Chapter 5 Design Development

In this chapter, a conceptual plan of the ACITC Educational Technology office area was first developed according to the basic functional relationships synthesized in the last chapter and Alexander's (1977) neighborhood development theory. Then, based on the information obtained from the questionnaire survey, the behavioral mapping and the review of the new workplace space patterns, a series of space patterns were developed in detail to transform the conceptual plan into the floor plan.

Spatial Relationship and Conceptual Plan

In chapter 4, the basic functional relationships had been synthesized into the matrixes. Usually, the adjacency diagram could be derived just from these matrixes. In this study, the Alexander's (1977) theory on neighborhood development was also incorporated into the adjacency analysis.

According to Alexander's (1977) theory the first step to create a neighborhood was to "identify those existing spots in the community where action seems to concentrate itself"(p. 166). In this project, the "spots" that might concentrate informal interactions were first picked out from the space standard. They included the breakout space, the lunch room and the reception area. In Alexander's theory (1977), the next step was to "modify the layout of the paths in the community to bring as many of them through these spots as possible. Thus, each spot functions as a 'node' in the path network"(p. 167). In this project, the major path was defined by the long and narrow building shell. It extended from one end to the other with the "nodes" distributed along the way (see figure 10).

Also, the facilities placed around one node must function in a cooperative manner (Alexander, 1977). In this project, the spaces around the node of the reception area were selected according to whether their functional relationships were mutually supportive. These spaces included two directors offices (with a group work/meeting space in between), a workspace (for mail, copy and storage), the conference room and the large meeting room/small classroom (see figure 11). The layout of this area was derived from

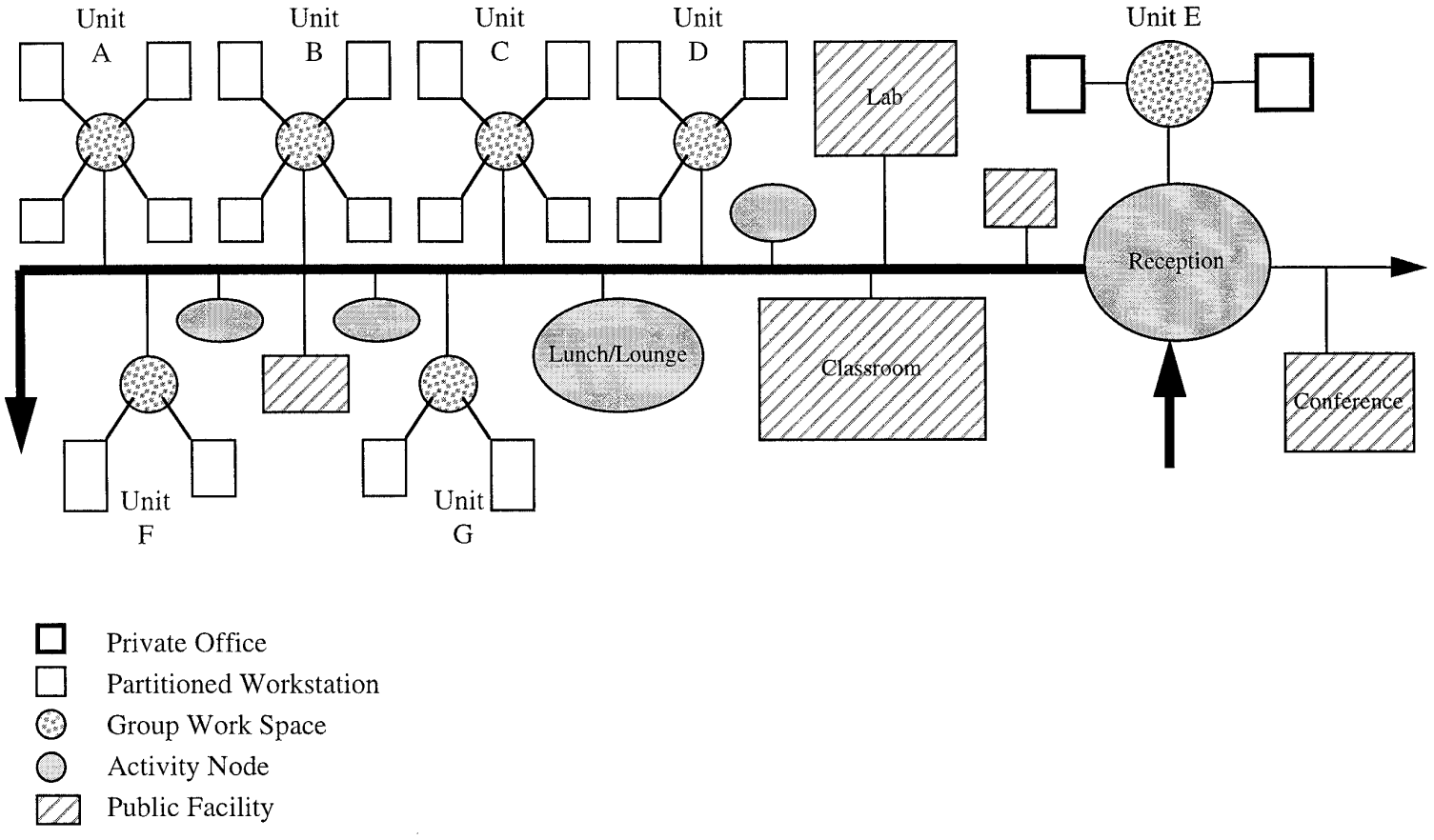

Figure 10. Conceptual Plan of the ACITC Educational Technology Office Area

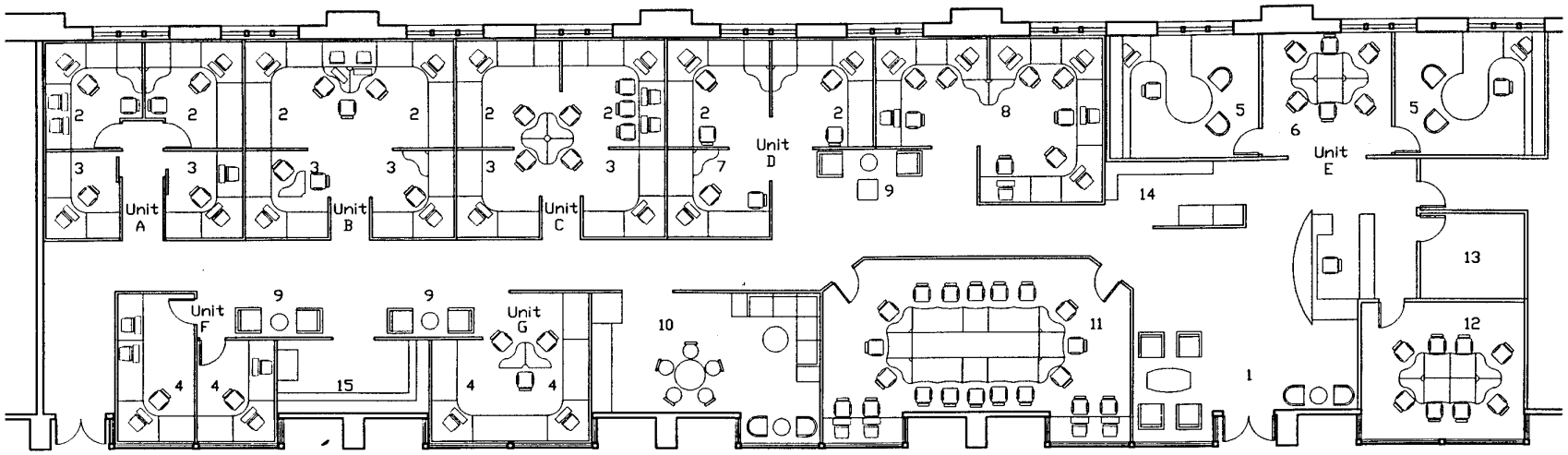

Figure 11. Floor Plan of the ACITC Educational Technology Office Area

the information of the questionnaire survey and the behavioral mapping. For example, the secretary had many informal interactions with the directors, the two directors had more meetings than anyone else, and the secretary often need to copy, file, or distribute mail while keeping an eye on the entrance. Also, based on the information obtained from the questionnaire survey, many outside people would come for meetings if the spaces were provided in the Educational Technology office area. Thus, these large and small conference rooms would be better near the reception area so as to facilitate this type of meeting space, and this arrangement also could avoid the disturbance from the guests coming in and out of the rooms. The workspace (for copy, mail and storage) adjacent to the reception area and the space in front of the group work/meeting space between the directors' offices provide people a chance to stand and interact with each other (see figure 11).

Based on the survey results and Alexander's (1977) definition of the node, the breakout space need not be large, but needs to be distributed appropriately. Thus, instead of two large breakout spaces in the space standard, three smaller breakout spaces were designed. Also, according to Sundstrom (1986), gathering places should contain items that give people work-related reason to be there. Thus, a small breakout space was placed on either side of the workspace (for copy and storage) at the back end of the whole office area. The third break out space was placed aside the computer lab (for shared computers) and opposite the large meeting room/small classroom (see figure 11). The idea here was to provide small niches for people coming to these public facilities to stop by and exchange information with the colleagues met on the road.

As recommended by the present Educational Technology employees, a lounge was added to the lunch room. Food and drink are big attractions for people to drop by and interact informally. Thus, the lunch room with a lounge was placed in the middle of the whole office area as a social hub of the neighborhood. Placed aside the large meeting room/small classroom, it also functioned as a good place for people to have a break during the meeting or training intervals (see figure 11).

If the whole Educational Technology office area was considered as one organically organized workplace neighborhood with activity nodes scattered along the main path, those individual workstations and offices could be considered as "cells" of the neighborhood. These cells were grouped into seven neighborhood units. The units were named alphabetically from "A" to "G" as shown in the Figure 10. Each neighborhood unit was concentrated in its own sector with an individual entrance. The unit E consisted of two private offices and a semi-open group work/meeting space in-between. The other six neighborhood units consisted of two to four partitioned workstations with flexible spaces for potential group works within each unit. The partition tiles would give the flexibility to adjust the privacy level of these workstations from open to closed and to reconfigure the group work spaces according to the specific tasks. Because various work patterns existed in the work process of the present Educational Technology Center, each neighborhood unit might be varied in character and have an identifiable image as illustrated in the Figure 11.

Workplace Space Pattern

After the spatial relationship had been determined, each space needed to be designed further. The space patterns for the Educational Technology office area were generated from the information obtained by the questionnaire survey and behavior mapping with the consideration of the new workplace space patterns discussed in the literature review. As shown in the conceptual plan of the ACITC Educational Technology office area (see figure 10), the spaces were categorized as private offices, partitioned workstations, group work spaces, activity nodes, and public facilities.

1. Private office referred to the two directors' offices. Each office could be closed by a door and had a group work/meeting space for two to three people. The questionnaire survey and behavior mapping indicated that programmers, sometimes faculty developers and graduate assistants also required private work spaces for individual work with high concentration. This requirement was met by providing the flexibility for changing the semi-open partitioned workstations into enclosed private work

spaces. The partition tiles could be used for this purpose as shown in the Figure 9, Unit A and Unit F. Because the partition tiles have the choices of clear or frosted glass tiles, dark rooms could be avoided (see figure 12).

2. Partitioned workstations included workstations for programmers, faculty developers, graduate assistants, the technical supporter, and visiting faculty. These workstations were grouped into neighborhood units (see figure 10 & 11). As to Unit A, B & C, each included two smaller workstations for graduate assistants, and two larger workstations for either programmers or faculty developers. Unit D included two large workstations for either programmers or faculty developers and a workstation for the technical supporter. Unit F and G were designed for visiting faculties. Each of them included one large workstation and one small workstation. These workstations would be assigned to visiting faculties according to their specific task requirements. The partition tiles provided various options for the configuration within each neighborhood unit from the private work space that had been discussed above to the variety of group work spaces that will be discussed next.
3. Group work spaces were flexible semi-public spaces existing in each neighborhood unit convenient for unscheduled group works. They could be of different configurations as required by the specific tasks. For example (see figure 13), Unit B had a keyboard meeting space for three between the two lager stations, a group work space for two in one small workstation, and an individual work space in the other workstation. Unit C (see figure 14) had a group work space for four in the middle of the whole unit and a keyboard meeting space for three aside. In Unit G, the two workstations for visiting faculties were integrated as one big project space. In Unit E, there was a semi-open space between the two directors' offices for either meeting or group work with six (see figure 11). In these group work spaces, the Steelcase Activity Products could be a good choice. The tables of the Activity products could provide power and data access for lap tops by having power posts installed in the middle. Also, these tables could be easily reconfigured for different

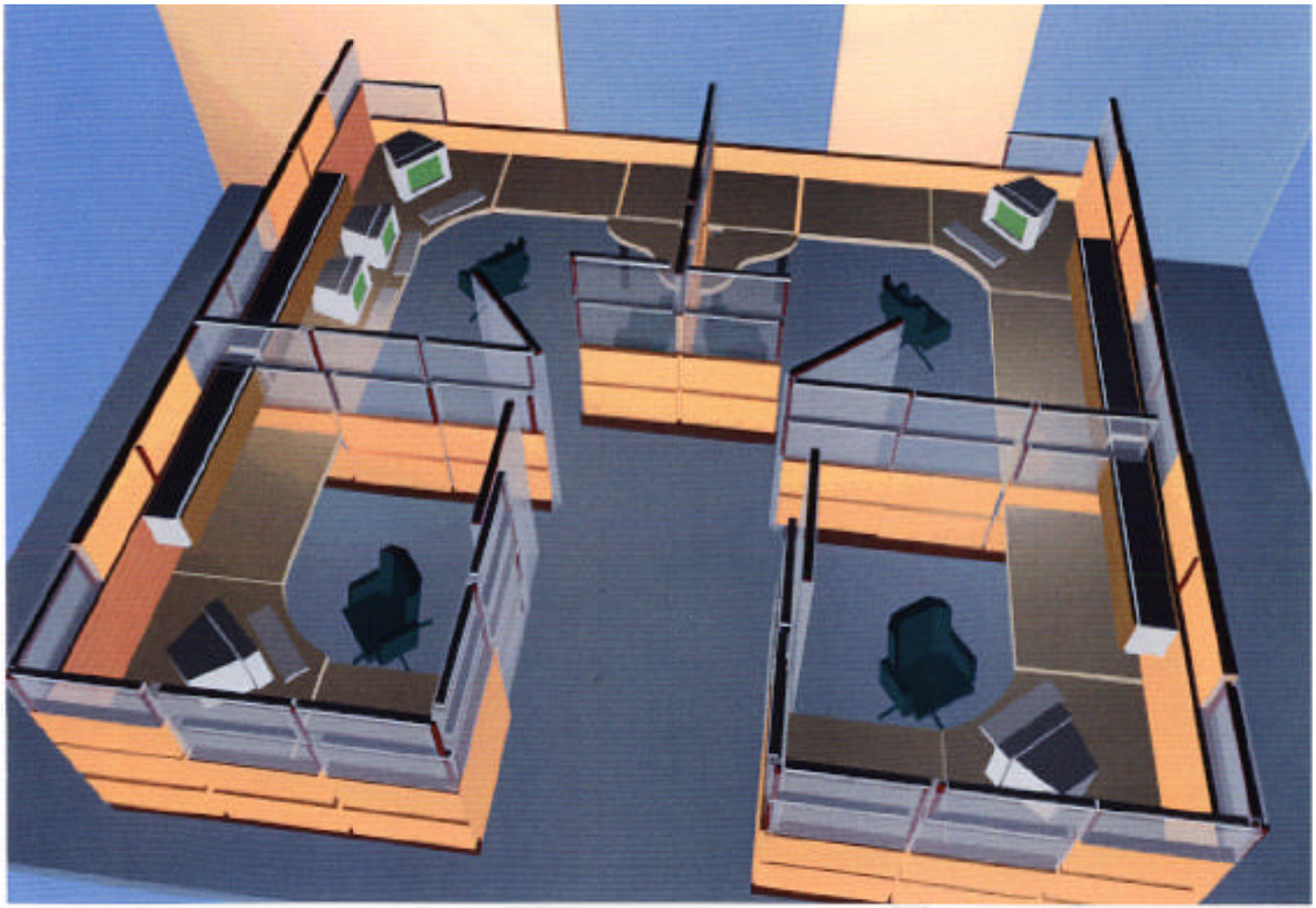

Figure 12. Neighborhood Unit A

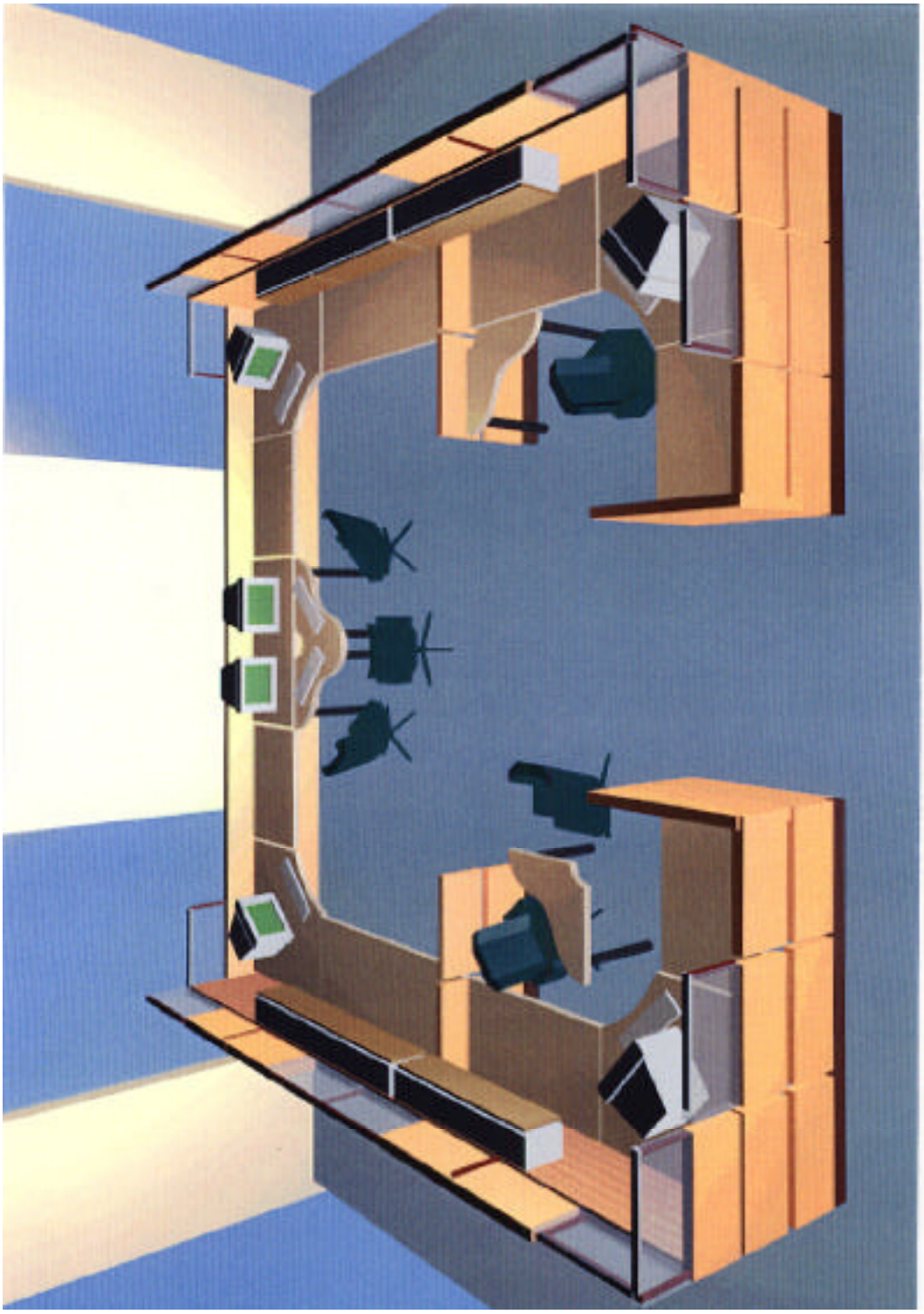

Figure 13. Neighborhood Unit B

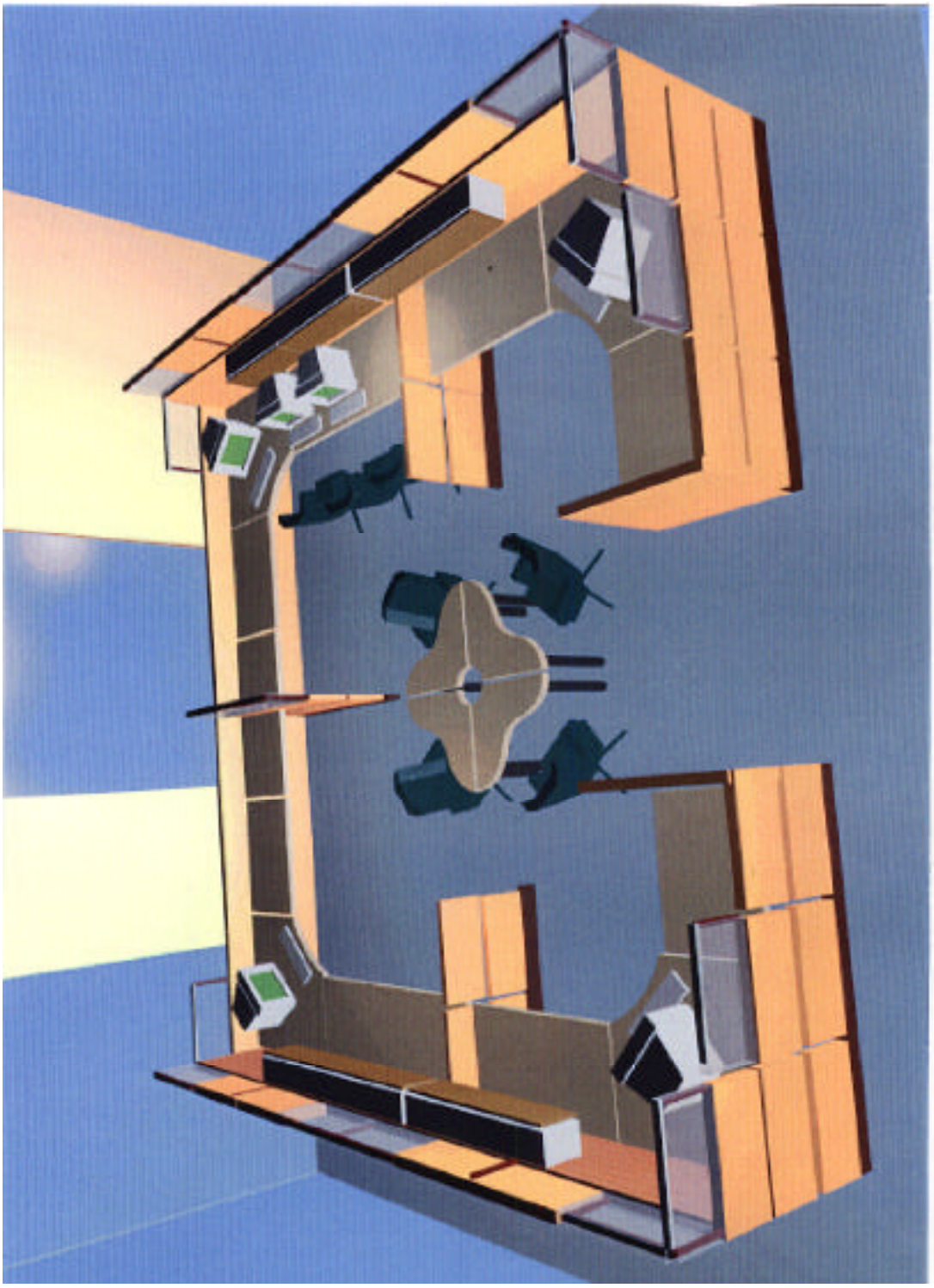

Figure 14. Neighborhood Unit C

sizes of group works. With casters on two legs, these tables could be moved around easily as needed.

4. Activity nodes included three breakout spaces, a lunch room with a lounge, and the reception area (see figure 11). The breakout spaces included sofa groups for two to three people off the main path adjacent to the public facilities. The lunch room with a coffee lounge had a refrigerator, minimum cooking surface for warming up food and preparing drinks, a table for five, a small table for two and a sofa group for five. The reception area had a secretary workstation, and six seats for waiting. Besides the basic functions, these activity nodes were informal activity generators which brought life to the workplace neighborhood.
5. Public facilities included an enclosed large meeting room/small classroom for sixteen, an enclosed small conference room for eight, a workspace aside the reception area (for copy, mail and storage), a workspace (for copy and storage) at the back end of the office area and a computer lab (for shared computer stations) (see figure 11). Instead of traditional big conference tables, the tables of the Activity products were used in the small conference room and the large meeting room/small classroom. Because these tables could be used either individually or in groups, they are flexible to be set up the for formal meetings, unscheduled group works or workshops. In the large meeting/small classroom, four computers were furnished for keyboard discussions and computer presentations.

The floor plan was developed for the ACITC Educational Technology office area by incorporating these space patterns into the conceptual plan. At this point, the space planning phase of this project had been accomplished. As indicated in the questionnaire survey, a traditional image were preferred by the Educational Technology employees. Thus, wood veneer was selected as the major finish of the partition tiles and furniture. Also, glass partition tiles were used for a natural light condition. The computer models of three neighborhood units were prepared based on these decisions (see figure 12, 13 &14).