copper) for demolition phase

Building G

- Provide centralized clock system
- Provide emergency announcement system
- Provide closed circuit television cameras (CCTV) where appropriate
- Provide IDF closets:
 - Equipment racks to be seismically braced to zone 4 standards
 - Provide wire management at equipment racks
 - Dedicated cooling 24/7
- Provide new tele/data devices to accommodate remodeled and new programming

Building L

- Provide centralized clock system
- Provide emergency announcement system
- Provide closed circuit television cameras (CCTV) where appropriate
- All classrooms to be smart classrooms including:
 - Permanently installed projector and projector screen
 - Permanently installed SMART boards
- Permanent installation of audio equipment for supporting visual presentation systems
- Standardized source selection switch for audio/visual source inputs

Building M

- Provide centralized clock system
- Provide emergency announcement system
- Provide closed circuit television cameras (CCTV) where appropriate
- All classrooms to be smart classrooms including:
 - Permanently installed projector and projector screen
 - Permanently installed SMART boards
- Permanent installation of audio equipment for supporting visual presentation systems
- Standardized source selection switch for audio/visual source inputs

Building N

- Provide IDF closets:
 - Equipment racks to be seismically braced to zone 4 standards
 - Provide wire management at equipment racks
 - Dedicated cooling 24/7
- Provide access control system for IDF room
- Provide new tele/data devices to accommodate remodeled and new programming

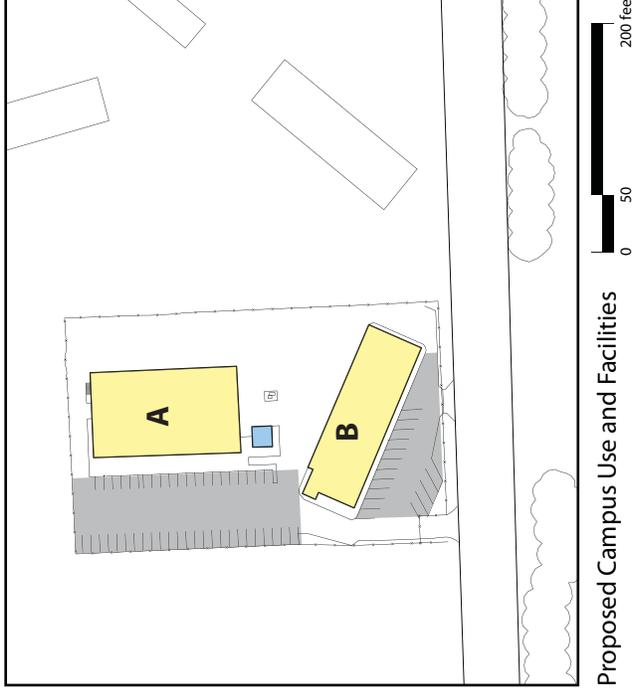
The newly introduced Transportation and Logistics program responds to emerging community and work force needs.

Logistics management is the science of getting *stuff* where it needs to be, when it needs to be there, as part of a larger process like manufacturing. In business, logistics management most often refers to transportation, inventory management, and storage issues related to the supply chain: among other factors, where are your parts or materials coming from, where do they need to get to and when.

As a result of this educational curriculum and the need to conform space capacity ratios of laboratories for state funding; we are recommending that building "B" be discontinued as a laboratory space. Distribute the existing educational functions between building "A" and the new Automotive Diesel Mechanics Complex.

Building "B" would be renovated and used as part of the District's warehousing storage space. This combination would assist in providing the students with real world experience for the Logistics management curriculum.

The site and buildings would be modernized to accommodate new technology (i.e.: provide one smart classroom at this facility), repair antiquated building components, correct pedestrian routes and ensure ADA accessibility (both access and building facilities); however, no new buildings are recommended at this time.



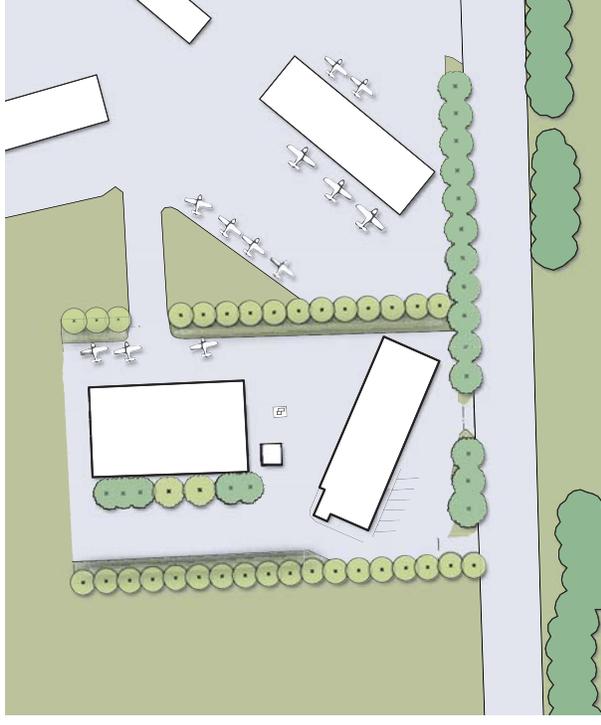
Aviation Facility Landscape and Site Design Guidelines

The Aviation Facility site is currently in extreme disrepair. (Refer to "Campus Open Space and Landscape" section of Planning Context chapter.) If repaired, the original design would adequately serve the needs of the program, with the exception that outdoor seating should be provided. Barring a change in program or a complete demolition and replacement of the buildings, this Master Plan recommends replacement and repair of the paving and landscape as follows:

- Pedestrian Circulation and Access: Replace all sidewalks.
- Furnishings: Replace all trash receptacles and ash urns with consistent and high-quality furnishings. Provide outdoor seating, especially outdoor tables and chairs for meetings and lunches.
- Lighting: The outdoor lighting appears to be adequate.
- Vehicular paving: Resurface all asphalt paving.
- Planting: Replant all shrub and groundcover areas. Soil amendment will be required. Existing trees are in good condition and enhance the campus character and should be preserved.
- Irrigation: Replace entire irrigation system.

In addition to these repairs, the following site sustainability measures should be implemented:

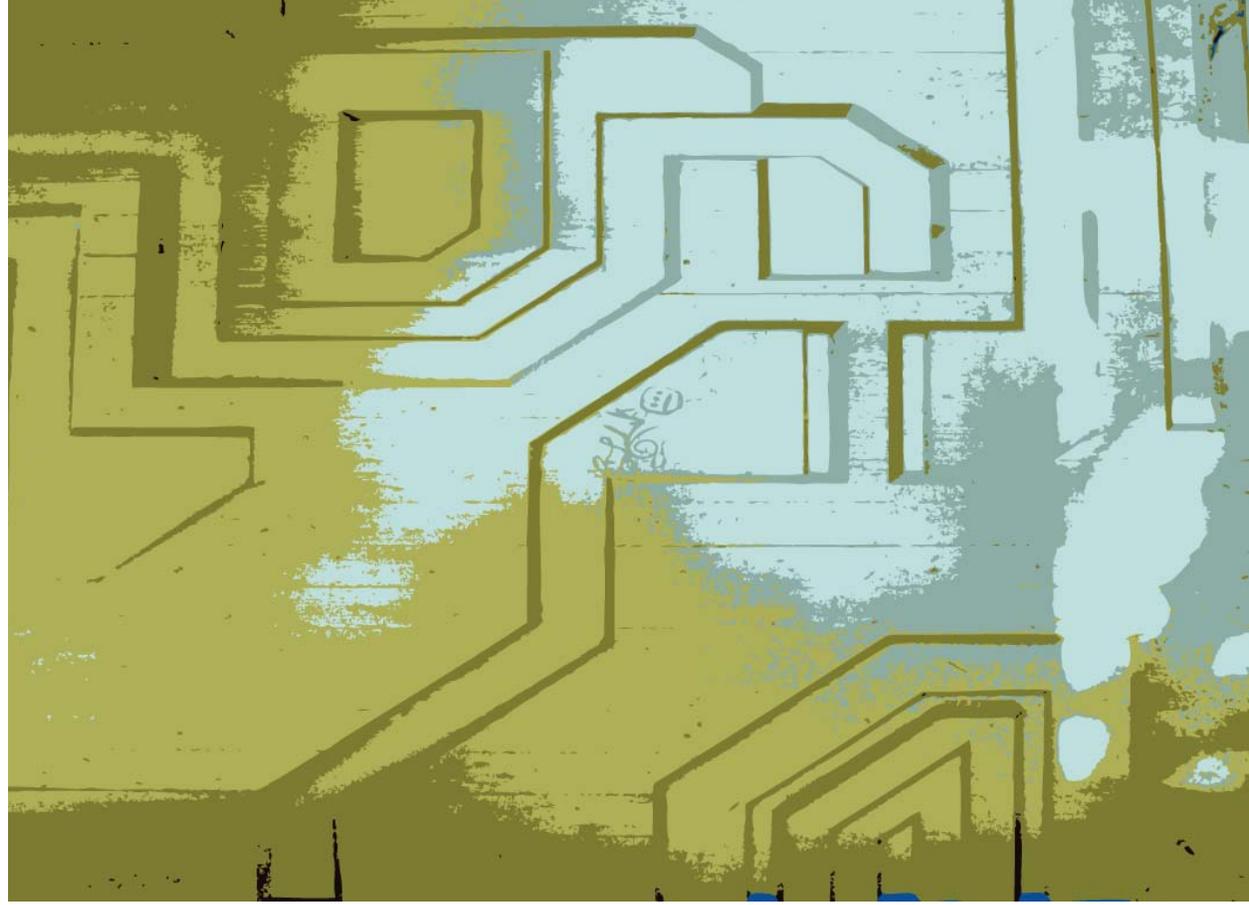
- Stormwater management: Bioswales and retention/detention basins should be constructed to handle the stormwater runoff from the paved areas.
- Heat island mitigation: The asphalt paving should be shaded with shade trees.



Landscape Concept Plan



Bioswale at parking lot - Precedent



An effective campus signage program is intended to provide visitors, new students, faculty, and staff with the information needed to find and arrive at their destinations timely and with ease. It is intended to convey a level of professionalism at all levels of application and enhance the student's, visitor's, and staff/faculty's experience while visiting the campus. Sign planning and implementation is based on a strategy that allows adaptability to the various campus' site conditions and architectural environments as well as establishing a consistent and visible identity and image from campus to campus that combines the PCCD values.

The Peralta Community College District has produced signage standards which may be found in the *Peralta Community College District Signage Standards Manual*.

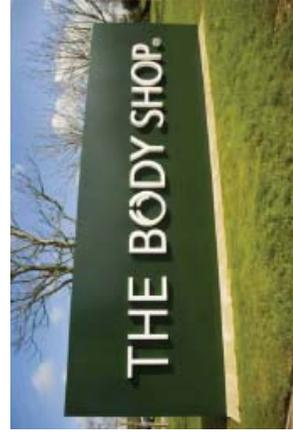
Identity: Existing

Throughout the campus, it is apparent that the signage evolved on an as-needed basis rather than having been designed with the whole campus in mind. The current signage has a negative visual impact.



Identity: Cohesive

Strong identity allows for campus individualism. Standards are to be established (see PCCD Signage Standards Manual 2008). Campus identification signage helps create a sense of place. Consistent and cohesive use of materials, colors, and type contribute greatly to a strong campus identity and sense of space.





Above are examples of existing campus signage. The signs are graphically non-cohesive nor are they easy to read.

Wayfinding

A comprehensive wayfinding system is to be developed. The system is comprised of the following components - campus maps, directional signs and building identification - these components work together as a series of signs to assist with navigation throughout the campus.

Campus Maps

Campus maps are to be located strategically at campus entry points and gathering places.

Directional Signage

Directional signage provides assistance in finding key destinations that are off the main path of travel. They should be located at key intersections.

Night

One important aspect of the College of Alameda's curriculum is night classes. Key signs should be illuminated, especially at the campus entries, throughout the campus to provide effective signage for evening students, staff, faculty and visitors.



The above are examples of signage that has cohesive, visually pleasing graphics and easy to read directions.



Existing signage - reflects poor primary and secondary building identification.

Building Identification

Building identification is another component of wayfinding and works with both campus maps and directional signage.

All buildings should be clearly identified starting with *primary building identification* (main building exterior) and *secondary building identification* (building entrances and doors).

Additionally, a set of acceptable fonts, sizes, and materials should be established and enforced. (See the PCCD Signage Standards Manual 2008)



Graphics and information is effective.



The Project Phasing that follows attempts to show possible scheduling of projects that would comprise the entire Facilities Master Plan. The project sequences are divided into Three general phases. This sequencing is used to coincide with potential applications for State funding, as a college campus is limited to one approved application per year.

The First phase has a time duration of Five years. the first phase incorporates the District's Five year plan projects in addition, ongoing maintenance projects and projects recommended by the Master Plan. This phase also attempts to provide the subsurface infrastructure components for future projects.

The Second phase has a time duration of Four years which now begins to implement the educationally driven changes to the facilities. This phase generally has fewer interim housing problems because new buildings and landscaping are constructed.

The Third phase has a time duration of Four years. The emphasis at this phase are the public - private partnership projects. In many ways this is a very speculative phase, however, if managed correctly it could offer many educational benefits and sources of revenue for the District.



Phase I

The first phase of the master plan includes the completion of the modernization of the administration building. Next would be the demolition of Building 'C' and 'D' and the construction of a new replacement building. The new entry walkway from the rear parking lot would be completed and the required infrastructure improvements would be installed. Photovoltaic canopies would also be installed in the rear parking lot.

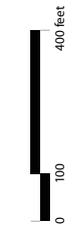
Phase I 2009 - 2014:

1. Modernization of Administration Building "A" 34,084 sq. ft.
2. Replacement of Buildings "C" & "D", 47,266 sq. ft.
3. New City/ County Willie Stargell Avenue
4. New Campus rear entry street.
5. Complete infrastructure projects to support above and future projects.
6. Photovoltaic Automobile Canopies



LEGEND

-  Modernizations
-  New Buildings / Development
-  Future Development
-  Existing Buildings
-  Public / Private Joint-Use
-  New Sustainability and Energy
-  Development



Phase II

Phase Two of the master plan includes the modernization of the Library and the Gymnasium Building. The central plaza, pedestrian and vehicular entries will be upgraded and fully developed.

Phase II 2014 - 2018:

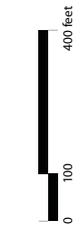
1. Modernization of Library Building "L" 33,517 sq. ft.
2. Modernization of Gymnasium Building "G" 27,600 sq. ft.
3. Redesign Center Core Plaza and Corner Pedestrian access.
4. Construct Bio-Swales





LEGEND

- Modernizations
- Existing Buildings
- New Sustainability and Energy
- Development



Phase III

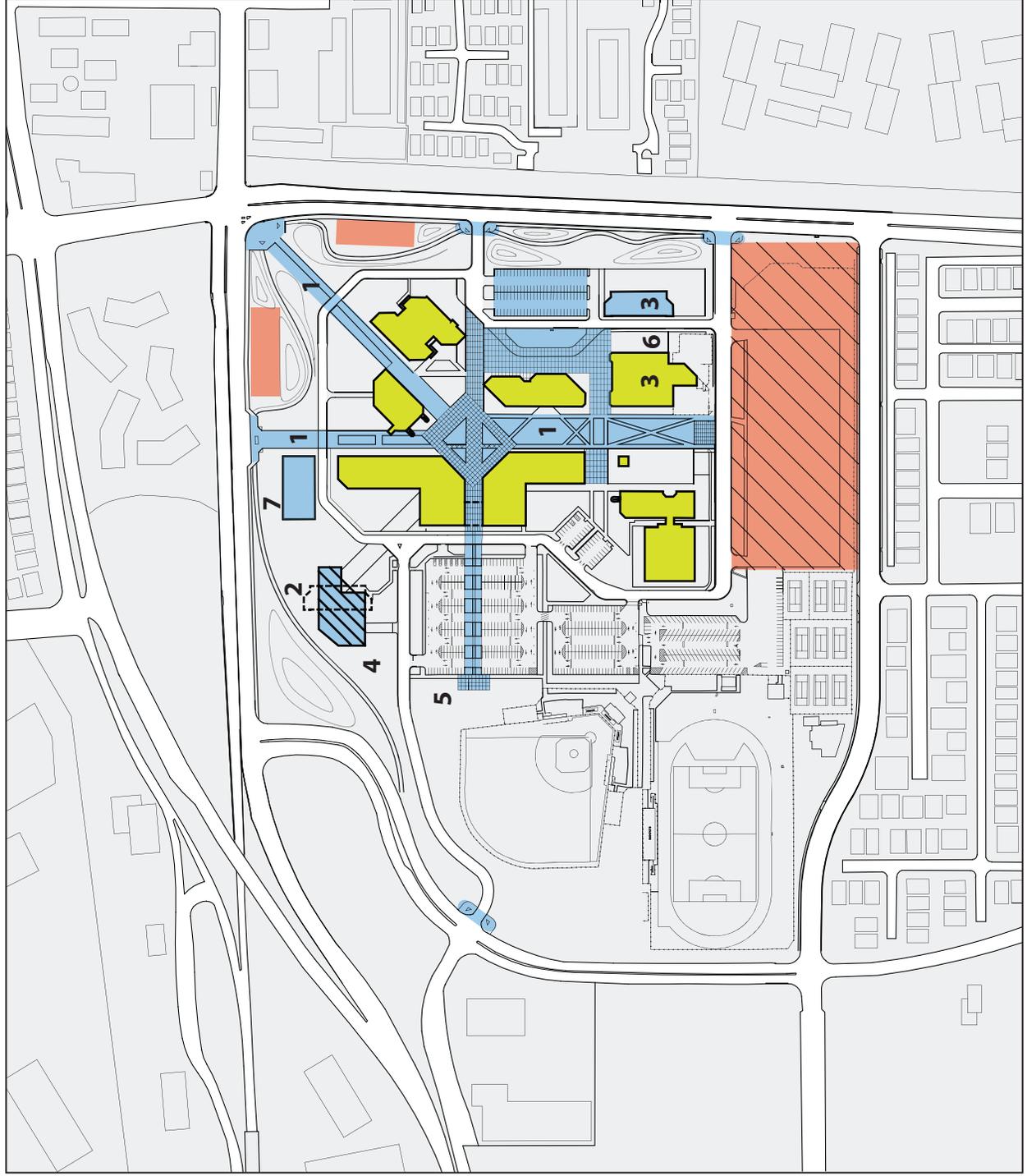
A consolidation of the vehicle related training is proposed in the third phase. A new state of the art diesel mechanics building will be built across from Building 'B'. Building 'B' would be modernized and the former Building E would be demolished. The pedestrian walkways and parking lot improvements will be completed. Depending on the academic requirements at the time, the funding availability and the needs of the campus community, a new auditorium/assembly building would be built. Also in this phase, if desired by the District and the campus, the child care center could be relocated and the child care site and adjacent parking lot could be cleared and made available as a future public/private development site.

Phase III 2018 - 2022:

1. Complete pedestrian entries, parking areas, & campus core.
2. Demolition of Building "E" 7,746 sq. ft.
3. Modernization of Building "B" 25,345 sq. ft., to include replacement of Building "E".
4. New Auditorium/ Classroom/ Office Building 35,000 sq. ft.
5. Complete rear public viewing area.
6. Combine Aviation Building "B" with Aviation Building "A" & Main Campus.
7. Possible relocation of Child Care Center if the District designates the area as a future development zone.

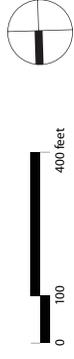
PROJECT PHASING

PROJECT IMPLEMENTATION



LEGEND

- New Buildings / Development
- Future Development
- Existing Buildings
- Public / Private Joint-Use
- Demolished Buildings



PROJECT IMPLEMENTATION

The following costs are based on current cost projections. At the time that each of the projects are developed the price will need to be escalated to meet the prevailing costs at that time.

PHASE 1: 2009 - 2014				
Phase	Description	ASF (Building)	GSF (Building or Site)	Total Project Cost
1A**	Modernize Administration Building - Building A	Under Construction		\$ 17,785,000
1B**	New Classroom & Lab Building - Building C & D	47,266	61,445	\$ 45,112,000
1C	New Roadway at Rear of Campus			\$ 2,100,000
1D	Infrastructure Projects: Central Quad, Landscaping, Sitework & Utilities for future projects		188,000	\$ 2,167,452
1E	Demolish Building C & D	47,266		\$ 4,130,000
TOTAL PHASE 1 PROJECT COST:				\$ 71,300,000

** Budget incorporated in CCC 5 year plan

PHASE 2: 2014 - 2018				
Phase	Description	ASF (Building)	GSF (Building or Site)	Total Project Cost
2A**	Modernize Library - Building L	35,517	42,620	\$ 22,070,000
2B**	Modernize Gym - Building G	27,600	35,880	\$ 5,922,000
2C	Parking & Paving Upgrades		140,000	\$ 1,793,400
2D	Infrastructure projects: Complete Quad, Landscape, Utilities, Hardscape			\$ 1,895,000
TOTAL PHASE 2 PROJECT COST:				\$ 31,600,000

** Budget incorporated in CCC 5 year plan

PROJECT BUDGETING

PHASE 3: 2018 - 2022				
Phase	Description	ASF (Building)	GSF (Building or Site)	Total Project Cost
3A	Complete Infrastructure Projects (Central Plant Upgrades, entries, parking, walkways, bioswales, etc.) (ALLOWANCE)		85,000	\$ 2,722,125
3B	Demolish of Building E	7,746	9,295	\$ 760,000
3C	Modernize Building B & New Building E (relocated)	25,345	33,065	\$ 14,861,000
3D	New Auditorium / Classroom Building	35,000	45,500	\$ 18,200,000
3E	Aviation Building Modernization & Relocate some uses to main campus (Allowance)			\$ 12,400,000
TOTAL PHASE 3 PROJECT COST:				\$ 48,900,000

Note:

Projects in Phase 3 are dependent on the needs of the campus and the District at the time and the availability of additional funding.

PHASE 1: 2009 - 2014	\$	71,300,000
PHASE 2: 2014 - 2018	\$	31,600,000
PHASE 3: 2018 - 2022	\$	48,900,000
TOTAL	\$	151,800,000



APPENDIX



ABBREVIATIONS	
AC Transit	Alameda County Transit (regional bus system)
ADA	Americans with Disabilities Act
AHU	Air Handling Unit
ASF	Assignable Square Feet
BART	Bay Area Regional Transit
FTES	Full-time Equivalent Students
LEED	Leadership in Energy and Environmental Design
NPDES	National Pollutant Discharge Elimination System
OGSF	Overall Gross Square Feet
TOP Code	Taxonomy of Programs Code: numerical code used at the state level to collect and report information on programs and courses at different colleges throughout the state.
WSCH	Weekly Student Contact Hours



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[View 08-09 SI Codes] [TOP Code Groups] [Room Use Groups]

Default CCI: 5065 Default EPI: 2894

Room Codes	TOP #s	Description	Cost / ASF	Equip. Cost / ASF	Cost / GSF	% Efficiency
1 110-115	0 0099-4999	Classroom	\$419.00	\$13.53	\$272.00	65%
4 210-255	1 0100-0199	Agr. and Nat. Res. (on campus)	\$646.00	\$68.79	\$420.00	65%
4 210-255	1 0100-0199	Agr. and Nat. Res. (on site)	\$279.00	\$16.03	\$237.00	85%
4 210-255	2 0200-0299	Architecture and Related Technologies	\$482.00	\$84.00	\$313.00	65%
4 210-255	71 0300-0399	Environmental Science and Technologies	\$622.00	\$68.78	\$386.00	62%
4 210-255	4 0400-0499	Biological Sciences	\$646.00	\$68.79	\$401.00	62%
4 210-255	5 0500-0599	Business and Management	\$432.00	\$24.67	\$281.00	65%
4 210-255	6 0600-0699	Media and Communications	\$431.00	\$23.73	\$280.00	65%
4 210-255	7 0700-0799	Information Technology	\$675.00	\$196.73	\$439.00	65%
4 210-255	8 0800-0899	Education	\$465.00	\$23.73	\$302.00	65%
4 210-255	9 0901,0924,0934,0935	Engineering Technology	\$479.00	\$84.00	\$359.00	75%
4 210-255	10 0936,0943,0945	Industrial Technology	\$415.00	\$63.77	\$311.00	75%
4 210-255	9 0946	Engineering Technology	\$479.00	\$84.00	\$359.00	75%
4 210-255	10 0947,0948,0949	Industrial Technology	\$415.00	\$63.77	\$311.00	75%
4 210-255	9 0950	Engineering Technology	\$479.00	\$84.00	\$359.00	75%
4 210-255	10 0952,0953	Industrial Technology	\$415.00	\$63.77	\$311.00	75%
4 210-255	9 0954,0955	Engineering Technology	\$479.00	\$84.00	\$359.00	75%
4 210-255	10 0956,0957,0958	Industrial Technology	\$415.00	\$63.77	\$311.00	75%
4 210-255	9 0959,0961	Engineering Technology	\$479.00	\$84.00	\$359.00	75%
4 210-255	10 0962	Industrial Technology	\$415.00	\$63.77	\$311.00	75%
4 210-255	9 0999	Engineering Technology	\$479.00	\$84.00	\$359.00	75%
4 210-255	3 1001,1002	Fine and Applied Arts	\$431.00	\$33.13	\$280.00	65%
4 210-255	25 1004,1005	Music	\$527.00	\$53.23	\$316.00	60%
4 210-255	3 1009,1011,1012,1013,1030,1099	Fine and Applied Arts	\$431.00	\$33.13	\$280.00	65%
4 210-255	11 1100-1199	Foreign Language	\$482.00	\$49.52	\$313.00	65%
4 210-255	12 1200-1299	Health	\$497.00	\$42.66	\$298.00	60%
4 210-255	13 1300-1399	Family and Consumer Sciences	\$475.00	\$25.01	\$309.00	65%
4 210-255	14 1400-1499	Law	\$419.00	\$25.79	\$272.00	65%



4	210-255	15	1500-1599	Humanities (Letters)	\$419.00	\$24.55	\$272.00	65%
4	210-255	16	1600-1699	Library Science	\$419.00	\$25.79	\$272.00	65%
4	210-255	17	1700-1799	Mathematics-computer lab	\$436.00	\$196.73	\$283.00	65%
4	210-255	17	1700-1799	Mathematics-traditional	\$419.00	\$25.79	\$272.00	65%
4	210-255	18	1800-1899	Military Studies	\$419.00	\$25.79	\$272.00	65%
4	210-255	19	1900-1999	Physical Sciences	\$652.00	\$68.78	\$404.00	62%
4	210-255	20	2000-2099	Psychology	\$571.00	\$53.53	\$354.00	62%
4	210-255	21	2100-2199	Public and Protective Services	\$419.00	\$68.79	\$272.00	65%
4	210-255	22	2200-2299	Social Science	\$425.00	\$25.79	\$276.00	65%
4	210-255	30	3000-3099	Commercial Services	\$498.00	\$63.77	\$324.00	65%
4	210-255	49	4900-4999	Interdisciplinary Studies-computer terminals	\$436.00	\$196.73	\$283.00	65%
4	210-255	49	4900-4999	Interdisciplinary Studies-traditional	\$419.00	\$25.79	\$272.00	65%
3	230-235	25	1004	Music Practice Rooms	\$563.00	\$45.79	\$366.00	65%
3	230-235	25	1004	Recording Arts	\$680.00	\$196.73	\$442.00	65%
3	230-235	25	1005	Music Practice Rooms	\$563.00	\$45.79	\$366.00	65%
3	230-235	25	1005	Recording Arts	\$680.00	\$196.73	\$442.00	65%
3	230-235	26	1006,1007,1008	Theater Arts	\$502.00	\$32.74	\$351.00	70%
5	300-355	-1	0099-4999	Faculty Offices	\$442.00	\$21.16	\$265.00	60%
5	300-355	60	6000-9600	Administration	\$425.00	\$24.14	\$276.00	65%
6	410-420	61	6110,6120	Library - Reading and Stack Space	\$325.00	\$31.76	\$228.00	70%
7	430-440	61	6110,6120	Library- Electronic Carrels and Processing Room	\$573.00	\$196.73	\$401.00	70%
8	520-525	23	0835,0837	Physical Education	\$331.00	\$12.74	\$248.00	75%
9	530-535	62	6130	Audio Visual Arts	\$675.00	\$94.45	\$452.00	67%
10	540-545	63	6230,6320,6400	Clinic (non-health)	\$421.00	\$29.59	\$274.00	65%
11	550-555	67	6920	Demonstration (Child Care)	\$350.00	\$33.73	\$245.00	70%
12	560-580	27	0100,6500	Field Buildings	\$279.00	\$16.03	\$237.00	85%
13	610-615	26	1006,1007,1008	Theater Arts	\$502.00	\$67.94	\$351.00	70%
14	620-625	66	6140,6800,6960	Exhibition Areas	\$465.00	\$36.30	\$326.00	70%
15	630-635	68	6940	Cafeteria	\$348.00	\$28.61	\$261.00	75%
23	650-655	70	0000-9600	Staff Lounge	\$417.00	\$21.93	\$271.00	65%
16	670-675	69	6960	Recreation Areas	\$492.00	\$91.51	\$320.00	65%

17 680-685	70 0000-9600	Meeting Rooms	\$417.00	\$21.93	\$271.00	65%
18 690	24 0835,1006,1007,1008	Locker Rooms	\$471.00	\$9.23	\$306.00	65%
19 710-715	70 0000-9600	Data Processing/Computer Lab	\$436.00	\$196.73	\$283.00	65%
20 720-725	65 6500-6599	Maintenance & Shop Facility	\$171.00	\$62.02	\$130.00	76%
21 730-735	65 6500-6599	Warehouse	\$119.00	\$6.15	\$113.00	95%
22 800-895	64 6440	Health Care	\$494.00	\$43.10	\$321.00	65%

