XVII. FACILITIES MASTER PLAN

COLLEGE DISTRICT ORGANIZATION

The college district organization is anticipated to remain a single college/multi-center district during the next ten-year period. Given the proximity of adjacent community colleges, it is likely that the Board of Governors of the California Community Colleges and the California Post Secondary Education Commission (CPEC) will approve only one additional educational center or campus for the District. That site will be in the King City area. Any other satellite education centers will be unofficial centers that will need to be solely supported by the College. No capital construction, maintenance or operations funds will be provided by the state. Further, it is anticipated the state will only fund capital construction on the East Campus if it is considered an integral part of the main campus in Salinas.

ENROLLMENT PROJECTION

Considering the factors and projections from the various demographic models, for planning purposes, it is projected that the College will have a student enrollment of 16,000 by the year 2010. This model is based on maintaining an annual growth rate of 5%. The distribution of the 16,000 students would be 12,000 students at the campus in Salinas (East and West campuses), 2,000 students at the center in King City and 2,000 at the remaining satellite education centers. For the purposes of forecasting enrollment growth, it should be noted that the exact year in which a given student enrollment is achieved is not critical. What is critical is that the projections for student enrollment are master-planned so that instructional programs, support services, facilities, and staffing will be in place when a particular level of enrollment ("target enrollment") is achieved.

INSTRUCTIONAL PROGRAMS

The future instructional delivery system at the College will need to keep pace with the constant challenge of change. Pressures from learners, demographic changes, the needs of business and industry, increasing competition in the education marketplace, and the economic reality of accelerated competition for every tax dollar will be the drivers of change.

The College's vision for the future will need to focus less on the "one size fits all" delivery system. Instructional delivery in the next decade will need to change significantly to accommodate various learning styles and needs. Computer technology will be integrated more widely across the curriculum. Learning outcomes will be placed ahead of teaching. Instructional delivery will focus on the adaptation of the teaching methodology to match the new requirements for learning.

To this end, the College's vision for the future will need to consider the following strategies:

Instructional Relevancy and Performance: Performance standards will be developed to assess course content, operational efficiency, relevancy, and applicability. Under-performing programs will be deleted and replaced with new programs.

Innovative Instruction: The development of inter-disciplinary courses and programs that promote connections between the disciplines, the community, and business and industry will be a part of the College's future. Innovative instruction will be encouraged and rewarded through

programs of recognition. Collaboration and team building will be the process by which innovative instruction is developed.

Accessibility: The instructional program of the future will be less dependent upon a schedule of classes and more responsive to the individual schedules of learners. A greater emphasis will be placed on working students, non-traditional students, and life-long learners at the College. Inter-session, accelerated, and modular courses will be added to the schedule in an effort to attract and retain students. Short-term, high-intensity learning experiences will be more in demand and, consequently, incorporated into the instructional delivery system at the College. The expansion of the curricular offerings at the education center in King City and satellite sites in other areas of the District will be a key component in defining the College's future.

Personalized Learning: Diagnostic and prescriptive counseling will be employed that will lead to the development of a learning prescription tailored to both the educational requirements of the individual and his/her cognitive style.

Alternative Instructional Delivery Strategies: The development of learning alternatives through which an individual can gain the same body of material in a variety of ways will be required. These learning alternatives will include use of the conventional classroom, technology (on-line and telecourses), tutorials, work experience, and specialized laboratories. Lectures and laboratory experiences will become more integrated. Greater emphasis will be placed on students succeeding in their academic experience.

Public and Private Partnerships: The instructional delivery system will incorporate community and regionally-based programs reflective of the needs and interests of the College service area and the public and private partnerships forged by the College. Contract education will be developed to its full capacity. A key location for the development of these programs will be the East Campus.

Technology: Hartnell College will become a leader and regional resource for distance learning telecourses, video conferencing, public access educational television, interactive television, and computer technology. Electronic access, literacy, and competency for students, faculty, and staff will be a strong part of the College's technology program. "Smart classrooms," interactive computer hardware and software, and computer-assisted instruction will be part of the technology infrastructure.

Distance Learning: The College's physical facilities will become less important as a blended and sole source learning environment. Distance learning, as an instructional delivery system, will be particularly valuable to individuals who cannot come to a central campus for a variety of reasons. The College will expand its instructional delivery for more and greater distance learning opportunities.

Diverse Learning: More diverse learning experiences and a wider variety of subject matter will be made available to students. These materials will be packaged and repackaged into learning modules that suit the individual needs of the learner.

Workforce Development: In the future, the College's technical and occupational education will not be a two-year linear process, but rather a short-term, high-intensity experience providing entry-level skills for workers in weeks or months. These offerings will be developed in part-

nership with business and industry yet lead to other educational opportunities in fully supported "ladder" programs.

Overall, the College's instructional delivery program must meet the needs of a student and labor force drawn from a highly diverse, multicultural, and multilingual population. It is imperative that the College build the appropriate "bridge" support systems and "ladder" programs that provide the opportunity to all students to succeed in higher education.

SUPPORT SERVICES

Student services at the College will need to be upgraded and made flexible to meet the needs of a changing student population. Counseling will assume a greater diagnostic and prescriptive function. Support services will need to make it easier for students to register, obtain assistance, access records, and receive financial assistance. Access to student services will need to be provided on campus, at the education and satellite sites, and from the home and/or the workplace. The College will also need to address a growing number of students with special needs and/or learning disabilities that will access the College for their educational needs.

The concept of a "one-stop" matriculation process, where all student services are housed in an integrated, common location is a high priority for the future. Current technology will need to be brought on-line to assist students with the admissions process, counseling, and assessing and registering students in one interactive process. Staff development and training programs must be implemented to provide faculty and staff the necessary training to utilize these student assistance systems.

FACILITIES

Facilities of the future will need to reflect a changing instructional delivery system and instructional program. As technology is accessed in the classroom, the definitive line that has separated lecture and laboratory space will become increasingly difficult to discern. Instructional space must be adaptable for many uses and equipped with the technological resources that are patterned after how the student of tomorrow will learn. Facilities must be developed with the idea that within five years they will need to be adapted and reconfigured. New construction for the future should permit the maximum amount of structural and infrastructure flexibility.

Significant changes in instructional delivery will mean a decrease in the significance of the large community college campuses that have been developed in the past. This will mean that building large numbers of classrooms and traditional laboratories may be less important than developing technology-based learning resource centers and outreach (satellite) sites.

The Learning (Resource) Center will replace the library as the backbone of the new approach to learning advancement. It will be a central learning location on campus as well as the site for transmission of distance learning and computer laboratories. Specific needs for computer labs related to specific disciplines such as music and art will still exist.

Infrastructure to support the physical plant of the campus will need to be addressed as a high priority. Air conditioning, telecommunications, and equipment sufficient to conduct laboratory experiments that are current and relevant in today's world are needs that cannot be overlooked.

HUMAN RESOURCES

Over the next ten years, the College will need to have faculty and staff that are both more knowledgeable and more flexible on the job. Cross-training of faculty and staff will be a high priority for the effective delivery and support of the instructional program. Support services staff will need to be well versed in the nuances of electronic technology.

The hiring and retention of full-time versus part-time faculty should be a strong consideration, understanding that this can only be initiated within the context of budgetary considerations. Full-time faculty would maximize the benefits derived from continuity of (educational) process and the investment of the district's training dollars. This vision implies that training will be a constant process for the majority of the faculty.

It will be imperative that all faculty hired in the future will be technologically literate. Significant efforts to provide training for those who lack the essential technological skills and knowledge may be needed.

A commitment to educational excellence will require additional faculty as programs expand and/or are newly created. The departments of Computer Information Systems, English and ESL, Visual Arts (Fine Arts), Mathematics/Physical Science, Physical Education, Allied Health, and Child Development face the most immediate needs for additional full-time faculty. Over the next ten years, other disciplines will require full-time faculty as well to meet the projected enrollment demands at the College.

A commensurate effort will need to be made relative to support services staff as part of Hartnell's vision for the future. The greatest staff demands are projected for personnel, MIS, tutoring, counseling and guidance, admissions and records, and financial aid. Additionally, full-time staff will be needed to support a marketing and recruitment/attraction effort.

EFFICIENTLY MEETING THE NEEDS OF STUDENTS

To be viable and competitive in the educational marketplace, the college will need to manage change and operate efficiently. Operational efficiency is necessary to ensure that the College is receiving maximum financial support and benefit from the state. Operational efficiency will translate to bringing the college closer to the statewide averages for class size, weekly student contact hours (WSCH) per section, WSCH per full-time equivalent faculty (FTEF), and WSCH per full-time equivalent student (FTES). Money generated by student attendance is the engine that drives the micro-economy of a community college. Low enrollments produce fewer operating funds, less program development, fewer employees, lower salaries, less equipment, and inferior facilities. In essence, funds must be transferred from support services to instruction in order to maintain income from the state.

The College can expect to face increased competition for financial support and students from the surrounding community colleges. As operational costs rise and the uncertainty of public funding becomes reality, the College will need to seek and locate new sources of revenue, either from grants, business and industry, or local bond measures.

CURRICULAR OFFERINGS OF THE COLLEGE

As part of the educational master plan process, the efficiency and productivity of the curricular offerings must be quantified. The following tables summarize date that will serve as the basis for determining future facility and staffing requirements for the College:

The College's productivity relative to WSCH per full-time faculty equivalents (FTEF) is shown in Table 17-1. The state's benchmark for peak efficiency is 525 WSCH per FTEF. Based on the Fall-1999 semester, the college's overall ratio is 423/WSCH per FTEF. In terms of facilities, this lower than state-wide average productivity means that class sizes are below state average and the number of students in a classroom is below the capacity of the room. This also means there is an excess of class sections being offered which makes it difficult to schedule classroom and laboratory space on the campus. It also has a significant impact on the operational budget of the College.

TABLE 17-1

ANALYSIS/COMPARISON WSCH PER FTEF
FALL SEMESTER-1999

BY INSTRUCTIONAL DIVISIONS
(Statewide Benchmark = 525 WSCH per FTEF)

Discipline	Total FTEF	Total WSCH	WSCH Per	% of Instruction Program
Agriculture/Natural Res.	2.27	962	424	1.29
Biological Science	5.07	2,957	583	3.95
Business/Mgt.	10.67	3,882	364	5.19
Communications	0.3	74	247	0.1
Computer & Info. Sciences	5.87	2,583	440	3.45
Education/PE	10.36	4,980	481	6.66
Engineering/Tech.	15.01	5,032	335	6.73
Fine/Applied Arts	25.74	9,082	353	12.14
Foreign language	7.03	2,587	368	3.46
Health Occupations	10.68	3,356	314	4.49
Consumer Ed/Child Dev.	3.54	1,897	536	2.54
Humanities	24.44	9,088	372	12.15
Library Science	0.09	19	316	0.01
Mathematics	14.6	7,292	499	9.75
Physical Science	5.87	3,330	567	4.45
Psychology	5.17	2,805	543	3.75
Public Affairs/Services	3.64	2,022	555	2.7
Social Science	12.85	7,119	554	9.52
Interdisciplinary	13.59	5,722	421	7.65
Total	**176.79**	**74,789**	**423**	**100%**

Source: Hartnell Office of Research and Planning, Academic Services, Fall Semester 1999, Analysis, the Maas Companies

ANALYSIS AND COMPARISON OF THE EXISTING INSTRUCTIONAL PROGRAM

The following tables and charts are created for the purpose of presenting data on the instructional program at the College. For purposes of comparison to statewide averages and standards, the divisional breakdowns used by the College will be converted into the uniform Taxonomy of Programs and Service (TOPS) Code Listing.

The Taxonomy of Programs and Services (the TOPS Code Listing) is the standardized method by which the state views and categorizes the different disciplines for comparison purposes. It varies substantially from the divisional breakdown used by the College to group the various disciplines. Table 17-2 provides a relational base from which to view the College's curricular offerings by TOPS code listing.

TABLE 17-2

SUMMARY OF HARTNELL COLLEGE
INSTRUCTIONAL DISCIPLINES BY TOPS CODE
FALL 1999

INSTRUCTIONAL DISCIPLINE	TOPS CODE	INSTRUCTIONAL DISCIPLINE	TOPS CODE
Administration of Justice	2100	Health Services	1200
Agriculture	100	History	2200
Animal Health Technology	100	Human Services	4900
Anthropology	2200	Instructional Aide	4900
Art	1000	Japanese	1100
Astronomy	1900	Journalism	600
Automotive Collision	900	Library Instruction	1600
Automotive Technology	900	Library Technology	1600
Biology	400	Machine Technology	900
Business	500	Mathematics	1700
Chemistry	1900	Mechanical Technology	900
Computer & Info. Sciences	700	Meteorology	1900
Construction Technology	900	Mill & Cabinet Technology	900
Counseling	2000	Music	1000
Dance	1000	Nursing-RN	1200
Drafting Technology	900	Nursing-VN	1200
Early Childhood Education	1300	Oceanography	1900
Economics	2200	Philosophy	1500
Electronics Technology	900	Photography	1000
Engineering	900	Physical Education/Athletics	800
English	1500	Physics	1900
English As a Second Language	4900	Political Science	2200
Environmental Technology	900	Psychology	2000
Ethnic Studies	2200	Radio/TV	600
Family & Consumer Studies	1300	Real Estate	500
Fire Science	2100	Sociology	2200
Food Services	3000	Spanish	1100
French	1100	Speech	1500
General Science	1900	Theater Arts	1000
Geography	2200	Water Technology	900
Geology	1900	Welding	900
Health Education	800		

TOPS CODE LISTING AND STATEWIDE AVERAGES FOR WSCH

Table 17-3 provides a listing of statewide averages for curriculum percentages of lecture-generated WSCH and laboratory-generated WSCH. The statewide averages are used as both a baseline and a target for projecting the future space needs of the instructional program.

TABLE 17-3

COMPARISON OF
LECTURE AND LABORATORY WSCH

		Statewide Averages	
Instructional Discipline by Tops	**TOPS CODES**	**% WSCH Lecture**	**% WSCH Lab**
Agriculture	100	20	80
Biological Science	400	40	60
Business / Mgt.	500	85	15
Communications	600	80	20
Computer & Info. Sciences	700	50	50
Education /PE	800	25	75
Engineering/Tech	900	35	65
Fine/Applied Arts	1000	40	60
Foreign Language	1100	85	15
Health Occupations	1200	40	60
Consumer Ed/Child Dev	1300	75	25
Law	1400	80	20
Humanities	1500	90	10
Library Science	1600	50	50
Mathematics	1700	90	10
Physical Science	1900	40	60
Psychology	2000	95	5
Public Affairs/ Services	2100	95	5
Social Science	2200	95	5
Commercial Services	3000	40	60
Interdisciplinary	4900	60	40

Source: Maas Companies Database

ANALYSIS OF INSTRUCTIONAL OFFERINGS

Table 17-4 outlines the productivity of the instructional programs of the College. For the 1999 fall semester, Hartnell enrolled a total of 9,418 students (Headcount). This enrollment equated to 6,409 Full time Equivalent Students (FTES). The College offered a total of 871 credit, class sections that generated a total of 74,789 WSCH. The average WSCH per section was 86.

TABLE 17-4

ANALYSIS OF INSTRUCTIONAL OFFERINGS
9,171 STUDENT ENROLLMENT - FALL 1999

Instructional Discipline	TOPS CODE	# of Net Sections*	WSCH Generated
Agriculture	100	7	962
Biological Science	400	12	2,957
Business / Mgt.	500	51	3,882
Communications	600	2	74
Computer & Info. Sciences	700	23	2,583
Education/PE	800	64	4,980
Engineering/Tech	900	73	5,032
Fine/Applied Arts	1000	77	9,082
Foreign Language	1100	21	2,587
Health Occupations	1200	14	3,356
Consumer Ed/Child Dev.	1300	27	1,897
Humanities	1500	99	9,088
Library Science	1600	1	19
Mathematics	1700	53	7,292
Physical Science	1900	20	3,330
Psychology	2000	71	2,805
Public Affairs/Services	2100	51	2,022
Social Science	2200	62	7,119
Interdisciplinary	4900	142	5,722
TOTAL		**871**	**74,789**
	HARTNELL WSCH/Section = 86		
	Statewide Average WSCH/Section =		

Source: Hartnell Offices of Research and Planning and Academic Services, Maas Companies Databases; Analysis the Maas Companies

* Class sections were discounted for off-campus work experience, and open enrollment courses, and sections with zero attendance to arrive at an effective "net" number of class sections.

ANALYSIS OF ON-CAMPUS VERSUS OFF-CAMPUS INSTRUCTIONAL OFFERINGS

Table 17-5 summarizes the instructional offerings by location. On-campus offerings are class sections offered at the east and west campuses. Off-campus offerings are classes offered at all other locations in the District including Fire Training Centers Administration of Justice Centers and the South County Center. A total of 83 sections of class were offered at off-campus locations. Of these 83 sections, 23 sections were offered at the South County Center in King City.

TABLE 17-5

ANALYSIS OF INSTRUCTIONAL OFFERINGS
EAST AND WEST CAMPUS VERSUS OFF-CAMPUS ENROLLMENT - FALL 1999

Instructional Discipline	TOPS CODE	Campus Sections*	Off-Campus Sections*	TOTAL Sections
Agriculture	100	7	0	7
Biological Science	400	11	1	12
Business / Mgt.	500	50	1	51
Communications	600	2	0	2
Computer & Info. Sciences	700	22	1	23
Education/PE	800	64	0	64
Engineering/Tech	900	71	2	73
Fine/Applied Arts	1000	77	0	77
Foreign Language	1100	21	0	21
Health Occupations	1200	14	0	14
Consumer Ed/Child Dev.	1300	25	2	27
Humanities	1500	94	5	99
Library Science	1600	1	0	1
Mathematics	1700	50	3	53
Physical Science	1900	19	1	20
Psychology	2000	70	1	71
Public Affairs/Services	2100	7	44	51
Social Science	2200	57	5	62
Interdisciplinary	4900	125	17	142
TOTAL		**788**	**83**	**871**
	HARTNELL WSCH/Section			**86**
	Statewide Average WSCH/Section			**115**

Source: Hartnell Offices of Research and Planning and Academic Services, Maas Companies Databases; *Analysis the Maas Companies*

* Class sections were discounted for off-campus work experience, and open enrollment courses, and sections with zero attendance to arrive at an effective "net" number of class sections.

PROJECTIONS FOR THE FUTURE INSTRUCTIONAL PROGRAM

Using the best available data, the projections that follow provide a quantifiable answer to the question of what the instructional program of the future will look like as Hartnell moves toward a target enrollment of 12,000 students. The projections presented have taken into account the actual performance of each discipline over the past five years and melded this with input from faculty, staff, students, and 66 community college districts in California. Changes in the instructional delivery methods that are anticipated in the future have also been factored into these projections.

Growth in the instructional disciplines has been forecasted at varying rates. The increase of approximately 60% in enrollment growth over the next ten years, therefore, will not come as linear or relational in its application to each instructional discipline. External and internal factors, demographics, past performance, projected need, and curriculum balance have been taken into account. The projection is meant to serve as a model for the instructional program that will be required to meet a future enrollment of 12,000 students.

The following reference sources were used to arrive at these projections:

1. 2000 Hartnell District Report 17 ASF/OGSF Summary and the Capacities Summary (an inventory of facilities that is recorded with the Community College Chancellor's Office).
2. 2000 Space Inventory and Facility Building Summary, conducted by the Maas Companies.
3. The Weekly Student Contact Hours (WSCH) Comparison Report (published by the Community College Chancellor's Office and validated via College's CCAF-320 Report).
4. Enrollment and performance data provided by the College's Offices of Academic Affairs and Research and Planning.
5. The Maas Companies' database that is comprised of information from 66 community college districts within the state for which the Maas Companies has completed educational and facility master plans.

WSCH AND FTES PROJECTIONS FOR 12,000 STUDENTS

Table 17-6 provides a perspective for an enrollment of 12,000 students. The data projected suggests a greater emphasis on increasing the efficiency and productivity of the instructional program. At the time when an enrollment of 12,000 students is achieved, active class sections are projected to be 1,068 with a corresponding WSCH of 115,711. WSCH generated per section would increase from the current 64.70 to 108.00. FTES are projected to be 8,019 with an overall WSCH per student enrollment of 9.64.

TABLE 17-6

HARTNELL INSTRUCTIONAL PROGRAM
PROJECTED FOR 12,000 STUDENT ENROLLMENT

TARGET YEAR 2010

Instructional Discipline	TOPS CODE	# of "Net" Sections*	Calculated WSCH
Agriculture	100	12	927
Biological Science	400	20	2,512
Business / Mgt.	500	65	6,155
Communications	600	3	342
Computer & Info. Sciences	700	44	4,846
Education/PE	800	78	6,406
Engineering/Tech	900	85	7,802
Fine/Applied Arts	1000	88	9,098
Foreign Language	1100	25	3,043
Health Occupations	1200	18	2,521
Consumer Ed/Child Dev.	1300	38	3,455
Humanities	1500	118	13,681
Library Science	1600	4	340
Mathematics	1700	65	8,667
Physical Science	1900	28	3,273
Psychology	2000	80	10,976
Public Affairs/Services	2100	58	5,660
Social Science	2200	74	9,724
Interdisciplinary	4900	165	16,283
TOTAL		**1,068**	**115,711**

Source: Maas Companies Projections

* Class sections are projected on the basis of "net" number of sections. Excluded are off-campus, work experience, combined and open enrollment courses, and sections with zero attendance.

WSCH AND FTES PROJECTIONS FOR 16,000 STUDENTS

Table 17-7 provides a WSCH and FTES perspective for an enrollment of 16,000 students. Class sections are projected to reach 1,424 with WSCH of 152,891. WSCH per class section will continue at 107 WSCH/Section. The FTES will be 10,595 and the WSCH per student enrollment continues at 9.56.

TABLE 17-7

HARTNELL INSTRUCTIONAL PROGRAM
PROJECTION FOR 16,000 STUDENT ENROLLMENT

TARGET YEAR 2020

Instructional Discipline	TOPS CODE	# of "Net" Sections	Calculated WSCH
Agriculture	100	16	1,236
Biological Science	400	27	3,421
Business / Mgt.	500	87	8,209
Communications	600	3	342
Computer & Info. Sciences	700	58	6,388
Education/PE	800	104	8,541
Engineering/Tech	900	113	10,401
Fine/Applied Arts	1000	117	12,123
Foreign Language	1100	33	4,064
Health Occupations	1200	24	3,362
Consumer Ed/Child Dev.	1300	51	4,637
Humanities	1500	157	18,203
Library Science	1600	5	453
Mathematics	1700	87	11,554
Physical Science	1900	37	4,364
Psychology	2000	107	14,715
Public Affairs/Services	2100	77	7,515
Social Science	2200	99	12,808
Interdisciplinary	4900	222	20,555
TOTAL		**1,424**	**152,891**

Source: Maas Companies Projections

* Class sections are projected on the basis of "net" number of sections. Excluded are off-campus, work experience, combined and open enrollment courses, and sections with zero attendance.

CURRENT WSCH LECTURE/LABORATORY BREAKDOWN

Table 17-8 provides a current breakdown, by instructional discipline, of lecture WSCH and laboratory WSCH for Hartnell College. The 1999 fall semester data from the college along with the state-wide lecture/laboratory ratios are used as the basis for the calculations.

TABLE 17-8

HARTNELL LECTURE AND LABORATORY WSCH
BY INSTRUCTIONAL DISCIPLINE
9,171 STUDENTS - FALL 1999

Instructional Discipline	TOPS CODE	# of "Net" Sections*	Lecture WSCH	Laboratory WSCH	Total WSCH
Agriculture	100	7	192	770	962
Biological Science	400	12	1,183	1,774	2,957
Business / Mgt.	500	51	3,300	582	3,882
Communications	600	2	60	14	74
Computer & Info. Sciences	700	23	1,291	1,292	2,583
Education/PE	800	64	1,245	3,735	4,980
Engineering/Tech	900	73	1,761	3,271	5,032
Fine/Applied Arts	1000	77	3,633	5,449	9,082
Foreign Language	1100	21	2,199	388	2,587
Health Occupations	1200	14	1,342	2,014	3,356
Consumer Ed/Child Dev.	1300	27	1,423	474	1,897
Humanities	1500	99	8,179	909	9,088
Library Science	1600	1	10	9	19
Mathematics	1700	53	6,563	729	7,292
Physical Science	1900	20	1,332	1,998	3,330
Psychology	2000	71	2,665	140	2,805
Public Affairs/Services	2100	51	1,921	101	2,022
Social Science	2200	62	6,763	356	7,119
Interdisciplinary	4900	142	3,434	2,288	5,722
TOTAL		**871**	**48,496**	**26,293**	**74,789**

Source: Analysis, CCAF-320, The Maas Companies data base

* Class sections are projected on the basis of "net" number of sections. Excluded are off-campus work experience, combined and open enrollment courses, and sections with zero attendance.

LECTURE/LABORATORY WSCH PROJECTED FOR 12,000 STUDENTS

In Table 17-9, a perspective is provided relative to WSCH ratios for lecture and laboratory at a point when a student enrollment of 12,000 students is achieved.

TABLE 17-9

PROJECTION OF LECTURE AND LABORATORY WSCH BY INSTRUCTIONAL DISCIPLINE

12,000 STUDENTS -TARGET YEAR 2010

Instructional Discipline	TOPS CODE	# of "Net" Sections*	Lecture WSCH	Laboratory WSCH	Total WSCH
Agriculture	100	12	185	742	927
Biological Science	400	20	1,005	1,507	2,512
Business / Mgt.	500	65	5,232	923	6,155
Communications	600	3	274	68	342
Computer & Info. Sciences	700	44	2,423	2,423	4,846
Education/PE	800	78	1,602	4,804	6,406
Engineering/Tech	900	85	2,731	5,071	7,802
Fine/Applied Arts	1000	88	3,639	5,459	9,098
Foreign Language	1100	25	2,586	457	3,043
Health Occupations	1200	18	1,008	1,513	2,521
Consumer Ed/Child Dev.	1300	38	2,591	864	3,455
Humanities	1500	118	12,313	1,368	13,681
Library Science	1600	4	170	170	340
Mathematics	1700	65	7,800	867	8,667
Physical Science	1900	28	1,309	1,964	3,273
Psychology	2000	80	10,427	549	10,976
Public Affairs/Services	2100	58	5,377	283	5,660
Social Science	2200	74	9,238	486	9,724
Interdisciplinary	4900	165	9,770	6,513	16,283
TOTAL		**1,068**	**79,680**	**36,031**	**115,711**

Source: Maas Companies Projections

* Class sections are projected on the basis of "net" number of sections. Excluded are off-campus, work experience, combined and open enrollment courses, and sections with zero attendance.

DETERMINATION OF SPACE CAPACITY

When space needs are projected, a total square footage requirement is compared against current space holdings. This comparison results in a net space capacity. The following sections provide a definition of capacity, a listing and explanation of the utilization and planning standards used to determine capacity, and net space capacity in all categories of educational space for the College.

Facilities Inventory

The inventory of facilities is an important tool in planning and managing college campuses. The California Community Colleges Facilities Inventory Manual includes descriptive data on buildings and rooms for each college district. This information is essential for developing the annual five-year capital construction plan and for scheduling and controlling campus space. In addition, planning for new capital outlay construction projects, projecting future facilities, developing capital outlay and deferred maintenance budgets, and analyzing space utilization are tasks that rely heavily on the facilities inventory documents and procedures.

The Education Code mandates an annual inventory of all facilities in the college district. This document, the 2000 Hartnell Community College District Report 17 ASF/OGSF Summary and Capacities Summary, was used as the basis for the facility assessment. The facilities inventory, as stated, has been integrated into the current database and used for the projection of future building requirements at the College..

Existing and Future Space Capacity

By combining existing and future enrollment estimates with appropriate space use standards, space capacity for the current year or for future years can be developed. Space capacity is the direct relationship between the amount of space available, by type, which may be used to serve students, and the number of students participating in campus programs. Space capacity analysis typically includes the following types of spaces:

TABLE 17-10
STANDARD SPACE CATEGORIES
USED FOR CAMPUS ASSESSMENT

Classrooms	Lounge
Non-class laboratories	Bookstore
Teaching laboratories	Health services
Library/learning resources	Theatre
Offices	Meeting room
Audio visual, radio and television (instructional media) facilities	Data processing
Teaching gym	Physical plant
Food service	Assembly/Exhibition

The space categories presented in Table 17-10 represent the majority of the total educational and general facility space on a typical community college campus. Space capacity analysis enables an institution to identify the types of space it needs and/or the types of space it holds in excess. The analysis of space capacity forms the core of the facilities plan.

SPACE UTILIZATION AND PLANNING STANDARDS

To determine space capacity requirements for a college's enrollment, the enrollment itself, or an appropriate form thereof, is applied to a set of standards for each type of space.

PRESCRIBED STATE SPACE STANDARDS

Title 5 of the California Administrative Code (Sections 57000-57140) prescribes standards for the utilization and planning of most educational facilities in public community colleges. These standards, when applied to the total number of students served (or some variant thereof, e.g., weekly student contact hours), produce total capacity requirements that are expressed in assignable square feet (space available for assignment to occupants). The Title 5 space planning standards used to determine both existing and future capacity requirements are as follows:

- **Classrooms**
  - Assignable square feet (ASF) per student station 15
  - Station utilization rate 66%
  - Average hours room used per week 53

- **Teaching Laboratories**
  - ASF per student station (See Exhibit IV-D)
  - Station utilization rate 85%
  - Average hours room used per week 27.5

- **Offices, Office Service, Conference Rooms, and Reception Areas**
  - ASF per FTE instructional staff 140

- **Library/Learning Resources Facilities**
  - Base ASF allowance 3,795
  - ASF for first 3,000 DGE 3.83
  - ASF per 3,001 - 9,000 DGE 3.39
  - ASF per for more than 9,000 DGE 2.94

- **Instructional Media/AV, TV, Radio**
  - Base ASF allowance 3,500
  - ASF per first 3,000 DGE 1.50
  - ASF per 3,001 - 9,000 DGE 0.75
  - ASF per for more than 9,000 DGE 0.25

Each component of these standards is mathematically combined with an appropriate form of enrollment to produce a total assignable square feet (ASF) capacity requirement for each category of space. The sum of these categories represents the total building requirement for the college.

ASSIGNABLE SQUARE FOOTAGE (ASF) STANDARD FOR COLLEGE LABORATORY SPACE

Listed below, in Table 17-11, is the Title 5 state standard used to determine assignable square footage for laboratory space. The determination for assignable square footage for lecture is derived via mathematical calculation.

TABLE 17-11

ASSIGNABLE SQUARE FEET (ASF) FOR LABORATORY SPACE

Instructional Discipline	TOPS CODE	ASF/Station	ASF/100 WSCH
Agriculture	100	115	4.92
Biological Science	400	55	233
Business / Mgt.	500	30	128
Communications	600	50	214
Computer & Info. Sciences	700	40	171
Education/PE	800	75	321
Engineering/Tech	900	75	321
Auto Mechanic	947	200	856
Auto Technology	948	75	556
Aviation Maintenance	950	175	749
Fine/Applied Arts	1000	60	257
Foreign Language	1100	35	150
Health Occupations	1200	50	214
Consumer Ed/Child Dev.	1300	60	257
Law	1400	35	150
Humanities	1500	35	150
Library Science	1600	35	150
Mathematics	1700	35	150
Physical Science	1900	60	257
Psychology	2000	35	150
Public Affairs/Services	2100	50	214
Social Science	2200	35	150
Commercial Services	3000	50	214
Interdisciplinary	4900	60	257
Welding	5341	90	385

Source: Maas Companies - Calculations based on
California Code of Regulations Title 5, Chapter 8 Section 57028

COMPUTATION OF THE FTE INSTRUCTIONAL STAFF

The sample worksheet (Table 17-12 below) must be completed by the district with the submission of the five-year capital construction plan. This worksheet must be updated and submitted by the college each subsequent year. For long-term planning purposes, this worksheet is used to project future staffing for the instructional program.

TABLE 17-12

WORKSHEET FOR COMPUTING FTE INSTRUCTION STAFF*

	Total Professional Instructional and Statutory Staff FTE	Non-Instructional Portion FTE	Net Total Statutory Staff FTE
Instructors			
Counselors			
Department Admin			
Librarians			
Instructional Admin			
Totals			

Source: Maas Companies and Chancellor's Office

*Please note that this chart must be completed prior to completing Five-Year Capital Construction Plan.

The five categories of full-time equivalent (FTE) staff are specified and defined as follows:

1. **Instructors:** Included are the professional instructional staff for day, extended-day, and adult education, except those whose offices are located off campus.

2. **Counselors:** Includes the professional counseling staff, special programs coordinators, extended opportunity program coordinators, statutory, and Title 5 required staff.

3. **Department Administrators:** Includes professional staff responsible for coordinating or supervising departmental activities. This category is dependent upon the organizational structure of the college but is generally defined as the department chair for an instructional or support service area.

4. **Librarians:** Professional librarians and directors of media services.

5. **Institutional Administrators:** Professional administrators with responsibilities covering the entire institution such as a president, vice president, deans, business managers, etc. This category generally covers all administrators above the department level.

NON-STATE SPACE STANDARDS

The state provides standards for utilization and planning for more than 60% of all types of spaces on campus. Capacity estimates for those remaining spaces, representing approximately 40%, are based on a combination of factors including the size and/or nature of the institution. Standards for the remaining types of spaces are presented in Table 17-13. These standards were determined based on a national study of space standards and discussions with colleagues in the California community colleges and the chancellor's office.

TABLE 17-13

ASSIGNABLE SQUARE FOOTAGE FOR NON-STATE STANDARD CAMPUS BUILDINGS

Category of Space	Basis	ASF Factor
Non-class Laboratory	0.095ASF per headcount student	0.095
Teaching Gym	Greater of 2.5 ASF per FTES or 35,000 ASF	2.5-35,000
Assembly/Exhibition	ASF Equal to Student Headcount	100%
Food Service	0.60 ASF per Student Headcount	0.6
Lounge	0.67 ASF per FTES	0.67
Bookstore	1,500 ASF plus 0.67 ASF per Student Headcount	0.75
Health Service	ASF Allowance	1,200
Meeting Room	0.333 ASF per Student Headcount	0.333
Childcare	Greater of 0.4 ASF per Headcount or 6,000 ASF (Also,	0.40 – 6,000
Data Processing	ASF Allowance	5,000
Physical Plant	ASF Allowance	5% of Total
All Other Space	ASF Allowance	2.5% of Total

Source: Maas Companies & Chancellor's Office

METHODOLOGY AND PROJECTIONS FOR FUTURE CAPACITY

The determination of future capacity requirements for Hartnell College is included in the following methodology:

- Enrollment estimates, or the appropriate form thereof, were applied in combination with appropriate space planning standards (space planning standards were presented in the preceding pages) to result in a total space requirement in ASF by type of space.

- The current space inventory for the college was subtracted from the total space requirements described above in step one to result in the net ASF need by type of space for the projected ten-year facilities plan.

- The result, net assignable square footage by type of space for the ten-year cycle, was translated into the facility codes used by the state to evaluate and authenticate the space needs projections.

The quantifiable calculations for assignable square footage begin with Table 17-4, the credit instructional offerings and WSCH for the college for fall 1999. Tables 17-6 through 17-9 project the sections of class and WSCH that will be generated by each instructional discipline as the college achieves the projected enrollment of 12,000 students. The WSCH information generated becomes the basis for the projection of future facility requirements for the college.

CURRENT CAMPUS INVENTORY

Included in Table 17-14 is a current facilities inventory for Hartnell as taken from the 2000 Hartnell Community College District Report 17 ASF/OGSF Summary and Capacities Summary (State Chancellor's Office Report). The breakdown is provided by the numeric quantification used by the state to categorise campus facilities.

TABLE 17-14

HARTNELL COLLEGE
FACILITIES INVENTORY – OCTOBER 2000

Room use Category	Description	Assignable Square Footage (ASF)
0	Inactive Area	0
100	Classroom	17,300
210-230	Laboratory	57,670
235-255	Laboratory Service	0
300	Office/Conference	27,064
400	Library	16,575
520-525	Physical Education (Indoor)	42,705
530-535	Instructional Media (AV/TV)	4,658
540-555	Clinic/Demonstration	4,524
570-575	Animal Quarters	1,242
610-625	Assembly/Exhibition	17,956
630-635	Food Service	9,052
650-655	Lounge/Lounge Service	3,892
660-665	Merchandise Facility/Bookstore	3,833
670-690	Meeting /Recreation/Locker Rm.	4,395
710-715	Data Processing/Comp	1,438
720-740	Physical Plant	10,084
760-770	Central Laundry/Utilities	203
800	Health Service	1,086
TOTAL	**ASF**	**222,238**

Source: Space Inventory and Building Facilities Report, conducted on campus by the Maas Companies, October 2000

ASSIGNABLE SQUARE FOOTAGE FOR 12,000 STUDENTS

As stated in the introductory portion of this chapter, the college district will achieve an enrollment of 16,000 near the year 2010. Of the 16,000 students, 12,000 will be accommodated on the East and West campus in Salinas. Table 17-15 provides a projection for the assignable square footage required to meet lecture and laboratory space needs for the projected student enrollment of 12,000 students.

TABLE 17-15

PROJECTION OF LECTURE AND LABORATORY ASSIGNABLE SQUARE FEET FOR 12,000 STUDENTS

TARGET YEAR 2010

Instructional Discipline	TOPS CODE	# of Sections	Lecture ASF	Laboratory ASF	Total ASF
Agriculture	100	12	79	3,651	3,730
Biological Science	400	20	431	3,511	3,942
Business / Mgt.	500	65	2,244	1,181	3,425
Communications	600	3	118	146	264
Computer & Info. Sciences	700	44	1,039	4,143	5,182
Education/PE	800	78	687	15,421	16,108
Engineering/Tech	900	85	1,172	24,341	25,513
Fine/Applied Arts	1000	88	1,561	14,030	15,591
Foreign Language	1100	25	1,109	686	1,795
Health Occupations	1200	18	432	3,238	3,670
Consumer Ed/Child Dev.	1300	38	1,111	2,220	3,331
Humanities	1500	118	5,282	2,052	7,334
Library Science	1600	4	73	255	328
Mathematics	1700	65	3,346	1,301	4,647
Physical Science	1900	28	562	5,047	5,609
Psychology	2000	80	4,473	824	5,297
Public Affairs/Services	2100	58	2,307	606	2,913
Social Science	2200	74	3,963	729	4,692
Interdisciplinary	4900	165	4,191	16,738	20,929
TOTAL		**1,068**	**34,180**	**100,120**	**134,300**

Source: Maas Companies Projections

* Class sections are projected on the basis of "net" number of sections. Excluded are off-campus, work experience, combined and open enrollment courses, and sections with zero attendance.

Total Net Assignable Square Footage (Student Enrollment of 12,000) for all Campus Facilities: Using data from the previous tables for calculating both prescribed state space standards and non-space state standards, Table 17-16 provides a net assessment for assignable square footage of all campus facilities to meet the needs of a student enrollment of 12,000. The data provided is formatted to be consistent with the state code for facilities. The forecast is based on a ten-year period with a target year of 2010.

TABLE 17-16

HARTNELL COLLEGE
BUILDING REQUIREMENTS
TO MEET NEEDS OF 12,000 STUDENTS

TARGET YEAR 2010

Space Category	Description	Current Space Inventory	ASF for 12,000 Students	Additional ASF Needed for 12,000 Students Year 2010
0	All Other (Inactive)	0	0	0
100	Classroom	17,300	34,180	16,880
210-230	Laboratory/Lab. Service	57,670	100,120	42,450
235-255	Non-Class Laboratory	0	1,140	1,140
300	Office/Conference	27,064	36,820	9,756
400	Library	16,575	32,371	15,796
520-525	Physical Education (Indoor)	42,705	35,000	<-7,705>
530-535	Instructional Media (AV/TV)	4,658	11,780	7,122
540-555	Child Care, Clinic	4,524	6,000	1,476
570-575	Animal Quarters	1,242	1,242	0
580	Greenhouse	0	1,500	1,500
610-625	Assembly/Exhibition	17,956	12,000	<-5,956>
630-635	Food Service	9,052	7,200	<-1,852>
650-655	Lounge/Lounge Service	3,892	5,550	1,658
660-665	Bookstore	3,833	9,540	5,707
670-690	Meeting /Recreation	4,395	4,000	<-395>
710-715	Data Processing/Comp	1,438	5,000	3,562
720-770	Physical Plant	10,287	11,200	913
800	Health Service	1,086	1,200	114
TOTAL		**222,238**	**315,646**	**93,408**

Source: Space Inventory and Report 17, Chancellor's Office, California Community Colleges and Maas Companies calculations based on California Code of Regulations Title 5, Chapter 8 Section 57028

FACILITIES MASTER PLAN RECOMMENDATIONS

1. Establish a formal entrance for the West campus. This project should be integrated with the planning and location for the Learning Resource Center.
2. Establish a master plan for the development of an educational/business research park for the East campus. Include the proposed Technology Center as part of this plan.
3. Continue to expand the center in King City to ultimately accommodate 4-5,000 students.
4. As land becomes available, acquire land adjacent to the West campus.
5. Develop a site master plan for both the East and West campuses that will address the need to accommodate a total of 12,000 students on the campuses. Such a plan must eliminate all portable structures on the campuses.
6. Provide outdoor recreational and physical education facilities as part of the East campus development that will serve both the college and the community.
7. Include Scheduled (Deferred) Maintenance projects as an integral part of the Facilities Master Plan.
8. As part of the master plan for the West campus, develop options for additional parking areas.
9. Consolidate all student service functions in one, central location on the West campus.
10. Renovate and remodel identified facilities on the West campus to provide additional classroom/laboratory space.
11. Consider using perimeter portions of the East campus (area not needed for educational/ research purposes) to create a public/private partnership to construct housing for faculty and staff.
12. Establish a limited number of satellite centers in selected areas of the District such as Soledad, Prunedale and Castroville. These centers will not be formal education centers approved by the State but rather centers that offer a limited number of classes at sites shared with other public and private agencies.
13. Recognize that the funds needed to implement the proposed master plan will need to be obtained from a number of sources including:
    a. State of California
    b. Local Bond Issue
    c. Public/Private Partnerships
    d. Public/Public Partnerships
    e. Grants
    f. General Fund of the District.