

***Chabot – Las Positas
Community College District
Facilities Modernization Program***



ASSESSMENT REPORT



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Introduction

To help document the need for funding the necessary replacement and upgrading of facilities within California's Community College Districts and to assist districts in preparing for bond issues, the Foundation for California Community Colleges (FCCC) negotiated a discounted-pricing agreement for facilities condition assessments with 3D/International. In Summer 2001, the FCCC issued a formal Request For Information (RFI) in a public newspaper and subsequently reviewed, considered, and evaluated the respondents' experience and quality of work, particularly work with higher education clients. The Chabot-Las Positas Community College District (CLPCCD) elected to participate in the joint agreement and contracted with 3D/I to assess and document the facility repair, rehabilitation, modernization requirements relative to the CLPCCD District.

Over a period of about three months, a staff of six 3D/International planning and construction professionals performed an Existing Facility Assessment, and working with the Chancellor's Office and CLPCCD. The following report presents 3D/International's findings.

The Report is organized into the following 2 sections.

- Executive Summary
- Existing Facilities Assessment

The Executive Summary condenses and provides key findings, cost and schedule information.

The Assessment of Existing Facilities section reports on the current physical condition of 62 buildings, totaling approximately 373,520 gross square feet.

The results of the assessment will provide CLPCCD with the technical information needed to make informed decisions regarding the disposition of existing facility maintenance funds and the need and cost of a capital improvement program.





3D/International conducted a visual inspection of 62 of the existing CLPCCD facilities to identify the condition and to estimate the cost to perform the necessary repairs and renovations.

Existing Facility Assessment Findings

The generally accepted range of Facility Condition Index (FCI) for establishing a buildings condition is shown below. This standard has been adopted by the Building Owners and Managers Association, the Council on Education Facilities, and the American University Planners Association, and a number of other national facilities groups.

| Condition | FCI |
|-----------|---------------|
| Good | 0 to 5% |
| Fair | 6 to 10% |
| Poor | 10% and above |

The results of our assessment are summarized in the FCI table on page seven. The estimated initial cost to repair these 62 facilities totals \$30.4 million.

The overall FCI rating of 23.33% for the 62 buildings assessed means that, in general, the facilities are in poor condition. This is to be expected due to the age of the buildings, a majority of which were built in 1965.

Twenty-nine buildings have an FCI less than 10%, which falls in good or fair range.

Only five buildings have FCI ratings in excess of 50%. When the FCI is greater than 70% the building should be considered for replacement, as opposed to investing substantial costs to repair a 30 to 40 year old building with systems well beyond their useful lives.

A more detailed discussion on the methodology and findings for each of the District buildings is provided in the Assessment of Existing Facilities section of this report.



Assessment of Existing Facilities

In March 2002, Chabot-Las Positas Community College authorized 3D/International to perform a district-wide, comprehensive facility condition survey assessment. The costs associated with correction of deficiencies can be identified as follows:

Deferred Maintenance – maintenance work that has been deferred on a planned or unplanned basis due to lack of funds in the annual budget cycle – excluding normal maintenance that has already been scheduled, planned or funded within the current budget cycle.

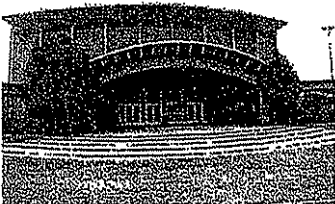
Capital Renewal – future renewal requirements for building systems that reach the end of their expected useful life.

The comprehensive facilities assessment performed for CLPCCD District is a detailed visual, non-destructive inspection of each building. 3D/I's software, "COMET" – Condition Management Estimation Technology – is used as the database for recording all deficiencies. The survey assessment is a comprehensive room-by-room inventory of defined key elements and characteristics. The result of the inspection is a populated database that catalogs every identified deficiency.

In parallel with the FCCC-3D/I agreement for discounted facility condition assessment services, an information technology project referred to as the Facility Utilization, Space Inventory Options Net or "FUSION" Project is underway. This project will design and deliver a centralized database and software in which the facility condition assessment data will reside and be used and managed by the districts to better manage their real asset portfolio.

Approach

The assessment teams were comprised of design professionals, typically an architect and an engineer. For each building, the teams collected much of the facility's historical information prior to visiting the facility. This research included a review of existing drawings, meetings with the campus maintenance staff, and a review of previous renovations. The assessment teams then conducted a site visit to verify data already gathered as well as to record additional information found during the inspection. Based on visual observations and discussions with facility occupants and maintenance staff, the assessors determined what deficiencies existed and the general conditions of key building systems. A written description of the facility, including an overview of the facility's construction, building systems and general condition, was then developed.





Background

The California Community Colleges Chancellor’s Office encouraged districts within the CCC System to take advantage of the discounted assessment service to generate an unbiased appraisal of the school’s physical conditions and to obtain recommendations for building system replacement based on priorities and expected useful life.

Facilities

One of the outcomes of the assessment process is the determination of the Facility Condition Index, or “FCI.” The FCI is a ratio of the estimated cost to repair the identified deficiencies divided by the estimated replacement value of the facility. It describes the relative state of the physical condition of a building (or its components, or a group of buildings) against a cost model of the original building as if it were at the beginning of its useful life, fully “renewed” to today’s standards.

Summary of Findings

The costs presented below are a summary of the findings of the assessment for the current deficiencies. The costs do include soft costs associated with a rehabilitation project. These costs can change based on how repair and renovation projects are packaged.

| Condition | FCI |
|-----------|---------------|
| Good | 0 to 5% |
| Fair | 6 to 10% |
| Poor | 10% and above |

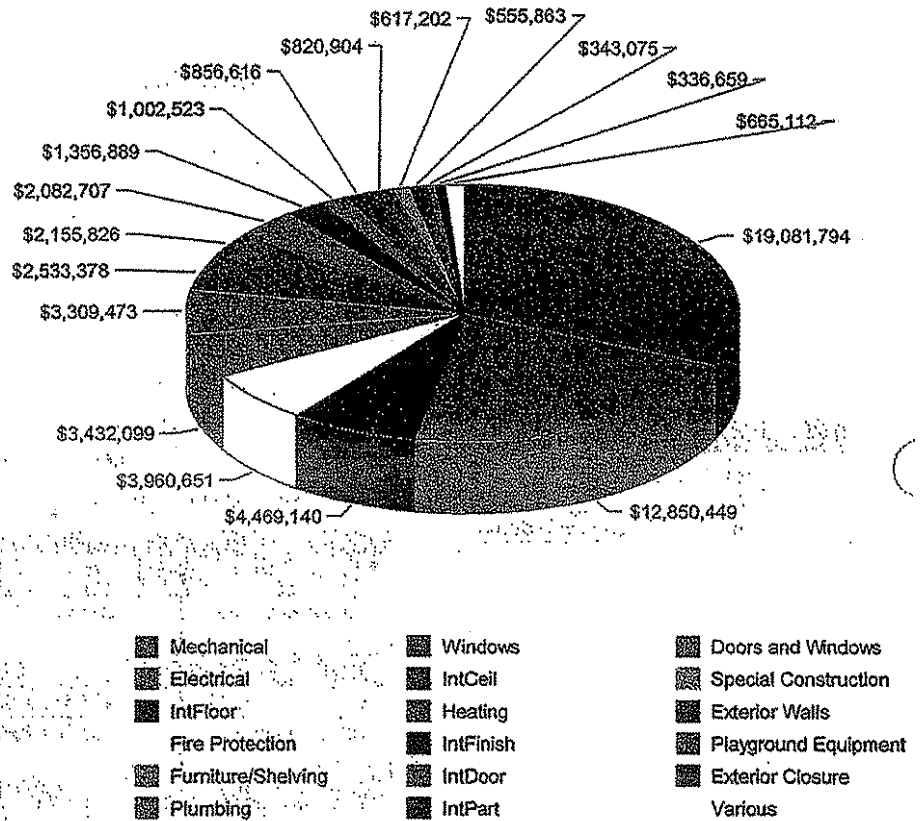
| Category | Estimated Repair | Gross Value | FCI % | Replacement |
|---------------------------|------------------|-------------|--------|---------------|
| Chabot Community College | \$56,667,518 | 611,470 | 29.67% | \$190,995,217 |
| Hard Cost | \$56,667,518 | | | \$186,660 |
| Soft Cost | \$28,562,582 | | | \$49,658,756 |
| Positas Community College | \$2,704,204 | 196,653 | 4.60% | \$58,799,922 |
| Hard Cost | \$2,704,204 | | | \$11,000 |
| Soft Cost | \$1,363,021 | | | \$15,287,979 |

Based on current industry standards, the campus FCI indicates their facilities are in poor condition.

Building System Classifications

The following chart gives a breakdown of the recorded deficiencies by their respective building systems for the entire district.

Estimate by Building System - Chabot-Las Positas CCD



In general, the majority of the costs identified in the assessment are for mechanical, electrical and systems. Within mechanical systems, most costs are for adding or replacing chillers, boilers, and associated components such as air handlers and ductwork. The majority of the electrical system costs are for replacing lighting fixtures and providing additional capacity to the main service and branch circuits.



Facility FCI by Type Structure

The following is a list of the campus facilities grouped by building number displaying the Current Repair Cost, Replacement Cost and FCI.

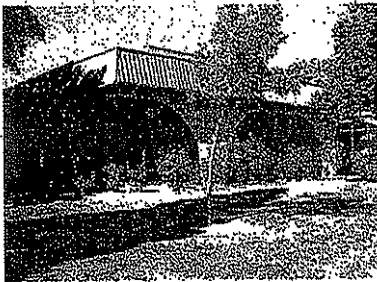
| Facility | Gross Sq. Ft. | Year Built | Repair Cost | Replacement Cost | FCI |
|--------------------------------|---------------|------------|---------------------|----------------------|---------------|
| Chabot College | | | \$28,051,760 | \$189,225,856 | 14.82% |
| ADAPTIVE PHYSICAL EDUCATION | 1,920 | 1991 | \$30,526 | \$341,376 | 8.94% |
| ADMINISTRATION | 19,664 | 1966 | \$699,157 | \$6,172,298 | 11.33% |
| ART | 12,646 | 1965 | \$360,068 | \$3,619,169 | 9.93% |
| AUDITORIUM | 33,852 | 1967 | \$1,466,331 | \$10,936,142 | 13.41% |
| BASEBALL FIELD PRESS BOX | 384 | 1967 | \$45,487 | \$21,096 | 215.62% |
| BIOLOGICAL SCIENCES | 19,084 | 1965 | \$2,059,545 | \$5,814,351 | 35.42% |
| BOOKSTORE | 1,997 | 1997 | \$12,905 | \$945,515 | 1.36% |
| BUSINESS | 22,111 | 1965 | \$791,846 | \$6,327,965 | 12.51% |
| BUSINESS-OFFICES | 5,127 | 1965 | \$180,188 | \$1,642,803 | 10.97% |
| CHEM/COMP | 31,400 | 1999 | \$577,679 | \$9,322,874 | 6.20% |
| CHEMISTRY | 20,118 | 1965 | \$907,461 | \$6,234,158 | 14.56% |
| CHILD CARE/DEVELOPEMENT CENTER | 12,368 | 1995 | \$71,735 | \$3,539,608 | 2.03% |
| DISABLED STUDENT CENTER | 5,408 | 1966 | \$86,509 | \$1,581,006 | 5.47% |
| EMERGENCY MED | 7,621 | 1995 | \$59,729 | \$2,321,902 | 2.57% |
| ENGINEERING | 27,361 | 1965 | \$802,562 | \$8,677,248 | 9.25% |
| FOREIGN LANGUAGE | 10,305 | 1965 | \$544,457 | \$3,193,309 | 17.05% |
| GYMNASIUM | 16,880 | 1966 | \$675,643 | \$5,701,497 | 11.85% |
| HUMANITIES OFFICE | 5,550 | 1965 | \$247,919 | \$1,742,080 | 14.23% |
| LANGUAGE ARTS BLDG | 21,974 | 1965 | \$1,081,850 | \$6,968,819 | 15.52% |
| LECTURE HALL | 2,762 | 1965 | \$219,391 | \$807,459 | 27.17% |
| LIBRARY | 71,346 | 1965 | \$5,184,030 | \$20,614,492 | 25.15% |
| MATH-SCI OFFICES | 10,222 | 1965 | \$530,166 | \$3,035,303 | 17.47% |
| MEDICAL-DENTAL | 17,970 | 1965 | \$845,509 | \$5,341,938 | 15.83% |
| MENS LOCKER ROOM | 19,139 | 1965 | \$1,636,196 | \$6,803,715 | 24.05% |
| MUSIC + LITTLE THEAT | 20,663 | 1965 | \$787,535 | \$6,675,337 | 11.80% |
| OFFICE BLDG | 14,313 | 1965 | \$823,050 | \$4,586,199 | 17.95% |
| PE CLASSROOMS | 18,513 | 1966 | \$682,231 | \$6,253,069 | 10.91% |
| PHYSICAL ED OFFICE | 7,026 | 1965 | \$694,286 | \$2,205,378 | 31.48% |
| PHYSICS-MATH | 20,306 | 1965 | \$714,537 | \$6,439,831 | 11.10% |
| PLANETARIUM-LECTURE | 7,541 | 1965 | \$341,565 | \$2,158,165 | 15.83% |
| PRINT SHOP | 5,000 | 1995 | \$15,467 | \$1,581,278 | 0.98% |
| SECURITY | 480 | 1991 | \$13,265 | \$85,344 | 15.54% |
| SNACK BAR | 256 | 1966 | \$8,382 | \$14,064 | 59.60% |
| SOCIAL SCIENCES | 21,975 | 1965 | \$1,561,999 | \$6,524,527 | 23.94% |
| STADIUM PRESS BOX | 550 | 1967 | \$95,587 | \$30,215 | 316.35% |
| STADIUM RESTROOMS | 576 | 1967 | \$41,374 | \$31,644 | 130.75% |
| STUDENT CENTER | 37,859 | 1966 | \$1,371,938 | \$12,230,634 | 11.22% |
| TECH VOC OFFICES | 7,168 | 1965 | \$318,676 | \$2,249,951 | 14.16% |
| TECH-VOC SHOP | 24,951 | 1965 | \$315,433 | \$7,731,806 | 4.08% |
| WAREHOUSE AND MAINT | 15,470 | 1966 | \$376,888 | \$4,593,636 | 8.20% |
| WOMENS LOCKER ROOM | 11,614 | 1965 | \$772,656 | \$4,128,656 | 18.71% |
| District Office | | | \$1,058,637 | \$9,232,784 | 11.47% |
| 5020 Franklin Drive | 25,535 | 1987 | \$1,058,637 | \$9,232,784 | 11.47% |
| Las Positas College | | | \$1,341,182 | \$8,769,666 | 3.96% |
| 0100 ADMINISTRATION | 3,008 | 1975 | \$42,589 | \$944,176 | 4.51% |
| 0200 CLASSROOMS | 3,008 | 1975 | \$33,653 | \$932,118 | 3.61% |
| 0300 GRAPHIC ARTS | 6,272 | 1975 | \$56,109 | \$1,910,900 | 2.94% |
| 0400 LANGUAGE CENTER | 6,090 | 1975 | \$109,586 | \$1,855,449 | 5.91% |
| 0500 CLASSROOM LABORATORY | 7,707 | 1975 | \$44,742 | \$2,348,103 | 1.91% |
| 0600 PHYSICAL EDUCATION | 6,272 | 1975 | \$150,406 | \$1,968,707 | 7.64% |
| 0700 COUNSELING/ADMISSION | 6,736 | 1977 | \$66,506 | \$2,158,362 | 3.08% |
| 0800 TECH VOC CENTER RV. | 28,530 | 1936 | \$496,010 | \$8,340,625 | 11.99% |
| 0900 COUNSELING CENTER | 1,300 | 1975 | \$23,937 | \$231,140 | 10.36% |
| 1000 TUTORING CENTER | 4,126 | 1987 | \$41,741 | \$1,271,335 | 3.28% |
| 1100 GREENHOUSE | 3,019 | 1988 | \$0 | \$135,600 | 0.00% |
| 1200 FITNESS CENTER | 2,993 | 1987 | \$27,486 | \$959,023 | 2.87% |
| 1300 BOOKSTORE | 5,760 | 1987 | \$72,321 | \$1,845,630 | 3.92% |
| 1400 CLASSROOMS | 2,748 | 1990 | \$36,761 | \$786,452 | 4.67% |
| 1500 FINANCIAL AID | 4,615 | 1991 | \$50,437 | \$1,478,747 | 3.41% |
| 1600 FACULTY STAFF BLDG | 3,840 | 1991 | \$38,460 | \$1,230,420 | 3.13% |
| 1800 SCIENCE TECH CNT | 27,465 | 1997 | \$0 | \$8,229,964 | 0.00% |
| 2000 LIBRARY | 32,562 | 1993 | \$0 | \$9,408,363 | 0.00% |
| 2100 FACULTY OFFICES | 32,562 | 1993 | \$0 | \$10,433,578 | 0.00% |
| 2200 CLASSROOMS | 8,040 | 1996 | \$50,438 | \$2,300,974 | 2.19% |

It is accepted practice within the field of professional property management to consider replacement rather than repair of an asset when the FCI for that facility is in the range of 60 – 70% or higher. For facilities with an FCI in or near this range, the master planning process should carefully weigh issues such as:

- Student population (current versus planned) of the school in question
- The generally good condition of the existing foundations and superstructures.
- The need for additional space, i.e., new construction.
- The appropriateness of the location of current assets.

Provided in this report are cost estimates to renovate the facilities and eliminate the identified deficiencies. Please note that these estimates reflect incorporating current building standards, codes, and livability issues into the renovation. The cost estimates *do not* reflect upgrades to:

- the architectural program—e.g., additional square footage for another educational mission;
- finishes—e.g., terrazzo tile in lieu of concrete); and/or
- systems—replacement of a 200 Amp electrical service with a 300 Amp service, which may in fact be more applicable for today’s educational mission/program but would require further engineering and study to determine the appropriate service for today’s learning environment.



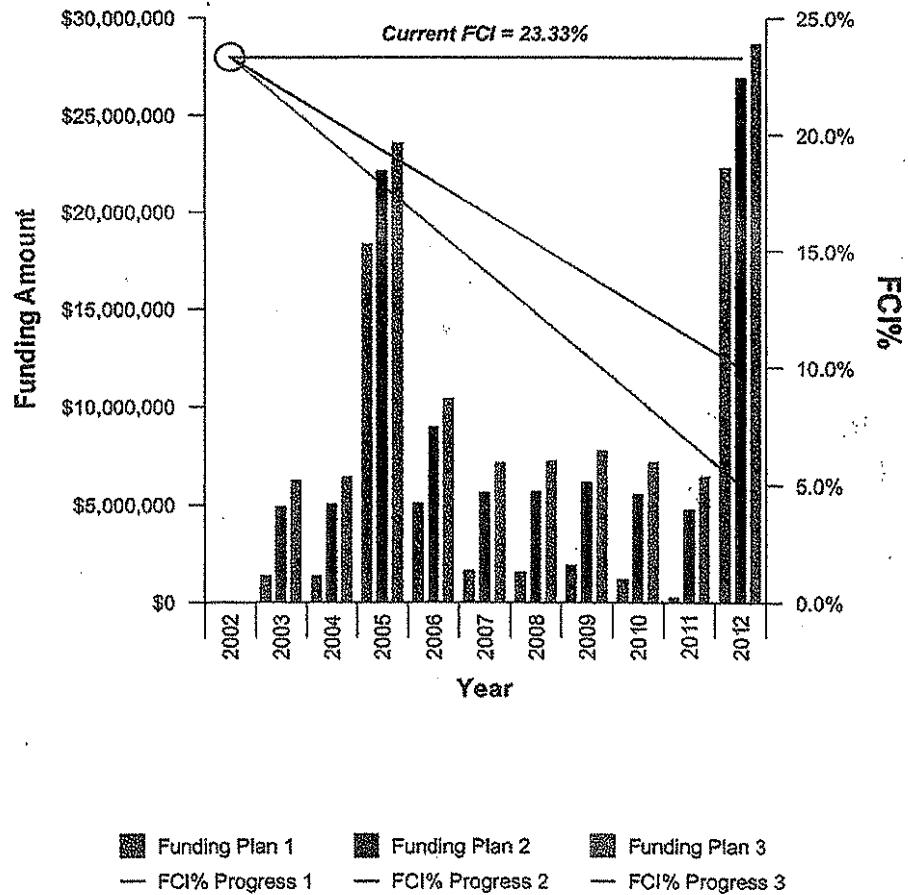
Capital Renewal

Funding Requirements – 10 Year Renewal Projection

The following chart illustrates the 10-year total funding requirements for the Chabot-Las Positas Community College District for three (3) funding scenarios. It shows the combined funding needed for correcting the assessed deficiencies and the predicted capital renewal requirements. Using this chart, we can query:

- “How much funding is required to maintain the current FCI?”
- “What level of funding is required to achieve an FCI of 10%?”
- “What level of funding is required to achieve an FCI of 5%?”

Future Facility Funding vs FCI for Chabot-Las Positas CCD





Three scenarios are shown:

- **Current FCI: Keep the current FCI Stable (Red)**

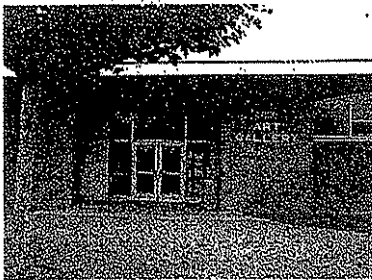
The red line assumes no spending in the current year (2002) for current deficiencies. Capital renewal costs, as shown, over the next 10 years would be required to maintain the current FCI. The total funding required over 10 years is \$55,032,879.20.

- **Required funding: Reduce the FCI to 10% (Blue)**

The blue line assumes no spending in the current year (2002) for all current deficiencies. It assumes a consistent level of funds for the next 10 years to buy-down the current deficiencies and additional funding for capital renewal items to achieve an FCI of 10%. (Minimal standard as published by APPA.) The total funding required over 10 years is \$95,802,324.18.

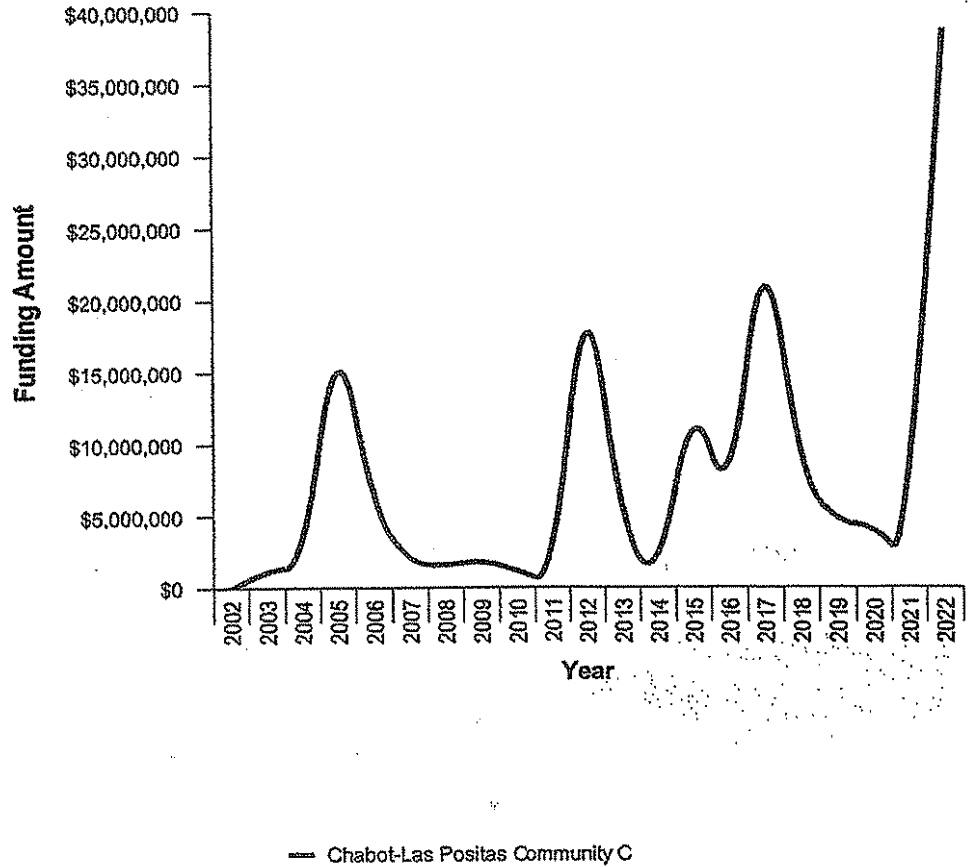
- **Required funding: Reduce the FCI to 5% (Green)**

The green line assumes no spending in the current year (2002) for all current deficiencies. It assumes a consistent level of funds for the next 10 years to buy-down the current deficiencies and additional funding for capital renewal items to achieve an FCI of 5%. The total funding required over 10 years is \$111,095,068.18.





Facility Renewal Forecast for Chabot-Las Positas CCD



20 Year Capital Renewal Forecast

The cost models for each building give us a method to predict future needs for capital renewal. Each model allows us to assess the remaining life of each of the main systems in the building and to enter the expected time of replacement of such systems. Although each model is only a rough approximation for one building, over a larger sample size use of these cost models produces a reliable estimate of the yearly cost to replace building systems. This chart illustrates a 20-year projection of capital renewal funding requirements, excluding current deficiencies for the entire district



Conclusions

The overall FCI of the facilities in the Chabot-Las Positas Community College District is 23.33%, typical of what we find for facilities of similar age and function across the nation.

The majority of the deferred maintenance requirements are of the type that can be renewed without demolition of the facility. (e.g., mechanical and electrical systems, wall and floor finishes, and exterior doors and windows.) Not all facilities should be renovated; however, renovation should remain an option as the planners consider educational master plans, new buildings, high growth areas, etc.





COMET Assessments

*Condition Management Estimation
Technology – 3D/International Facility
Management Software*

Facilities Assessment Methodology

The primary surveys to be performed within the CCC System are referred to as “Level 1” or “Level 2” assessments. A Level 1 (L-1) assessment is a mathematical model of a facility’s component building systems, which is used to determine their conditions based on the components’ planned life cycles. It is a strategic tool for programming and budgeting capital renewal costs; a macro view of facility status. A Level 2 (L-2) assessment is a detailed physical survey of the condition of existing facilities wherein the assessors document hundreds or thousands of current deficiencies. These deficiencies are added to the L-1 component building system life cycles to determine a comprehensive facility evaluation of both current deficiencies and future renewal costs. It is a tool for facility managers to identify specific deferred maintenance and capital renewal items to repair or replace.

The majority of the facility condition assessment being performed by 3D/I, for Districts within the California Community College System, are Level 2 assessments. For this type of assessment, data is collected from a review of as-built drawings and other current documents as well as a complete but non-destructive visual inspection of facilities. Typical areas of buildings that are investigated include roofs, mechanical rooms, and exterior support areas extending to 5 feet from the building.

The first phase of an L-2 assessment is the review of the floor plans of each facility to be assessed. Next a hierarchical structure (a “tree” or “parent/child” relationship) that captures the facilities and all interior rooms and spaces is designed in the COMET software. The tree structure provides the assessor a road map of the building and the lowest level of the tree structure is where the deficiencies are recorded. The next step is developing cost models for the life cycles of building systems. This includes reviewing existing documents to determine types, ages, and components of the buildings, and the dates and scope of any recent renovations. 3D/I’s cost models are based on RS Means building material estimates and the Business Owners and Managers Association (BOMA) estimated useful life of building components. However, COMET can be customized to reflect individual client’s project or O&M cost histories and to account for particular environmental or operational conditions—such as excessive moisture and heat or continuous operation. Also considered are preventative maintenance efforts, since they can often significantly affect the number of years a system can remain in operation.