NEWPORT BEACH CIVIC CENTER
CITY HALL FACILITIES NEEDS ASSESSMENT

REPORT ON
SPACE UTILIZATION ASSESSMENT

9 August 2002

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1. INTRODUCTION

WHAT IS IN THIS REPORT

Objectives

This is the first report requested by the City regarding possible improvements to the existing Civic Center. The objectives of this report are

1. To illustrate how space is used in the City Hall today, especially for staff areas, visitors and customer service operations, shared areas, specialized equipment areas, and site area. These illustrations, in particular, show areas of constraint and inefficiency.
2. To analyze and describe the space allocations today, and, for each functional area, discuss the amount of space, the quality of space, points of constraint and inefficiency, and unit averages which can be used in benchmark comparisons.
3. To identify proposed and recommended space standards which can be used for assessing space requirements for improved City Hall facility planning.
4. To identity benchmark criteria and use them for comparison of existing space allocations in a range of measurements, including space per work station, usable space per person, space per capita, and the like.
5. To identify the existing physical conditions of the separate buildings making up the Civic Center complex, and discuss the apparent constraints and opportunities for long term use of these buildings for City operations.

Methodology

Our approach and methodology for accomplishing these objectives is outlined in the statement of work which was approved by the City and in which scope this work is undertaken.

To identify the spaces in use, we have undertaken a comprehensive survey of operations and space utilization, accompanied by interviews with many staff occupying space in City Hall regarding the adequacy of space assignments, workstations, conference areas, counters and public meeting areas, and the other components which make up City Hall operational areas.

Benchmarks were obtained from Federal and local sources, and space allocations were also compared to a selection of other Civic Center facilities. One key source for space allocation benchmarks has been an ongoing program of office space review conducted by the U.S. General Services Administration, Office of Government-wide Policy, Office or Real Property. This program has evaluated current practices of space use nationwide (and some sources in Canada), both in the public sector and in private enterprise. The latter is important, because when examining City Halls as a whole, there are many elements in the operations of City Government which align to the private sector, especially when Council areas and other spaces are included.

Existing physical conditions of the City Hall buildings was undertaken by examination of existing building documents and plans, discussions with City building management and maintenance personnel, and physical survey and observation by engineers, designers, and experts with experience in City Hall design and reuse.

Review of This Report by the City

Several reviews are required by the City to maintain project schedules and progress of work. The review and approval of space standards is important to the next phase of work, and it is incumbent on the City to review and approve these standards for use in computing space requirements. Also, it is important to review the evaluation of physical conditions inasmuch as these findings will contribute to possible recommendations regarding reuse, replacement, and reconfiguration of existing buildings on the Civic Center campus for meeting future space requirements.

FINDINGS

1. The Civic Center occupies over 44,000 gross sq. ft. of space in 5 buildings. Using definitions taken from the Building Owners and Managers Association (BOMA definitions), these buildings contain about 37,880 usable sq. ft. of space or about 41, 460 rentable sq. ft. of space.
2. The survey found a total of 189 workstations in the Civic Center. There is a total of 206 persons working out of the Civic Center, but this includes interns which may work split shifts, and some persons for whom no unique designated workstation is allocated (including some staff also with field-based workstations, general Council Members, and others).
3. The space allocations in the Newport Beach Civic Center are smaller than the benchmarks of comparable jurisdictions by between 11% and 25%, and space conditions are functionally and qualitatively below desirable levels. It is also the opinion of the survey team that the nature of workstations in use do not allow for adequate flexibility to meet technological, operational, or organizational changes and advancements that typically occur over time.
4. Standards have been proposed for use in estimating space requirements for the functions in the Civic Center (the needs requirements will be the subject of the next report). These standards compare favorably with other jurisdictions, and are tailored to reduce the space shortfalls that occur today. The actual person-by-person assignment of standards will be discussed with City project staff in the course of review of this report.
5. A physical survey of buildings has been completed by the architect and consulting team working on this project. The results show specific code deficiencies, especially relating to accessibility and to seismic requirements. This is the subject of a separately bound survey document which accompanies this report.

2. SPACE ALLOCATIONS

SITE PLAN

Buildings

The City supplied base drawings of the Civic Center to our project team and we have used these as a starting point to examine both the site conditions and the specific spaces within each of the buildings. Exhibit 1 shows the site as a whole, including parking areas, building footprints, walkways, and general landscaping. The buildings are shown in relative scale, with parking areas shown in light-gray. The total building sizes, again taken from the plans provided to us, are measured as follows:

Building	First Floor GSF	Second Floor GSF	Total Gross Sq. Ft.
Building A	3,622	--	3,622
Building B	12,242	--*	12,242
Building C	6,300	7,277	13,577
Building D	9,222	4,283	13,505
Building E	1,078	--	1,078
Total			44,029

* There is a small storage area which also serves as mechanical (HVAC) space on an upper level of Building B. The area was not shown on the City plans. Unconfirmed estimate of room size is about 600 sq. ft.

Parking

According to the plans, there are about 160 parking Civic Center spaces on-site. This excludes the Fire Station and its parking, and also excludes the metered parking on 32nd Street, even that amount which is adjacent to the Civic Center itself. The parking on the plan provided us by the City shows the 160 stalls divided into the following types of parking areas:

Type of Parking Area	Total Stalls
Designated Public Visitors	10
Reserved Employee (by named position or by group)	73*
Reserved for General Employees (un-designated)	65
Reserved for Electric Vehicles	9
Reserved for Disabled Persons	3

* 11 of these are available to Public Visitors on a limited basis. Also, two of these are located inside Building E.

The gross building space of 44,000 gsf is divided into conference rooms, assembly space (Primarily Council Chambers), office areas, storage, and other functional areas, as described elsewhere in this report. Based only on total undifferentiated GSF, at 4 parking stalls per 1000 gsf, an on-site parking requirement of 176 stalls is computed. But this fails to account for times when the public assembly spaces are in use, for the special demand for visitor parking which is always higher at City offices than at commercial offices (for which the 4-per-1000 rule was developed), and fails to account for City vehicles which are parked at the site (including electric vehicles) which effectively doubles the parking required for those employees who drive City vehicles in the course of their work day.

Insert site plan here (exhibit 1)

PLANS OF INDIVIDUAL BUILDINGS

As shown on the site plan, there are 5 buildings on the Civic Center site. The headquarters fire station is also located there, adjacent to the Civic Center, but this is not part of this project.

The exhibits in Appendix A show the layouts of these buildings, with the illustrations presented in the following order:

-- Building A and the south end of Building B,[1]
-- Building B, central section.
-- Building B, north end.
-- Building C, first floor.
-- Building C, second floor.
-- Building D, first floor, and Building E (in proximity),
-- Building D, second floor.

The plans are all in scale (1/16" = 1'-0"), and are color coded to illustrate functional and department areas. Colors are reused for various departments where the separation of department areas is clear, but colors for core and circulation areas are consistent across all sheets.

TOTAL BUILDING SPACE ALLOCATED

How Areas Are Measured

Boundary Lines for Rooms and Measurable Areas

Our approach has been to measure smallest areas first and then to aggregate these into various totals for comparison and analysis. We measure all areas to the centerline of the bounding partition (whether an office or a panel-based workstation), or in the case of thick exterior walls we use a typical wall thickness to measure that side of the room involved. This provides that each room be measured consistently, and also provides that the sum of the areas equals the total, less a measured strip of wall thickness around the perimeter of the building.

Generally, this is similar to the BOMA[2] guidelines for measuring floor area in office buildings, but in some ways our approach deviates from the BOMA guidelines. It should be noted that the BOMA guidelines are very specific and allow for a method to compute building rentable space in manner which is consistent across buildings and across various user types. The American National Standards Institute, Inc., has accepted this standard in its ANSI guidelines and the U.S. General Services Administration also uses the BOMA method for computing and comparing space utilization by the Federal Government.

A Small Difference from the BOMA Measurement Method

BOMA method entails several definitions, which are presented in Appendix C of this report. Mainly, there are three or four key concepts involved. Most importantly, BOMA allows for measurements on the outside perimeter to be to the "dominant portion" of the exterior wall, which (in most cases) may be either the glass line or the inside surface of that wall. The glass line is approximately the center-

[1] The plan sections for Building B are arranged so that they can be cut and pasted together along the invisible match lines on each sides of the continuing plan.
[2] Building Owners and Managers Association. The guidelines are published in "Standard Method for Measuring Floor Area in Office Buildings," ANSI/BOMA Z65.1-1966. See www.boma.org for details.

line of the wall (though in some designs it may not be), while the inside surface measurement excludes the whole wall thickness. We use the centerline of the exterior wall in all cases, partly because it is easier to compute (we do not have elevation drawings, needed to verify "dominant portion") and partly to make each office comparable when we discuss workstation standards. If we did not do this, then two offices of the same dimensions would be given different areas depending on the amount of outside wall involved, the design of the windows, and other factors. The BOMA method also measures shafts and vertical penetration walls from the outside surface, so stairs and other shafts are slightly larger in the BOMA method. But the difference is quite small[3] overall from either of these variations.

In the course of computing the rentable space, the BOMA method allows for computing "usable" space. We also compute usable space (which is more meaningful for our analysis of space requirements than "rentable" space), and use the BOMA rules for the most part, but not in all cases, as noted above.

Summary of Space by Department and Building

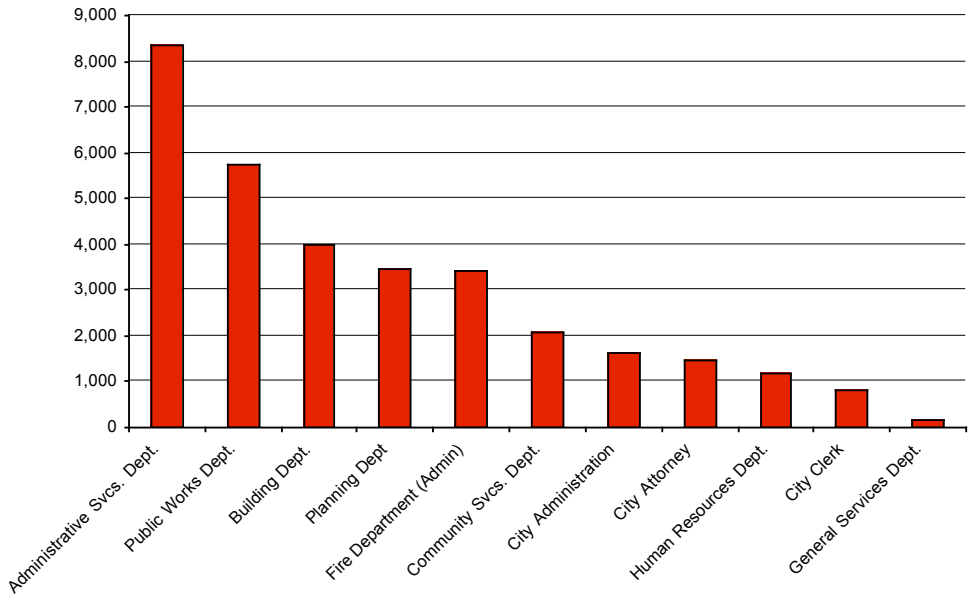
On this basis the total measured areas for the Civic Center buildings are summarized in the following table.

[3] For example, for Building C, the entire thickness of the exterior wall on either floor is at most a few hundred square feet, and our method allows for half of this to be included in the measurement. BOMA would take each section of wall and measure to the glass line where glass was 50% of the surface and to the interior face elsewhere, so that our method usually ascribes a little more space to the usable area than does theirs. For a typical stairwell, our approach may reduce the stair allowance only by 20 sq. ft.

Exhibit 2
Summary of Space Allocations by Building and Department

Department/Area	Bldg A	Bldg B	1st Fl Bldg C	2nd Fl Bldg C	1st Fl Bldg D	2nd Fl Bldg D	Bldg E	Total
Administration	3,191	1,636	-	-	-	-	-	4,827
Administrative Services Dept.	-	3,491	-	-	4,555	-	311	8,357
Building Dept.	-	-	1,013	2,975	-	-	-	3,988
City Attorney	-	-	-	-	-	1,466	-	1,466
City Clerk	-	824	-	-	-	-	-	824
Community Services Dept.	-	1,029	-	-	1,047	-	-	2,076
Fire Department (Admin)	-	-	-	-	957	2,218	242	3,417
General Services Dept.	-	-	-	-	155	-	-	155
Human Resources Dept.	-	1,200	-	-	-	-	-	1,200
Planning Dept	-	-	474	3,001	-	-	-	3,475
Public Works Dept.	-	1,572	4,151	-	-	-	-	5,722
General Building Areas								
Unassigned Building Lobby	-	532	-	-	-	-	-	532
Major Circulation Corridors	-	768	-	407	1,172	131	61	2,539
Stairwells	-	-	216	-	32	100	-	348
Atrium Opening	-	-	-	395	-	-	-	395
Other Vert. Penetrations/Shafts	-	-	-	87	-	14	-	101
Mechanical Rooms	12	195	55	13	291	23	-	589
Lavatories	292	404	292	247	266	251	-	1,752
Lunch Room & Storage Rooms	-	-	-	-	540	-	-	540
Parking/Garage	-	-	-	-	-	-	427	427
Totals (Measured Gross SF)	**3,495**	**11,651**	**6,201**	**7,125**	**9,015**	**4,203**	**1,041**	**42,730**
Added remaining wall thicknesses	127	591	99	152	212	80	37	1,299
Grand Total Building Gross Sq. Ft.	**3,622**	**12,242**	**6,300**	**7,277**	**9,227**	**4,283**	**1,078**	**44,029**

Summary of Space Allocated to the Department
(omits Building A)



In the above table, all areas except the General Building Areas have been allocated to one department or another. In particular, all conference rooms appear in one of the departments (Council areas in Building A are listed with Administration here, but are omitted from the graph), and smaller circulation pathways within department areas also are allocated with the associated department.

BOMA Usable and Rentable Approximations

Because the BOMA standards are used for many benchmarks, it is necessary to estimate the existing BOMA usable and rentable space allocations. Definitions of these and other terms appear in Appendix C to this report. It should be noted, too, that the size of the existing General Building Area is misleading since so much access space is outside the buildings themselves; this may make the "rentable efficiency" appear higher than otherwise in some cases.

We generally treat the entire complex as "the building" for applying BOMA rules;[4] this approach is suggested as a useful alternative in the clarifying notes in the case of building campus complexes, and seems particularly appropriate where the buildings are all low-rise and function in such and integrated manner. Referring to the table above, we have taken the following approach:

1. We add the (a) department areas (equivalent to BOMA Tenant areas[5]), (b) unassigned lobby, and (c) lunchroom and its storage areas to obtain BOMA Usable. We exclude the mechanical spaces because they appear to fit the BOMA definition of "Floor
2. We add Major Circulation, Mechanical Rooms (which includes janitor rooms in this calculation), and Lavatories to obtain the BOMA Rentable
3. We use our measured totals for the BOMA Measured Gross, even though this is slightly too large. BOMA would not add any wall thicknesses where windows are not dominant, for example. We do exclude parking (in Building E) in accord with the BOMA guideline.

The results of the calculations are as follows:

Department/Area	Bldg A	Bldg B	1st Fl Bldg C	2nd Fl Bldg C	1st Fl Bldg D	2nd Fl Bldg D	Bldg E	Total
BOMA Usable (see text)	3,318	10,875	5,737	6,128	7,466	3,764	590	37,878
BOMA Rentable	3,495	11,651	5,985	6,643	8,983	4,089	614	41,459
BOMA Measured Gross Sq. Ft.	3,495	11,651	6,201	7,125	9,015	4,203	614	42,303

TABLE OF DETAILED EXISTING SPACE ALLOCATIONS

A detailed listing of space allocations by room, workstation, position, file and equipment area, and other component of the space-in-use is presented in Appendix B. This information in this table is analyzed in the next section of this report, and is used along with the summary data above in comparisons with benchmark standards and space allocated at other City civic centers.

[4] In particular, most of the mechanical and support areas are treated as "Floor Common Areas."
[5] This is overstated slightly, since we have measured the Tenant areas in all cases to the middle of the bounding wall, and BOMA would not do this for rooms on the exterior which had less than 50% window area (among other things).

3. ANALYSIS OF SPACE ALLOCATIONS

WORKSTATION COUNTS AND SIZES

Identifying Workstations and Equipment Areas

The plans presented in Appendix A illustrate the areas we have used in identifying space allocated to each office and open-area work station. The table in Appendix B shows the sizes of these areas as indicated by the CAD system used to make the drawings.

Note that we used City-supplied drawings as the basis for these computations, but have modified the base drawings in some cases to reflect updated partition relocations and otherwise to show the locations of movable partitions, cabinetry, and furnishings where this was necessary. In some cases, the shown sizes and locations are only approximate, so that our workstation boundaries are reasonably close estimates that may be off by several inches one way or the other.

Similarly, the equipment and file areas are estimated, and especially where passageways and equipment areas meet we have had to make some judgment as to where the boundary is drawn. Our objective was to allocate all areas to one function or another so that these could be totaled without overlap.

Total Workstations and Distribution by Size

We found a total of 189 workstations, for a total of 206 persons. The staff count includes interns and part-time persons, and does not match the number of "authorized" budgeted fte positions. Some staff are not shown with Civic Center workstations (such as 6 Council Members, some persons also with field offices, and others), even though we included the person in the count of people working there.

The workstations include all stations even if unassigned, as well as four positions which are in "shop" areas and were not separately measured as workstation areas on the drawings. These "shops" are the print shop (two work stations) and the mail room (two work stations), and in the analysis of space per workstation and other benchmark results, we subtract these four so as not to report incorrect averages.

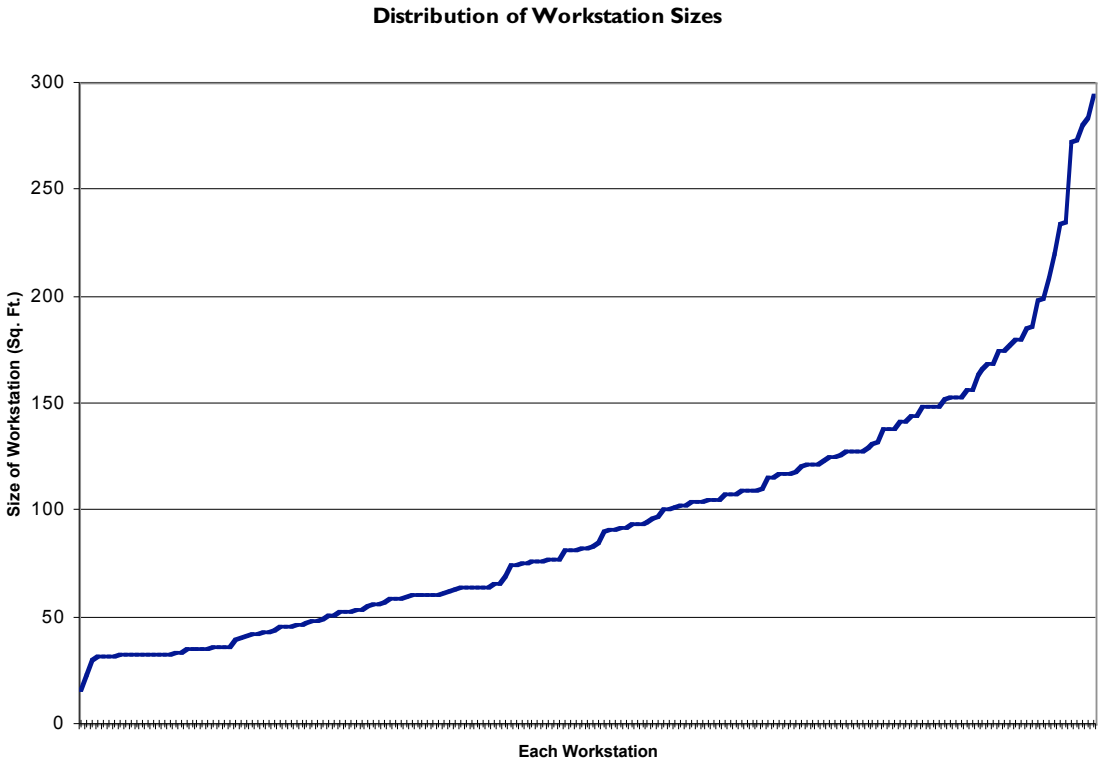
As a result, we have the following summary of workstations:

Total Persons Identified	206
Total Workstations	189
Total Workstations excluding Shop-based	185
Largest Workstation	294 sf
Smallest Workstation	16 sf
Average Size of Workstation (excl. shop-based)	95.4 sf
Standard Deviation	57.1 sf
Median Size of Workstation (excl. shop-based)	82.0 sf

The chart below plots the 185 workstations by size. The smallest workstation (16 sf) is first on the left, and the largest workstation (294 sf) is last on the right. Each workstation is included, so horizontal segments of the graph indicate that there is more than one station of that size.

The median workstation (the half-way point on the horizontal x-axis) is clearly less than 100 sq. ft. In fact, this median is computed (in the table just above) to be about 82 sq. ft.

The somewhat horizontal or small-slope shape at the beginning of the graph means that more workstations have the indicated smaller size. The scoop up at the end of the graph means that only a few workstations are of the larger sizes. Very few workstations are above 250 sq. ft. but visually about 20% of them are below 50 sq. ft.



Grouping Workstations by Position

The above counts each workstation separately, so that if eight Fiscal Clerk positions have eight different workstation sizes ranging from 16 sf to 64 sf, then they are each are shown in the chart. We also have grouped workstations into clusters of similar job position, in order to begin analysis of workstation standards which would be assigned on a position basis.

The first level of grouping by positions resulted in 54 categories, as shown in the table below, for the 185 different persons noted above. After grouping the positions, we totaled the space for the grouped workstations and averaged them for each category, to arrive at the average workstation size for a given position group. The total of the resulting 54 averaged workstation sizes is 6,180.8 sq. ft., for an

average size for all 54 (grouped) workstations of 114.5 sq. ft. This effectively smoothes out the raw 185 workstation sizes into 54 grouped sizes.

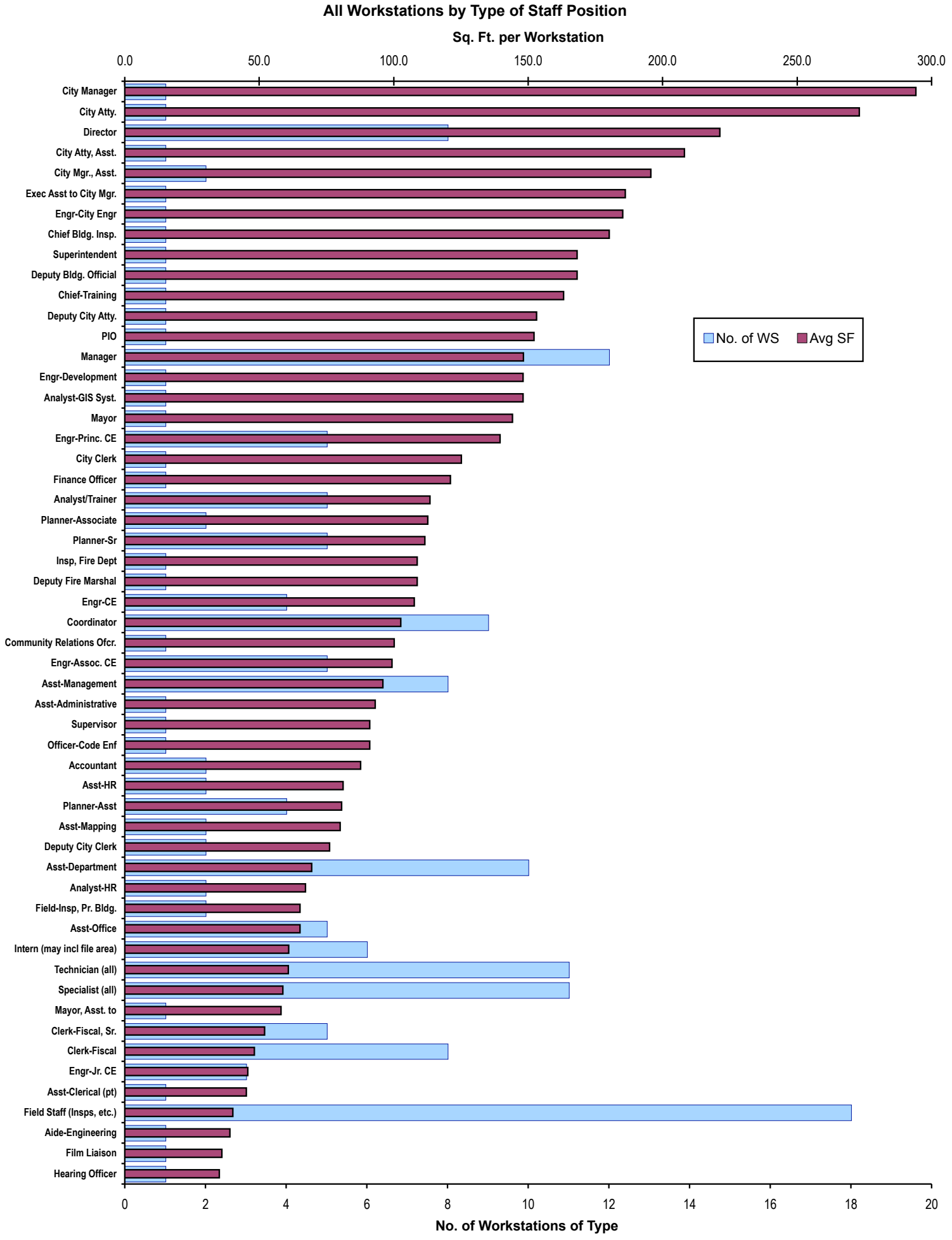
Even so, it is necessary that the total number of workstation standards be reduced to many fewer, either for computing proper needs or eventually for providing required facilities. Workstation standards should number about 10 for a typical City government. Also, we note that many positions have average workstation sizes that are below the expected size for similar positions. This disparity is discussed under the "Benchmark" heading later in this section of the report.

Grouped Workstations by Category of Similar Job Titles

Position	No. WS	Tot. SF	Avg SF	Position	No. Ws	Tot. SF	Avg. SF
Accountant	2	175	87.5	Director	8	1769	221.1
Aide, Engineering	1	39	39	Engr., Assoc. CE	5	496	99.2
Analyst/Trainer	5	567	113.4	Engr., CE	4	430	107.5
Analyst, GIS Syst.	1	148	148	Engr., City Engr	1	185	185
Analyst, HR	2	134	67	Engr., Development	1	148	148
Asst., Administrative	1	93	93	Engr., Jr. CE	3	137	45.7
Asst., Clerical (pt)	1	45	45	Engr., Princ. CE	5	697	139.4
Asst., Department	10	693.6	69.4	Exec. Asst. to City Mgr.	1	186	186
Asst., HR	2	162	81	Field Staff (Insps, etc.)	18	722	40.1
Asst., Management	8	767	95.9	Field, Insp, Pr. Bldg.	2	130	65
Asst., Mapping	2	160	80	Film Liaison	1	36	36
Ass., Office	5	325	65	Finance Officer	1	121	121
Chief Bldg. Insp.	1	180	180	Hearing Officer	1	35	35
Chief, Training	1	163	163	Insp., Fire Dept	1	108.6	108.6
City Atty., Asst.	1	208	208	Intern (may incl file area)	6	365	60.8
City Atty.	1	273	273	Manager (all types)	12	1778	148.2
City Clerk	1	125	125	Mayor	1	144	144
City Manager	1	294	294	Mayor, Asst. to	1	58	58
City Mgr., Asst.	2	391	195.5	Officer-Code Enf	1	91	91
Clerk, Fiscal	8	384	48	PIO	1	152	152
Clerk, Fiscal, Sr.	5	259	51.8	Planner, Associate	2	225	112.5
Community Relations Ofcr.	1	100	100	Planner, Asst.	4	322	80.5
Coordinator (all types)	9	922	102.4	Planner, Sr.	5	557	111.4
Deputy Bldg. Official	1	168	168	Specialist (all)	11	645	58.6
Deputy City Atty.	1	153	153	Superintendent	1	168	168
Deputy City Clerk	2	152	76	Supervisor	1	91	91
Deputy Fire Marshal	1	108.6	108.6	Technician (all)	11	668	60.7

The data in this chart are shown graphically on the following page. In the chart, the positions are ordered by average workstation size.

Note that the dark red bars indicate the size of the average workstation for the indicated job category, and the blue bars indicate the number of positions which were found to make up that category and are used to make the average size.


All Workstations by Type of Staff Position
Sq. Ft. per Workstation
0.0
50.0
100.0
150.0
200.0
250.0
300.0
City Manager
City Atty.
Director
City Atty, Asst.
City Mgr., Asst.
Exec Asst to City Mgr.
Engr-City Engr
Chief Bldg. Insp.
Superintendent
Deputy Bldg. Official
Chief-Training
Deputy City Atty.
PIO
Manager
Engr-Development
Analyst-GIS Syst.
Mayor
Engr-Princ. CE
City Clerk
Finance Officer
Analyst/Trainer
Planner-Associate
Planner-Sr
Insp, Fire Dept
Deputy Fire Marshal
Engr-CE
Coordinator
Community Relations Ofcr.
Engr-Assoc. CE
Asst-Management
Asst-Administrative
Supervisor
Officer-Code Enf
Accountant
Asst-HR
Planner-Asst
Asst-Mapping
Deputy City Clerk
Asst-Department
Analyst-HR
Field-Insp, Pr. Bldg.
Asst-Office
Intern (may incl file area)
Technician (all)
Specialist (all)
Mayor, Asst. to
Clerk-Fiscal, Sr.
Clerk-Fiscal
Engr-Jr. CE
Asst-Clerical (pt)
Field Staff (Insps, etc.)
Aide-Engineering
Film Liaison
Hearing Officer
No. of WS
Avg SF
0
2
4
6
8
10
12
14
16
18
20
No. of Workstations of Type

Department-Level Comparisons

The space occupied by the various Departments is summarized as follows:

Department	No. of Persons	No. of Workstations	Total Sq. Ft.	Sq. Ft. per Workstation
City Clerk	3	3	824	274.7
City Attorney	5	6	1,466	244.3
Fire Department (Admin)	16	15	3,417	227.8
Administration	14	8	1,636	204.5
Planning Dept	21	20	3,475	173.8
PWD	38	33	5,722	173.4
Administrative Svcs. Dept.	57	54	8,357	154.8
Community Services Dept.	18	14	2,076	148.3
Building Department	25	27	3,988	147.7
Human Resources Dept.	9	9	1,200	133.3
General Services Dept.[6]	0	0	155	0.0

These figures omit Building A, and also omit non-department ("General Building") areas, so no grand totals are given here. These figures allow comparison of workstations "densities" across departments, and show, among other things, that on the average smaller departments have higher amounts of space per workstation on the average. This is due mainly to the fact that support spaces (such as the vault and counter space in the City Clerk's office) are distributed across fewer staff (in the case of the City Clerk, there are only 3 staff), so that the averages get larger.

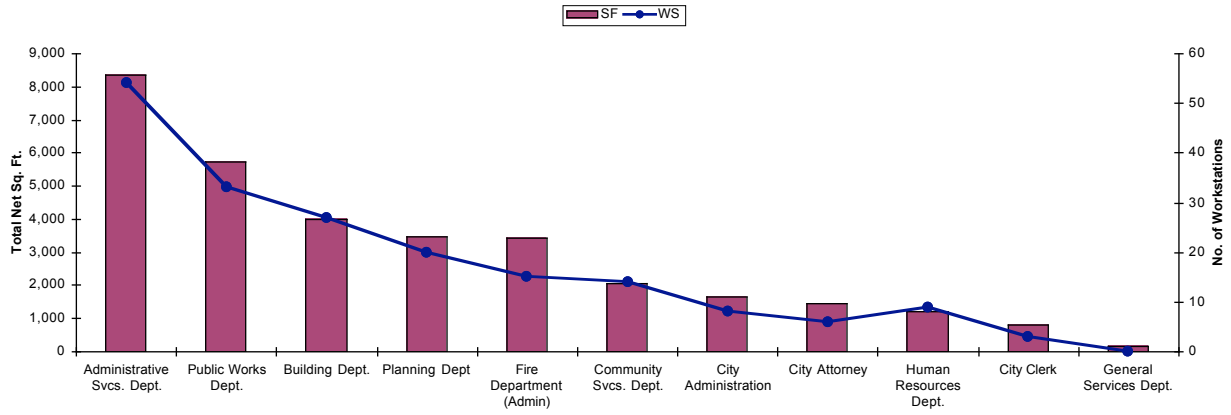
The following three charts show, respectively, the following:

1. Chart 1 shows the total net sq. ft. for each Department and the total number of workstations in each. The scale to the left applies to the vertical bars; the scale to the right applies tot he line.
2. Chart 2 shows the total number of workstations (vertical bars) and the average square footage per workstation ("density"). Note that all the larger Departments are well under 200 sq. ft. per workstation. The Departments are ordered by number of workstations in this chart.
3. Chart 3 shows the total space per workstation and the total space allocated to each Department. The Departments are ordered by space per workstation, from high to low.

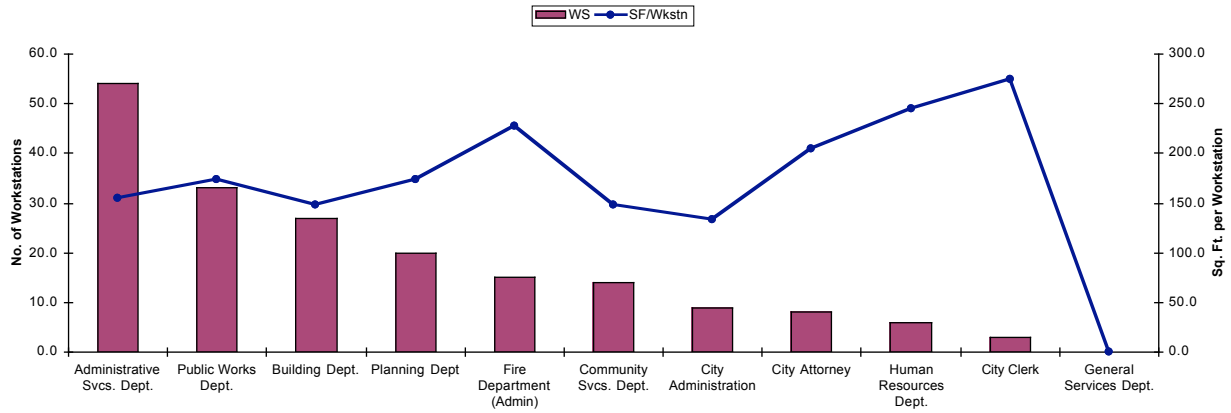
The key observations are (a) the larger departments are all below 200 sq. ft. per workstation, (b) small departments may deceptively appear to have larger space per workstation,, (c) on balance, density, when used as a measure of efficient space use, does not take special needs for public counters, storerooms, and other non-staff areas into account, even though it is commonly used as a benchmark.

[6] The General Services Department space consists solely of a building maintenance room, and no "workstation" as such.

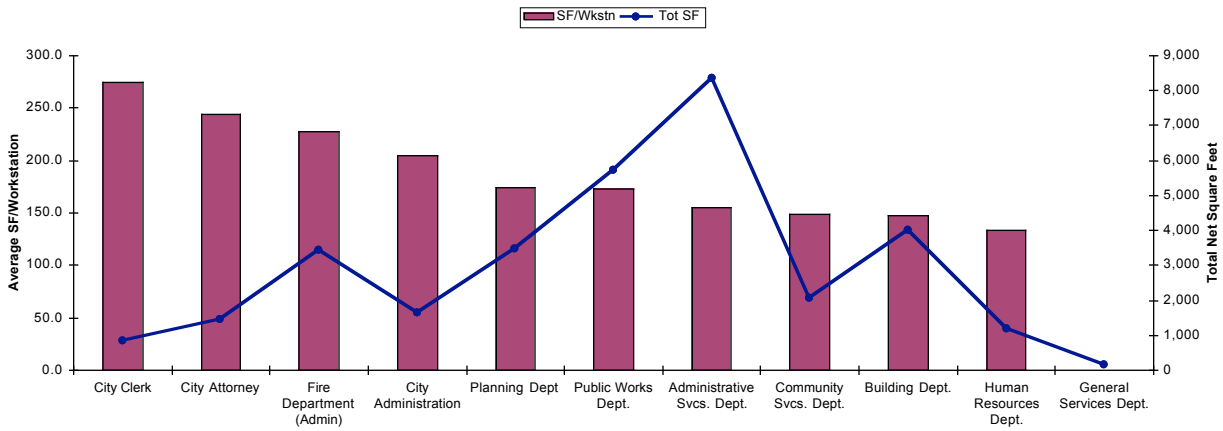
Total Net Sq. Ft. and Total Workstations



Total Workstations and Avg. SF/Workstation



Avg. SF/Workstation and Total Net Sq. Ft.



BENCHMARKS OF SPACE UTILIZATION

General Services Administration Guidelines

Beginning in the mid-1990's and continuing into the present, the U.S. General Services Administration's Office of Governmentwide Policy began to adapt the approach taken in allocating Federal office space to the practices and experiences which were occurring in the private sector as well as in other quadrants of the public sector. This came about as the Federal Real Property Asset Management Principles were examined and as recommendations for improvements and the adoption of "best practices" into the Federal community.

The result has been movement toward an approach that emphasizes flexibility, individual agency responsibility, strategic planning for real property needs, and adoption of space-use efficiency standards as measured in private sector terms.

Ultimately, there are several measures of space utilization that can come into play, depending upon the criteria or factors which are to be tested. Space per person, space per workstation, cost of space per person, and others all are the kinds of measures that have been examined.

While the principles are easy to express, the details are very difficult to implement. For example, it is difficult to agree on common definitions of "workstation," "person," "cost," "space-in-use," and other factors. Are part-time persons counted as fractions or as whole numbers, are dual-assignment workstations (as for interns in Newport Beach) counted only once, and when costs[7] are considered, how are they computed? Is space measured as gross space, workstation space, rentable space, or other mix?

The basic approach has been to move toward the BOMA definitions and to use measures common in the private sector for most benchmarking. This is not universal, since there are some extreme situations which just do not fit into the private sector model. Moreover, it is important to take care that the measures used for benchmarking do not drive policies to the wrong conclusions: efficient space use does not mean making workstations small, at least not to the point of lost functionality, and it is fruitless to compare the space needed by attorneys, say, and clerk-interns. Benchmarks have to be taken as averages over large numbers of operations, and where possible similar operations should be used in comparison.

An important benchmark document for space standards produced by the U.S. GSA is *Office Space Use Review: Current Practices and Emerging Trends*, printed in 1979 by the Office of Real Property. This document surveys numerous private and public sector sources for space standards and utilization ratios. In it they also observe:

1. The workspace is changing, and evaluating space use is more complex as a result.
2. All organizations surveyed look at some type of square feet per person measure.
3. The U.S. Government average for space use is 200 usable s.f. per person, as compared to the U.S. private sector average of 250 usable s.f. per person.

The following table is a summary of selected office space utilization rates which were obtained by the U.S. study team and reported in the referenced document:

[7] For example, costs may include operating costs, costs of equipment and furnishings, costs of original construction, cost of replacement facilities, cost of special equipment associated with the functions examined, and so on, and these may or may not be useful in examining space utilization effectiveness, efficiency, or productivity.

Source	Group/Component/Measure	Usable SF/Person
BOMA Experience Report	U.S. Private Sector	245*
	U.S. Government Sector	204*
Arthur Anderson LLP	Private Sector Target Value	250
	Technology Firms (Sample)	206
Lucent Technologies	Occupancy Density Targets (depends on types)	174-190
Mobil Corporation	Overall Density Target	225
Dun & Bradstreet Corp'n	Headquarters Density Standard	190-200
State of Virginia	Maximum per Person	250
State of Texas	Statewide Average	234
State of Missouri	Statewide Average	200
State of Oregon	Maximum Allocation (average)	200
U.S. Government	Overall Average (GSA)	200

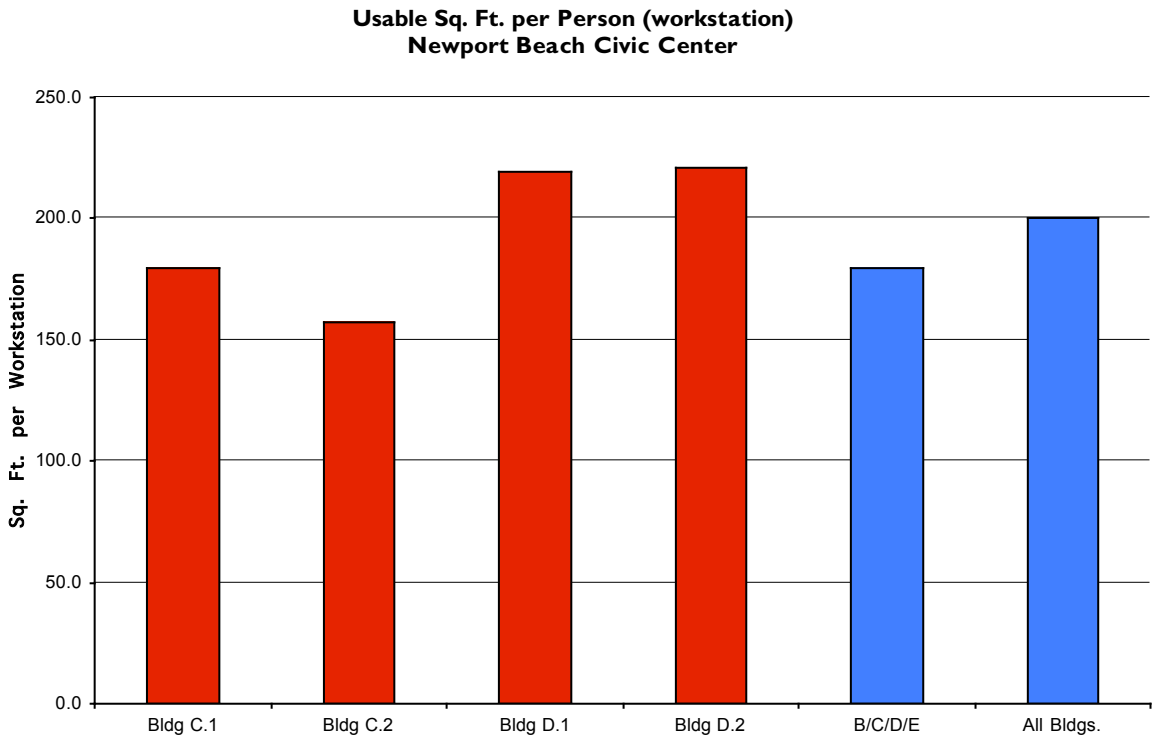
*Converted from BOMA Rentable where reported, but using the BOMA definition for Usable.

The GSA Document goes to lengths to point out that these numbers are specific in what they refer to and may not be valid comparisons for different agencies that have a different mix of functions, needs, and support components. Among the caveats: (a) this applies only to "office type buildings," (b) usable sq. ft. is measured using the BOMA method ("the space where a tenant normally houses personnel or furniture"), and (c) the persons used are the persons housed during a peak 8-hour shift, including temporary, part-time , other-agency, budgeted vacancies, and other persons who are intended to be officed in the area.

The space utilization at Newport Civic Center is repeated in the table below, based on using the BOMA methods for space use calculations. See the earlier discussions for how BOMA Usable is computed in Newport Beach. Also, note that we have used workstations as a measure of persons since this seems to capture the intent of the measures above, by including some field staff where they use the Civic Center offices and otherwise omit persons who are housed off-site.

Department/Area	Bldg A	Bldg B	1st Fl Bldg C	2nd Fl Bldg C	1st Fl Bldg D	2nd Fl Bldg D	Bldg E	Total B/C/D/E	Total All
BOMA Usable (see text)	3,318	10,875	5,737	6,128	7,466	3,764	590	34,560	37,878
BOMA Rentable	3,495	11,651	5,985	6,643	8,983	4,089	614	37,964	41,459
Total Persons (workstations)	0	68	32	39	34	17	0	189	189
Usable SF/Workstation	n/a	159.9	179.3	157.1	219.6	221.4	n/a	179.7	200.4

The following chart illustrates these figures. Note that the average for all buildings is about 200 sf per workstation, and when Building A is omitted, the number is about 180 sf per workstation.



There are two ways to compare Newport Beach Civic Center to the GSA benchmarks. Either compare the figure for all buildings to the commercial office (private sector) measure of 250 sq. ft. per person, or if the Council Chambers facility (Building A) is omitted, compare the result to standard office average of 200 sq. ft. per person. In either case, the City is significantly below the benchmark.

The GSA points out, further, that older facilities typically show inflated averages, which may signify a greater present need than do the above ratios.

Local Government Workstation Standards by Position

The GSA report referenced above contains a number of example standards at the State level, and also notes that local and other government standards have been developed according to their needs. Most space standards apply to individual positions, and not to overall densities.

We made a survey of local governments, and while some of this data is old, it is still in use in various jurisdictions. In any event, the following table of standards represents an example of comparison local governments and the approach they take at allocating offices.

We have not yet assigned persons to these standards, but will ask the City's help in identifying the appropriate job description categories to go with the associated workstation space standard. This process will be part of the review of this report with the City.

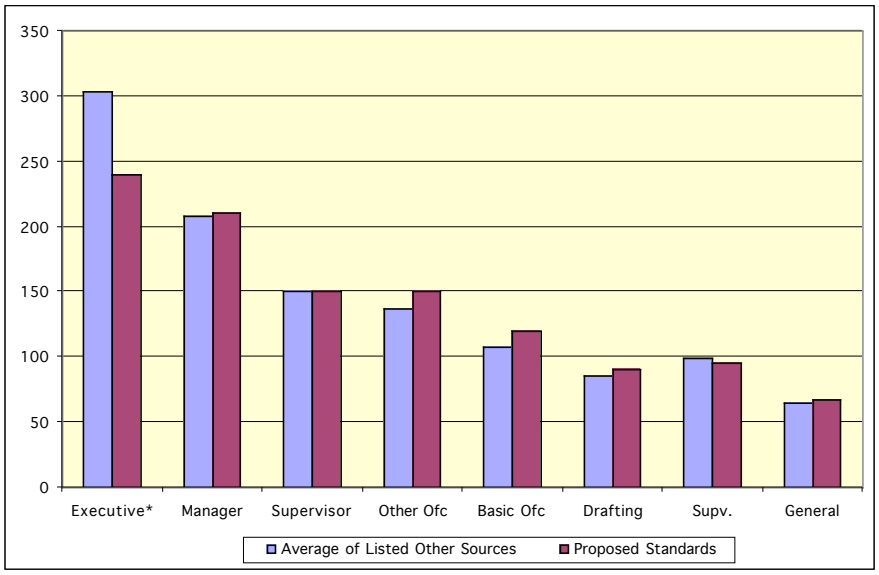
	Private Office					Typical Open Systems		
	Exec*	Mana-ger	Super-visor	Other Ofc	Basic Ofc	Drafting	Supv.	Gen'l
Selected Agencies								
GSA (Typical)**	300-400	225-300	225	150	100	-	100	60-75
LA County (Social Svc)	250	150-225	130-150	-	80-130	-	65-90	56-85
LA County (General)	250-350	250	120-160	-	80	79-90	-	50
Orange County	270	180	144	-	108	-	-	-
Riverside County	300-375	225	150	-	144	69	-	57
San Bernardino County	150-200	150	120	120	70-90	50-85	-	50-80
San Diego County	300	250	120	-	-	n/a	120	50-100
LA City***	250	140-180	140-180	140	120	85-110	100	60-85
Selected Publications								
Open Office	200-350	100-250	100-150	-	80-150	80-150	-	50-90
Architect's Journal	247-452	194-247	151-194	-	86-118	75	97	48-75
Summary								
Avg of Other Sources	304	208	151	137	108	86	99	65
Proposed Standards	300-240	210	150	150	120	75-90-120†	96††	60-75

* Compares to City Manager and Department Heads, as well as higher positions in some agencies.
** Old standard for individual office assignments.
*** Various office enhancement provisions are also described for various job classifications.

† The proposed drafting stations are 75 sf for a basic table/user-chair; 90 sf for table, user-chair, and drafting-sized back-table;
and 120 sf for table, chair, back-table (drafting size), guest seating, and file space.
†† Enclosed area is 96 sf; the allocation may also include circulation which adds to this allowance.

Note: Sources for some entries are from materials of a wide range of dates, and are available on request.

Illustration of Proposed Standards Compared to Other Jurisdictions



QUALITY OF WORKSTATIONS

In all the above review of quantity of existing space allocations, we have not addressed the quality and functionality of the workstations. Generally, from our experience as well as from the reports of the users, the existing staff workstations are generally not well designed and do not make for more efficient office functioning. This is not true in all cases, however, and some workstations are extremely efficient in how they function as well as how they utilize space.

Part of this situation comes from the fact that many workstations are custom-built, in some cases for the persons who are now in those workstation and in some cases for persons who are no longer there. While technology, organization, and operational procedures are generally slower to change in Government office spaces, in time hard-built workstations become less convenient or appropriate to their originally designed function.

There is another class of workstation in the Civic Center which is not so custom-made as it is assembled from available materials and equipment. And this is not so much for efficiency as for the availability of components. There are examples in the Planning and Building Department staff areas especially, where individuals make do with all sorts of odd collections of equipment or *ad hoc* furnishings.

There is also an issue of design and quality from an aesthetic viewpoint. This is not discussed much here, since our purpose is to focus on amount and functionality of spaces, but it is a real

Overall, it is clear that some part of the crowding, inefficiency, and functional overhead is due to improper or inadequate workstation design, layout or use.

OTHER AREAS

Conference and Meeting Rooms

There are several conference and meeting spaces in City Hall, but even so these are inadequate to meet the routine needs there. The conference spaces which exist are listed as follows.

Building/Conference Area		Sq. Ft.
Building A	Council Chambers (meeting area only*)	1,819
	Council Conference Room	400
Building B	Lobby Conference Room	244
Building C	Public Works Conference Room	176
	Building Department Conference Room	178
	Planning Conference Cubicle	84
Building D	Fire Department Conference Room	555
	Legal Department Conference Room	258

* Council Chambers (storage, vestibule, etc.) adds 865 sq. ft.

Excluding the Council Chambers, this amounts to a total space of 1,895 sq. ft. for conference areas, serving 189 workstations, or about 10 sq. ft. per workstation.

The basic planning guide we use is minimally 15 sq. ft. per workstation, with between 5-10 sq. ft. additional space for "special" meeting areas, such as interview rooms, plan check meeting rooms, department libraries, and the like. This partly accounts for more space per seat than the existing spaces now allow, and partly accounts for more meeting rooms in general. One major problem today is that there are few rooms big enough for mid-size meetings.

It should also be noted that the *location* of the existing rooms is also very inconvenient. For example, the conference room in Building A might be even better used if it were not so remote from most departments. A group meeting there can "cost" an extra 10 or 20 minutes in logistic overhead, allowing for walking both ways, getting materials there, and the occasional unexpected need to go back to one's office for some information. Disability access is a related issue which is addressed more fully in the review of existing building conditions and code deficiencies. It is enough to say here that of the conference areas listed above, half the rooms are inaccessible, accounting for even more than half the total meeting space aside from the Council Chambers.

It is also important to stress the need for some specialized meeting spaces which serve unique purposes. For example, most One-Stop Shops provide for at least one meeting room equipped to allow visitors to review plans in a private (or semi-private) space, away from the main public counter. These rooms may be equipped with typical tables and chairs, so that the room can be used for different purposes when available, or may be equipped with a standing-height table (or counter) and no seating.

Most departments have some special meeting needs, none of which are provided today, except for the City Attorney office area which is provided with a small (and ill-furnished) law library. Other typically needed special-purpose areas include meeting space for labor negotiations and hearings, auditor workrooms, workrooms that provide space for packet assembly or for special project team meetings, and department libraries which may contain meeting and reading areas.

Public Areas

The public areas at the Civic Center include (a) the main building lobby, (b) the access-ways between and reception points at each building and Department, (c) all public counters, (d) waiting areas at each Department, (e) the Council Chambers vestibule and main meeting room. These can be evaluated in terms of amount of space, functionality of space, and design of space. We leave the last of these to a later report on implementation strategies, design guidelines, and other design considerations.

Main Building Lobby

The building lobby appears adequately sized, but this is partly due to the fact that there are so many entry points to the Civic Center that this area serves only the first-time Civic Center visitor and those visitors who are coming to an adjacent department. Uses are mixed, with Revenue functions and Administrative functions merged, so that the visitors using the lobby are not very well segregated by purpose of visit. The area also does not serve informational purposes well, since signage is limited and the take-away materials are not very well organized or displayed according to the visitors' needs. The adjacent conference room, being open to the lobby, allows both areas to function less well than they should.

Access Paths and Building Entry Points

It is difficult for visitors new to the Civic Center (or new to a different Department than they usually visit) to find their way from the parking areas to the function they are seeking, assuming that they are

able to park near the building in the first place. Visitor parking is deficient, as noted elsewhere, and it is dispersed between three or four primary areas[8] none of which are signed as to what functions are best reached from any location. The general signage in the passage areas is also not very good, especially in directing persons both according to function *and* to Department name.

While the weather allows for less discomfort in the outside passages most of the year, it is at other times not so pleasant. All movement between buildings is open at least to the side, and the number of entry points to the campus are as numerous as there are spaces between buildings. There are, furthermore, awkward passages through Departments (such as through City Clerk offices to get to Human Resources, or to access the upper floor areas) which are disruptive and confusing. Most of the visitors are not first-timers, of course, and so the problems apply mainly to those who come once, or those who come rarely, but for these persons the visit is not easy.

Public Counters and Related

There are a number of public counter areas and department reception points:

Building	Area	Description
Building B*	Community Svcs. Dept. Counter/Lobby	16' Counter with 2 built-in workstations
	Admin. Services Dept./Revenue	11' Counter with 2 workstations
	Main Lobby/Asst. to Mayor	6-1/2' Counter at workstation
	Main Lobby/Exec. Asst. to City Mgr.	18' Counter at workstation
	Administrative Svcs. Dept./Cashier	13' 3-station Counter
	City Clerk	11' Counter/limited waiting
	Human Resources	12' Counter at workstation + display
Building C	Public Works Department Counter	18-1/2' Counter + 6 seats
	Building Department Counter	24' Counter + 6 seats
	Planning Department Counter	(included)
	Planning/Building Dept. Waiting	6 seats + others near Director
Building D	Print Shop	Workstation
	Mail Room	Workstation
	Fire Department/Prevention	6-1/2' Counter
	Fire Department/Admin.	Workstation
	MIS	(no clear reception point)
	City Attorney	Counter at workstation + 1 seat

*Omits a "non-public" area for Payroll, consisting of 1 guest seat at workstation.
Note: all dimensions are approximate, from plans supplied by City.

At quiet times, these amounts of space are generally adequate, but this is not often the case. Especially City Clerk and Human Resources areas are crowded, not just because of counter length but also due to the absence of space for waiting and passing on the visitor side. All counters are crowded on the staff side, including those serving the development functions, and the existing counter space could be doubled (that is, doubled in depth) merely to provide the same counter length in an adequate work space.

As to required counter "stations" (which is to mean counter length), all Departments report significant problems at many times. For development-related functions, we generally assume a 5' counter length

[8] There is a dedicated area on the north side, for about 10 persons, a time-limited area for about 11 more persons on the back side of the Civic Center, metered parking behind the Council Chambers, and on-street parking along 32nd Street and nearby.

as equal to one "station." For other functions we usually assume a counter length of 4' although in some cases, when there are suitable separations for visitor privacy and security, as well as suitable equipment for staff to conduct business, it is possible to reduce a counter station to 3' of length.

Staff space deficiencies have in part led to building staff workstations into the counters in an effort to create more efficient work areas. This limits the use of the counter even when business is heavy to the few workstations which are constructed (as at Human Resources), but does allow for staff to alternate from their work surface to the visitor more easily. This is fine for those situations where (a) future growth in work volume, (b) changes due to new equipment and technology, (c) staff work functions, and (d) seasonal and workday visitor peak volumes are all generally unchanging. Flexibility over time is provided, however, when the staff workstations are not integrated into the counters themselves.

Department Waiting Areas

The above table also indicates the character of Department waiting areas other than counters. As shown, these are in almost all cases minimal, and Departments report a general need for more space and accommodation (as at the offices of the City Attorney, where visitors cannot wait comfortably at the point of reception). This is all part of the general conversion of available space into staff and operations work areas, whether for desks, storage, or other uses, and contributes in no small part to the sense of crowding and limitation of office space.

In particular, there is limited space for departments to display informational materials and to conduct reception-area business (such as space for applicants in Human Resources). Most of these reception points seem, at least to us, not so much to convey a sense of efficiency in government and space use, which is appropriate, as a sense of clutter, constriction, and inefficiency, which is not.

CONCLUSIONS

The space allocations in the Newport Beach Civic Center are smaller than the benchmarks of comparable jurisdictions by between 11% and 25%, and space conditions are functionally and qualitatively below desirable levels. It is also the opinion of the survey team that the nature of workstations in use do not allow for adequate flexibility to meet technological, operational, or organizational changes and advancements that typically occur over time.

4. EXISTING BUILDING CONDITIONS

APPROACH

LPA, Inc., and its consultants have reviewed the existing Civic Center drawings made available by the City of Newport Beach. These drawings include 1945 City Hall, 1975 Council Chambers, 1984 Community Services building, and miscellaneous other additions.

They also conducted a site observation tour of the project area on March 7, 2002. This tour and resulting review consisted of a overview of the building shell as well as a walk-thru of the interior spaces. The buildings assessment is one of the first steps in the scope of services of this project to understand what improvements need to be made to the City Hall Campus which will better serve the citizens of Newport Beach. No testing of materials or removal of finished materials for observation of concealed construction was undertaken.

GENERAL BUILDING ASSESSMENT CONCLUSIONS

The evaluation of the buildings by LPA and its consultants is presented under separate cover in a document accompanying this report.

This evaluation represents the survey team's opinion of the conditions of the construction based on a general review of the drawings and on personal site observation. It is not in the scope of this report to evaluate code compliance extensively , or to determine probable damage and losses caused by seismic activity. In making a general review, it should be recognized that conditions and deficiencies might exist which the team has not been able to identify specifically. This review is not intended to preempt the technical or professional responsibility of the project design consultants in any way, and does not represent a warranty or guarantee on our part that other problems may not exist.

The findings are summarized generally as follows:

- Overall, the complex has responded to short-term needs without a master plan to guide the expansion and changing needs of the City. Many of the current problems with the work environments, space allocations, lack of adequate parking, and inefficiency in systems are related to this lack of planning.
- Confused circulation and a lack of a central lobby or entry point make many departments either too accessible to the public or difficult to find. Lack of control and security are an issue with all buildings.
- No building meets current practices for seismic design. Of the four buildings where seismic systems could be reviewed, all building would experience varying degrees of structural damage in a major seismic event.
- The existing Fire Station very likely does not meet the requirements of an essential facility and would likely sustain significant structural damage in a major seismic event.
- ADA violations are widespread with none of the buildings complying with ADA requirements.
- HVAC systems and Electrical systems are all individual-building-based. This causes energy inefficiency and is costly to maintain and service.

5. PROPOSED SPACE STANDARDS

INTRODUCTION

A space standard is defined as a specific square footage allocation for an operation, an item of equipment, or a functional area, to which is added a description of what functions can be performed in that area. Thus, for example, once the functions and activities of a person are known, it is possible to select a workstation and a square footage allowance that are appropriate for that person. The following pages contain a description of the proposed workstation and private office standards, and also related definitions.

Development of Space Standards

What is Included in the Standard

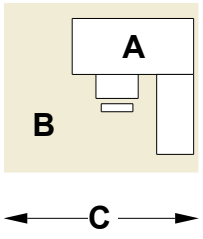
Equipment standards are based on the item footprint, workspace for operating the equipment (opening drawers, for example, and access to or around the equipment. Workstation standards are based on the work surface needs (equipment, papers, writing space, reference space, and so on, on the desk or work plane), on filing needs, on bookshelf requirements, and on guest seating. There is a distinction between enclosed (office) workstations and stations in "an open area."

- For enclosed offices, our standards are measured to the center line of the boundary walls of the room, and include no access space outside. It is assumed either that access will be directly off major circulation networks or that it will be off unit circulation areas provided with other open work rooms.
- For elements in an open area, an allowance for access is added to the workstation footprint in the space standard. Similarly, for panel-enclosed stations, we include an allowance for access in the standard (to account for inner circulation).

Access Around Workstations and Equipment

Access is the space around the footprint of the item of equipment and open workstations, and it is used to create side aisles into a cluster of desks, or to allow for opening file drawers, cabinet door swings, and so on. As noted, we include this in the standard allowance for panel-enclosed or for open workstations. The item allowance and access comprise the equipment or workstation standard, as illustrated in Exhibit 1.

EXHIBIT 1
An Open Workstation

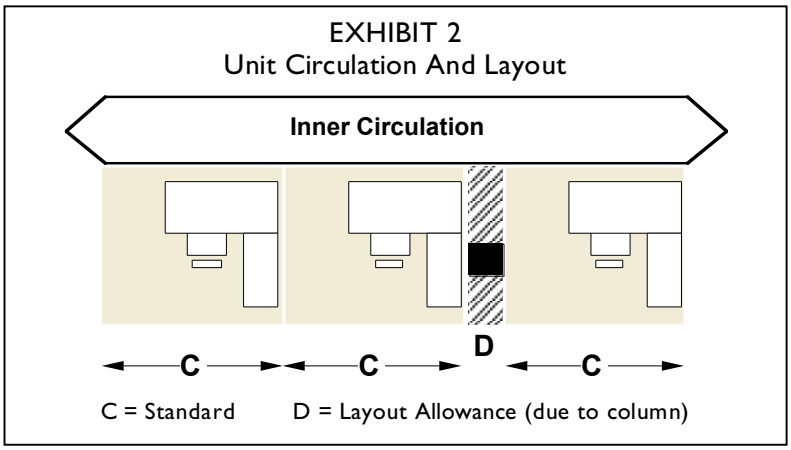


A = Item Footprint; B = Access;
C = A+B = Standard

Unit Circulation and Layout Factor

Unit circulation is a network of main aisles, generally passing in front of offices or to shared work areas. An additional factor sometimes must be added to account for layout variances, which in the amount of space required to account for non-rectilinear design, design features which are peculiar to a given plan or existing facility, including such factors as disproportionate number of offices, column placements, design flexibility, extra sense of openness, and so on. Generally, however, we include the layout factor in the unit circulation allowance rather than accounting for it separately.

Exhibit 2 illustrates these separate concepts: item space allowance, access, total standard, circulation, and layout. It shows a series of workstations, an area for "circulation," and an extra need for "layout" contingency due, in this case, to the location of a building column.



Computing Building Circulation, Core, and "Gross" Square Footage

The estimated net square footage needed equals the sum of the required standard areas, the unit circulation, and the other factors described above.

To estimate the size of (gross) building floors, it is necessary to add further allowances for the major circulation areas, mechanical areas, and building core. These additions are based on typical percentages encountered in actual building experience, and the ratio of total net to total gross square footage on an entire floor (or entire building) is the assumed "efficiency" of that floor (or building). See Appendix C for definitions.

Space Standards Presented Here

Space standards are presented for the following types of areas:

Workstations – Private Offices
Workstations – Traditional Open Stations
Workstations – Systems Furnishings
Open Area Equipment
Conference Rooms
Other Rooms and Areas

WORKSTATION STANDARDS — PRIVATE OFFICES

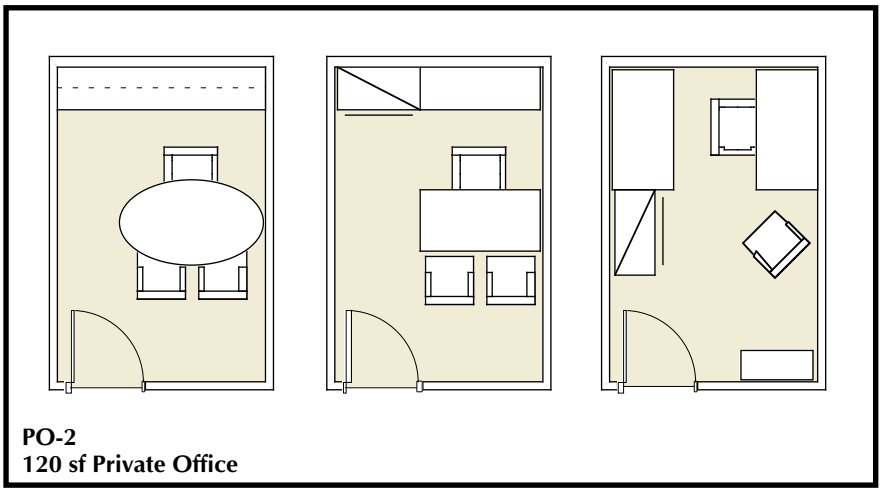
Private office standards are designated by the letters "PO" and are in most cases defined as having floor-to-ceiling walls and a door. The walls may be partially glass or may be equipped with pass-through openings, but such refinement considerations are noted in the program notations and not in the standard allowance itself.

We also provide for some private offices to be shared by two or more persons, and adapt the private office allocations to "shared" private office standards where needed. In this case we generally use the symbol "SPO" rather than "PO."

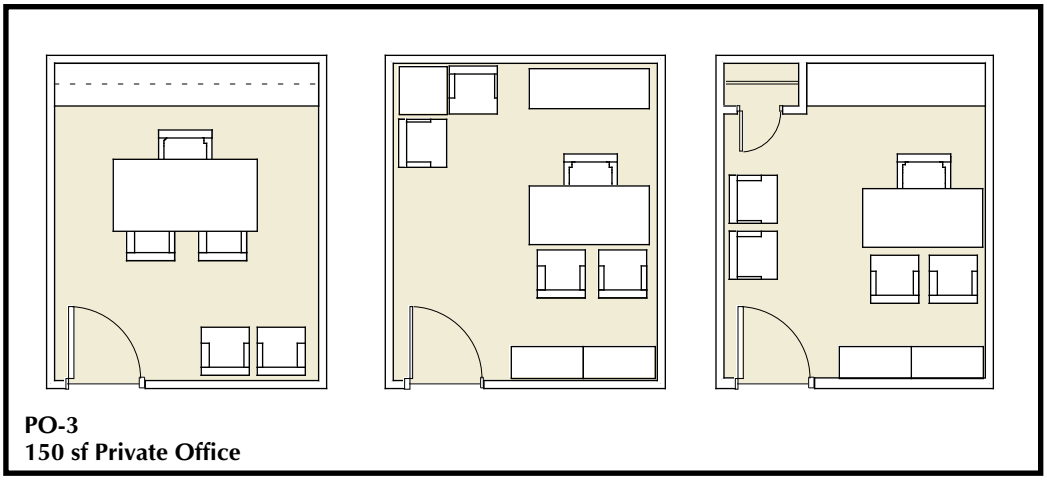
EXHIBIT
Private Office Standards

Symbol	Space Std Ftp't/Acc's/Tot'l	Typical Assignment	Typical Furnishings
PO-1	90 -- 90	Cubicle Office	Desk and chair, file, seating for 1-2 guest. Often may not be a full height office. This standard is rarely allocated, and is included for completeness in these standards.
PO-2	120 -- 120	Supervisor	Desk and chair, credenza or back table, file, seating for up to 2 guests.
PO-3	150 -- 150	Special cases	Desk and chair, credenza, 2 guests at desk, side seating for up to two persons.
PO-4	180 -- 180	Manager	Executive desk and chair, credenza, 2 guests at desk plus side seating for 2.
PO-5	210 -- 210	Special cases	Executive desk and chair, credenza, 2 guests at desk plus side seating for 2 or small conference table.
PO-6	240 -- 240	Division Head	Executive desk and chair, credenza, 2 guests at desk plus side seating for 4 or small conference table.
PO-7	300 -- 300	Department Head; City Manager	Executive desk and chair, credenza, 2 guests at desk, club seating for 4-6 or conference table.
PO-8	360 -- 360	Unassigned	Executive desk and chair, credenza, 2 guests at desk, club seating for 4 plus small conference table.
PO-9	400 -- 400	Unassigned	Executive desk and chair, credenza, 2 guests at desk, club seating for 4 plus conference table.

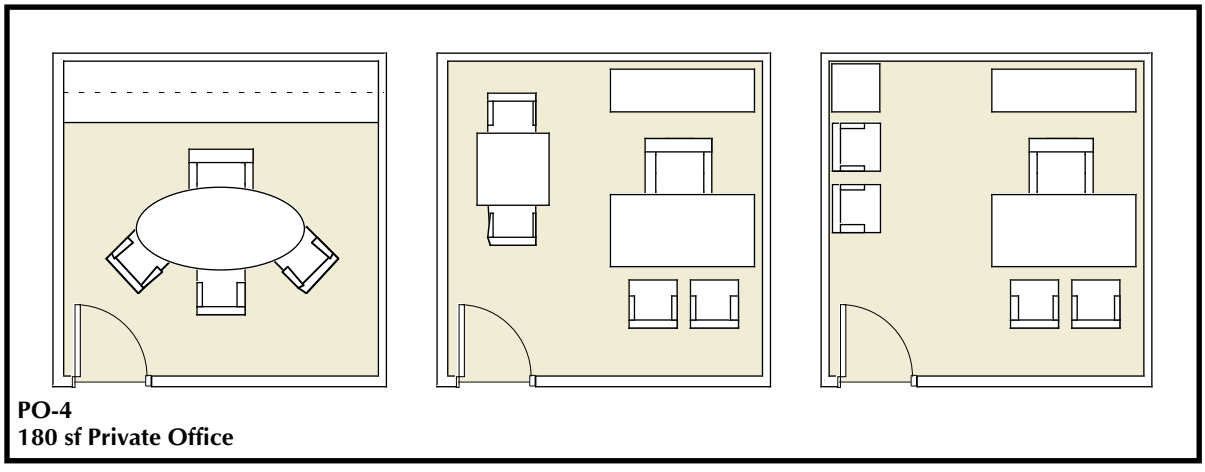
Illustration – Private Office Standards



PO-2
120 sf Private Office

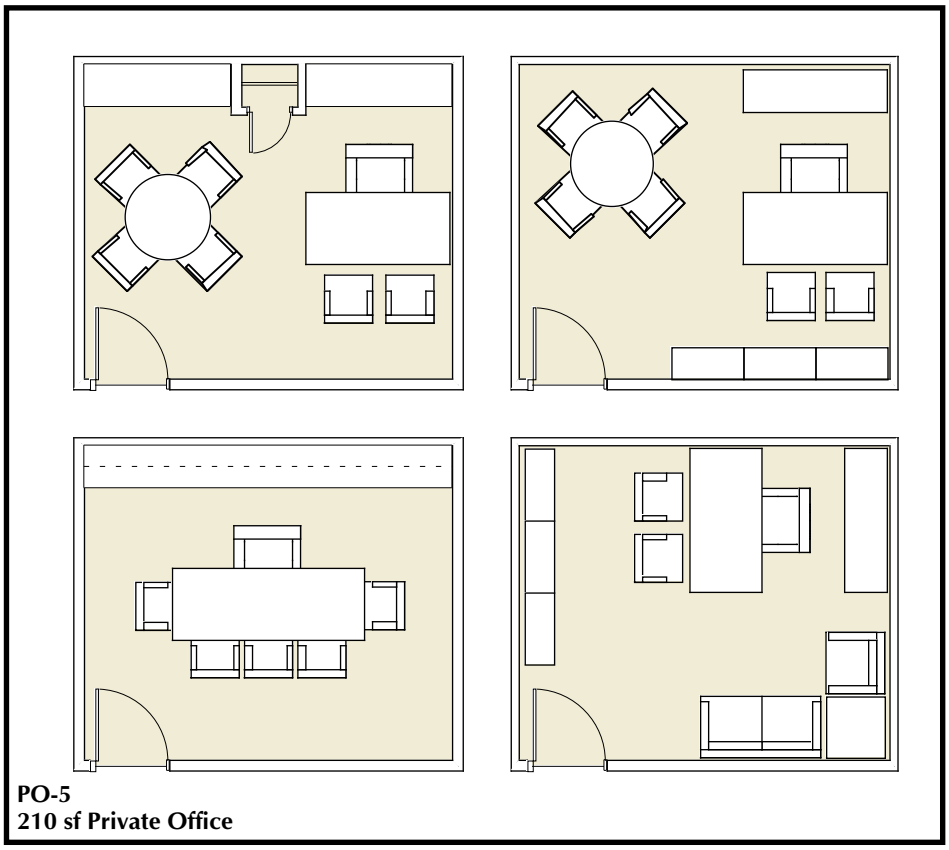


PO-3
150 sf Private Office

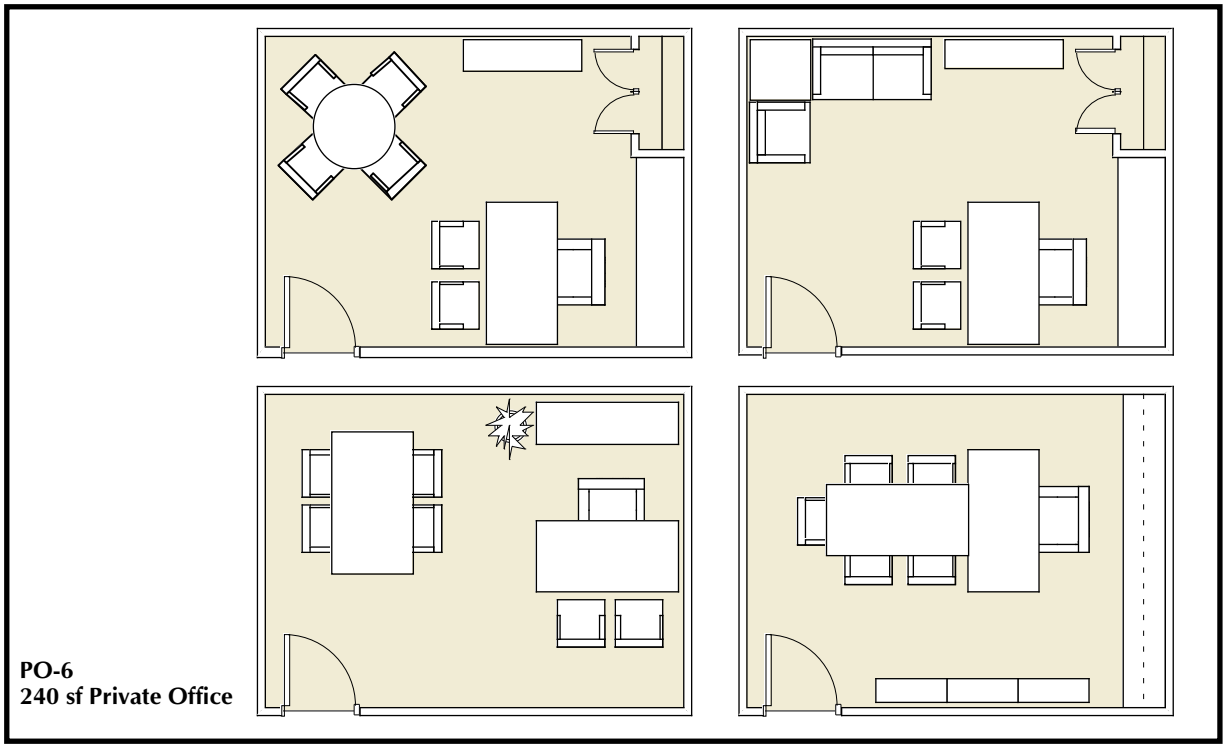


PO-4
180 sf Private Office

Illustration – Private Office Standards

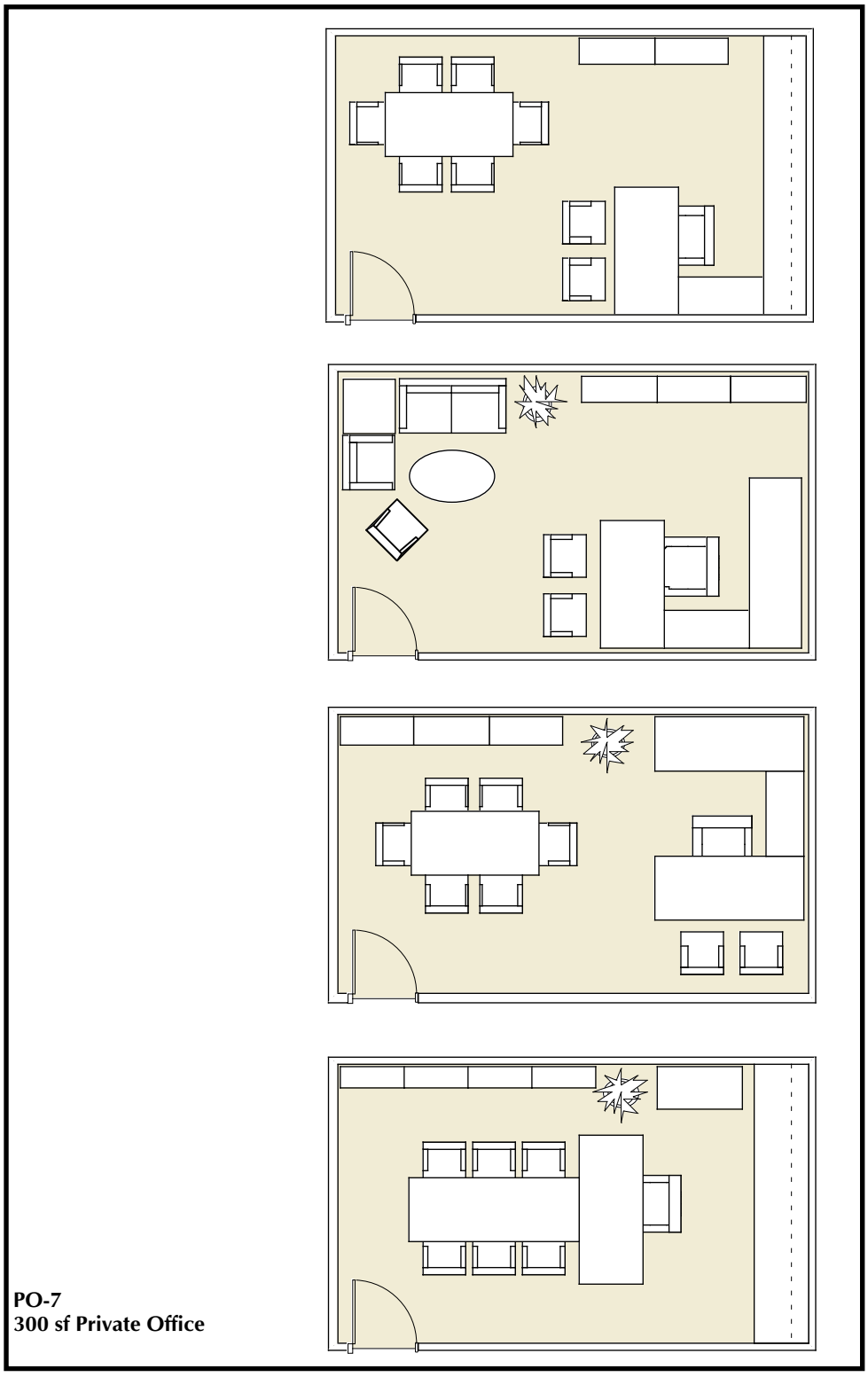


PO-5
210 sf Private Office



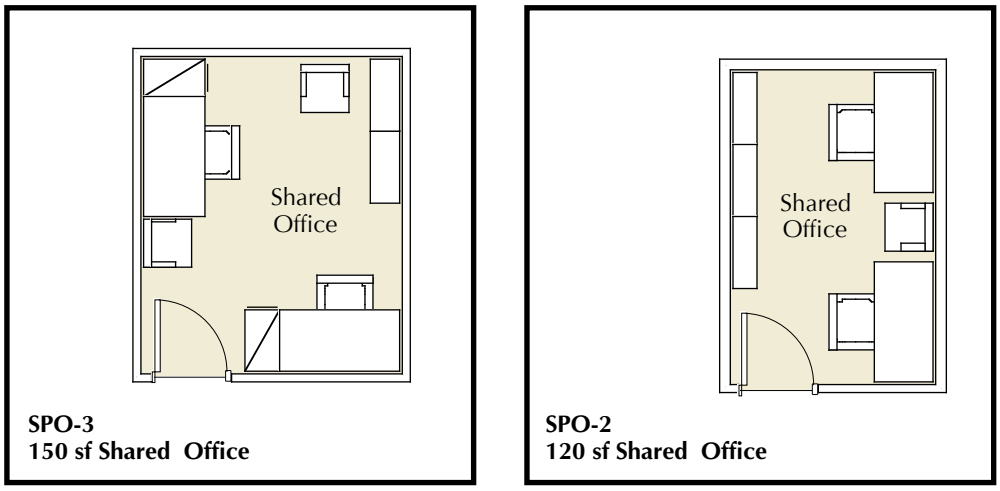
PO-6
240 sf Private Office

Illustration – Private Office Standards



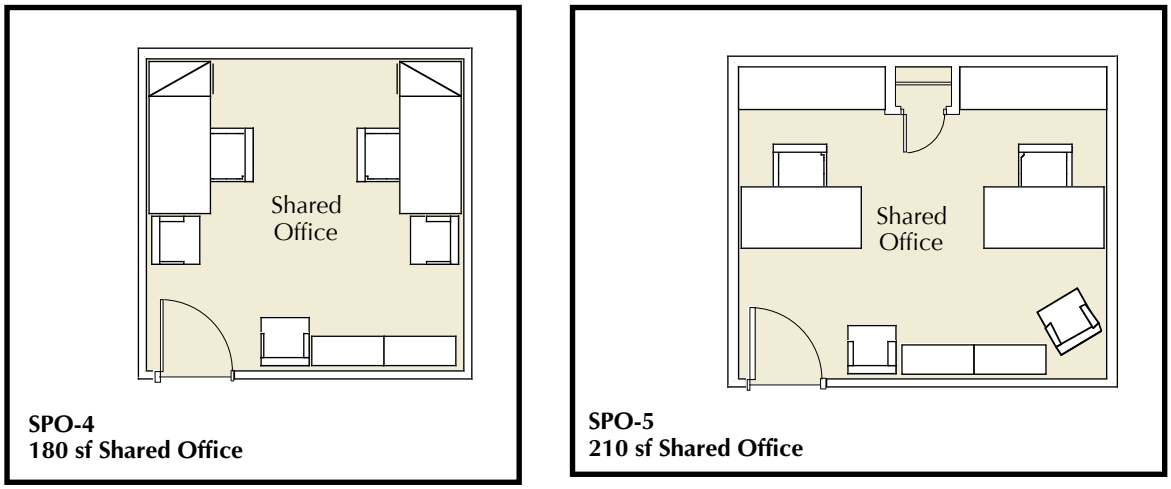
PO-7
300 sf Private Office

Illustration – Private Office Standards – Shared Offices



SPO-3
150 sf Shared Office

SPO-2
120 sf Shared Office



SPO-4
180 sf Shared Office

SPO-5
210 sf Shared Office

WORKSTATION STANDARDS — TRADITIONAL OPEN WORKSTATIONS

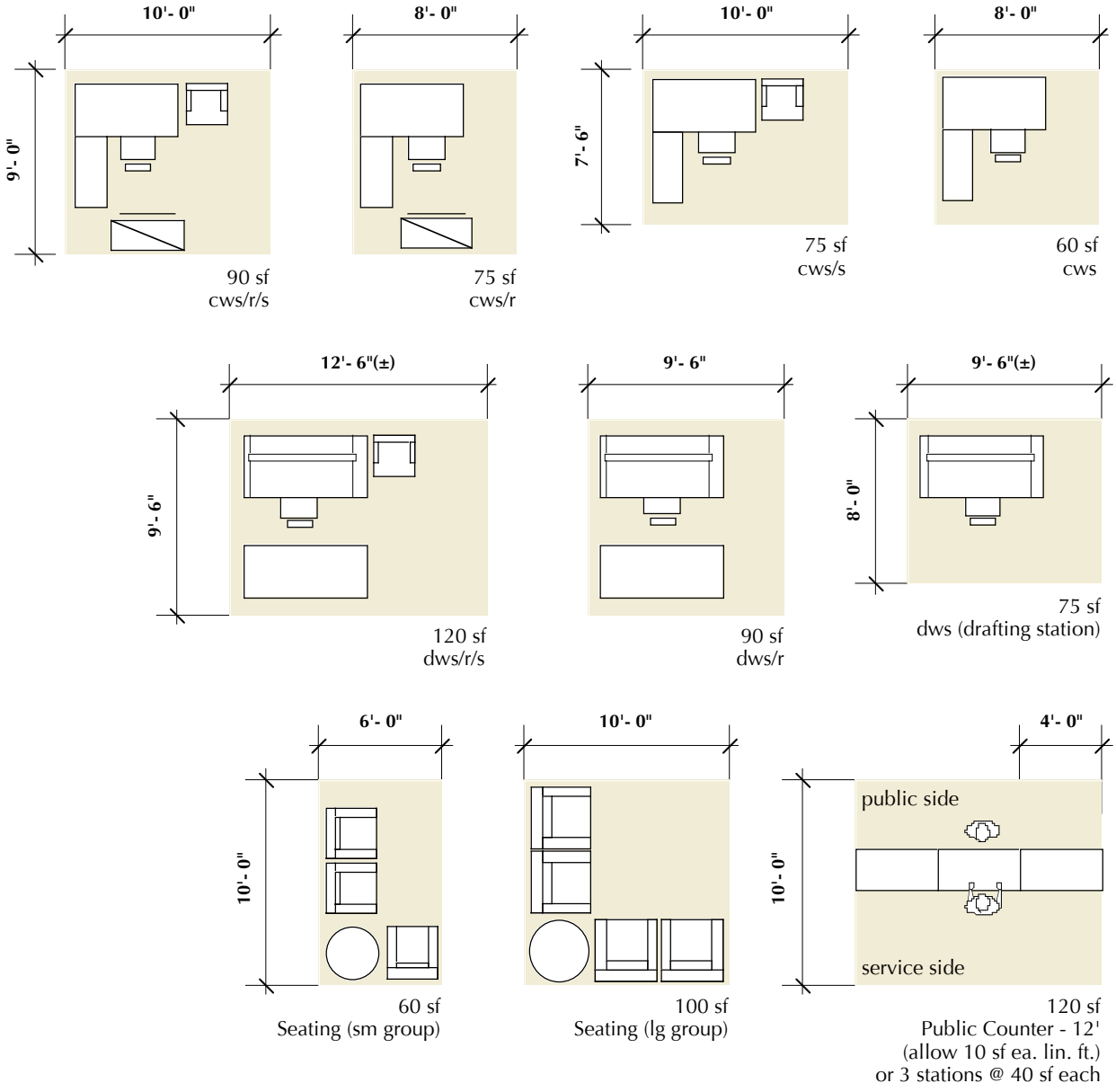
Traditional open stations are defined as having no integral panels as part of the stations, but are desks and work units which are found in traditional offices. These stations may have surrounding panels, for privacy or acoustic reasons, but traditional furniture is assumed. Open stations usually occur in groups of several stations or in conjunction with a block of filing or other unit equipment items. In some cases, the program may designate two (or more) open stations to be located in a room, as in a shared office.

The following Exhibit summarizes the space standards allocated to traditional open area workstations. Standards for System Work Stations are presented following.

EXHIBIT
Traditional Open Workstation Standards

Symbol	Space Std Ftp't/Acc's/Tot'l			Typical Assignment	Typical Furnishings
cws	30	30	60	Staff with std. desk	Clerical work station (cws), with lowered side return for terminal or typewriter. May include desks without a return, in some cases.
ews	30	30	60	Staff with std. desk	Work station (executive work station) without a typing or equipment return (double pedestal desk) or else with a return at executive height.
/r	10	5	15	as required	Indicates the addition of a reference unit (back table or lateral file) behind and as part of a work station.
/s	5	10	15	as required	Indicates the addition of a guest side-chair beside and as part of a work station.
ews/r	40	35	75	Staff with exec. desk	Executive work station (see "ews") with back unit.
sws	20	25	45	Staff with small desk	Small work station (desk 36" - 48" wide); may be a single-pedestal desk.
dws	40	35	75	Staff with drafting stn	Drafting table and chair.
dws/r	60	30	90	Staff with large drafting station	Drafting table, reference unit or work desk, and staff chair. Some plan storage at the station may be included.
uws	60	30	90	"U"- workstation	"U"-station for Records Clerks, including a desk, computer work station, and side surface for reference materials, radio, etc.

Illustration
Traditional Open Workstation Standards



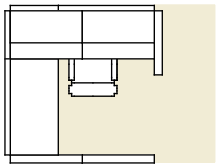
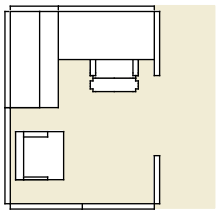
WORKSTATION STANDARDS — SYSTEM WORK STATIONS

The enclosures in an open furniture system are generally structural; that is, the panels carry the weight of surfaces, storage modules hung on the wall, and so on. The panels usually also have built-in chase-ways for electrical and communications lines (data and telephone), as part of an integrated wire management design. System work stations are designated by "en" which begins the symbol for the standard. The "en" is followed by a letter, which indicates the general size category for the work-station. The space provides for the possible inclusion of one or more back tables, lateral files, extended side reference surfaces, side chairs, or other components as shown.

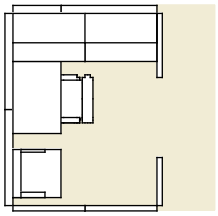
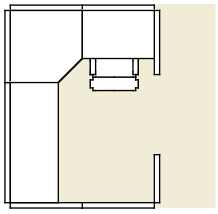
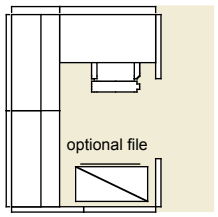
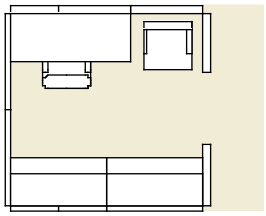
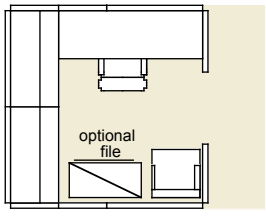
Therefore, there are alternative configurations that a given space standard can have, so that, for example, an "en-c" space allowance can accommodate different work requirements. Also note that these allowances are generic, in that no one vendor is used. Different vendors may have various dimensions and components available in a system line. The following Exhibit identifies the range of features that each of these standards might have, noting total surface size, length of shelving and filing, and so on. This is followed by additional illustrations showing conference spaces and reception stations developed with systems furnishings, and other possible allocations.

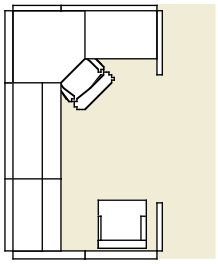
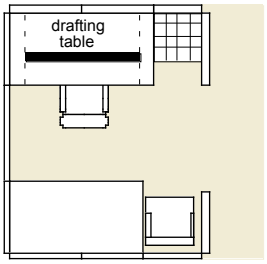
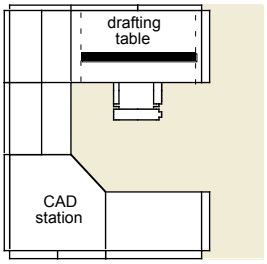
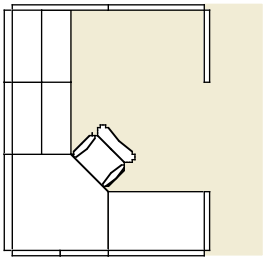
EXHIBIT

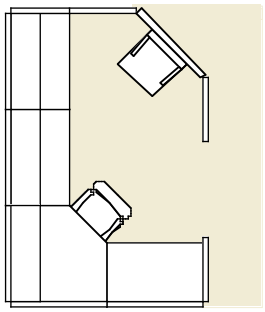
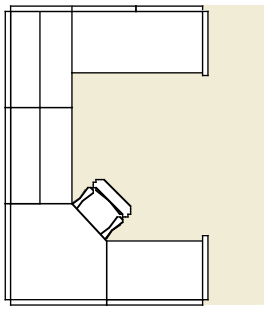
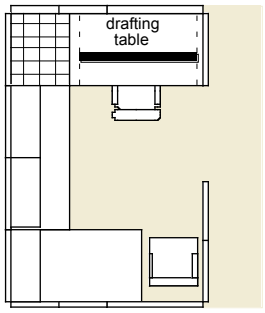
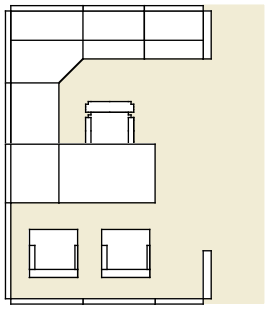
Analysis Of Open System Standards
(Showing Various Alternative Configurations)

Symbol Used	Total SF*	Encl. SF	Surf. SF	Peds (No.)	Shelf LF	Files LF*	Seats (No.)	Illustration of the Standard	Reference & Notes
en-a	58.5	36	20	1-2	6	—	—		A standard clerical desk
en-b	76.5	48	18	1-2	4	—	1		B compare to cws/s

* This is the total typical "cost" of space for this station, when an access aisle allowance is added. The actual station size is the "Encl. SF" in the next column.
* Not counting files in pedestals.

Symbol Used	Total SF*	Encl. SF	Surf. SF	Peds (No.)	Shelf LF	Files LF*	Seats (No.)	Illustration of the Standard	Reference & Notes
en-b	76.5	48	17.5	1-2	6	—	1		C an alternative config'n for B
en-b	76.5	48	24	1-2	—	6±	—		D shown with a data surface
en-b	76.5	48	34	1 or more in lieu of files	8	8-16	—		E compare to cws/r
en-c	93.5	64	28.5	1-2	8	8-16	1		F compare to cws/r/s a return is an option
en-c	93.5	64	31 +top of file	1-2	8	6-12 or more	1		G

Symbol Used	Total SF*	Encl. SF	Surf. SF	Peds (No.)	Shelf LF	Files LF*	Seats (No.)	Illustration of the Standard	Reference & Notes
en-c	94.5	60	28	1-2	7	6-8	1		H like D, but longer for a guest chair
en-d	115.5	80	33	1-2	5	roll file	1		I drafting stations are less flexible when smaller than this
en-d	115.5	80	51	1	10	0-6 +roll file	1		J shown with data or CAD sur-face
en-d	115.5	80	39.5	1-2	8 opt.	6-12 opt.	— opt.		K with a deeper data work sur-face than D or H

Symbol Used	Total SF*	Encl. SF	Surf. SF	Peds (No.)	Shelf LF	Files LF*	Seats (No.)	Illustration of the Standard	Reference & Notes
en-e	137.5	96	43	1-2	12	6-12	1		L longer than K to fit the guest chair better (shown with shelv-ing)
en-e	137.5	96	56.8	2	12	11-20	—		M (see L) added sur-face and files replace the guest chair
en-e	137.5	96	46.5	1-2	12 may also re-place side chair	12 +roll file may also re-place side chair	1		N larger ver-sion of I or J guest chair is an option
en-e	137.5	96	36	2-3	8	6	2		O smallest office con-figuration (see P)

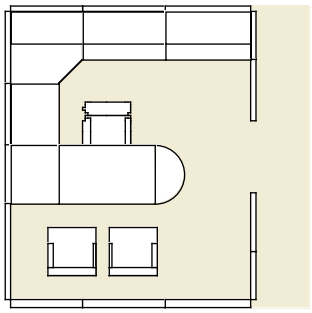
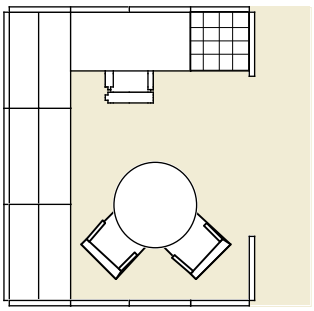
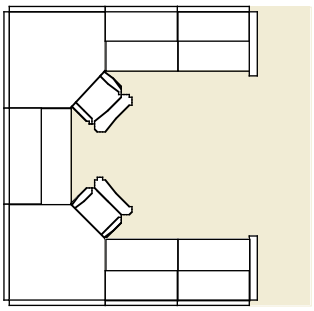
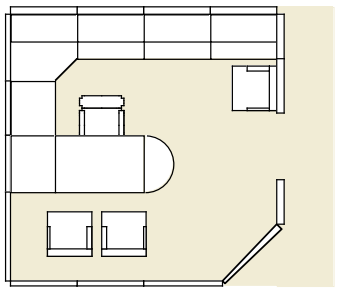
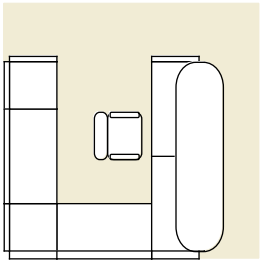
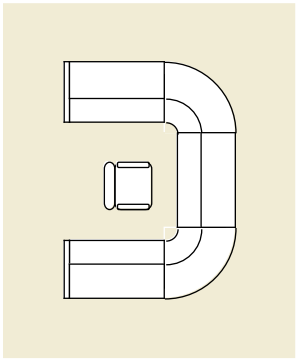
Symbol Used	Total SF*	Encl. SF	Surf. SF	Peds (No.)	Shelf LF	Files LF*	Seats (No.)	Illustration of the Standard	Reference & Notes
en-f	162.5	120	42	1-3	10	10-12	2		P much more open than O for a small addition of space
en-f	162.5	120	49	1-2	12	12 +roll file	2		Q small office version of a plan-review station
en-f	162.5	120	66 33 each	2-4 1-2 each	20 10 each	12-24 6-12 each	— can add 2 but cuts surf and files		R can be assigned to one person needing a large data station
en-g	187.5	144	52.5	2-3	12	6-18	2-3		S larger version of P with an added guest chair

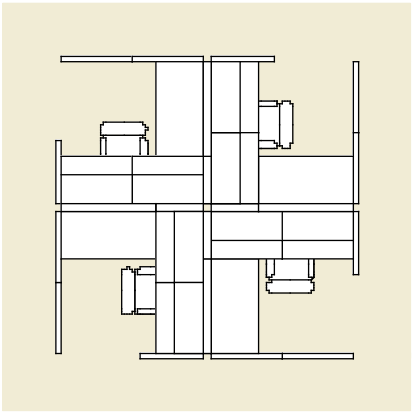
Illustration
System Standards – Miscellaneous Elements



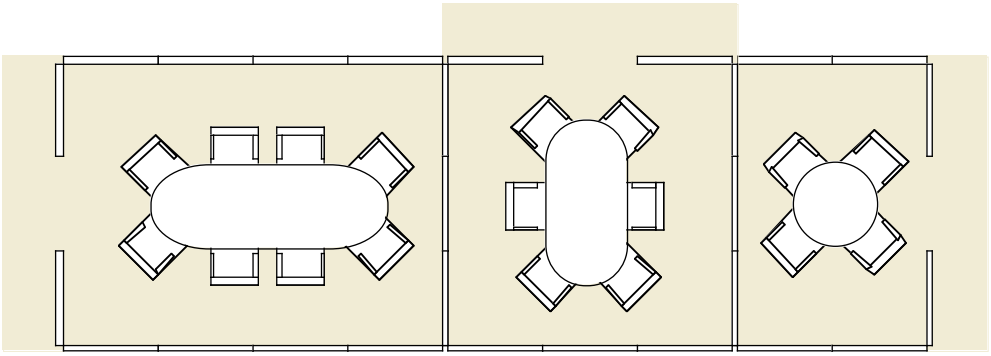
en/reception
115 sf allowance
64 sf inside



en/reception
185 sf allowance (colored)
72 sf station footprint
48 sf inside



en/pinwheel
300 sf allowance
145 sf inside (total)



en/conf—8 seats
240 sf allowance
192 sf inside

en/conf—6 seats
190 sf allowance
144 sf inside

en/conf—4 seats
135 sf allowance
96 sf inside

OPEN AREA EQUIPMENT AND RELATED STANDARDS

There are three primary considerations in determining the space requirements for a particular piece of equipment: (1) the area occupied solely by the equipment item, (2) the space required for the equipment user or operator, and (3) the need for access to the item.

Exhibit 4 outlines the equipment dimensions and square footage allocations for frequently used items. The total space requirement of each piece of equipment of this nature is determined by increasing the actual footprint area of the item to allow for access and use. This factor has been determined from previous experience in developing layouts for similar facilities; space for non-standard equipment is calculated on an individual item basis.

EXHIBIT 4
Typical Standards For Open Area Equipment

Item	Symbol (If Any)	Typical Item Size	Standard Base	Standard Access	Total
Bookcase	bc	36" x 12"	3	7	10
Card File	file	18" x 28"	4	6	10
Coat Rack	coat or ctrk	24" x 48"	8	12	20
File Cabinet—Traditional File	file or sf	18" x 28"	4	6	10
File Cabinet—5-drawer	f-5	18" x 28"	4	6	10
File Cabinet—Lateral File	lf	36" x 18"	4	6	10
		42" x 18"	5	10	15
		48" x 18"	6	14	20
Side Chair	chair	24" x 24"	4	11	15
Storage Cabinet	stg cab	36" x 18"	5	10	15
Table	table	60" x 30"	12	28	40
Table—Extra Access Space	table	60" x 30"	12	48	60
Typewriter Stand/Cart	type	12" x 24"	2	8	10
		24" x 30"	5	10	15
Guest Seating—4 lounge	seat-2	—	80	20	100
Guest Seating—2-3 chairs	seat-1	—	40	20	60
Coffee Station—counter	cof-1	—	10	20	30
Coffee Station—enclosable	cof-2	—	15	35	60

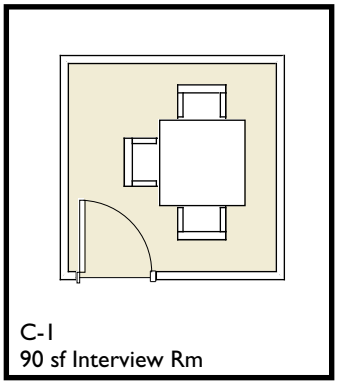
CONFERENCE ROOM STANDARDS

The size of conference rooms depends on (a) the number of persons seated at the table, (b) the size of the table (to accommodate bulky items, for example), (c) the possible requirement for spectators seated away from the table, and (d) presentation or display space. The last may include such needs as a projector area at the back of the room as well as a screen and presentation area with podium and such at the front. The standards we have used in this report are summarized in Exhibit 5.

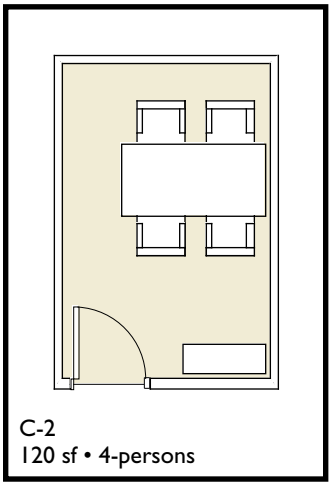
EXHIBIT
Summary Of Conference Room Standards

Space Symbol	Capacity Std	Type of Conference Room	Typical Furnishings
C-1	90	2-Person Interview Room	Table, 2 or 3 chairs.
C-2	120	2-4 Person Interview	Table, 2-4 chairs.
C-3	180	6 Person Conference	8 ft table, 6 chairs, possible writing surface on wall.
C-4	240	8 Person Conference	8 ft table, 8 chairs, possible tack boards or writing surface. Table can seat 10, but crowded.
C-5	300	8-12 Person Conference	12 ft table, 12 chairs. Can add library at one end and seats 8, or add presentation area and room seats 8.
C-6	360	12-16 Person Conference	12 ft table, 12 chairs, presentation area at end of room. Can accommodate 16 persons if presentation space is converted to conference space.
C-7	420	16-20 Person Conference	16 ft table, 16 chairs, presentation area at end of room. Can accommodate 20 persons if presentation space is converted to conference space.
C-8	480	18-22 Seat Conference Room	20 ft table, 18 chairs, presentation area at end of room; cabinet (possibly with coffee service) at other end of room. Can accommodate 22 persons if presentation space is converted to conference space.
C-9	560	22 Person Conference - 14 at main table - 8 at side seating	Conference seating 14 at table, plus 6-8 persons at the side, with a presentation area at the end of the room; and cabinet (possibly with coffee service) at other end of room. Seats 16 at main table if no cabinet.
C-10	640	28 Person Conference - 18 at main table - 10 at side seating	Conference seating 18 at table, plus 8-10 persons at the side, with a presentation area at the end of the room; and cabinet (possibly with coffee service) at other end of room. Seats 20 at main table if no cabinet.
C-11	720	34 Person Conference - 22 at main table - 12 at side seating	Conference seating 22 at table, plus 10-12 persons at the side, with a presentation area at the end of the room; and cabinet (possibly with coffee service) at other end of room. Seats 24 at main table if no cabinet.
C-12	800	34-Person Conference Divisible : 8-10 person 20-22 person	Modular combination of C-9 and C-4 conference rooms which open into one large room using room-divider partitions. Full room seats 24 at the main table and 10 persons at the side. Cabinet at one end of room.

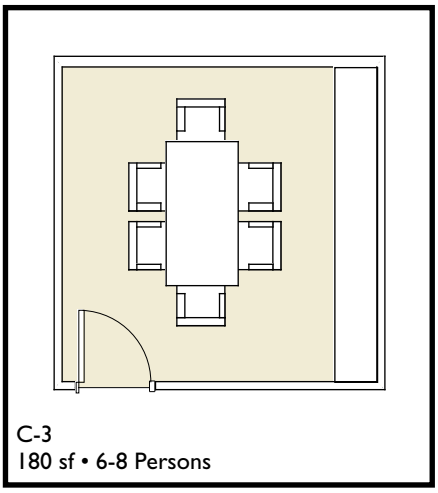
Illustration
Small Conference Rooms



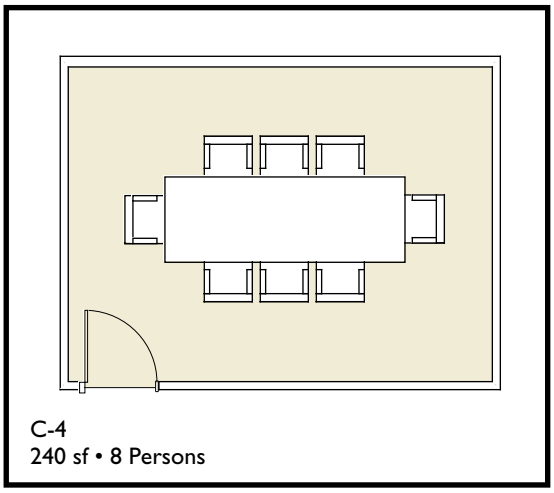
C-1
90 sf Interview Rm



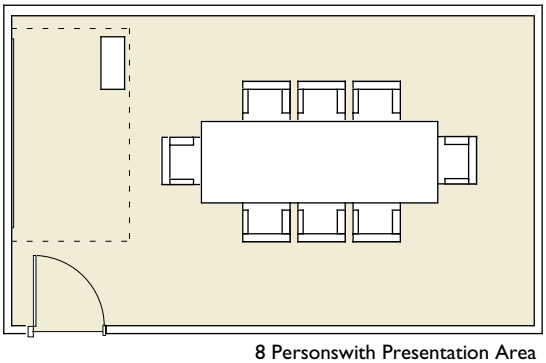
C-2
120 sf • 4-persons



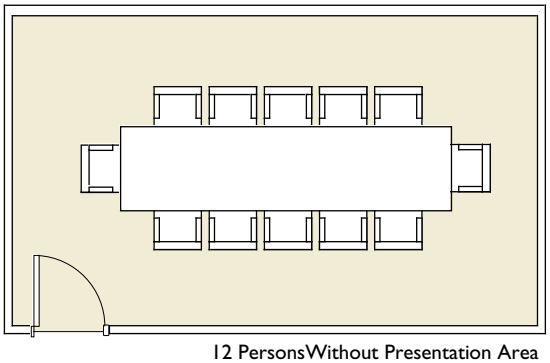
C-3
180 sf • 6-8 Persons



C-4
240 sf • 8 Persons



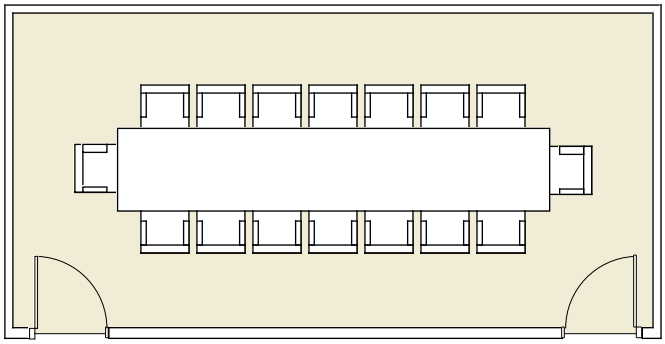
8 Personswith Presentation Area



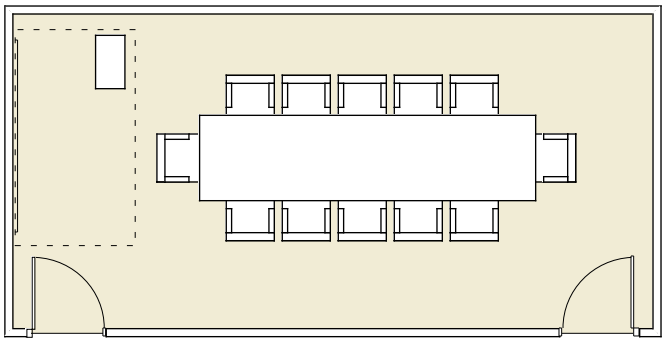
12 PersonsWithout Presentation Area

C-5
300 sf • 8-12 Persons

Illustration
Medium Conference Rooms

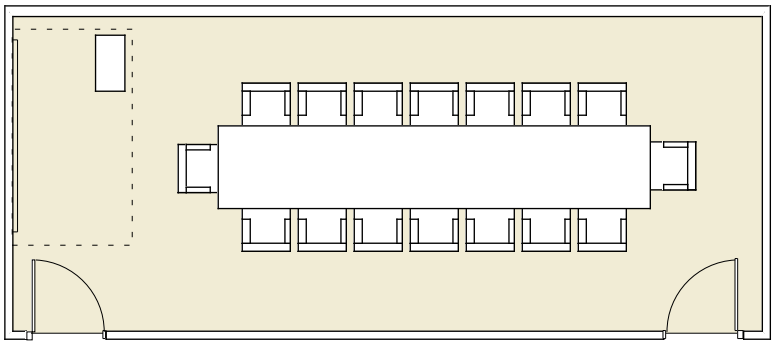


16 PersonsWithout Presentation Area



12 PersonsWith Presentation Area

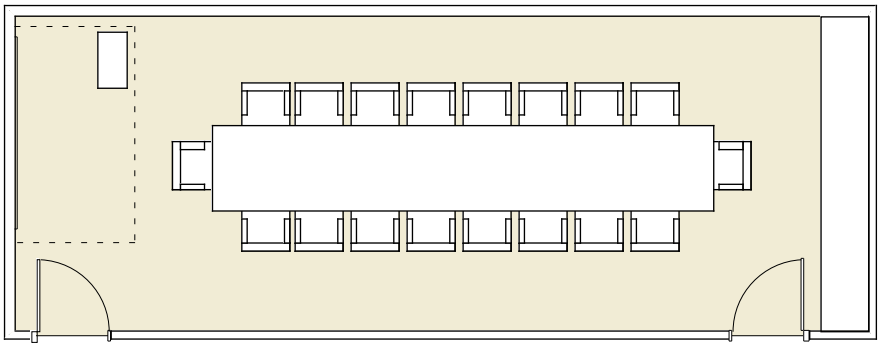
C-6
360 sf • 12-16 Persons



16 PersonsWith Presentation Area
20 PersonsWithout Presentation Area

C-7
420 sf • 16-20 Persons

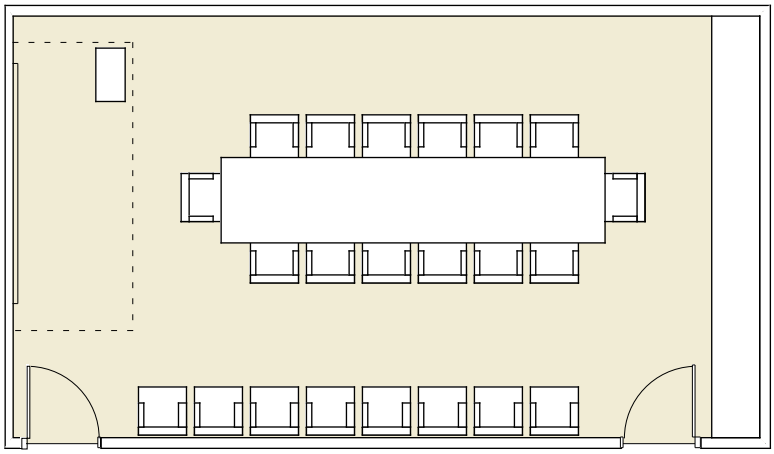
Illustration
Large Conference Rooms I



18 PersonsWith Presentation Area

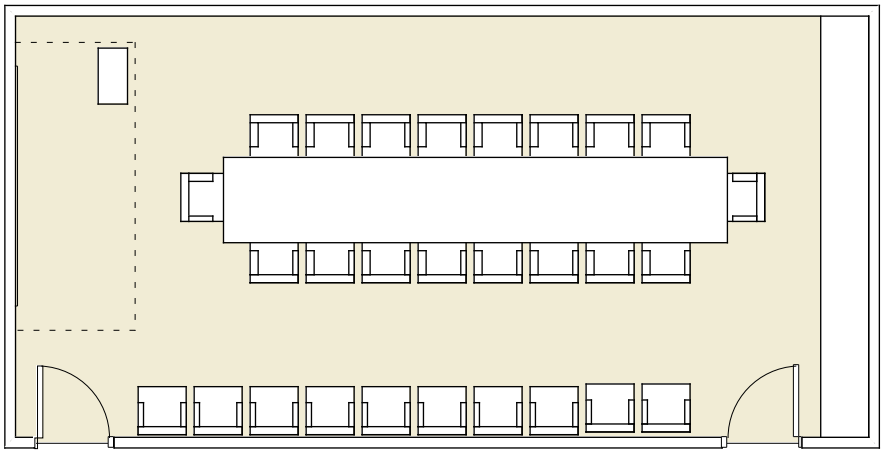
22 PersonsWithout Presentation Area

C-8
480 sf • 18-22 Persons

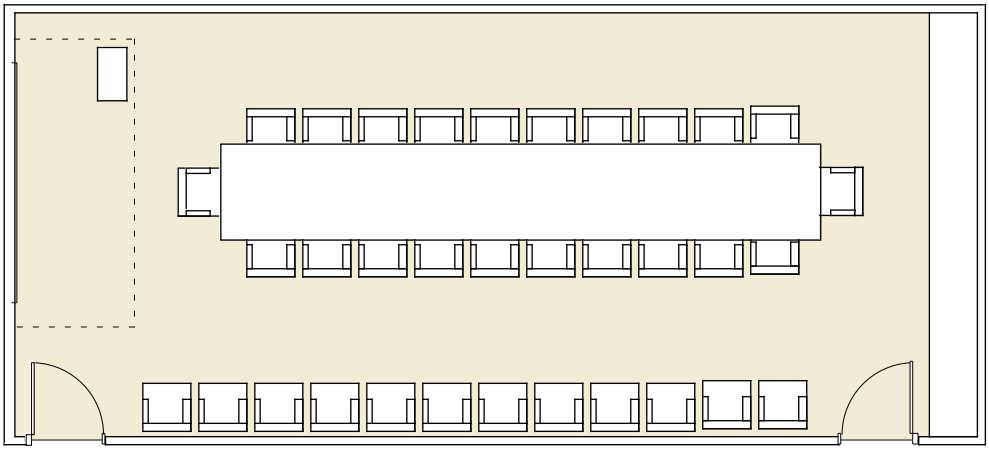


C-9
560 sf • 14 Persons at Table (16 Without Built-in Cabinet); 6-8 Side Seating

Illustration
Large Conference Rooms II

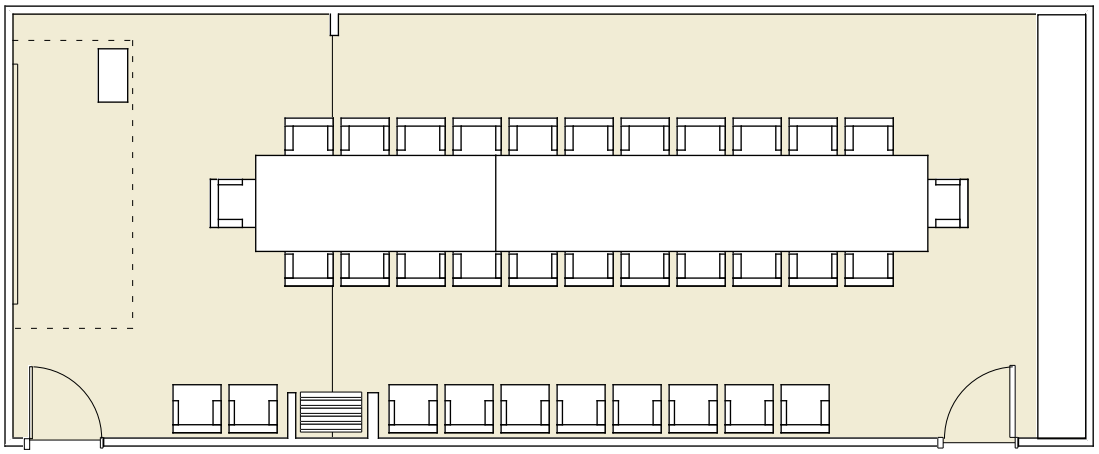


C-10
640 sf • 18 Persons at Table (20 Without Built-in Cabinet); 8-10 Side Seating

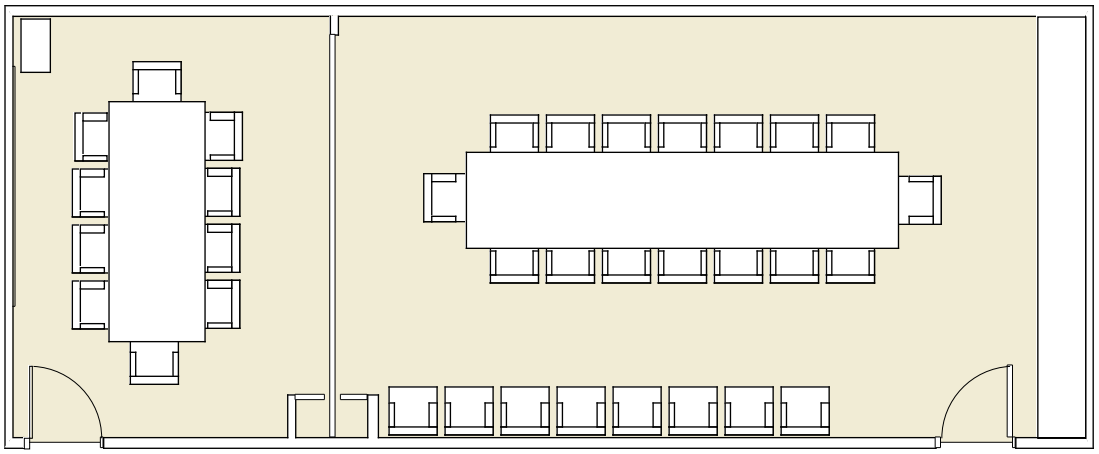


C-11
720 sf • 22 Persons at Table (24 Without Built-in Cabinet); 10-12 Side Seating

Illustration
Divisible Conference Room



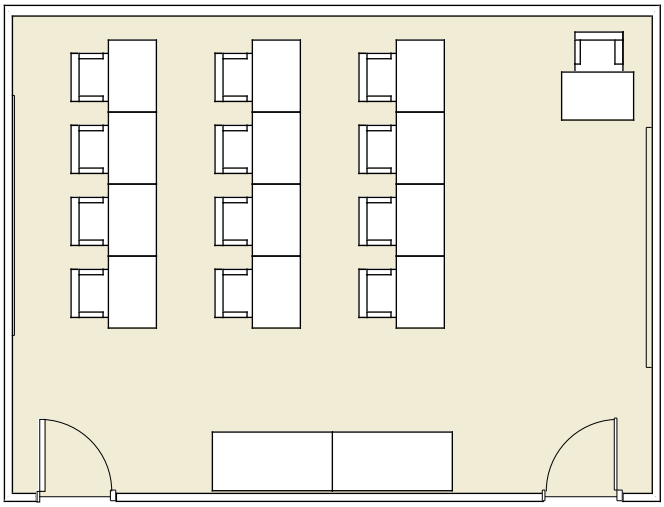
24 Persons at Table with 10-11 Side Seating



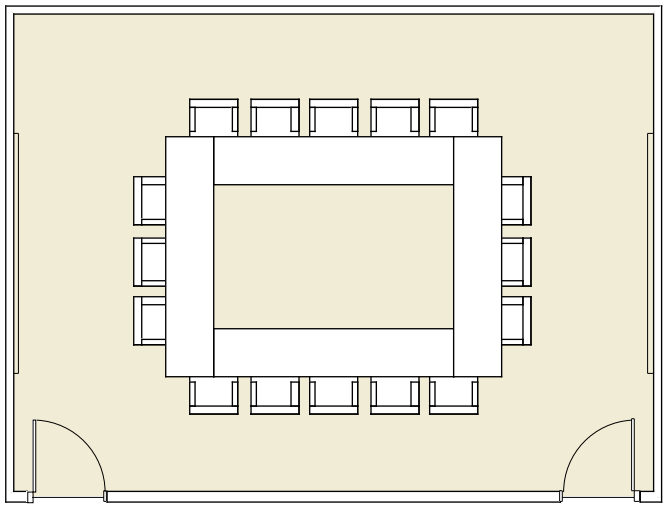
16 Persons at Table #1 with 8-9 Side Seating • 8-10 Persons at Table #2

C-12
800 sf • Divisible Conference Room

Illustration
Training or Meeting Room 1



Computer Training Arrangement



Symposium Arrangement

Training or Symposium Room
540 sf • 12-15 Persons

Illustration
Training or Meeting Room II

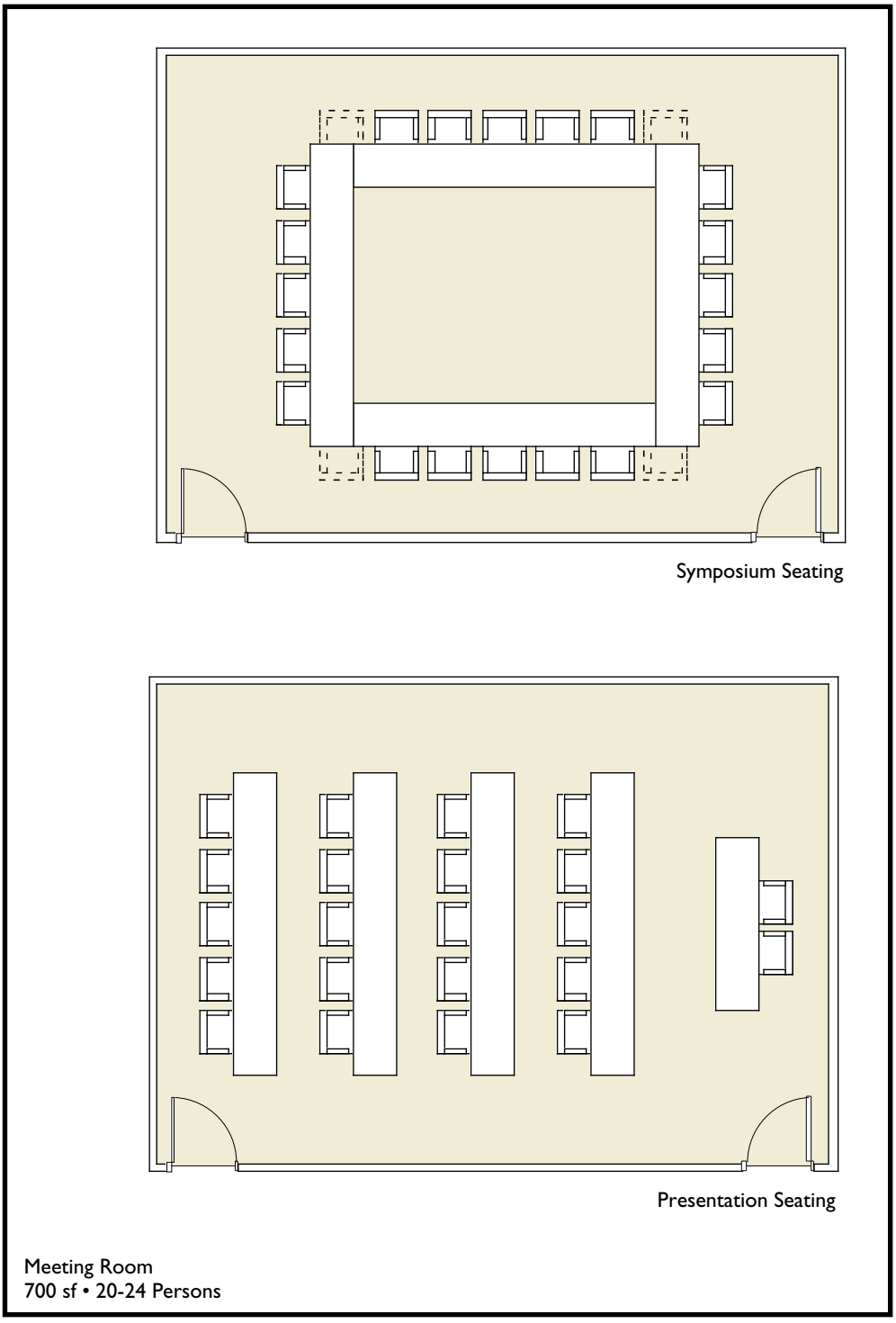
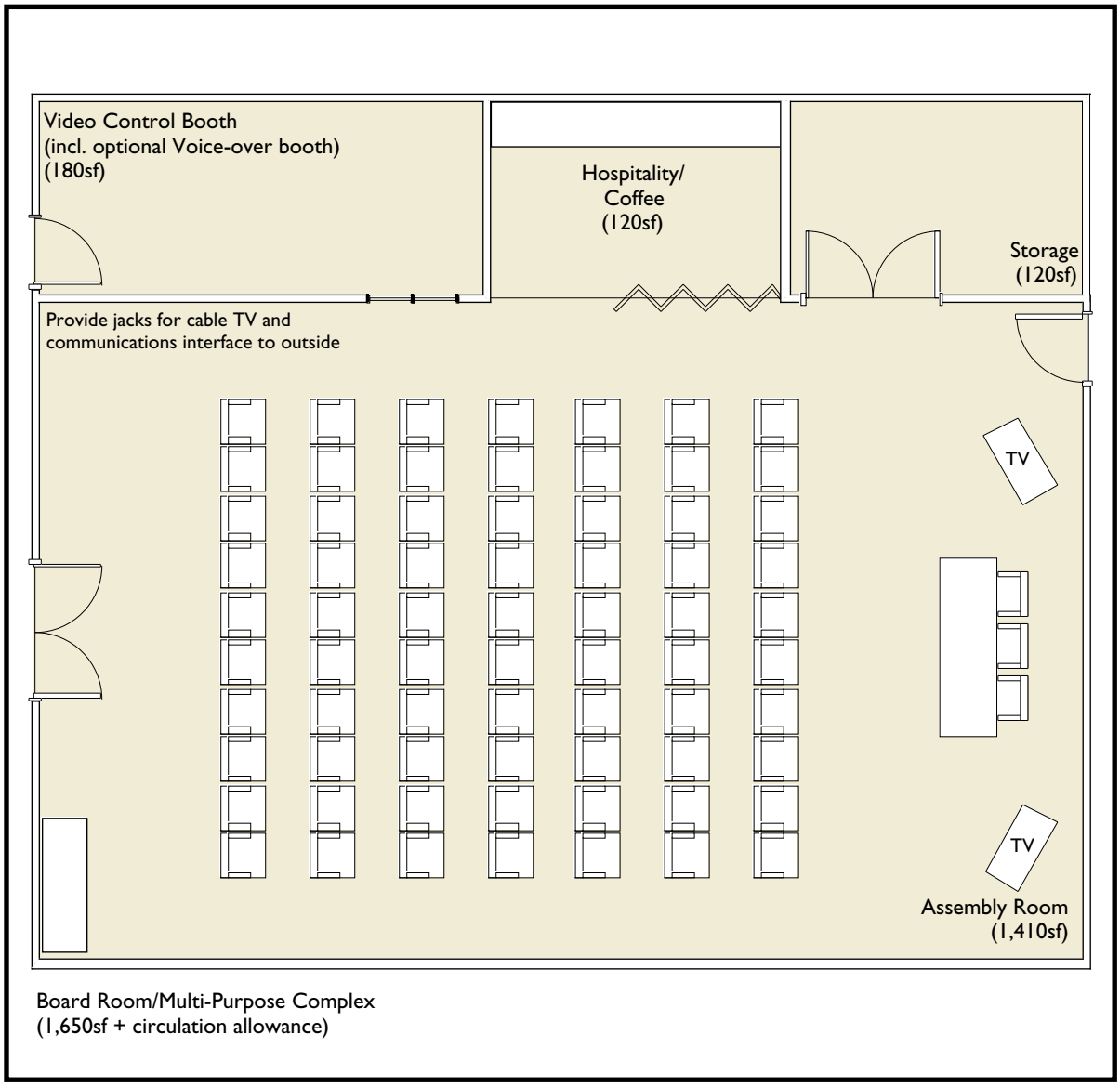
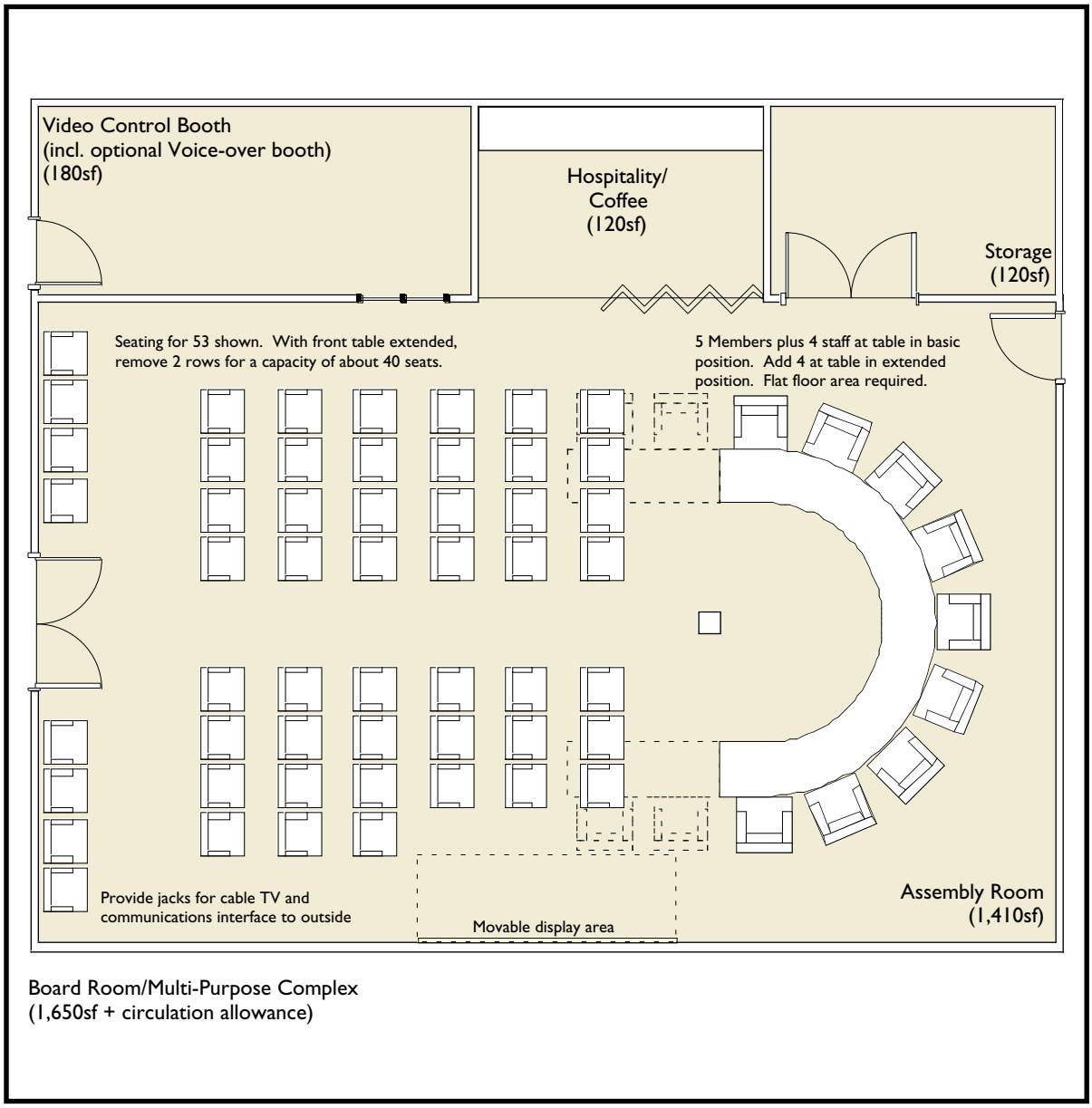


Illustration
Sample Assembly and Meeting Room
(Flat Floor Multi-use Room)



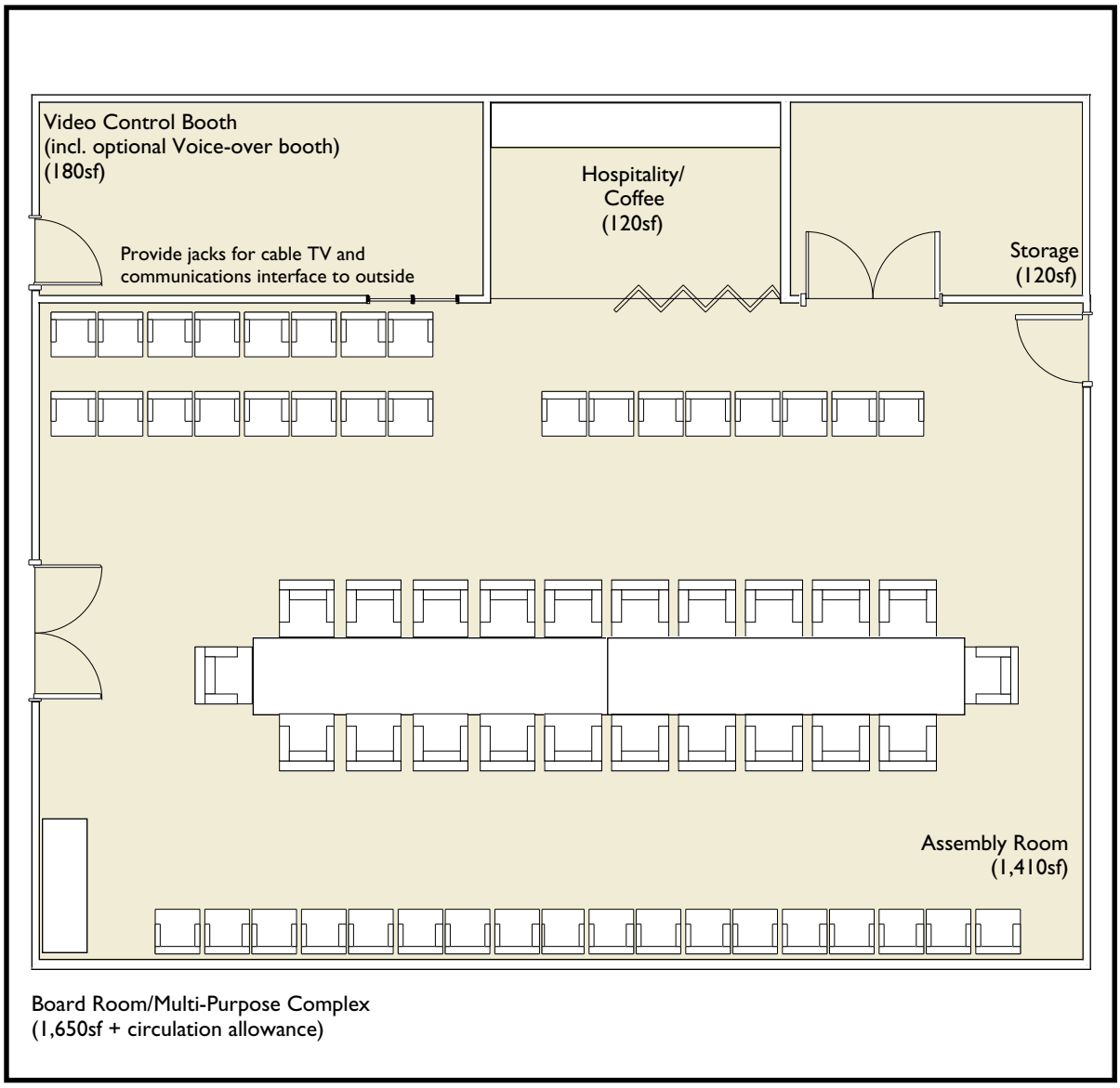
Audience seating
for 70 is shown.

Illustration
Sample Small Board and Commission Meeting Room
(Flat Floor Multi-use Room)



Audience seating
for 53 is shown.

Illustration
Sample Medium Board and Commission Meeting Room
(Flat Floor Multi-use Room)

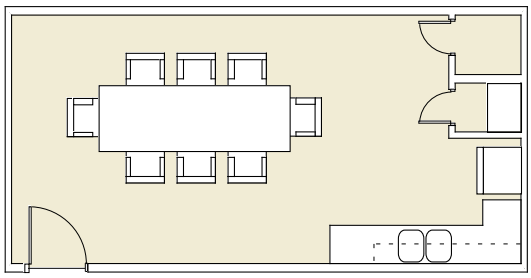


Audience seating
for 42 is shown.

STANDARDS FOR OTHER ROOMS

Other rooms, such as copy rooms, computer rooms, mail rooms, storage rooms, and so on are sized based on individual content needs. That is, standard requirements for the workstations, unit equipment, counters, and other items in the room are added together, with an allowance for extra circulation (when needed) and for the use of the items. The need for added circulation allowance is typically based on test layouts to assure an efficient yet workable standard is developed. As with other rooms is this project, we have generally sized the (smaller) rooms in multiples of 60 sq. ft., to allow the design and layout process greater flexibility and modularity. Illustrations of standards and assumptions for selected "other rooms" appear below.

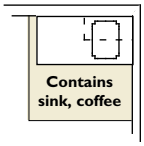
Typical Break Room



360 sf
Typical Breakroom

Typical Coffee/Service Counter (small area)

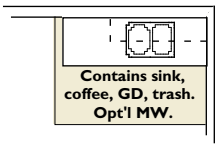
(standard "cof-2")



20 sf
Coffee (type 2)

Typical Coffee/Service Counter

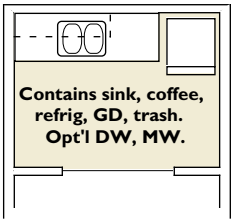
(standard "cof-3")



30 sf
Coffee (type 3)

Typical Coffee/Service Alcove

(standard "cof-4")



60 sf
Coffee (type 4)
shown as an alcove

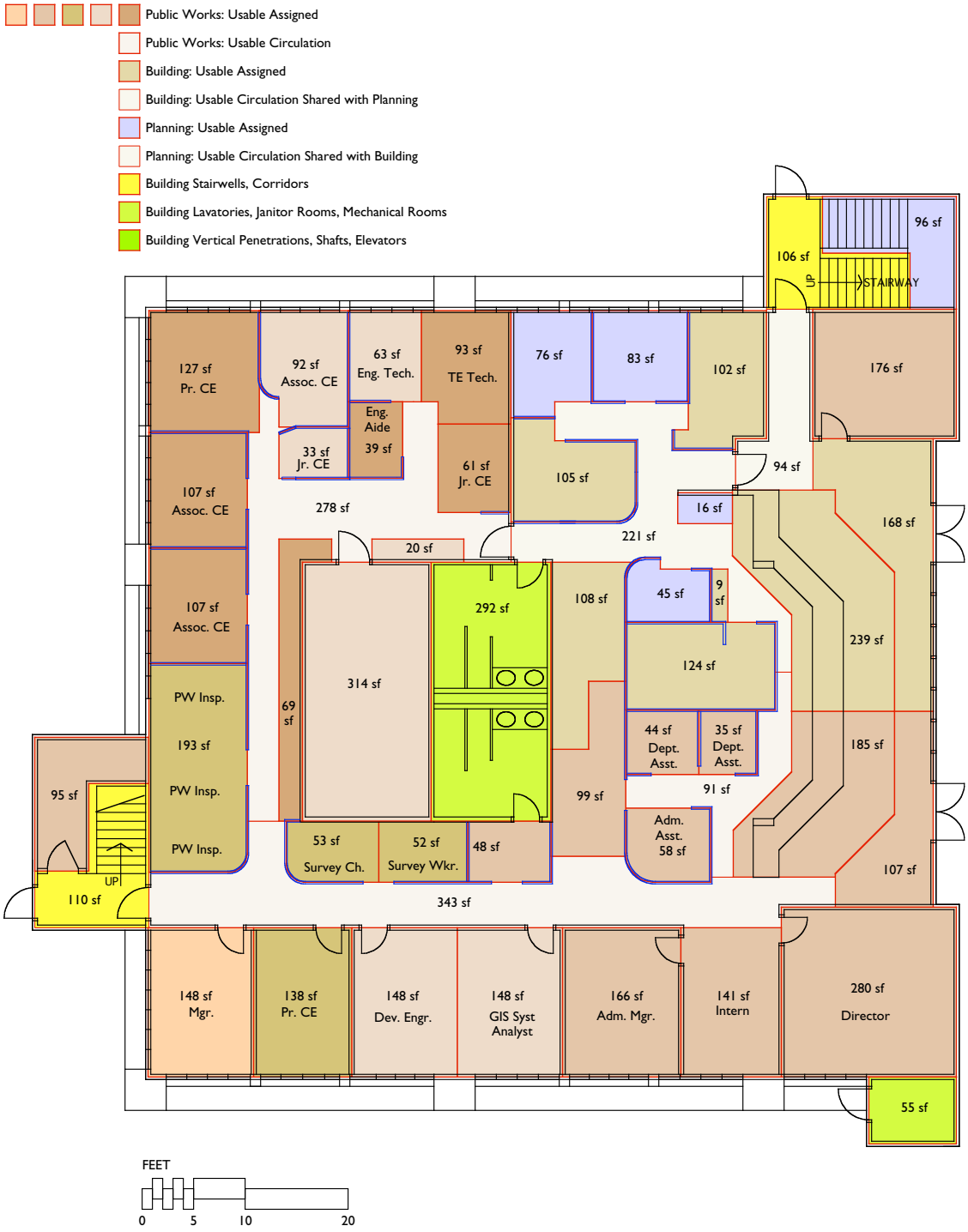
APPENDICES

APPENDIX A – FLOOR PLANS OF EXISTING BUILDINGS

The following pages present detailed CAD drawings of the existing Civic Center buildings under the scope of this project. The base outlines and major partitions represented in these drawings were obtained from the City and were modified in some cases according to observed field conditions at the time of our physical survey.

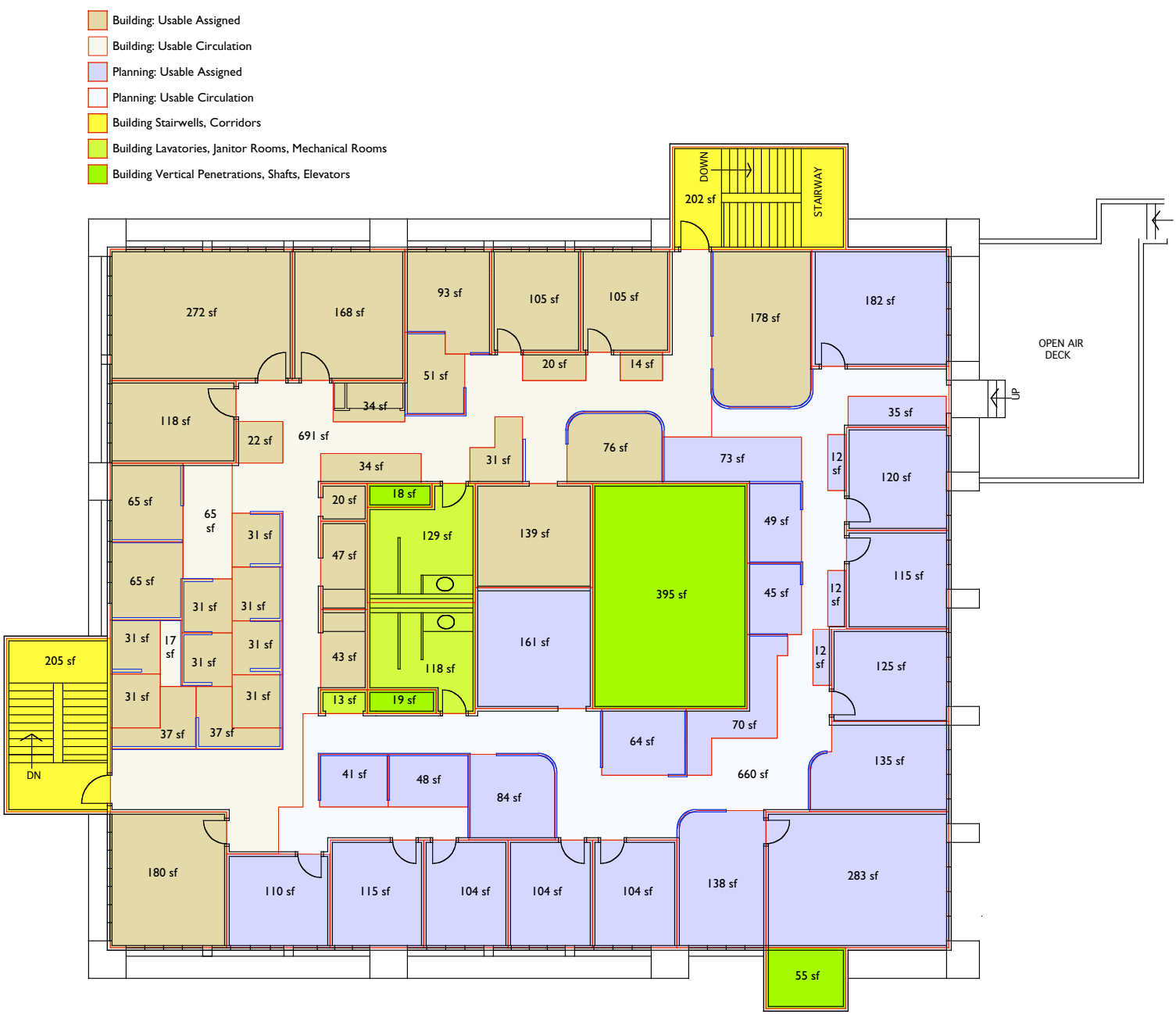
We also identified the functions of each space, and have color-coded the areas according to department and use. Some colors are reused, so a general knowledge of the buildings and the location of occupants is needed to track the designations we have used. The area quantities shown on the drawings are given in square feet. Faint red lines bound the areas, so that the exact assumptions of areas, work station sizes, and allocations used in this report are discernable. In some cases, access space is included in the workstation, where this appears to be integral to it, but generally this is not the case. In applying space standards, however, some access and circulation allowances are incorporated into the standard, and so it may not be true that a direct correlation between an allocation identified in the drawing will equal the size of a comparable space standard.

Building C.1

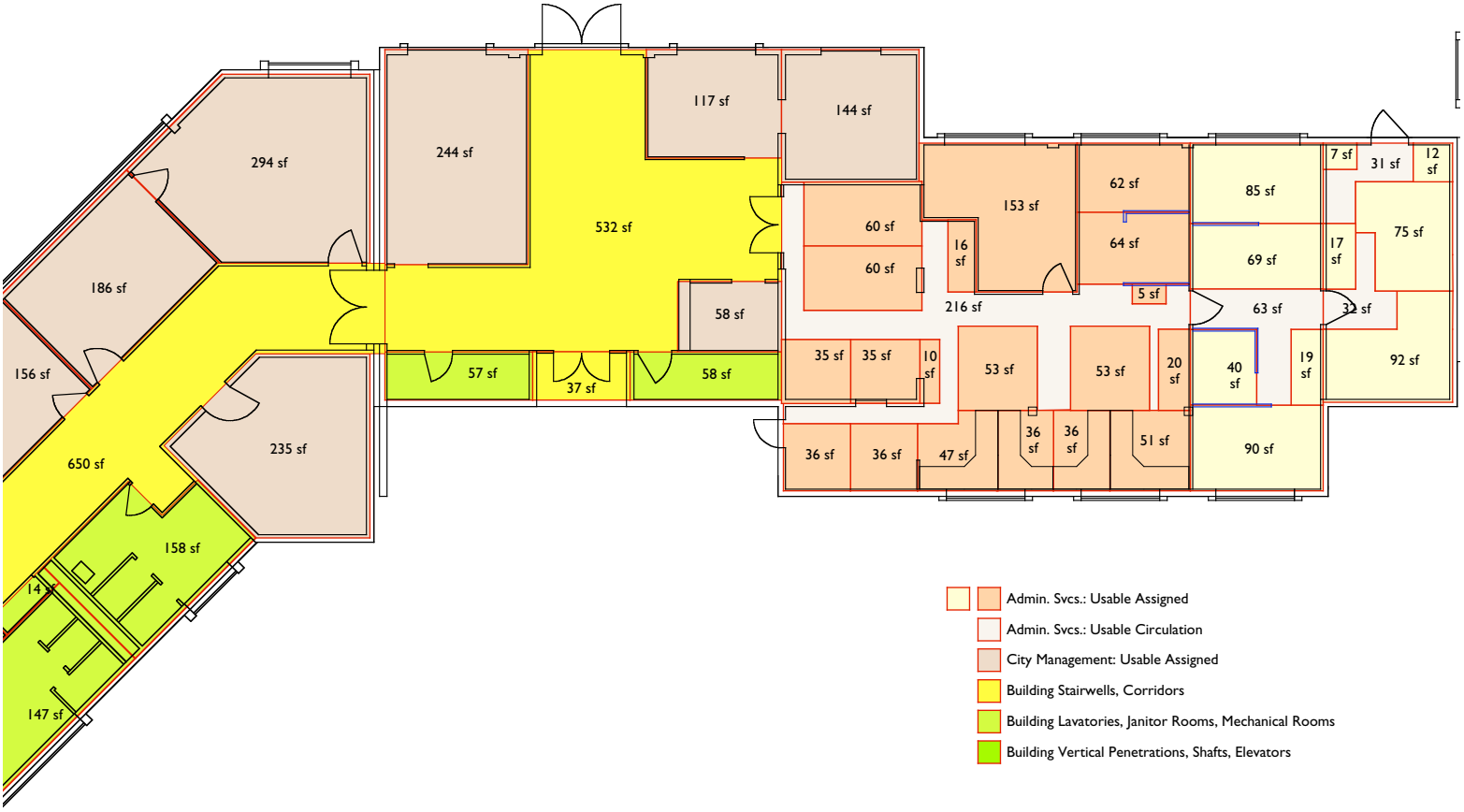

Public Works: Usable Assigned
Public Works: Usable Circulation
Building: Usable Assigned
Building: Usable Circulation Shared with Planning
Planning: Usable Assigned
Planning: Usable Circulation Shared with Building
Building Stairwells, Corridors
Building Lavatories, Janitor Rooms, Mechanical Rooms
Building Vertical Penetrations, Shafts, Elevators
96 sf
106 sf
UP
STAIRWAY
127 sf
Pr. CE
92 sf
Assoc. CE
63 sf
Eng. Tech.
93 sf
TE Tech.
76 sf
83 sf
102 sf
176 sf
Eng.
Aide
39 sf
33 sf
Jr. CE
61 sf
Jr. CE
105 sf
94 sf
107 sf
Assoc. CE
278 sf
16 sf
168 sf
221 sf
20 sf
107 sf
Assoc. CE
292 sf
108 sf
45 sf
9
sf
239 sf
124 sf
PW Insp.
193 sf
PW Insp.
PW Insp.
314 sf
69
sf
44 sf
Dept.
Asst.
35 sf
Dept.
Asst.
185 sf
95 sf
99 sf
91 sf
Adm.
Asst.
58 sf
53 sf
Survey Ch.
52 sf
Survey Wkr.
48 sf
UP
110 sf
343 sf
107 sf
148 sf
Mgr.
138 sf
Pr. CE
148 sf
Dev. Engr.
148 sf
GIS Syst
Analyst
166 sf
Adm. Mgr.
141 sf
Intern
280 sf
Director
55 sf
FEET
0
5
10
20

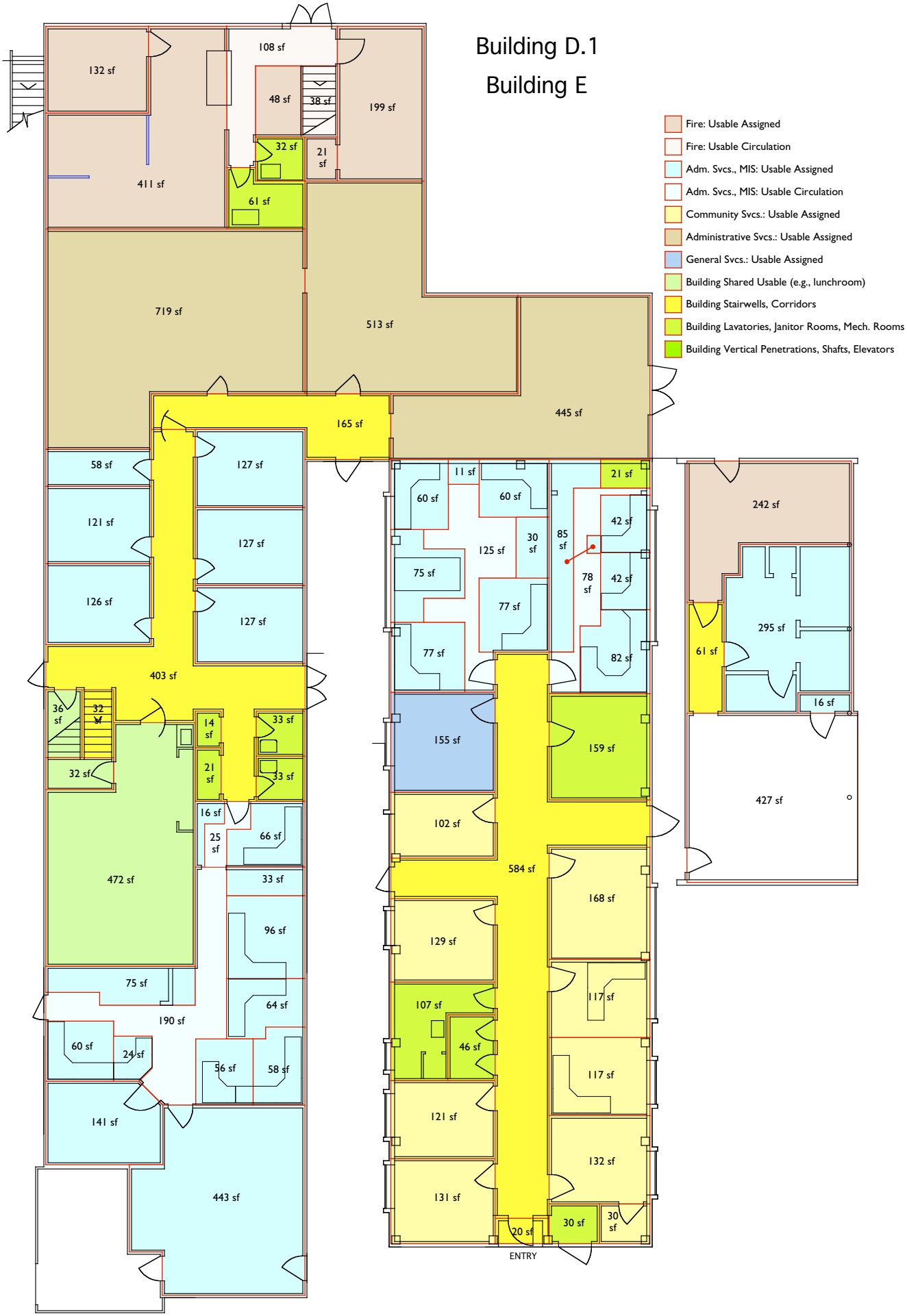
Building B (north section)

Building C.2


Building: Usable Assigned
Building: Usable Circulation
Planning: Usable Assigned
Planning: Usable Circulation
Building Stairwells, Corridors
Building Lavatories, Janitor Rooms, Mechanical Rooms
Building Vertical Penetrations, Shafts, Elevators
DOWN
202 sf
STAIRWAY
OPEN AIR DECK
UP
272 sf
168 sf
93 sf
105 sf
105 sf
178 sf
182 sf
51 sf
20 sf
14 sf
34 sf
118 sf
22 sf
691 sf
31 sf
76 sf
73 sf
35 sf
12 sf
120 sf
34 sf
20 sf
18 sf
129 sf
139 sf
395 sf
49 sf
65 sf
65 sf
31 sf
47 sf
45 sf
115 sf
31 sf
31 sf
31 sf
17 sf
31 sf
31 sf
161 sf
12 sf
125 sf
205 sf
43 sf
118 sf
31 sf
13 sf
19 sf
37 sf
37 sf
70 sf
64 sf
135 sf
DN
41 sf
48 sf
84 sf
660 sf
180 sf
110 sf
115 sf
104 sf
104 sf
104 sf
138 sf
283 sf
55 sf

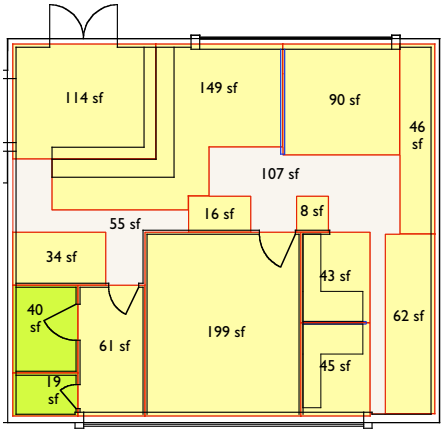
Building B (central section)



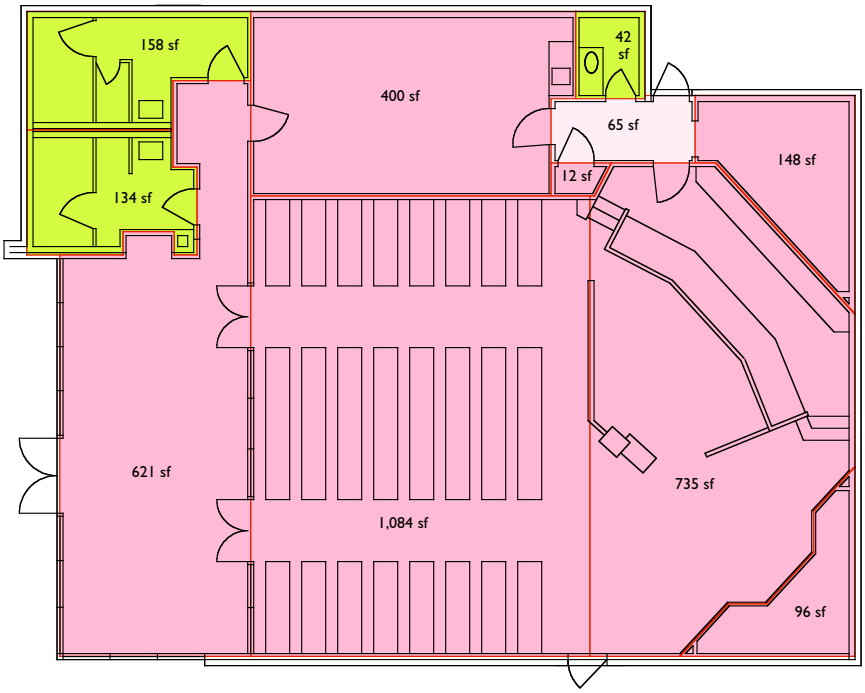

Building D.1
Building E
Fire: Usable Assigned
Fire: Usable Circulation
Adm. Svcs., MIS: Usable Assigned
Adm. Svcs., MIS: Usable Circulation
Community Svcs.: Usable Assigned
Administrative Svcs.: Usable Assigned
General Svcs.: Usable Assigned
Building Shared Usable (e.g., lunchroom)
Building Stairwells, Corridors
Building Lavatories, Janitor Rooms, Mech. Rooms
Building Vertical Penetrations, Shafts, Elevators
132 sf
108 sf
48 sf
38 sf
199 sf
32 sf
21 sf
411 sf
61 sf
719 sf
513 sf
445 sf
165 sf
58 sf
127 sf
121 sf
127 sf
126 sf
127 sf
403 sf
36 sf
32 sf
14 sf
33 sf
21 sf
33 sf
32 sf
16 sf
25 sf
66 sf
472 sf
33 sf
96 sf
75 sf
64 sf
190 sf
60 sf
24 sf
56 sf
58 sf
141 sf
443 sf
11 sf
60 sf
60 sf
21 sf
42 sf
125 sf
30 sf
85 sf
75 sf
78 sf
42 sf
77 sf
77 sf
82 sf
155 sf
159 sf
102 sf
584 sf
168 sf
129 sf
117 sf
107 sf
46 sf
117 sf
121 sf
132 sf
131 sf
20 sf
30 sf
30 sf
ENTRY
242 sf
295 sf
61 sf
16 sf
427 sf

Building A

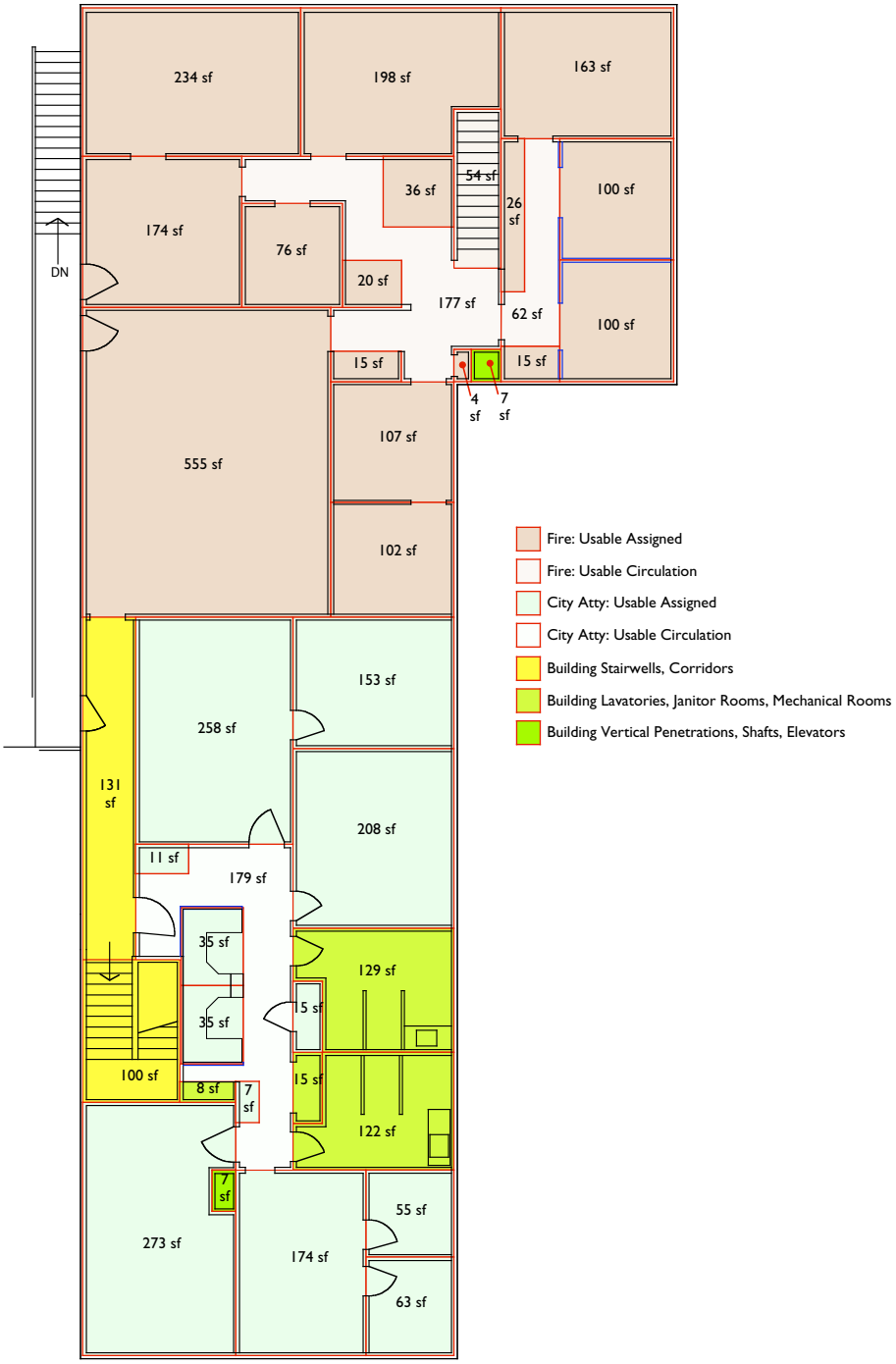
Building B (south section)



- Community Svcs.: Usable Assigned
- Community Svcs.: Usable Circulation
- City Management, Council Areas: Usable Assigned
- City Management, Council Areas: Usable Circulation
- Building Stairwells, Corridors
- Building Lavatories, Janitor Rooms, Mechanical Rooms
- Building Vertical Penetrations, Shafts, Elevators



Building D.2


234 sf
198 sf
163 sf
54 sf
36 sf
26 sf
100 sf
174 sf
76 sf
20 sf
177 sf
62 sf
100 sf
DN
15 sf
15 sf
4 sf
7 sf
555 sf
107 sf
102 sf
153 sf
258 sf
131 sf
208 sf
11 sf
179 sf
35 sf
129 sf
35 sf
15 sf
100 sf
8 sf
7 sf
15 sf
122 sf
7 sf
55 sf
273 sf
174 sf
63 sf
Fire: Usable Assigned
Fire: Usable Circulation
City Atty: Usable Assigned
City Atty: Usable Circulation
Building Stairwells, Corridors
Building Lavatories, Janitor Rooms, Mechanical Rooms
Building Vertical Penetrations, Shafts, Elevators

APPENDIX B – DETAILED EXISTING ALLOCATION OF SPACE

The following table presents a detailed listing of the existing spaces in the Newport Beach Civic Center, and indicates, in particular, the space presently allocated to each person who has a workstation there.

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	No. Pers	No. WS	Space In Use By Buiilding: Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
Administration										
Office of City Manager										
City Manager	1	1		294						Bludau
Asst. City Mgr.	1	1		235						Kiff
Asst. City Mgr.	1	1		156						Wood
PIO	1	1		152						Jackson
Exec Asst. to City Mgr.	1	1		186						Lektorich
Dept. Asst.	1	1		117						Oborny; (Wick)
Copy Room				50						
Lobby Conference/Hearings				244						
Office of Mayor										
Mayor	1	1		144						Ridgeway
Asst. to Mayor	1	1		58						Wick
Council										
Council Member	6	0								
Council Conference Room			400							
Council Lavatory			42							
Chambers, Front Area			735							
Chambers, Seating Area			1,084							
Chamber, Projection			96							
Chambers, Storage			148							
Chambers, Lobby			621							
Chambers, Inner (Net) Circulation			65							
Chambers, Mechanical			see below							
Chambers, Lobby Lavatories			see below							
Total Administration	14	8	3,191	1,636	0	0	0	0	0	
Administrative Services Department										
Administration/Resource Management										
Director/Treasurer	1	1		177						Danner
Deputy Director	1	1		180						Kurth
Adm. Asst.	1	1		57						Frederickson
Inner (Net) Circulation				105						
Shared Areas										
Coffee Area				17						
Vault				300						
Fiscal Services										
Administration										
Fiscal Ops. Mgr.	1	1		101						Askey
Cashiering & Collections										
Fiscal Spec.	1	1		55						Enriquez
Sr. Fiscal Clerk	1	1		59						Rettig
Fiscal Clerk	1	1		42						Battioli
Fiscal Clerk (pt)	1	1		46						Frost

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	Pers	WS	Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
Fiscal Clerk (pt)	1	1		56						Hughes
Counter				127						
Equipment				56						
Inner (Net) Circulation				95						
Accounts Payable										
Fiscal Spec.	1	1		33						Bakuy
Sr. Fiscal Clerk	1	1		46						Gallagher
Fiscal Clerk (pt)	1	1		16						Lewis
Files and Equipment				55						
Inner (Net) Circulation				31						
Print Shop										
Manager	1	1					(prt shp)			Flores
Specialist	1	1					(prt shp)			Martin
Print Shop							719			
Mailroom/Remittance Processing										
Coordinator	1	1					(mail rm)			Wills
Fiscal Clerk (pt)	1	1					(mail rm)			Rubidoux
Mail Room							513			
Purchasing/Warehouse										
Store Room							445			
Management Information Systems										
Administration										
Manager	1	1					141			Malkemus
Applications										
Coordinator	1	1					121			Luengas-Alwafai
Analyst/Trainer	1	1					126			Birbeck
Analyst/Trainer	1	1					127			Hsu
Analyst/Trainer	1	1					127			Kiatkwankul
Analyst/Trainer	1	1					127			Maglinti
MIS Technician	1	1					82			Eichel
Inner (Net) Circulation							25			
GIS										
Coordinator	1	1					58			Murphy
Analyst/Trainer	1	1					60			Watson
Mapping Asst.	1	1					96			Pappas
Mapping Asst.	1	1					64			Stadlman
PT/Temp/Intern	2	1					56			
Equipment & Files							133			
Inner (Net) Circulation							190			
Operations										
Coordinator	1	1					77			Cone
MIS Tech Supp Spec	1	1					77			Ellsworth
MIS Tech Supp Spec	1	1					60			Lee
MIS Tech Supp Spec	1	1					60			Wojciechowski
Store Room							58			
Equipment, Files, Work Area							116			
Inner (Net) Circulation							125			
Computer Room										
Equipment Room							443			

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	Pers	WS	Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
Telecommunications/networks										
Comm Coordinator	1	1					82			Auger
Comm Spec	1	1					42			Hathaway
Pay Phone Control Stn							42			
Equipment/Files							85			
Inner (Net) Circulation							78			
General Storage Areas									311	
Revenue										
Manager	1	1		153						Everroad
Rev. Tech.	1	1		62						Pauley
Fiscal Spec.	1	1		51						Carney
Fiscal Spec.	1	1		47						Duncan
Fiscal Spec. (pt)	1	1		36						Williamson
Sr. Fiscal Clerk	1	1		35						March
Fiscal Clerk	1	1		60						Bryant
Fiscal Clerk	1	1		60						Petroski
Fiscal Clerk	1	1		64						Walters
License Inspector	1	1		36						Burckle
License Inspector	1	1		36						Cooper
Film Liaison	1	1		36						Cleary
Hearing Officer	3	1		35						Hansen; Long; Valenti
Files and Equipment				137						
Coffee, etc.				20						
Inner (Net) Circulation				216						
Accounting										
Finance Ofcr.	1	1		121						Matusiewicz
Accountant	1	1		85						Bello
Accountant	1	1		90						Ghorbani
PT/Temp Wkstn + Files	1	1		69						
Acctg Files/Eqpt				19						
Mgt Asst.	1	1		92						Coulter
Fiscal Spec.	1	1		75						Harris
Payroll Files/Eqpt				36						
Fiscal Clerk	1	1		40						Bui
Inner (Net) Circulation				126						
Total Admin. Svcs. Department	57	54	0	3,491	0	0	4,555	0	311	
Building Department										
Administration										
Building Director	1	1				272				Elbettar
Adm.in Asst.	1	1				93				Goodwin
Dept. Asst.	1	1				51				Schank
Ofc. Asst.	1	1				76				Yamada
Equipment						31				

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	Pers	WS	Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
Customer Service										
Sr. Permit Tech.	1	1			105					McCourt
Permit Tech & Intern	3	4			124					Duarte; Taylor; Wilson
Files (total in area)					117					
Public Counter					239					
Public Waiting					168					
Plan Check										
Deputy Bldg. Official	1	1				168				Jurdi
Civil Engr	1	1				118				Barar; Groverman; Naji; Tran
Civil Engr	1	1				105				
Civil Engr	1	1				105				
Civil Engr	1	1			102					
Inspection Division										
Chief Bldg. Insp.	1	1				180				Hook
Pr. Bldg. Insp.	1	1				65				Baltera; Burckle
Pr. Bldg. Insp.	1	1				65				
Res. Bldg. Record Insp.	1	1				31				Hansen
Sr. Bldg. Insp.	3	3				93				Dexter; Dick; Michael
Bldg. Insp.	5	6				198				Capp; Fleener; Hotz; Sobeck; Uitermark
Inner (Net) Circulation						82				
Other Areas										
Copy Room						43				
Break Area						47				
Supplies Closet						20				
Other files and equipment						124				
Inner (Net) Circulation					158	691				
Vault						139				
Conference Area						178				
Total Building Department	25	27	0	0	1,013	2,975	0	0	0	
City Attorney										
City Atty.	1	1						273		Burnham
Asst. City Atty.	1	1						208		Clauson
Dep. City Atty.	1	1						153		Ohl
Adm. Asst.	1	1						174		Alcaraz
Law Clerk/Intern		1						35		
Dept. Asst.	1	1						35		Poole
Law Library								258		
File Room(s)								118		
Supply Closet								15		
Other Equipment								18		
Inner (Net) Circulation								179		
Total City Attorney	5	6	0	0	0	0	0	1,466	0	

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	Pers	WS	Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
City Clerk										
City Clerk	1	1		125						Harkless
Dep. City Clerk	1	1		75						Fisher
Dep. City Clerk	1	1		77						Brown
Scanning Station				33						
Files & Equipment				74						
Vault				145						
Counter & Waiting				66						
Inner (Net) Circulation				229						
Total City Clerk	3	3	0	824	0	0	0	0	0	
Community Services										
Administration										
Director	1	1		199						Kienitz
Adm. Asst.	1	1		45						Craig
Sr. Fiscal Clerk	1	1		43						Patterson
Administrative Files				62						
Office Asst.	4	2		149						(PT staff, rotates between 4 persons)
(Media Coord.)	1									Adams
(Graphic Spec.)	1									O'Mara
Reception/Waiting				114						
Equipment				58						
Coffee, etc.				61						
Inner (Net) Circulation				162						
Recreational Services										
Rec. Supt	1	1					168			McGuire
Rec. Mgr.	1	1					132			Calvert
Closet							30			
Rec. Mgr.	1	1					131			Levin
Rec. Coord.	1	1					129			Dingwall
Rec. Coord.	1	1					121			Peart
Rec. Coord.	1	1					117			Veches
Rec. Coord.	1	1					117			Williamson
(Rec. Maint. Wkr.)	1									Amend
Dept. Asst.	1	1		90						Lee
Field Desk		1		(incl)						
Files				46						
Store Room							102			
Total Community Services	18	14	0	1,029	0	0	1,047	0	0	
Fire Department										
Office of the Chief										
Fire Chief	1	1						234		Riley
Adm. Asst.	1	1						174		Gill
Comm Relations Ofcr.	1	1						100		Blauer
Emerg. Svcs. Coord.	1	1						100		Boston
Equipment								41		

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	Pers	WS	Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
Support Services										
Manager	1	1						198		Ulaszewski
Sr. Fiscal Clerk	1	1						76		Merrill
Supp Svcs Capt							reloc			Schmehl
Facility & Supply Coord.							reloc			
Ofc. Asst.	1	1					48			Olson
Equipment								56		
Fire Prevention										
Fire Marshal	1	1					220			Lockard
Dep Fire Marshal	1	1					543			Bryg
Fire Prev Spec	1	1					incl			Lerch
Insp	1	1					incl			Morris
Dept. Asst.	1	1					incl			Fountain
Equipment, Counter, Files							incl			
EMS Management										
Manager	1	1						102		Cleary
Dept. Asst.	1	1						107		Foeldi
Training										
Training Chief	1	1						163		Scheerer
Lifeguard Capt.	1							off-site		Boyer
Department Shared Areas										
Conference Room								555		
Coffee Area & Water								19		
General Storage									242	
Inner (Net) Circulation							108	239		
Inner (Net) Stairway							38	54		
Total Fire Department (Admin)	16	15	0	0	0	0	957	2,218	242	
General Services										
Facilities Mantenance										
Maintenance Room							155			
Total General Services	0	0	0	0	0	0	155	0	0	
Human Resources Department										
Director	1	1		144						Livingston
Adm. Asst.	1	1		52						Tristan
Risk Mgr.	1	1		148						Farley
HR Ops. Mgr.	1	1		138						O'Neil
HR Analyst	1	1		81						Anderson
HR Analyst	1	1		53						Redyk
HR Asst.	1	1		81						Jensen
HR Asst.	1	1		81						Wingert

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	Pers	WS	Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
Ofc. Asst.	1	1		52						Vitiello
Files, Eqpt, Stg, Display				127						
Waiting				74						
Inner (Net) Circulation				169						
Total HR Department	9	9	0	1,200	0	0	0	0	0	
Planning Department										
Administration										
Director	1	1				283				Temple
Adm. Asst.	1	1				138				Varin
Storage/Supply						70				
Work Area						135				
Economic Development										
Sr.. Planner	1	1				104				Berger
Assoc Planner	1	1				115				Trimble
Dept. Asst.	1	1				64				Kallikounis
Current Planning										
Sr. Planner	1	1				120				Garcia
Sr. Planner	1	1				125				Campbell
Assoc Planner	1	1				115				Weber
Asst. Planner	1	1				48				JJ Brown
Asst. Planner	1	1			83					Marrelli
Asst. Planner	1	1			76					Ramirez
Planning Tech.	1	1			45					Levin
Files					16	36				
Advance Planning										
Sr. Planner	1	1				104				Alford
Sr. Planner	1	1				104				Campbell
Files in open area						35				
Shared: ED/CP/AP										
Asst. Planner	1	1				110				Kain
Dept. Asst.	1	1				49				Egan
Clerical Asst (pt)	1	1				45				Duarte
Interns	2	1				41				
Vault						161				
Conference Area						84				
Reception Seating						73				
Store Room (under stair)					96					
Inner (Net) Circ					158	660				
Code Enforcement										
CE Supv.	1	1				182				Sinasek
CE Ofcr.	1	1				incl				Spence
Total Planning Dept	21	20	0	0	474	3,001	0	0	0	

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	Pers	WS	Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
Public Works										
Administration										
Director	1	1			280					Badum
Intern	1	1			141					
Adm. Mgr.	1	1			166					Thompson
Adm. Asst.	1	1			35					Oyler
Dept. Asst.	1	1			44					Locey; Rooks
Dept. Asst.	1	1			58					
Files					99					
Counter					185					
Public Waiting					107					
Shared PW Areas										
PW Conference					176					
Coffee/Service					48					
Store Room (under stair)					95					
Engineering										
Administration/City Engineer										
City Engineer	1	1		185						Patapoff
Engineering										
Pr. CE	1	1		156						Sinacori
Pr. CE	1	1		153						Dalton
Pr. CE	1	1		123						Stein
Assoc. CE	1	1		97						Luy
Assoc. CE	1	1		93						Tse
Jr. CE	1	1		43						Crumby
Sr. Eng. Tech.	1	1		94						Garcia
Intern(s)	2	1		23						
Files and Equipment				96						
Field, Inspection & Survey										
Pr. CE	1	1			138					Gunther
PW Insp.	3	3			193					Berger; Puglisi; Masters
Survey Party Chief	1	1			53					Wittmeyer
Survey Inst. Wrkr.	1	1			52					Metzger
Transportation and Development Services										
Administration										
Manager	1	1			148					Edmonston
Transportation										
Pr. CE	1	1			127					Brine
Assoc. CE	1	1			107					Brahler; Divan
Assoc. CE	1	1			107					
TE Tech.	1	1			93					Garrett
Jr. CE	1	1			61					
Eng. Aide	2	1			39					
Parking Meter Supv	1	0			0					Small
Parking Meter Svcwkr.	2	0			0					Bui; Collins
Files					69					

Civic Center Space Occupied
Newport Beach, California

Organization/Position/Item	Pers	WS	Building A	Building B	Building C.1	Building C.2	Building D.1	Building D.2	Building E	Name
Development Services										
Development Engr	1	1			148					Hoffstadt
Assoc. CE	1	1			92					Wong
Jr. CE	1	1			33					Arciniega
GIS Syst. Analyst	1	1			148					Medina
Eng. Tech.	1	1			63					Wagner
Vault				144	314					
Misc Eqpt					20					
Other Areas										
Inner (Net) Circulation				365	712					
Total PWD	38	33	0	1,572	4,151	0	0	0	0	
										Totals
General Building Areas										
Unassigned Building Lobby				532						532
Major Circulation Corridors				768		407	1,172	131	61	2,539
Stairwells					216		32	100		348
Atrium Opening						395				395
Other Vertical Penetrations and Shafts						87		14		101
Mechanical Rooms			12	195	55	13	291	23		589
Lavatories			292	404	292	247	266	251		1,752
Unassigned Conference Rooms										0
Lunch Room							472			472
Lunch Room Storage							68			68
Parking/Garage									427	427
General Building Areas	0	0	304	1,899	563	1,149	2,301	519	488	7,223
Totals (less some exterior wall thickness)	206	189	3,495	11,651	6,200	7,125	9,015	4,203	1,041	42,730
See note below on method										
Block Take-offs (Gross Footprint)			3,622	12,242	6,300	7,277	9,227	4,283	1,078	44,029
Computed Exterior Wall Thicknesses			127	591	100	152	212	80	37	1,299
Percent of total			3.5%	4.8%	1.6%	2.1%	2.3%	1.9%	3.4%	3.0%

Note: The room take-offs are measured (generally) from the center-line of the bounding partition. When all is added, there is generally some thickness of the exterior wall that is not yet accounted for (there are some technical exceptions to this). The "block take-offs" are separate measurements overall, and so the difference represents exterior wall thickness as shown in this table.

APPENDIX C – DEFINITION OF TERMS

The following terms are closely related, and the definitions for these terms often vary from user to user. Care should be taken to verify the definitions when these terms are encountered in other sources.

Gross Building Area	BOMA does not make much use of this figure, but for us the term means the total area of the building enclosed by the bounding walls, exclusive of overhangs and areas (including docks) outside the building line. The gross square footage of a building is the sum of the gross sq. ft. on each floor, which is measured to the outside finished surface of the permanent outer building walls. Basements, mechanical equipment areas, penthouses, etc., are all included. Note that this is sometimes referred to as the "construction area." Patios, overhangs, and similar elements are (usually) not included.
Gross Measured Area	BOMA defines Gross Measured Area to exclude the area outside the "dominant portion" of the bounding wall, and also excludes overhangs, areas (docks) outside the building line, and enclosed parking. The dominant portion is usually either the inside face of the wall or the glass-line of the wall, depending on whether windows make up more or less than half the wall surface. There are exceptions, however, as in the case of street-front storefronts. For us, this area differs from the Gross Building Area (by the thickness of the wall areas which are not included in the "dominant portion" and also by parking which is included in the Gross for Building E.
Vertical Penetrations	BOMA defines major vertical penetrations to include elevator shafts, mechanical shafts, and other areas "without a floor," including the bounding walls of these areas. We measure to the average thickness of these bounding walls, however.
Tenant Area	BOMA defines the area of a tenant (the "Office Area") to be the area where the tenant normally houses personnel, furniture, and operations under its sole control.
Floor Common Area	BOMA defines the Floor Common Area to be the areas on that floor available primarily for the use of tenants on that floor, such as washrooms, janitorial closets, electrical rooms, telephone rooms, mechanical rooms, elevator lobbies, and public corridors. The Rentable Area for a Tenant on a floor includes its prorated share of the Floor Common Area for that floor.
Building Common Area	BOMA defines the Building Common Area to be areas *to exclude* the Floor Common Areas and Vertical Penetrations, but *to include* areas which provide service to (all) building tenants, such as building lobbies and atria (at the floor level, not the shaft space above), building elevator lobbies, building mail rooms, and building core service rooms. The point is to identify areas servicing *all* tenants rather than just tenants on one floor.

In the case of a campus setting, especially where the buildings are each low-rise as at Newport Beach, it is useful to think of each building as a "floor" in the BOMA definitions. At Newport City Hall, the lunchroom would be such an area.

Usable Area

BOMA defines the Usable Area as the sum of the Tenant Areas and the Building Common Areas. Floor Common Areas are omitted. Thus, typically, the usable area equals the tenant spaces plus the areas which are shared by all tenants (such as main building lobbies and corridors, but not floor corridors, for example).

In the case of Newport Beach Civic Center, we are approaching this as if the entire complex were "the building" and each floor were a floor in it. Further, each department is treated as a separate tenant. Consequently, there are only a few areas which are "Building Common Areas," such as the main building lobby and information area, the lunchroom, and complex-wide mechanical rooms.

Net Sq. Ft

This is the same as usable interior area in this report, and is the space which is listed in the program tabulation.

Modified Usable Area

In this study, especially where needs are to be computed, it is useful to distinguish all the main circulation corridors rather than to divide this between "Building Common" and "Floor Common" allowances. Similarly, it is useful to identify all mechanical spaces needed by the building, not to distinguish the mechanical areas for a floor from those for the building as a whole. Consequently, where we make this distinction, we identify the Usable as being Modified accordingly. The usable space is always defined when the definition is being modified in this way.

Tenant's Rentable Area

BOMA defines the rentable area of a tenant to be Tenant Area (Office Area), plus the prorated share of Floor Common Area (computed on a floor-by-floor basis and added) plus the prorated share of the Building Common Area.

Rentable area for a floor usually includes everything except Vertical Penetrations.

Building Rentable Area

BOMA defines the total rentable area of a building to be the sum of the rentable for each tenant (which equals the sum of the rentable for each floor). Rentable area usually includes everything except Vertical Penetrations.

Tenant Usable Area

This is the same as the Tenant Area, above. It equals the Tenant Assignable Area plus the Tenant Assignable Circulation.

Tenant Assignable Area

This is the tenant usable area less the tenant assignable circulation. It includes (a) the area of rooms or offices, (b) the open areas by or "footprints" of desks, equipment, and so on, (c) the access area around such furniture or equipment (unless this is part of the "unit circulation" aisle).

Assignable Circulation

This area is equal to the walkways and defined aisles within the tenant usable area. Access space around open-area desks and equipment is not included, unless it is overlapped with such well-defined aisles. Unit circulation is included in the net sq. ft.

Inner Circulation	This allowance is added inside rooms or areas to provide needed access to equipment or work stations that are listed there, especially when it is judged that the total allowance for access which is part of the items' space standard will otherwise be insufficient for proper layout. Inner circulation is part of the net sq. ft. of a room.
Efficiency	The efficiency of a building is the ratio of net sq. ft. to gross sq. ft., usually expressed as a percentage. While the "gross" is usually well defined, there are several ways that "net" can be calculated.
Major Circulation	This area typically consists of stairwells and corridors defined by fire-rated partitions and in a multi-tenant building is that corridor space which is shared by all tenants.
Total Building Area	This may be larger than the gross sq. ft. of the building (but never less) and includes any balconies, constructed covered areas which are part of the building but exterior to it, and the like. We generally do not compute a "Total Building Area" beyond the gross sq. ft. figure, unless these elements are essential to the functional requirement. Outdoor elements are usually treated as separate items in this report.

APPENDIX D – EVALUATION OF EXISTING BUILDINGS

The evaluation of existing buildings is presented as a separately bound document. A summary of selected findings appears in Section 4 of this report.