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ABSTRACT

Administrators and staff members of the College of Eastern Utah and the Carbon County School District along with specialists of the Utah State Department of Education developed specifications for a proposed career center, which were based on guidelines and decisions established by a vocational planning policy committee. The resulting specifications indicate: (1) the kinds and sizes of spaces needed in relation to the purposes for which they are to be used, (2) the utilities to be provided, (3) the acoustical, safety, and other features to be included, and (4) the placement of spaces in relation to others in order to achieve the greatest convenience and utilization. Space allocations and special requirements are specified for auxillary services and for the instructional areas of construction, cosmetology, distributive education, drafting, health services, metalworkers, mining technology, printing, and transportation. (SB)

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EASTERN UTAH CAREER CENTER

at PRICE

Educational Specifications

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EASTERN UTAH CAREER CENTER AT PRICE

EDUCATIONAL SPECIFICATIONS

Prepared under Technical Assistance Grant: FCRC Project #421-202-003

for

Utah State Board for Vocational Education
1400 University Club Building, Salt Lake City, Utah 84111

and

Four Corners Regional Commission
3535 East 30th Street, Farmington, New Mexico 87401

under direction of

Vocational Planning Policy Committee

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January 22, 1973

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FOREWORD

These educational specifications for the proposed Eastern Utah Career Center at Price were developed under Technical Assistance Grant No. 421-202-003 to the Utah State Board for Vocational Education by the Four Corners Regional Commission.

The planning project was begun February 22, 1972, upon finalization of a contract between the State Board for Vocational Education and the consultant, and upon appointment the same day of a Vocational Planning Policy Committee. The project was scheduled for completion by February 22, 1973, culminating with this document of educational specifications. Interim progress reports were submitted quarterly as of the 22nd of May, August, and November.

The Vocational Planning Policy Committee early established guidelines for the project. These were published in the first interim report, then synthesized in a prospectus issued in June, and later summarized in the third interim report and in the forepart of this final document.

Important among these guidelines were decisions:

....to locate the proposed career center on the campus of the College of Eastern Utah, thereby obviating the expense of procuring a separate site;

....to make the career center available to students of the college, to students of high schools in Carbon and Emery counties so that there need not be unnecessary duplication of vocational training facilities, and to youths and adults of all ages with or without high school or college education;

....to make special provision for handicapped students; and

....to include vocational counseling and job placement services for the benefit of both workers and employers.

The consultant was also assisted by numerous local and state organizations and public officials, vocational education staff members of state agencies and schools, industrial leaders, and others, from whom he sought and received information and advice. The valuable assistance of all participating agencies and individuals is gratefully acknowledged, as is the foresight, ongoing interest, and direction of the members of the Policy Committee who are identified on the title page.

Capson Ed-Visors

January 22, 1973

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DEFINITION AND REVIEW

Educational specifications constitute an educational institution's statement of interior requirements to the architect who is to design a new learning facility.

Staff members concerned with curricular and other aspects of the proposed structure are involved in the planning in order to assure the provision of facilities keyed to the instructional and training programs and methods to be followed.

The resulting specifications indicate the kinds and sizes of spaces needed in relation to the purposes for which they are to be used; the utilities to be provided; the acoustical, safety, and other features to be included; and the placement of spaces in relation to others in order to achieve the greatest convenience and utilization.

Administrators and staff members of the College of Eastern Utah, of the Carbon County School District, and specialists of the Division of Vocational and Technical Education of the Utah State Board of Education, all participated in the development of the educational specifications presented here, as well as the Policy Committee which has guided the overall planning project.

The preparation of these specifications was preceded and underlain by the work of the Vocational Planning Policy Committee, organized February 22, 1972, at the outset of the planning. This committee developed guidelines for the project and made fundamental decisions which formed the matrix for the detailed specifications for all components of the proposed career center. Important among these were decisions to:

1. Identify Carbon and Emery counties as the primary area to be served by the proposed vocational institution, but to plan for its utilization by the entire southeastern sector of the State.

2. Locate the facility in Price (in Carbon County and adjacent to Emery County).

3. Designate the facility as Eastern Utah Career Center.

4. Locate the center on the campus of the College of Eastern Utah
   --in recognition of the prospect of interchange between the center and the college with respect to instructional facilities and administrative functions, thus preventing unnecessary duplication and expense;

   --in consideration of the convenience of the students at the college; and

   --in order to obviate the necessity of purchasing a career center site.

5. Plan the Career Center's capacity for accommodation of at least 200 students simultaneously, realizing that approximately 600 could be registered for various classes and that even more could attend due to part-day and evening classes and year-round operation of the plant.

6. Accept everyone desiring vocational training--enrollees of the adjacent college, students from nearby high schools without sufficient equipment and facilities, and youths and adults of all ages with or without high school or college education.

7. Make special provision for the training and job placement of handicapped individuals.

8. Establish curriculum categories to meet the employment requirements of the area to be served, and of other job-opportunity areas, as well.

9. Transfer to the new Center from the College existing occupation-oriented programs, and to accommodate in the College certain vocational courses not requiring laboratory facilities.

The application of these guidelines and policy decisions is apparent throughout the descriptions and explanations which follow.

A prospectus synthesizing and emphasizing these guidelines, published by the committee at the request of the College of Eastern Utah, appears in the Appendix to this report, as does the Position Paper on Career Education (also considered) which was adopted by the Utah State Board of Education on May 12, 1972.

GENERAL DESCRIPTION OF PLANNED FACILITY

Location and Scope

The Career Center is planned for location on the campus of the College of Eastern Utah at Price and in close association with it. The training emphasis is to be on occupational requirements of both workers and employers of this sector, as well as on employment opportunities available in other parts of the State and elsewhere. It is expected to provide job-oriented training, not only for enrollees of the College of Eastern Utah, but for students in those nearby high schools which will rely on the Center's equipment, facilities, and staff (avoiding unnecessary duplication), and also for youths and adults of all ages, with or without high school or college education.

The Center is to be available to students on a year-round basis, both days and evenings, for it is recognized that many can attend classes only when they are out of other schools for the summer, or when, because of employment or other reasons, they are unable to enroll in daytime classes.

General overall administration of the Center will be integrated with existing administrative functions of the College of Eastern Utah.

Student Capacity of Center

The Career Center is planned to accommodate equipment and an adequate program for approximately 600 fulltime students (i.e., 200 at any one time). Many more, of course, can be enrolled simultaneously due to part-day and evening attendance. It is expected that at least two-thirds of these students will be derived from the College of Eastern Utah (which has a present registration of 555) and from nearby high schools which will rely on the Center for vocational training which they are not equipped to provide for 200 or more of their pupils. Adults, including those in Manpower Development Training Act programs, are expected to account for

the remaining one-third of the Center's enrollment. Current national and state emphasis on vocational-technical education is continuing to stimulate the demand for facilities of this kind, with the prospect of increasing utilization of the Center.

In designating the capacity, consideration was given to the fact that the Center will be so located as to serve the several counties constituting the eastern-southeastern sector of Utah, that it will be in close association with the College of Eastern Utah, and that the nearest comprehensive vocational school, and one attended by many students from this area, is the Utah Technical College at Provo. The travel distance between Provo and most communities in this vast area, and the unpredictable and hazardous driving conditions in winter, are such as to prohibit commuting on a daily basis.

Furthermore, the existing Provo facility is overloaded and straining to accommodate its current enrollment which, over the past five years, has increased 90 percent, to more than 3,000, with college level day school enrollment having more than doubled (from 900 to 1826) and evening registration having risen by nearly 25 percent (from 800 to 970). The provision of comprehensive occupational training in Price will tend to relieve the Utah County facility while at the same time accommodating residents of southeastern Utah nearer to their homes.

Approximate Size and Cost

The new Career Center is planned to consist of 37,333 square feet--approximately 75 percent of it, or 28,000 square feet, for instructional space, and 25 percent, or 9,333 square feet, for circulation, custodial, and other general support purposes. The cost, for the size indicated, is estimated at $30 per square foot to be $1,119,990.00, and an additional $220,000 is expected to be required for architect's fees, utilities extensions, furnishings and equipment, landscaping, and contingencies, bringing the grand total to $1,339,990.00.

Components of the Center

About two-thirds of the instructional space of the Center is designated for four large-equipment shops, for training in various kinds of mechanical, technological, and construction occupations. At the outset, courses in these shops will include building construction, metal work, mining technology, and transportation services. These four shops are to be so located as to open onto an extensive common outdoor area for work on big-scale projects, for storage of bulky equipment, and for convenient interchange between these areas.

The remaining third of the instructional space of the Center is to include provision for five additional kinds of occupational training--cosmetology, nursing, distributive education, drafting, and printing. It is also to include space for related auxiliary services designated as administration, career counseling and job placement, and the supervisory and advisory aspects of rehabilitative programs for handicapped students. These uses include those with the greatest probable public patronage and, therefore, are to be clustered together, facing toward public access to services such as cosmetology, printing, registration regarding employment by both workers and employers, and other or different services which may be available in the future.

The relationship to one another of the several instructional sections and of the auxiliary services of the Center is portrayed in Diagram 1 on page 19, and the square footage allocated for each section appears in the following tabulation.

Career Categories	Square Footage
Construction	2,000
Cosmetology	2,000
Distributive Education	1,000
Drafting	1,000
Health Services	1,700
Metalworks	7,000
Mining Technology	3,200
Printing	900
Transportation Services	5,800
Auxiliary Services	3,400
Total (75% of entire facility)	28,000

OVERALL PLANNING CONSIDERATIONS

Interaction of College and Career Center

The planning for the Career Center took into consideration the contemplated transfer from the College of Eastern Utah of existing programs of definite vocational-technical orientation, and, conversely, the accommodation in the College of career-related courses not requiring proximity to other Career Center spaces, equipment, or laboratories. These planned exchanges will free 12,537 square feet of space in the College, most of it already declared substandard for instructional purposes and located in a building eventually to be disposed of. The programs listed for transfer from the College and the space they now occupy are:

Subject to Transfer	Square Footage
Auto mechanics	4, 166
Cosmetology	2, 400
Drafting	955
Machine trades	3, 588
Mining machines, electricity	3, 420
Welding	2, 412
Total	16, 941

Career Center classes to be accommodated in the College (but not already in existence there) are those pertaining to agriculture which do not involve shopwork, and those in environmental control, each requiring approximately 800 square feet of classroom space. The Career Center category of Office Occupations, already adequately accommodated in the College, and occupying 2, 804 square feet, is scheduled to remain where presently situated, thus bringing to 4, 404 the total square footage for Career Center programs to be housed in the College. This results in the net difference of 12, 537 square feet of freed space in the College, most of it eventually to be eliminated.

Furthermore, classrooms specified for the Career Center are minimal because of the possibility of utilizing to the fullest possible extent, for classes not requiring adjoining laboratory facilities, classrooms which may be available at the College.

Although a small administration office is indicated for location within the Career Center for direct management of that facility and for the convenience of students, faculty, and the community with respect to functions and operation of the Center, general overall administration will be integrated with existing facilities of the College. These are expected to include registration, purchasing, recordkeeping, maintenance, and other usual administrative functions.

The interrelationship between the College and the Career Center indicates the importance of careful planning by the architect for convenient interchange of students and administrative personnel between the two institutions.

Flexibility to Accommodate Future Changes--A Major Requirement

The Career Center is to house facilities and equipment, laboratories and classrooms, for introduction of students to various aspects of vocational education on an exploratory basis, and for specific job-centered instruction and training of those preparing for employment in the areas offered, from beginning to advanced courses.

Inasmuch as this training must be geared to the requirements of potential employers, and inasmuch as the types of skills required are continually changing, space in the career center must be planned to be as versatile as possible. Although beginning with programs which are designed to meet the needs of the immediate future, the occupational training programs, and the space assigned to them initially, must be readily adaptable to change as types of job opportunities diminish or increase or as new ones are developed.

In order that the space initially designated for stated purposes may be subject to future changes with a minimum of inconvenience and expense, fixed installations are to be avoided insofar as possible in all the laboratories and shops, and instructional space is to be maneuverable for accommodation of small or

large groups, and convertible for different types of activities and equipment. Actually, in the planning stage, the entire instructional and training area must be considered as unassigned space, with flexibility of use as the prime requirement.

Students to be Mingled--not Segregated as to College and Non-College Status

The various shops and laboratories of the Career Center are to be available, insofar as practicable, not only for students registered at the College of Eastern Utah, but for students of nearby high schools which will rely on the facilities of the Center for vocational training, and also for adults, irrespective of age or prior educational attainment. The facilities are to be so set up that the educational programs conducted within them may be terminal or on an ongoing basis and keyed to broad student exposure to the total program.

All students, whether beginning or advanced, who are participating in any of the several major categories of training at the Center (as well as those in the career-training classes which are housed in the College) are to be trained within the same general area in order that each may obtain a comprehensive grasp of all phases of the operation. Each is to be given the means to understand how the skill he is acquiring relates to others in the same field, and his interest in the opportunities afforded for continuing education will thus be stimulated. For example, the transportation laboratory should simulate a commercial repair shop, with a section for body and fender work, wheel alignment, motor tuneup, etc., with beginning students and those with more advanced training working together in the same shop.

This means that the laboratories are not to be sectioned for separate accommodation of students from the high schools, for example, and that there need be no duplication of facilities and equipment for one group or another, but rather progression according to competence and acquired skill within the various stations of the same laboratory.

Special Consideration for Handicapped Students

Special consideration must be given to accommodation of handicapped individuals with respect to ramps, entrances and exits, and other features, such as elevators, where applicable, and special toilet facilities. These considerations are to receive high priority in view of the rehabilitation services program to be included in the Career Center. This program anticipates assignment of handicapped individuals for training throughout the facility in all established departments to the greatest appropriate extent.

Restrooms for handicapped students are to be provided in connection with the Rehabilitation Services section of the Center. These restrooms, as well as the main toilet facilities, are to be especially designed for accommodation of the handicapped, including those in wheelchairs. The separate facilities in connection with the Rehabilitation Services section will limit the extent to which handicapped students must contend with others for these services.

Restroom-Locker Facilities

Restrooms for the entire Center are to be concentrated in an area between the large-equipment shops and all other sections, and to include student lockers and clothes-changing areas, and showers. Centralization will provide economy in building costs and reduce the amount of supervision required for such facilities. The separate accommodations for the handicapped, as already indicated, are to be located convenient to the Rehabilitation Services section of the Center.

For the general restroom concentration, personal lockers will be needed for approximately 870 students--for 270 women and 600 men. One clothes-change locker should be provided for and adjoin every three individual lockers, for rotated use during different class periods when changing from usual clothing to shop garb. These facilities should be similar to those ordinarily provided in connection with school gymnasiums.

For men, the general facilities should be located for ready access from the large-equipment shops; those for women, with accompanying small lounge area, are to be located for convenient access from the other instructional and auxiliary sections. These facilities are for the use of both faculty and students, without distinction between them other than sex.

Similar facilities are required for the separate restrooms for handicapped individuals, for perhaps 12 women and 12 men.

Ease of maintenance and cleanability are required for all restroom-locker facilities.

Efficient Utilization of Space Without Unnecessary Duplication

An overriding consideration in the preparation of the educational specifications, and one to be observed during the architectural process, is the provision of adequate space, to the greatest possible extent, for effective operation of the Career Center within established size and cost limitations. As a means to this end, the specifications limit duplication of similar spaces insofar as practicable, and provide for concentrated or multiple space utilization wherever feasible. Principal efforts in these directions are those summarized here:

1. Limiting classrooms to a minimum throughout the Center, most of them on a shared basis as, for example, the divisible classrooms between each two large-equipment shops.

2. Suggesting that requirements for classes not requiring accompanying laboratory facilities be held in regular classrooms in the College of Eastern Utah..

3. Considering requirements and facilities of the College and of nearby high schools and making space-use proposals to avoid or eliminate unnecessary duplication between them and the Career Center.

4. Concentrating in one general area restrooms, lockers, and clothes-changing facilities, and also showers, eliminating such facilities from individual shops and laboratories, and making no provision for separate accommodation of students and faculty.

5. Limiting conference rooms to one--in the Administration section--and expecting program or interdisciplinary committees to meet in instructors' offices or in classrooms when unoccupied.

6. Limiting the number of instructors' offices to one for each section, and indicating shared office space in sections with more than one instructor.

7. Providing space in the administration office for a clerical pool for assistance for instructors, rather than providing space for a secretary in connection with each instructor's office.

8. Providing for the Center only a small administration office for direct operation of the facility, and for the integration of all other usual administrative functions with those already existing in the College of Eastern Utah.

List of General Requirements for the Overall Career Center

In addition to the preceding overall planning considerations, the following list is presented, for reference by the architect, with respect to other requirements applicable to the entire Center. This list is followed by another relating to uniform requirements for the large-equipment shops, and the section following that lists the detailed space allocations for each of the several sections of the Center and the special requirements of each. *

1. Flexible interiors, so that laboratories and other spaces can be expanded or contracted by means of operable partitions and dividers for utilization by both large and small groups of students, and so that spaces can be converted to different purposes as curriculum and other changes occur.

2. Utilization of movable cabinets, bookshelves, and furniture arrangements to provide partial, flexible partitioning of interior spaces to the greatest practicable extent.

3. Tool and equipment storage to be portable wherever practicable, the cabinets and containers to serve also as walls or space dividers wherever feasible, and the tools and supplies for specific tasks to be visible and accessible where needed--not housed in a remote area.

*See Worksheet explanation on page 17.

4. Lockable cabinets to be included where needed (as well as open and unlocked storage) for protection of valuable equipment, hazardous liquids and other supplies, and students' projects.

5. Uniform heating and air-conditioning throughout.

6. Separate thermal and lighting controls in all instructional and auxiliary areas, adaptable to varying space arrangements, so that each may be used independently of the others, as required, on days and at times when the entire Center is not ordinarily in operation.

7. Sound control, insofar as this can be achieved in flexible interiors, by means of sound-absorbing floors and ceilings if otherwise practicable, and by zoning noise-generating activities away from quiet ones.

8. Lighting and darkening facilities, to supplement and modify natural light from easy-to-clean windows, for both day and night utilization, with adequate controls so that complete darkening can be obtained as well as zoned control so that the instructor may retain enough light for students to take notes during visual presentations.

9. Electrical outlets throughout the Center, in ample quantity and capacity according to needs indicated by reference to the equipment inventories and specifications for each section which appear at the back of this report.

10. Master shut-off switch with signal light in every laboratory (except the simulated store in the Distributive Education section).

11. Fire control and safety devices, such as fire extinguishers and fire blankets, shower heads and fume hoods, installed in accordance with local codes and with special reference to the activities involved, including those areas where fumes, acids, or dust constitute health hazards; these safety devices should supplement rather than abrogate the normal functioning of the general mechanical system.

12. Drinking fountains, readily accessible, in all instructional, shop, and auxiliary areas.

13. Fixed utilities, such as sinks and cleanup areas, shampoo basins, drinking fountains, and washing machines to be located at perimeters so as to constitute no interference with changeable interior arrangements and maneuverability of partitions and dividers.

14. Sinks and cleanup areas in every laboratory, large and small.

15. Floor surfaces throughout to be of smooth finish for easy cleaning, resilient wherever practicable, as slip-proof and sound-absorptive as possible, and resistant to heat, acids, stains, and moisture. Exceptions are most large-equipment shop floors where concrete is not to be covered (except for slip-proof material around machines), and the Auxiliary Services section of the Center which is to be carpeted throughout.

16. One classroom for every instructional category (except Drafting and Printing which are combined classroom-laboratories); the one classroom for each of the four large-equipment shops to be located between and shared by each two shops; these shops also to have combined classroom-laboratories where specifically indicated.

17. One instructor's office in every instructional section (except that Drafting and Printing require only desk and file space in their respective areas --not a separate office) with ready access from areas of circulation, with direct access to respective classroom and laboratory, and with desk and file space for one or more occupants as specifically indicated.

18. Clothes closet in every instructor's and administrator's office, and in other designated places as, for example, in the cosmetology shop for patrons' use, and in Drafting and Printing, and near clerical pool.

19. Telephone in every instructor's office, and at additional locations as specifically indicated, such as the appointment desk in cosmetology,

and as specifically indicated in the three sections of Auxiliary Services--administration, counseling and job placement, and rehabilitation services.

20. Toll telephone booths, as indicated, in the main entrance lobby and in the cosmetology area.
21. Laboratory facilities in connection with every instructional area, with ready access to classrooms and offices, and to supplies and equipment, taking into consideration the special requirements of each as delineated in specifications for each section.
22. Wall finishes without glare, in appropriate colors, and of easy cleanability.
23. Chalkboards and map rails in all classrooms, including classroom-laboratories, e.g., drafting and printing shops, and others wherever indicated.
24. Projection screen in every classroom: provision for permanent mounting.
25. Television reception: provide for accommodation in every classroom.
26. Interior circulation to be provided to all instructional and other areas throughout the Center.

Uniform Requirements for Large-Equipment Shops

The four large-equipment shops, to occupy about two-thirds of the total instructional space of the Career Center--18,000 of 28,000 square feet--are to be so located as to open onto an extensive outdoor common area for work on big-scale projects of the various shops, for storage of bulky equipment, and for convenient interchange between all four shops.

Diagram 1 indicates the proposed location of these shops in relation to one another and to the other components of the Center. The largest and perhaps noisiest shops might well be placed at the greatest distance from the quieter laboratories and Auxiliary Services which are to face public access to the Center. Other relationships indicated in the diagram are also important--location of the welding section of Metalworks near Construction which will at times require welding facilities; location of Construction near the drafting shop with which it will

have a direct working relationship; and location of Mining Technology near Health Services where mine first aid is expected to be taught.

The many identical requirements of these four large shops are listed here for the convenience of the architect. These requirements are in addition to the general requirements for the entire Center, already stated and also applicable to this four-shop area. Additional separate specifications for each of the different shops appear in the next section of this report.

1. Access to each shop for delivery of large equipment and supplies.
2. Noise protection, insofar as possible, of the public and of the other more quiet sections of the Center, from these four shops.
3. Common outdoor area, readily accessible to all four shops, for shopwork on large-scale projects, storage of bulky equipment, and easy interchange between the shops.
4. Overhead doors (with windows), size 12'x12', power operated, opening directly onto central outdoor shop area (three in Transportation, two in Metalworks, one each in Construction and Mining Technology).
5. Standard walk-in door, adjacent to every overhead door.
6. Ceiling height of approximately 14'.
7. Service grids, overhead, to provide electrical power, hot and cold water, dry and vaporous disposal and exhaust, gas, steam, and compressed air, all easily accessible and adaptable for various and changing activities and equipment.
8. Electric power to be provided as required for various machines and equipment listed in the inventory of present equipment and specifications for new equipment, which appear at the end of this report, and to which the architect is referred.
9. Floor drains, constructed to provide for adequate wet waste disposal, and designed for easy cleanability and maintenance.

10. Concrete floors, increased strength, sufficient to support heavy equipment wherever desired within the laboratories, finished for easy cleanability and maintenance, but covered only where specifically indicated (with slip-proof material around each machine).

11. Sound control, insofar as this can be achieved in a flexible interior, by means of sound-absorbing ceilings, by zoning noise-generating activities away from quiet ones, and by providing as much protection as possible from shop areas for classrooms and instructor's offices.

12. Sinks and cleanup areas for each laboratory, so located as to not interfere with the maneuverability of interior space for various purposes.

13. Other fixed facilities, such as mechanical hoists and stationary storage, to be zoned so that they will not inhibit the versatility of the main maneuverable space.

14. Stationary storage facilities in each shop, securable, located near wide overhead door, to accommodate heavy and bulky materials, such as lumber, pipes, and other supplies.

15. Tool and equipment storage, portable wherever practicable, at least 7' high and about 15'x22', with double doors for easy access, with secured storage for students' projects as well as for tools and equipment, with the tools for specific tasks to be visible and accessible where needed (not housed in a remote central storeroom); such storage to serve also as walls or space dividers wherever feasible.

16. Instructor's office in connection with each shop, for accommodation of one or more instructors as specifically indicated for each area.

17. One classroom of 800 square feet between each two shops, divisible, for shared utilization by small groups and readily convertible to one large area for alternate use by one shop or the other, as required.

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

The foregoing general planning considerations pertaining to the overall Career Center are supplemented in the following pages by detailed specifications for each instructional space, shop, and laboratory in the facility. Both the general and the detailed lists will serve as guides to the architect, as will the diagrams showing the relationship of areas to one another--not only of the different sections but also of their subdivisions.

Staff members of the College of Eastern Utah, area high schools, and State Division of Vocational and Technical Education assisted in development of both general and specific lists by checking worksheets to indicate, for their respective programs, their opinions, preferences, and requirements as to:

Services and Equipment;
Heating, Ventilating, and Cooling;
Lighting and Ceiling Criteria;
Partition Criteria;
Floor Coverings; and
Furniture.

Their worksheets and supplementary comments and diagrams were all taken into consideration in the compilation of the lists of both general and particular requirements included in this report. A sample set of these worksheets, checked to reflect composite views regarding items included in the foregoing list of general requirements, appears in the Appendix. Architects and engineers may find this sample set useful for quick reference, and also for their own further specification of factors as their planning proceeds beyond the scope of this report.

Diagram 1 on page 19 portrays the several spaces for which detailed specifications follow. It also indicates relationships of one area to another. For example, the two largest and perhaps noisiest of the large-equipment shops might well be placed, as indicated, at the greatest distance from the quieter sections of the Center, to help provide noise protection for the rest of the facility and the

public. The relationship of Construction to both Metalworks (welding section) and Drafting is indicated, as is that of Mining Technology to Health Services where mine first aid is to be taught. Also indicated is the clustering toward public access of spaces for services with greatest probable public patronage, i.e., cosmetology, printing, and registration regarding employment by both workers and employers. Handicapped individuals, likely to congregate in the Rehabilitation Services center during waiting periods connected with necessary transportation arrangements, are also considered by indicating the placement of this center near the main entrance.

The specifications as to space sizes and special requirements follow in alphabetical order for, first, the Auxiliary Services, and then for instructional areas. Career Center programs not included in these specifications are:

Agriculture and Environmental Control, classroom aspects of which will be accommodated in standard classrooms in the adjacent College of Eastern Utah; and

Office Occupations already adequately accommodated in the College and expected to remain there.

Those aspects of Agriculture which pertain to:

Farm buildings and conveniences will be taught in Construction;
Powered farm machinery will be taught in Transportation Services; and
Repair of farm equipment will be included in Metalworks.

Each list of particulars for the various spaces is preceded by a brief narrative summary and, where applicable, a diagram indicating, for architectural planning purposes, the components of the respective section and their relationship to one another.

Although the space allocations specified may change to accommodate subsequent architectural design, the total square footage requirements for the Career Center are expected to remain constant.

Eastern Utah Career Center

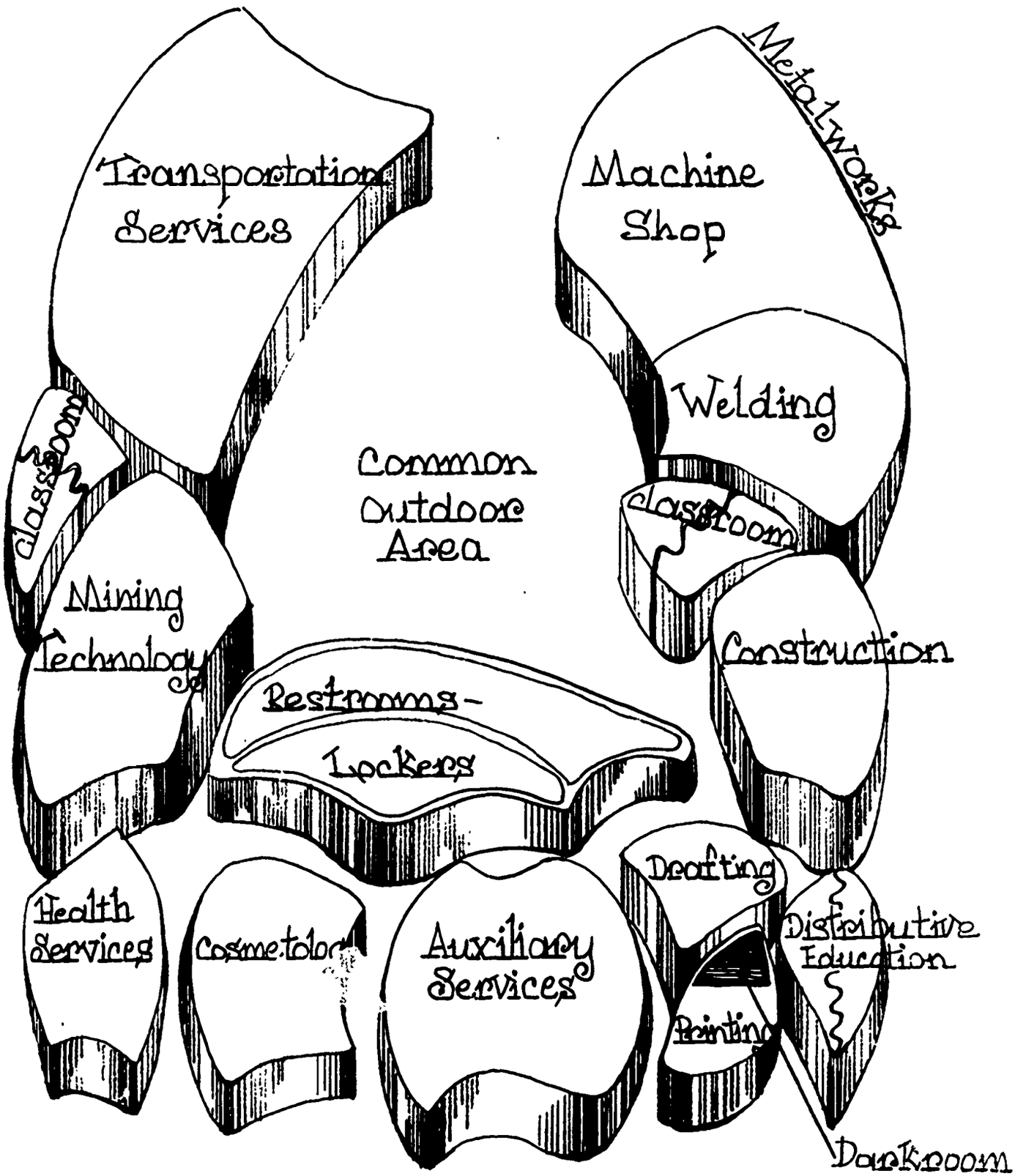


Diagram 1

Auxiliary Services

The Auxiliary Services section of the Career Center, to be composed of 3,400 square feet, is to be located directly off the main entrance lobby of the entire facility, and is to be readily accessible to the community, students and faculty, and personnel of the adjacent College of Eastern Utah. This section is to be carpeted throughout. It is to encompass three departments--Administration, Career Counseling and Placement, and Rehabilitation Services for handicapped students. The area relationships of these departments are illustrated on page 22, preceding the list of space allocations and specifications. A general description of the three subdivisions of Auxiliary Services follows here.

Administration

An allowance of 945 square feet is for a small administration office for direct management of the Career Center. It is to include offices for the administrator and secretary-receptionist, a conference room, and space for a small clerical pool for the convenience of instructors of all sections of the Center. It is expected that general overall administration will be integrated with existing facilities and functions of the College of Eastern Utah, including registration, purchasing, recordkeeping, maintenance, and other usual operating services. The importance of easy accessibility to this section from all areas of the Center and from the College and the community in general is readily apparent.

Career Counseling and Placement

The Career Center is expected to provide comprehensive and sophisticated career counseling and job placement services. A total of 1,200 square feet is allocated for this section--to accommodate an office for a secretary-receptionist and a waiting area, four semi-private interview booths, and a multi-use room for testing purposes, to serve also as an occupational information center and reference library regarding employment opportunities, qualifications, and related matters. Convenient access is required for both job applicants and employers.

Rehabilitation Services

Space for Rehabilitation Services--1, 255 square feet--is intended to function as a focal point for handicapped students, a place where they can be registered and evaluated, and from which they can be assigned to appropriate training stations. This is an area where they can congregate during unassigned periods, for study, rest, or waiting before and after classes occasioned by their respective transportation arrangements, and for work on minor projects.

The director of these services will evaluate the probable training stations within the Center in relation to the capabilities of individual students and, where necessary, will sponsor the establishment of such stations in the desired categories as will specifically accommodate the trainees. The director will also locate and make arrangements for the training of the handicapped in off-campus situations in instances where certain individuals may not fit into a formalized vocational training program but can benefit from on-the-job training. Rehabilitation Services will also provide for placement of handicapped trainees in job situations (including sheltered workshops) or in transitional harbors between training and placement. Furthermore, it will maintain counseling and subsequent placement assistance, and other followup as required, in the interest of former students participating in the labor market.

A special requirement for the Rehabilitation Services is the provision of restroom-locker facilities for both men and women, with individual student lockers and clothes-changing areas related to shopwork. These facilities, to the extent of 12 each for men and women, are to be especially designed for use by the handicapped, including those in wheelchairs. These separate facilities will limit the extent to which disabled students need utilize the main restrooms.

Convenient access from Rehabilitation Services to the restroom-locker facilities, to the testing room and information center, and to all instructional areas is necessary.

Auxiliary Services

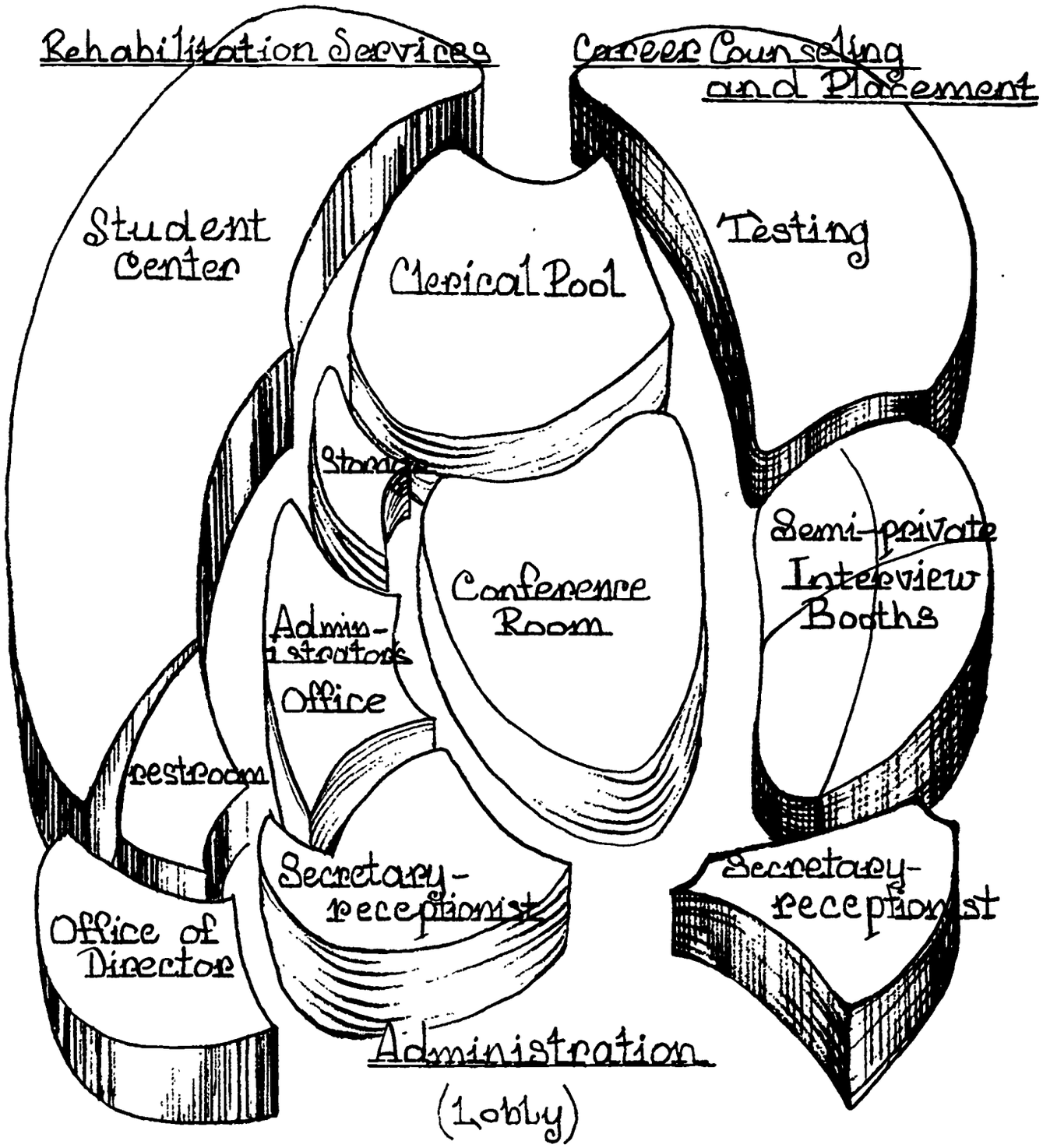


Diagram 2

Auxiliary Services

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
AUXILIARY SERVICES--Total Square Footage.....			3,400
1. Administration		1	945
a. Office of secretary-receptionist . convenient to public and administrator	1	1	150
b. Administrator's office . convenient to public and all areas of Center	1	1	125
c. Conference room, near entrance lobby . room darkening provisions		1	300
d. Clerical pool, convenient access from all instructional sections of Center	4	1	300
e. Space for storage of office supplies and for coat closet for clerical pool		1	70
f. Telephone service for both offices, the clerical pool, and a toll station in entrance lobby			
2. Career Counseling and Placement		1	1,200
a. Office of secretary-receptionist, near entrance . space for at least four waiting patrons	1	1	150
b. Semi-private interview booths for counselors	4	1	440
c. Multi-use room for testing, information center, and occupational reference library		1	610
d. Telephone service in office and each booth			
3. Rehabilitation Services		1	1,255
a. Office of director, near entrance, with semi-separate space for four waiting patrons . convenient access to multi-use room in Career Counseling and Placement	1	1	110
b. Student center for registrants of Rehabilitation Services during unassigned time, with space for rest, study, and work on minor projects . direct access to special restroom-locker area equipped for exclusive use of these students, including clothes-changing areas for shopwork, to serve 12 boys, 12 girls		1	925
c. Telephone service in office			
4. Entire Auxiliary Services section to be carpeted			
5. Each of the three departments to be readily accessible from the main lobby of the Center entrance			
6. Each department to be conveniently accessible from all instructional areas.			

Construction

An area of 2,000 square feet is provided for training and practice in most aspects of building construction, including carpentry, masonry, roofing, cement work, glazing, plumbing, painting, plastering, and surveying.

Agriculture-related instruction in construction of farm buildings and conveniences will also be conducted here.

The major floor space of the laboratory will be required for millwork and cabinet-making machines, and there must also be provision for accommodation of apprenticeship programs in electricity, plumbing, painting and decorating.

Diagram 1 on page 19 suggests that Construction be situated between Drafting and the welding shop of Metalworks, with ready access to both, because of Construction's direct working relationship with them.

A classroom for shared use of Construction and Metalworks is indicated for convenient access by both.

It is recommended that buildings constructed by students for subsequent disposition be built on property which can be sold with such buildings so that removal of the construction projects will not be necessary.

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
CONSTRUCTION--Total Square Footage.....			2,000
1. Instructors' office	2	1	160
2. Classroom (divisible, for shared use with adjoining shop and located between them, with 400 square feet derived from each and providing a total large area of 800 square feet)	15	1	400
3. Laboratory To include:	24	1	1,440
a. Space for millwork and cabinet-making machines			
b. Space to accommodate apprenticeship programs in electricity, plumbing, painting, and decorating			
c. Storage space at perimeter, near overhead door, fenced or otherwise partitioned from laboratory for supplies such as lumber, plumbing equipment, and other supplies for projects, and for secured storage of students' projects			
d. Tool storage, portable if feasible, for hand-construction tools, skill-saws, and other such equipment			
e. Sinks and cleanup areas			
f. Wide overhead door, opening upon common outdoor area			
g. Standard walk-in door alongside overhead door			

Cosmetology

An area of 2,000 square feet is allocated for Cosmetology. It is to be equipped with modern beauty salon facilities, and to provide student-training services to community patrons; therefore, it is to be located for ready public access. The components of the shop are illustrated in Diagram 3 below, and space allocations and other requirements are specified in the list on page 27.

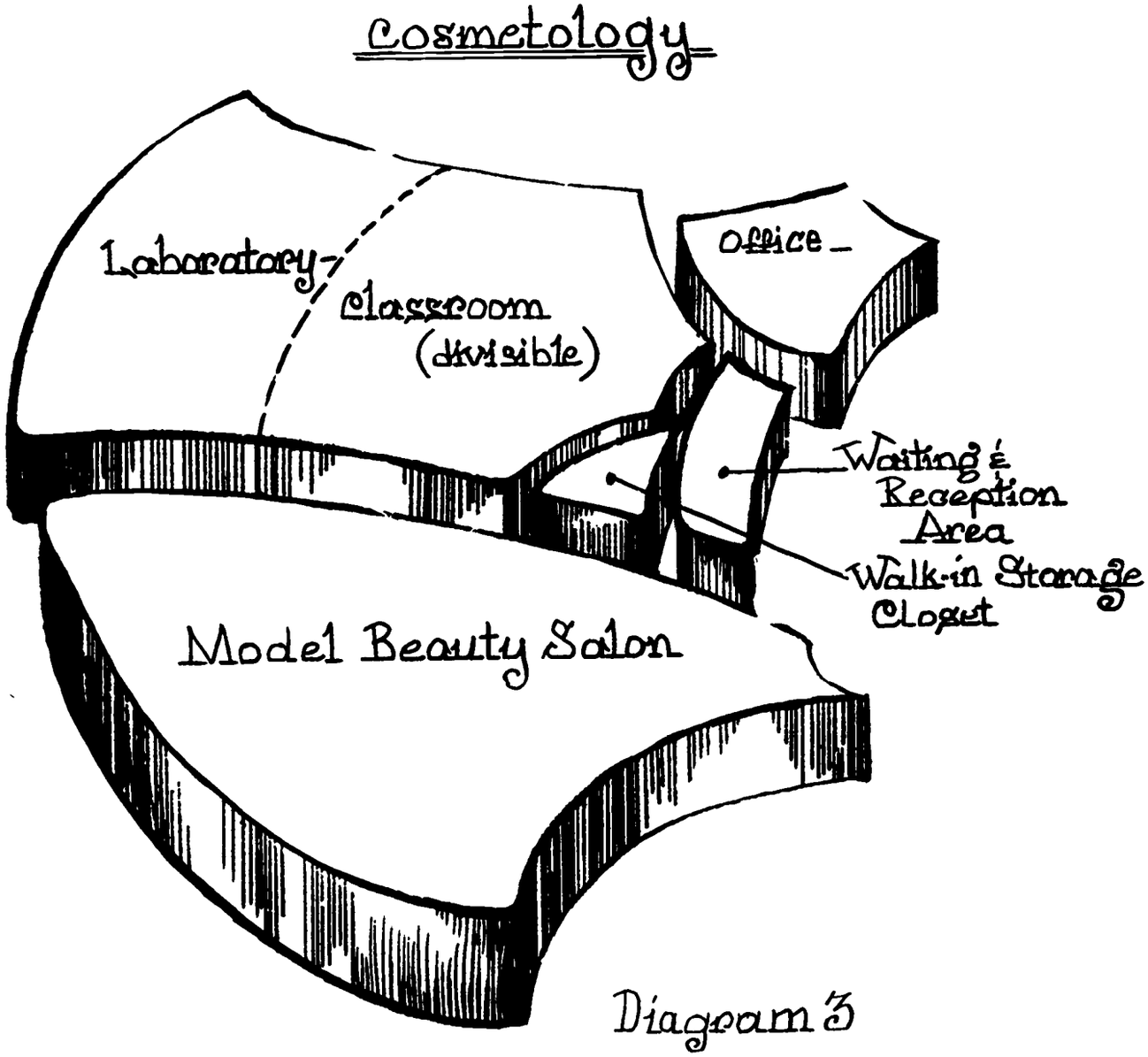


Diagram 3

Cosmetology

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
COSMETOLOGY--Total Square Footage.....			2,000
1. Instructors' office with closet, for desks and files	3	1	225
2. Reception and waiting area to accommodate at least four patrons and receptionist's desk, with convenient public access		1	110
.Closet or rack space for patrons' coats			
. Switchboard telephone at reception desk			
. Toll telephone station for patrons			
3. Walk-in storage closet for supplies (fireproof for chemicals and pressurized spray cans) and shelf and drawer storage for uniforms, towels, mannequins, and other cosmetic supplies		1	
.Provide for washer-dryer installation in this area			50
4. Laboratory-classroom, divisible, with movable partition	20	1	700
.Portable platform 8'x7'x1' at perimeter for demonstration purposes			
.Shampoo basin and hair dryer near platform			
.Shampoo bowl and wig dryer in laboratory area			
.Provide for compressed air hair-spray units at both these stations			
.Two or more student booths in laboratory area at perimeter, 18" deep, with wall mirrors			
5. Model beauty salon, arranged and equipped to supply student-training services to patrons	20	1	915
.Approximately half this space for hair styling			
. Equip for suspended stations for stylists to work on both sides, with mirror panel between, to allow for easy floor cleanup			
.Provide for compressed air hair-spray units			
.Approximately half this space for shampoo basins and hair dryers: four basins, 20 dryers			
.Storage cupboards above shampoo bowls.			
.Basins to be equipped with water-mixing fixture; bowls and drains to be chemical-resistant			
.Provision for odor and humidity exhaust			
.Provision for dust and hair-spray removal			
.Shadow-free light for makeup and hair styling			

Distributive Education

Distributive Education is allotted 1,000 square feet for classroom-simulated marketing purposes. The current curriculum in this area consists of instruction in the merchandising of auto parts and accessories. Eventually, it is expected that this space will be used also for other courses in general management, marketing, and salesmanship, and in service-station operation and industries relating to tourist-recreation accommodations needed in the State.

Requirements for all these occupational programs may be met by rotated or joint use of the indicated spaces, supplemented, if necessary, by facilities of the College of Eastern Utah for classes not requiring merchandising displays.

Space designations here are for an instructor's office, and classroom-laboratory facilities to provide a model store arrangement with actual and simulated stock storage. The space is to be flexible and adjustable according to requirements, with portable storage cabinets serving as room dividers where needed.

The simulated dispensing unit may eventually become a source for dispensing supplies of small items actually used in all sections of the Center.

Reference is made to Diagram 1 on page 19 for suggested location of this area in relation to others, and detailed space and other specifications are on page 29.

Drafting

An area of 1,000 square feet is specified for Drafting, to accommodate 24 drafting tables, a desk with telephone, and sink and cleanup area. It will serve the drafting requirements of all the large-equipment shops, and will have a direct working relationship with Printing; therefore it should be located for convenient access from all these areas.

Specifications follow on the next page as to space allocations and special requirements. The suggested location of this shop to other areas of the Center is indicated in Diagram 1 on page 19.

Distributive Education

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
DISTRIBUTIVE EDUCATION--Total Square Footage...		1	1,000
1. Instructor's office	1	1	110
2. Classroom-Laboratory a. Entire area to be subdivided as required by movable storage cabinet-dividers to accommodate class instruction and an area to be stocked and set up as a model training store (about half the space for each purpose) b. Storage shelves and bins, and catalog racks c. Work counters d. Some storage to be secured e. Sink and cleanup area f. Adequate electrical outlets are necessary	25	1	890

Drafting

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
DRAFTING--Total Square Footage.....	24	1	1,000
a. Area for 24 drafting tables b. Sink and cleanup area c. Uniform light required d. Space for instructor's desk e. Telephone f. Blackboards and map rails g. Locate for convenient access from the large shops, Administrative Services, and Printing h. Combined clothes closet-supply storage area			

Health Services

An area of 1,700 square feet is designated for instruction and training in Health Services. At the outset, the curriculum to be transferred to the Center from the College of Eastern Utah is for the training of licensed practical nurses. It is expected that diagnostic laboratory technology and medical recordkeeping will eventually be added, and that mine first aid will be taught here in cooperation with Mining Technology. Because of the mine first aid course, Health Services and Mining Technology are indicated for location in the Career Center in proximity to each other. (See Diagram 1 on page 19.)

Although the diagnostic laboratory is not specified for the training of licensed practical nurses, it should be closely related and accessible to that section of Health Services. Both facilities require isolation from the classroom to be provided in Health Services, and both require provision for odor-removal.

A special requirement for the simulated patient laboratory is that doorways be wide enough to accommodate bed removal from one area to another, and this should be taken into consideration when movable partitions and portable storage-work counters are planned for use as room dividers.

Area relationships within the Health Services section of the Center are portrayed in Diagram 4 on the next page. Space allocations and related requirements for all components appear in the list of specifications which follows the diagram.

Health Services

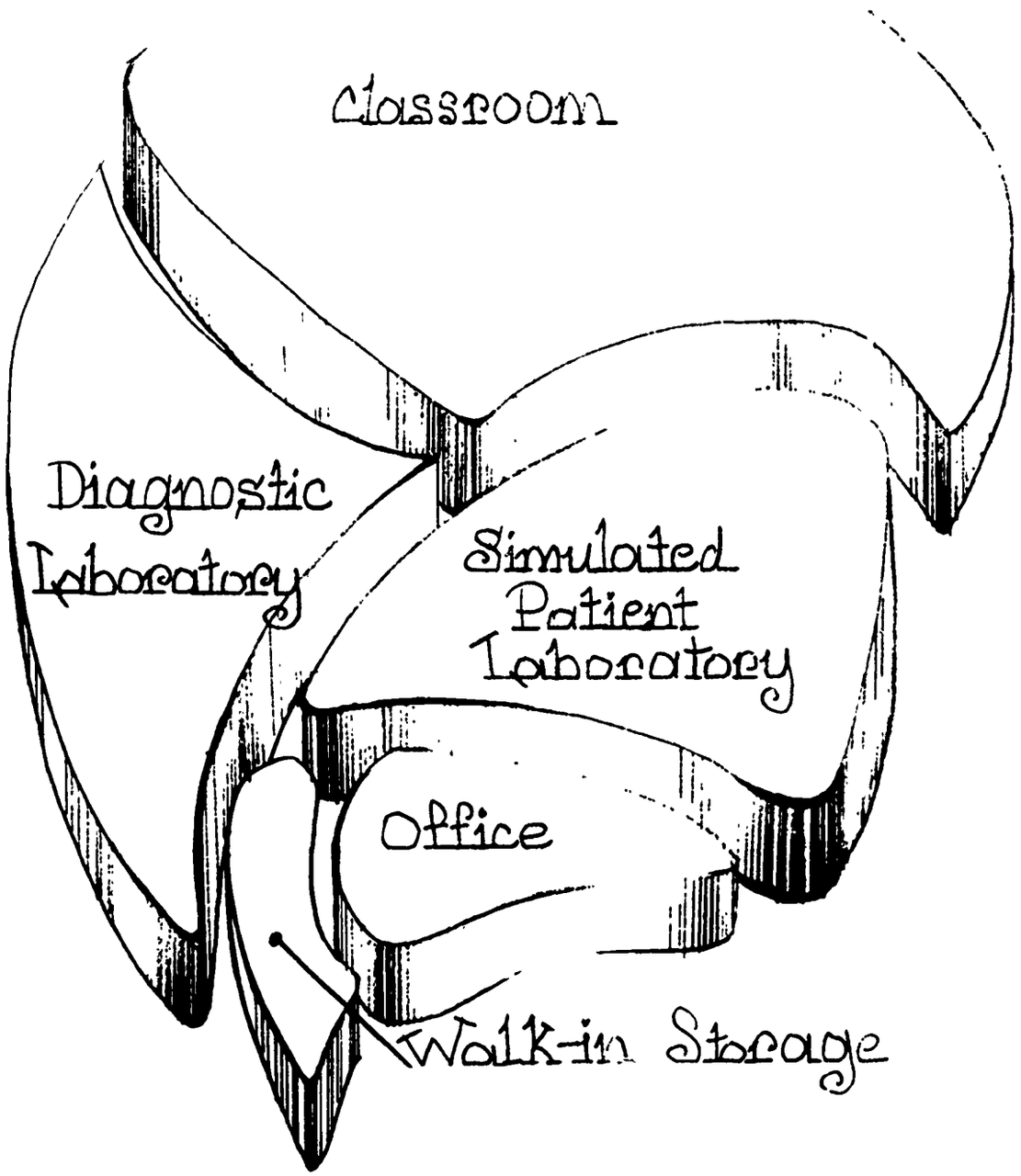


Diagram 4

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
HEALTH SERVICES--Total Square Footage.....			1,700
1. Licensed Practical Nurse Training Facilities		1	1,400
a. Instructor's office	2	1	160
b. Classroom . With wall blackboards, map rails, bookshelves . Direct access to Diagnostic Laboratory	35	1	800
c. Simulated Patient Laboratory . Space for four beds and bedside stands, with space between for nursing services . Spot lighting and electrical outlets at each bed . Elevated platform, portable, to accommodate one bed and bedside stand, and several students, for demonstration purposes . Spot lighting and electrical outlets here also . Toilet room for demonstration-training use		1	440
. Walk-in equipment storage space for wheelchairs, stretcher, bed siderails, chart desk for 24 student charts, bedpans, and other nursing equipment		1	(80)
. Long work counter, usable from both sides, with storage cupboards above and below, look-through space under upper cupboards, some locked cupboards for simulated drug storage . Good lighting for cupboard-counter . Cupboard-counter to be utilized as a movable space divider . Ceiling tracks, 10' modules, for curtain screens between beds . Provide for accommodation of washer and dryer in perimeter location . Two sinks, with counter space between, in perimeter location			
2. Diagnostic Laboratory	10	1	300
a. Readily accessible to Health Services entrance, to classroom, and simulated patient laboratory b. Provide for utilities for diagnostic procedures			

Metalworks

The 7,000-square-foot area for Metalworks is to consist of two main laboratories, with the welding shop occupying about one-third of the space, and the machine shop about two-thirds. Initial courses in both categories will be transferred to the new space from the College of Eastern Utah. It is expected that the curriculum will eventually be expanded to include tool- and die-making and other aspects of metalwork, and that the Agriculture course in repair of farm machinery will be conducted here.

The Metalworks welding shop is to accommodate 12 welding booths and 12 acetylene stations, and a large area, opening directly through a wide overhead door to the exterior, for outdoor welding work on sizable projects such as cars, farm and other machines, and construction simulation. Interaction between welding and Construction will be facilitated by locating them in proximity to each other as suggested in Diagram 1 on page 19. The divisible classroom to be shared by Construction and Metalworks will be in this vicinity also.

The Metalworks machine shop is to accommodate 40 students in a laboratory with adequate space for metal-working equipment, including lathes, milling machines, shapers, grinders, drilling machines, metal-cutting saws, abrasive cutting machines, and testing equipment. This area is to be accommodated by one wide overhead door opening onto the outdoor commons. Of special importance is the provision of nonslip floor covering surrounding every machine.

Both laboratories require special treatment with respect to fume and dust removal; both require high intensity lighting, adequate ventilation, and some stationary storage. In addition, the welding shop requires storage for oxygen, carbide, and an acetylene generator.

Diagram 1 on page 19 indicates Metalworks' relationship to other areas. The tabulated list of specifications as to size and special requirements follows here.

Metalworks

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
METALWORKS--Total Square Footage.....		1	7,000
1. Welding Shop	24	1	2,400
a. Instructors' office	2	1	160
b. Laboratory	24	1	2,240
.Space at perimeter for 12 arc welding machines each in a station 6'x6', soundproof as possible, facing welding booths		12	(432)
.Welding booths, each 6'x8', facing the welding machines		12	(576)
.Fume hood in each welding booth			
.Steel and rod storage room, permanent		1	(200)
.Tool storage in permanent location		1	(100)
.Acetylene stations for 12 students, 6 on each side, with fume hoods			
.Adequate area for welding work on large objects, such as cars, farm and other machines, and construction simulation, this area to open directly onto common outdoor space through wide overhead door			
.Standard walk-in door adjacent to wide door			
.Allow for cupboard storage-divider between welding and machine laboratories, with doorway space between at both ends			
.Light control, fume hoods, and dust collectors required at all student stations, as well as safety zones around equipment			
.Provide oxygen and carbide storage (80 square feet for each) and exterior storage (100 square feet) for acetylene generator			
.Entire area to be well ventilated with special provision for fume removal			
.High intensity lighting required			
.Electrical power as required for operation of equipment and machinery (refer to equipment list at end of report)			

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
2. Machine Shop	40	1	4,200
a. Instructors' office	2	1	160
b. Laboratory	40	1	4,040
.Tool room, at perimeter, permanent		1	(160)
.Inspection and gauging shop, at perimeter with windows for laboratory observation		1	(180)
.Stock storage room, permanent, to accommodate 20' lengths		1	(300)
.Portable stock storage			
.Wide overhead door, opening upon common area for outdoor shopwork		1	
.Standard walk-in door alongside wide door		1	
.Sinks and cleanup area at perimeter			
.Space for metal-working equipment such as lathes, milling machines, shapers, grinders, testing equipment, heat-treating equipment, drilling machines, metal-cutting saws, abrasive cutting machines			(3,400)
.Nonslip floor covering surrounding every machine			
.Entire area to be well ventilated with special provision for fume and dust removal			
High intensity lighting			
.Electrical outlets from overhead grids for both 115V. and 230V. (see list of equipment at end of this report for machines to be accommodated)			
3. Classroom (divisible, to be shared with adjoining shop (Construction) and located between them, with 400 square feet derived from each and providing a total large area of 800 square feet)	15	1	400

Mining Technology

A total of 3,200 square feet is allocated for Mining Technology, which is to include two classroom-laboratories--one for mine mechanics, and one (with simulated mine tunnel) for instruction in mine safety and mine foremanship. A divisible classroom to be shared with an adjoining shop (Transportation Services) is also indicated.

The new 1972-73 curriculum in Mining Technology of the College of Eastern Utah will constitute the nucleus for training in this area. At the outset it includes the testing of gaseous atmospheres and oxygen-deficient atmospheres, measurement of air velocities and quantities, roof and rib control methods, measurement of noise and of dust in atmospheres. First-aid training applicable to mines is also included in the curriculum, and is expected to be conducted in the Health Services section of the Center. Accordingly, these two facilities are indicated in Diagram 1 on page 19 for location in proximity to each other.

Special attention is directed to the ventilation requirements for the simulated mine tunnel, and the suggestion that, if possible, provision be made for concentration in this area, for brief periods as required, of the entire heating and ventilating capacity of the Center in order to provide ventilation up to a rate of 20,000 cubic feet per minute.

Reference is made to Diagram 1 for indication of the relationship of this shop to others in the Center, to the tabulated list of size and other specifications for the interior which follows, on next page, and to the equipment list at the end of this report for aid in determining electrical power requirements for this area.

Mining Technology

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
MINING TECHNOLOGY--Total Square Footage.....			3, 200
1. Instructor's office	1	1	110
2. Divisible classroom, shared with adjoining shop and located between them, with 400 square feet derived from each, providing a total large area of 800 square feet	15	1	400
3. Classroom-laboratory for mine mechanics a. Seating space for 24 students b. Workbench at perimeter for 15 students, with power for electrical test equipment (220-3 phase DC, 0 to 350 volts, 15 horsepower) c. Workbench at perimeter for 15 students, for hydraulics test equipment d. Both workbenches to be equipped with drawer storage at each student station e. Portable storage f. Sink and cleanup area g. Wide overhead door, standard door alongside h. Projection screen	24	1	1, 790
4. Classroom-laboratory (with simulated mine tunnel) for training in mine safety and foremanship a. Provision for total darkness b. Seating space and table space for 24 students c. Space for special racks for mine rescue equipment d. Methane explosion chamber e. Storage and charging station for methane detection instruments, secured f. Storage for 15 Mcaa oxygen-breathing apparatus, secured g. Storage for oxygen cylinder, oxygen pump, and carbon-dioxide, secured h. Storage, secured, for noise-measuring equipment and dust-weighing and analysis equipment, and for naphtha gas i. Simulated mine tunnel (hall space suggested) with provision for ventilation at a rate of up to 20, 000 cubic feet per minute) . If possible, provide for concentration in this area, for brief periods as required, of the entire heating and ventilating capacity of the Center, in order to provide the required ventilation. j. Projection screen	24	1	1, 000

Printing

An area of 900 square feet is allocated for Printing, and is to include a darkroom. The shop is to be equipped with up-to-date machines and facilities for providing both the Career Center and the College of Eastern Utah with printing services, and also constituting a laboratory for the training of students in printing machines operation and techniques. Inasmuch as this shop may also make printing services available to students and the community on a piece-work basis, it should be located for convenient access by students and the community, as well as by administrative personnel of both institutions. It bears a direct relationship to Drafting and should be situated in close proximity to that shop, as indicated in Diagram 1 on page 19. The list of special requirements follows below.

The nucleus for this shop will be the duplicating equipment transferred to it from the College of Eastern Utah.

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
PRINTING--Total Square Footage.....	12	1	900
1. Laboratory a. Entire area to have reinforced floors to carry operating presses b. Adequate power for the machinery c. Sink and cleanup area in both lab and dark room d. Sound control e. Shelf storage for paper and other supplies f. Counter near entrance for receiving and delivering printing orders, storage cabinets underneath g. Telephone at counter h. Combined clothes-closet-supply storage area	12	1	800
2. Darkroom, with adequate electric outlets and control a. Hot and cold water, mixing valve		1	100

Transportation Services

Space to the extent of 5, 800 square feet is allocated for Transportation Services, to accommodate the program and equipment currently housed in the College of Eastern Utah in slightly more than 4, 000 square feet. The larger shop will provide a more adequate training area, and accommodate also instruction in the operation and maintenance of powered large farm machinery.

The Transportation Services laboratory is to be equipped and arranged to resemble a typical commercial auto-truck agency workshop. Instruction and practice in automobile mechanics will include engine removal, disassembly, cleaning and repair, chassis repair, wheel alignment and balance, and engine diagnosis and tuneup.

Training in service-station operation, although closely allied to the general category of Transportation Services, is expected to be conducted in the Distributive Education section of the Center.

As in the other large-equipment shops, utilities such as gas, compressed air, and electricity are to be provided wherever needed by suspension from ceiling grids.

Special requirements, restated here, are for acetylene gas, compressed air, high intensity light for work areas, some stationary storage, and provision for adequate ventilation and for removal of engine exhaust and odors.

It is noted that this shop requires three wide overhead doors opening onto the outdoor common area, each with a standard walk-in door alongside.

Diagram 1 on page 19 indicates a desirable location for this shop at the greatest distance from the more quiet instructional areas for the protection of them and of the public from noise-generating activities. Ready access is also required for delivery of large supplies and parts needed in the operation of this shop. A tabulated list of specifications as to size allocations and special requirements follows.

SPACE ALLOCATIONS AND SPECIAL REQUIREMENTS

Specifications by Type of Space	Unit Capacity	No. Units	Total Area
TRANSPORTATION SERVICES--Total Square Footage			5,800
1. Instructors' office	2	1	160
2. Classroom (divisible, shared with adjoining shop--Mining Technology--and located between them, each contributing to a large area of 800 sq. ft.)	15	1	400
3. Laboratory (to resemble commercial agency shop)	48	1	5,240
a. Three wide overhead doors, all opening onto the common outdoor area		3	
b. Standard walk-in door alongside each wide door		3	
c. Portable storage		2	
d. Storage and tool room at perimeter, near overhead doors, perhaps between the two, secured, large enough for engines, transmissions, etc.		1	
e. Two movable work benches, each to accommodate 24 students, to be used as required as space dividers		2	
f. Space for at least four cars for engine work			
g. Partial pit or rack space, with accent lighting, large enough to accommodate cars of all sizes, for wheel alignment, and brake, steering, and frontend service			
h. Auto washroom large enough to accommodate one large car and surrounding working area, to be equipped for steam cleaners, buffing devices, etc.			
i. High-pressure water supply			
j. Overhead track with electric hoist to run from one engine repair stall to auto washroom			
k. Drying room, with blower fan with hot air			
l. Space for two twin-post lifts (air and hydraulic operated)			
m. Adequate provision for wet waste disposal			
n. Special provision for removal of engine exhaust and odors			
o. High intensity light for work areas			
p. Acetylene gas for welding			
q. Compressed air			
r. Sinks and cleanup areas			
s. Space for engine diagnosis center, large enough to install chassis dyromometer and special testing equipment (permanent installation)			

EQUIPMENT SPECIFICATIONS

Specifications for equipment for the several departments of the new Career Center are presented on subsequent pages, in the same alphabetical order in which the preceding Space Allocations and Special Requirements appear.

As in the case of the general and special lists of facility requirements, the following equipment specifications were derived mainly from cooperating staff members of the College of Eastern Utah, of participating high schools, of the State Division of Vocational and Technical Education, and from the Utah Technical Colleges. Those staff members of the College of Eastern Utah currently involved in vocational programs subject to transfer to the new Career Center, prepared two lists--one of existing equipment suitable for utilization in the new facility, and another of additional requirements for either replacement or supplementation of present equipment, taking into consideration the more comprehensive programs to be provided at the Career Center.

However, by the time the proposed Center becomes a reality, these equipment specifications should be reviewed and modified in relation to the programs then to go into effect. By that time courses may differ somewhat from those now planned, improved equipment may be available, and instructional methods may have changed in some respects. The lists included here may be useful at that time as work sheets for the preparation of new equipment orders.

In the meantime, the equipment specifications which follow here will be helpful to architects planning the spaces, space arrangements, and electric and other utility services for the new Eastern Utah Career Center.

EQUIPMENT SPECIFICATIONS-- AUXILIARY SERVICES

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Administration							
Chairs, desk		1					
Conference		18					
Reception-waiting		3					
Typist		2					
Desk, executive		1					
Typist		2					
File cabinets		3					
Tables, conference		1					
Lamp or magazine		1					
Typewriter		2					
Career Counseling and Placement							
Chairs, desk		4					
Reception-waiting		8					
Library-testing		12					
Typist		1					
Desks, counselors'		4					
Typist		1					
File cabinets		6					
Table, library		1					
Testing carrels		12					
Typewriters		5					
Shelves, bookcases							
Rehabilitation Services							
Chairs, desk		1					
Reception-waiting		2					
Typist		1					
Students		12					
Desk, director's		1					
Typist		1					
File cabinets		3					
Tables, students'		6					
Lamp or magazine		3					
Typewriter		1					

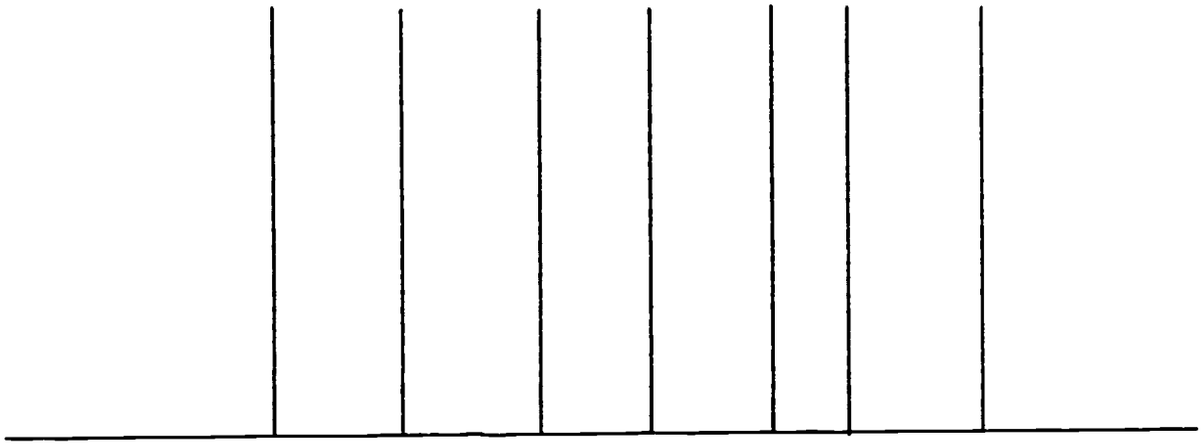
EQUIPMENT SPECIFICATIONS--CONSTRUCTION

Description	number available CEU	additional or replacement			electric power		other services (specify)
		number	dimensions		volts	other	
			length	width		(specify)	

It is expected that the Construction shop will provide some demonstration and practice in various aspects of building construction, such as carpentry, electricity, masonry, plumbing, et cetera.

However, intensive training programs may well be developed on an apprenticeship basis in cooperation with local trade and industrial organizations. Therefore, no equipment specifications are listed here, and no construction equipment is available for transfer from the College of Eastern Utah.

Equipment requirements for Construction should be determined in relation to types of programs adopted at the time the Career Center becomes operational. This determination will doubtless be made in consultation with the Utah Apprenticeship Council of the state, the Division of Vocational and Technical Education of the Utah State Board of Education, and the State Board of Higher Education.



EQUIPMENT SPECIFICATIONS--COSMETOLOGY

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Dryer (clothes)	1		30"	35"	110		
Facial chair	1	4	24"	22"			
Hair color accelerators	3	3	30"	24"	110		
Hair dryer	12	20	30"	24"	110		
Hydraulic styling chairs	23	20	24"	22"			
Manikin demonstration table		1	round: diam. 9'				
Shampoo chairs	4	4	24"	22"			
Styling stations	22	20	30"	30"			
Washer (clothes)	1		30"	35"			

EQUIPMENT SPECIFICATIONS--DISTRIBUTIVE EDUCATION

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Bookcase	1	8	6'	1'			
Catalog racks (small)		6					
Chair, typist	1		3'	3'			
Calculator		1			110		
Counter stools		4					
Chair, desk	1		3'	3'			
Catalog racks (master)		4					
Desk	1		5'	3'			
File cabinets 4-drawer, legal	2	4	3'	2'			
Projector, 35 MM		1			110		
Projector, overhead		1			110		
Projector, micro-film		3			110		
Projection screen		1					
Parts Bins		8	8'	2'			
Parts Counter		2	10'	3'			
Record player	1		2'	2'	110		
Teletype		1	3'	3'			
Typewriter	1						
Typewriter table	1		2'	2'			

EQUIPMENT SPECIFICATIONS-- DRAFTING

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Drafting tables	20		4'	3'			
Drafting table	1		8'	4'			
DumpyLevels with tripods	7						
Print machine	1		6'	2'	110	15 amps 1-phase	water
Print washer	1		6'	2'			water
Transit with tripods	4						

EQUIPMENT SPECIFICATIONS-- HEALTH SERVICES

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Beds, hospital		5	36"	70"			
Bedpan sanitizer		1	40"	40"			H_2O and steam connection
Chart rack		1	36"	36"			
Desks, office		2	36"	48"			
Desk chairs or tables (students)		30	30"	30"			
Desk and podium in classroom		1	36"	48"			
Files, 4-drawer legal		6	24"	48"			
Scales, infant		1					
Scales, physician's		1	20"	11"			
Sinks with knee and hand control		2	30"	36"			
Table, for scales		1					
Tables, bedside		5	28"	28"			
Tables, overbed		5	18"	36"			
Wall or floor stand		1	36"	36"			

Note: See pages 30 to 32 for movable cabinet with countertop to be constructed; also for demonstration-bed platform to be constructed.

Equipment for diagnostic laboratory to be specified by medical technician when this laboratory is authorized.

EQUIPMENT SPECIFICATIONS--METALWORKS (MACHINE SHOP SECTION)

Description	number available CEU	additional or replacement			electric power		other services (specify)
		number	dimensions		volts	other	
			length	width		(specify)	
Contour band machine, DoAll		1	53"	61"	220	3-phase	
Cut-off band saw DoAll model C-4		1	83"	44"	220	3-phase	
Cut-off saw, abrasive		1	4'	2'	220	3-phase	
Drill press, Wilton	1		26"	29"	220	3-phase	
Drill, radial, Cincinnati-Gilbert	1		6'	3'	220	3-phase	
Electrical discharge		1	6'	4'	220	3-phase	
Flexiwriter (to prepare N/C tapes)		1	42"	30"			
Grinder, Landis	1		8-1/2"	6'	220	3-phase	
Grinder, pedestal		3	24"	18"	220	3-phase	
Grinder, surface		1	71"	44"	220	1 hp. 3-ph	
Grinder, tool and cutter		1			220	3-phase	
Gear shaper, Fellow	1		48"	42"	220	3-phase	
Heat-treating furnace		1	4'	3'	220		
Hydra Shift, 13" Cincinnati		1	69"	56"	220	1 hp. 3ph.	
Lathe, 15" Clausing Colchester	1	2	96"	38"	220	7-1/2 hp. 3-phase	
Lathe, 20"Monarch	1		14'	4'	220	10hp. 3-ph.	
Lathe, Hardinge	1		54"	24"	220	3-phase	
Lathe, LeBlond 13"	2		90"	36"	220	2hp. 3-ph.	
Lathe, high speed with hydro-copying attachment, Mitsubish		1	78"	41"	220	3-phase	

continued on next page

EQUIPMENT SPECIFICATIONS--METALWORKS (Machine Shop--continued)

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Lathe, 15" South Bend	1	1	85"	31"	220	5hp. 3ph.	
Lathe, N/C		1	84"	48"	220	3-phase	
Mill, #3 Vertical Cincinnati	1		8'	7'	220	3-phase	
Mill, Index	1		5'	5'	220	2hp. 3ph.	
Mill, Milwaukee Model H	1		84"	90"	220	3-phase	
Mill, Milwaukee Model 15HP-3CK	1		96"	90"	220	15hp. 3ph.	
Mill, N/C 3-axis		1	6'	4'	220	3-phase	
Mill, Vertical Tracer, DoAll		1	86"	55"	220	3hp. 3ph.	
Optical Comparator	1		4'	2'	110	1-phase	
Tempering Bath		1	3'	3'			
Vises, 20' work		3	20'	30'			

EQUIPMENT SPECIFICATIONS-- METALWORKS (WELDING)

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Acetylene Generator	1		10'	10'	110		water and sewer outlet
Acetylene Regulator	12						
Anvil	2		2'	2'			
Argon Flow Meter		3					
Automatic Cutter	1		5'	2'	110		oxy.acetyl.
Cooling pit	1		30"	30"			
Drill Press		1	4'	4'	110		
Idealarc R3S-250	1		30"	30"	220	3-phase	CO_2
Metal Press	1		6'	6'			
Oxygen Regulator	12						
Pedestal Grinders	3		10'	10'	110		
Power Hacksaw		1	4'	2'	110		yes
Tables, firebrick top		12	3'	3'			
Tables, steel top		12	3'	3'			
Tensile Tester bench type							
Torch, Airco	2		30"	30"			oxy. acetyl.
Torch, Oxweld	3		30"	30"			oxy. acetyl.
Torch, cutting Oxweld	2		30"	30"			oxy. acetyl.
Torch, Victor acetylene	3		30"	30"			oxy. acetyl.
Vice	2	2	2'	2'			yes
Welder, A.C.Arc	2		24"	24"	220	1-phase	
Linde	1		48"	36"	220	1-phase	water
Motor generator	3		48"	24"	220	3-phase	argon
NGG rectifier	1		48"	24"	220	1-phase	argon
Portable Arc		1					gas power
Rectifier 300-300	5		30"	30"	220	1-phase	water

EQUIPMENT SPECIFICATIONS-- MINING TECHNOLOGY

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
AC-DC Generator	1		4'	2'	220	5 hp 3-phase	
Electric Drill	1		2'	2'	110	1/3 hp 1-phase	
Hydraulic Test Stand	1		6'	3'	220	10 hp 3-phase	
Motor-winding equipment		1					
Power rectifier (transformers) 220-440 v. A.C. 250-350 v. D.C.		1					

EQUIPMENT SPECIFICATIONS-- PRINTING

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Collator	1		17"	14"	110		
Combo Binder	1		24"	10"			
Copying Machine	1		20"	15"	110		
Thermo-Fax							
Xerox Copier	1		46"	45"	110		
Desk with typewriter extension	1		66"	60"			
Duplicator, fluid	1		28"	18"	110		
Filing cabinet	1		27"	15"			
Folding machine		1			110		
Offset Press	1		28"	21"	110		
Paper cutter							
Large	1		20"	20"			
Small	1		13"	13"			
Padding Clamp		1					
Tables	3		59"	29"			
Typewriter							
Regular carriage	1		19"	18"	110		
Wide carriage	1		25"	17"	110		

EQUIPMENT SPECIFICATIONS--TRANSPORTATION SERVICES

Description	number available CEU	additional or replacement number	dimensions length	dimensions width	electric power volts	electric power other (specify)	other services (specify)
Air hydraulic hoist, Weaver-twin post	2		17'	7'	230		
Bear Telaliner Model 600	1		11'	8'	110	7 amps.	
Brake shop	1		6'	3'	115	7.8 amps. 1/2 hp. 1 phase	
Bench grinder, 10-inch, Van Dern	1		2'	11"	110		
Chassis dynamometer		1	24'	12'	115		150 lbs. air pressure
Combustion analizer	1		36"	24"	115	1 phase	
Distributor machine	1		30"	24"	115	5 amps. 1 phase	
Electric hoist-Yale overhead, 1/2 ton capacity	1				220	3 phase	
Engine cleaning vat		1	48"	28"	220	1-1/2 hp. 1 phase	150 lbs. air pressure
Engine diagnosis center		1	3'	2'	110	1 phase	
Engine lift--Black Hawk model AC-11	1		8'	4'			
Engine stands--1000 lb. capacity, Black Hawk ES 100	6		3'6"	3'5"			
Engine analyzer--King model 514	1		2'	2'7"	110		
Generator and alternator tester		1	2'	40"	230	1 phase	
Generator testing machine, Allen 241	1		2'	3'10"	220		

continued on next page

EQUIPMENT SPECIFICATIONS-- TRANSPORTATION SERVICES (Continued)

Description	number available CEU	additional or replacement			electric power		other services (specify)
		number	dimensions		volts	other (specify)	
			length	width			
Hydraulic engine lift, Weaver model WC 101	1		6'	2'6"			
Hydraulic press	1		6'	3'			
Hydraulic press 3-ton capacity	1		4'2"	1'4"			
Stand grinder	1		36"	36"	220	2.8 amps 1 hp. 3-phase	
Static dynamic balancer		1	5'	3'	220	3-phase	
Sun analiscope		1	4'	3'	115	1-phase	150 lbs. air pressure
Sun distributor, tester model 600	1		2'2"	1'22"	110		
Sun scope motor tester, model 900	1		3'2"	2'	110		
Tire changer	1		5'	5'			150 lbs. air
Twin post lift		2	18'	7'	220	24.4 amps. 7-1/2 hp. 3-phase	150 lbs. air pressure
Tire balancer	1		4'	4'			150 lbs. air
Valve grinding machine, #682	1		3'4"	1'10"	230		
Valve refacing machine	2	1	3'	3'	115	1-phase	150 lbs. air pressure

APPENDIX

Exhibit A, Position Paper on Career Education

Exhibit B, Prospectus on Career Center

Exhibit C, Worksheet Composite of General Considerations

EXHIBIT A

UTAH STATE BOARD OF EDUCATION

Position Paper
(adopted May 12, 1972)

Career Education

"Career Education" is defined as a comprehensive, correlated educational system (including all facets of the present system) focused on individual career needs. Career Education begins in grade one or earlier and continues through the adult years. Career Education not only provides occupational information, career guidance and concept and skill development, but also helps students to develop attitudes about the personal, psychological, social, esthetic, and economic significance of life and the world in which the individual lives. Furthermore, it recognizes the fact that education transcends the school curriculum and that the entire community is a resource for career development. In this context, Career Education is not separate and apart from total life education, but is a correlated, integral part of all human development. It calls for a united effort of the school and community to help all individuals become familiar with the values of a work-oriented society; to integrate these values into their lives; and to implement them in such a way that work becomes useful, meaningful, and satisfying.

Career Education is a concept rather than a program; however, in order to carry out the Board's position, the following programs will be implemented:

1. The kindergarten through sixth grade program will be revised to include career awareness with the development of proper attitudes, appreciations, and understandings in the World of Work.

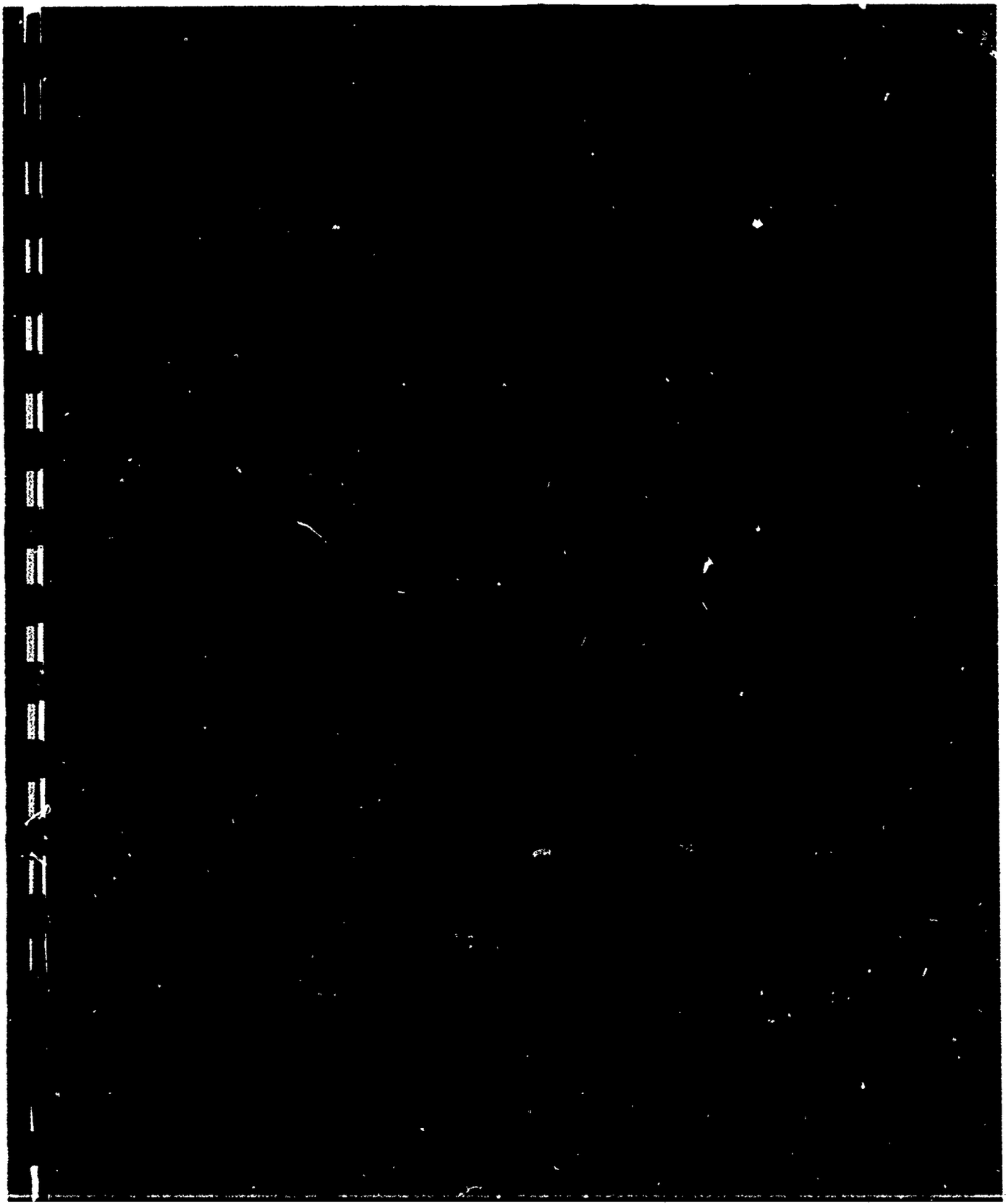
2. The junior high or middle school program will focus on career orientation and exploration with continued development of foundation skills and attitudes. At this level, students should have opportunity for in-depth exploration of different job families and to acquire information about themselves, their interests, and talents and how these can be transferred into career opportunities.

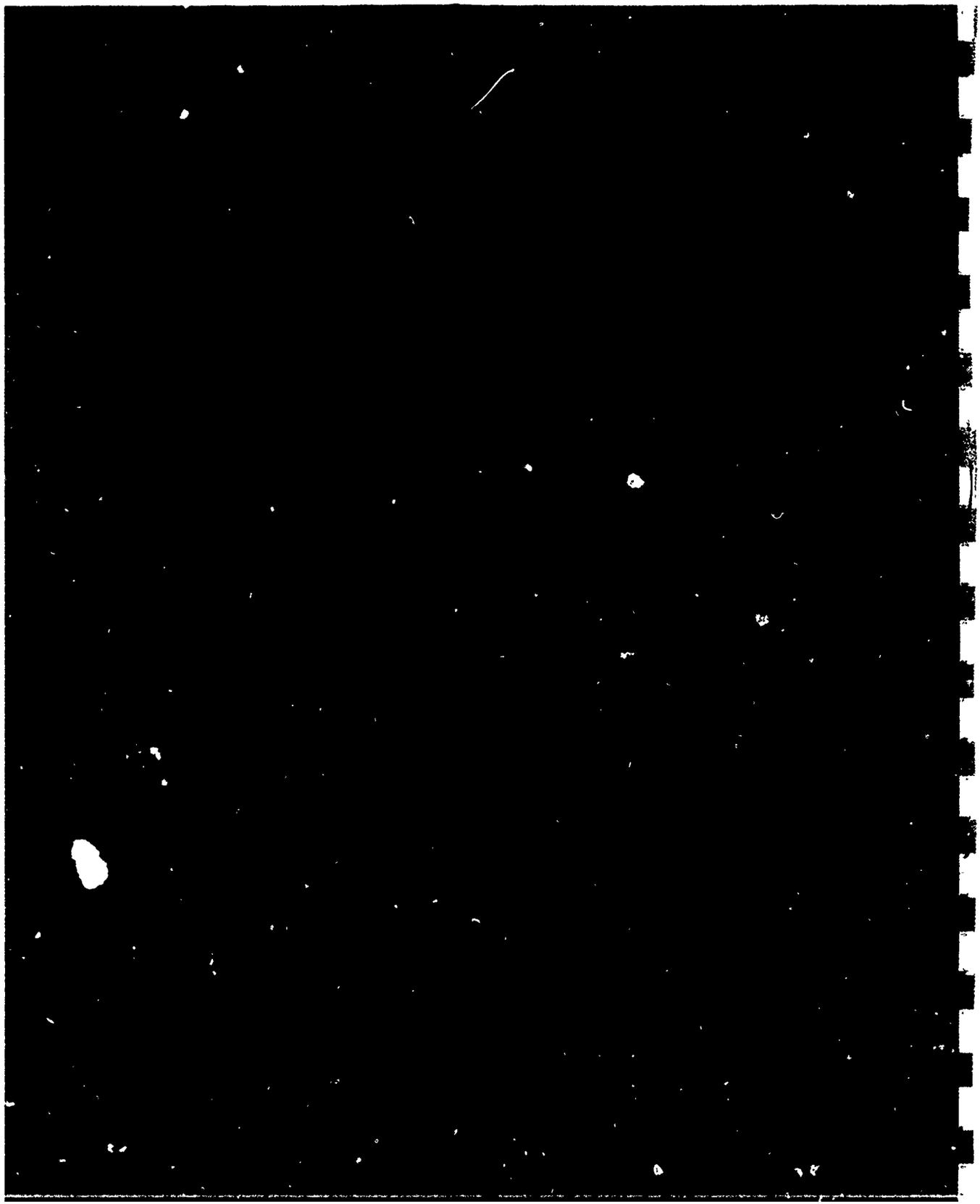
3. The senior high program will provide for the extension and expansion of programs identified in the elementary and junior high and for appropriate career specialization and support programs. A student should identify a tentative career goal as a matter of record. Within his senior high experience, a student should be able to devote a minimum of one-fourth of his time to study in a chosen area of concentration. The offerings of the school should be broad enough to provide learning in a wide range of occupational fields with support of inter-relating classes. The schools should provide optimum opportunities for students to engage in work experience activities.

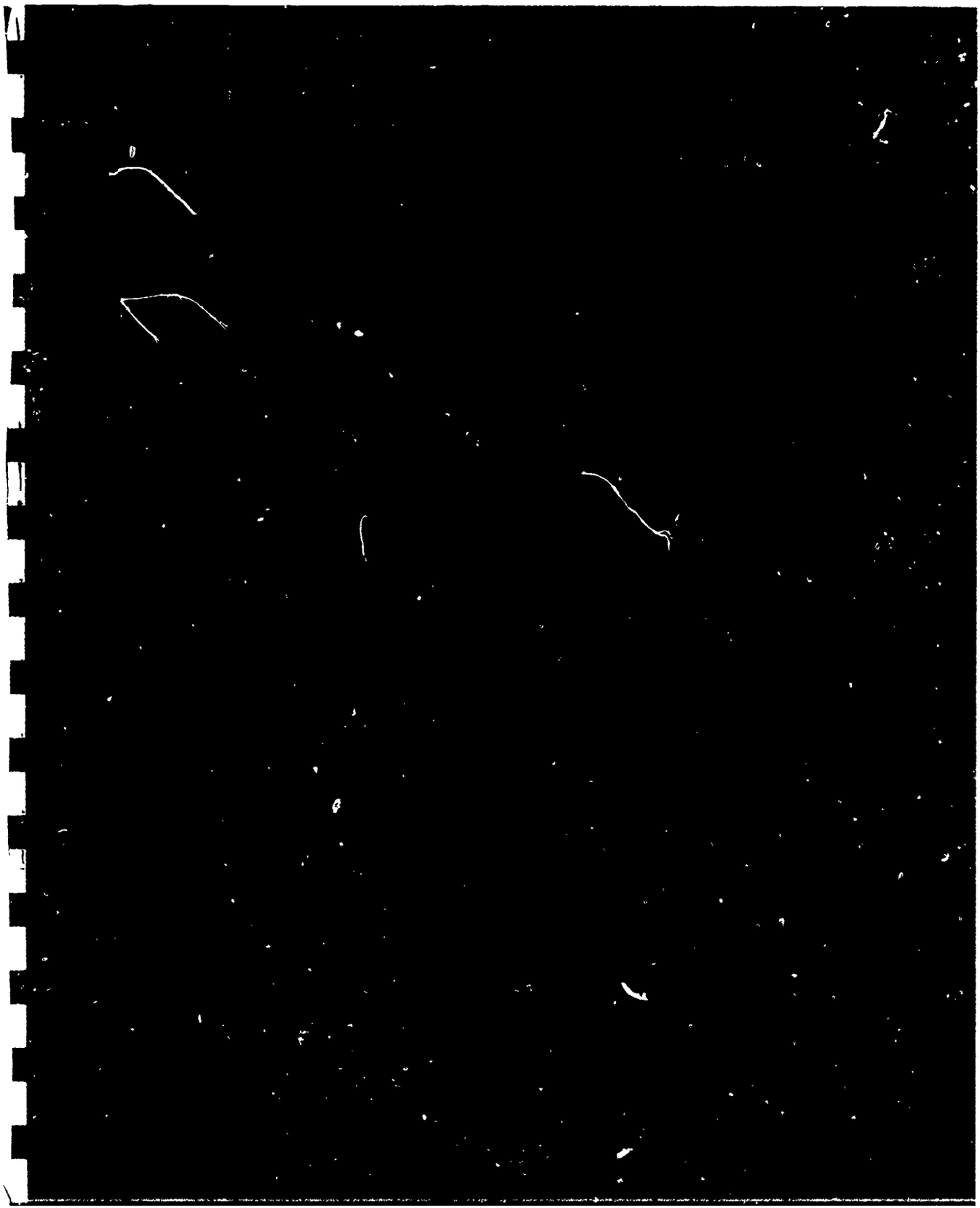
4. At high school graduation or at the time a person leaves school, each student will be successfully placed at his next step. This may include entry-level employment, military service, technical school, college, homemaking or any other temporary or permanent goal identified by the student under wise counseling at the school. Such a step requires school personnel to provide for follow-up to ascertain the effectiveness of the school program.

5. Programs of study at adult and postsecondary levels will be tailormade to each student's interests and needs. Course content of subject matter related to his career choice will allow for varied career applications or will provide retraining for specific job needs.

It is the position of the State Board that Career Education will be a major thrust of the total public education system from the kindergarten through secondary, postsecondary, and adult levels. The State Educational Agency will provide the leadership necessary for development and implementation of the Career Education concept.







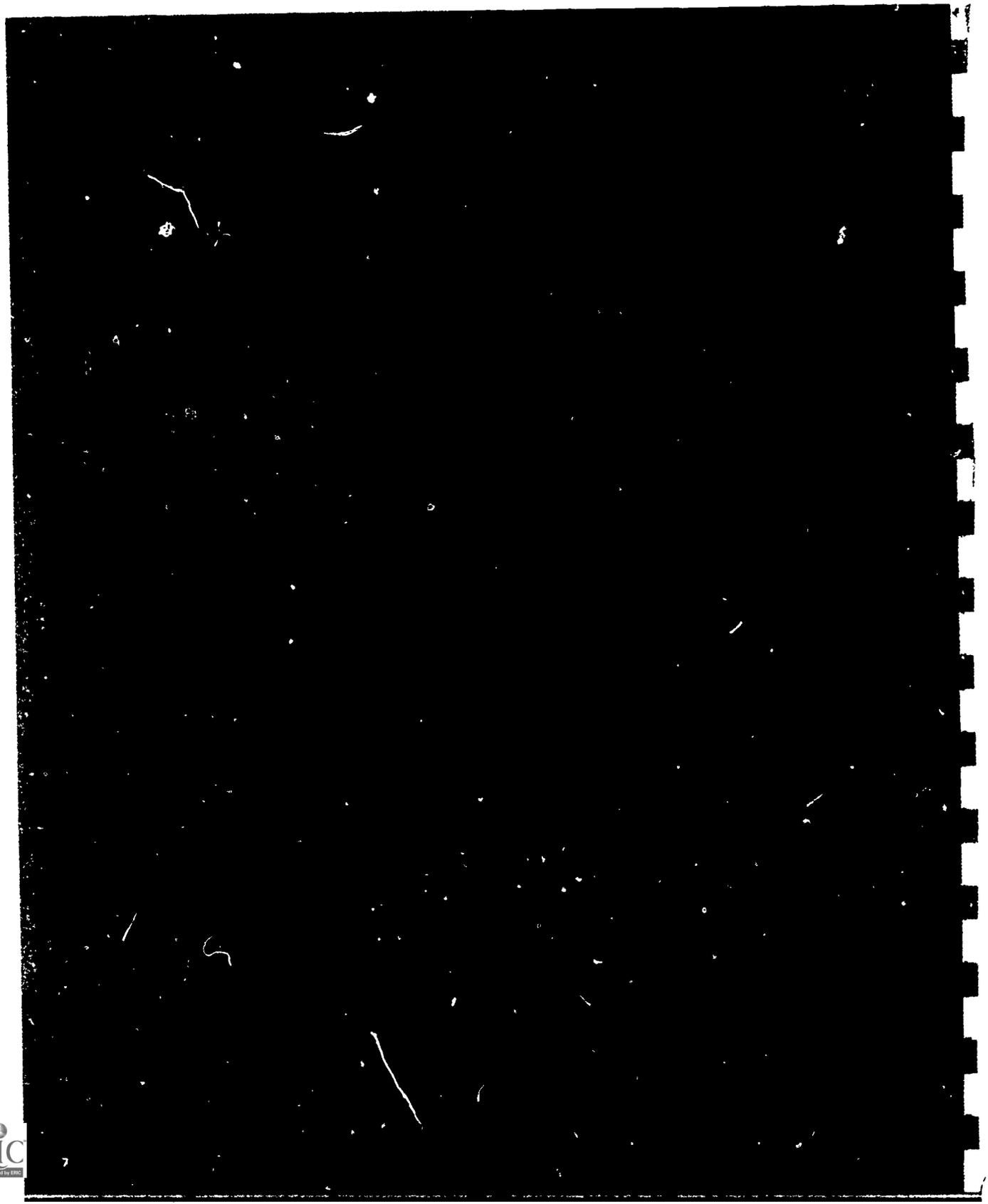


EXHIBIT C

WORKSHEETS

CONSULTANTS, ARCHITECTS, AND ENGINEERS

NAME OF SPACE: _____

_____

_____

_____

_____

_____

ACTIVITIES: _____

_____

_____

_____

_____

_____

_____

_____

_____

INDEX:

At Student Activity	At Perimeter Wall	At Teacher Station	SERVICES AND EQUIPMENT
			Gas
			Air
			Cold Water Only
	✓		Hot and Cold Water - Variable Control
	✓		A. C. Electrical - Multiple Outlets
			D. C. Electrical
			A.C. / D. C. - Variable Control
			Headset - Mono/Stereo
			Speakers - Mono/Stereo
✓			Television - Receive / ~~Transmit~~ classrooms
			Fume Hood - Exhaust Fan Only
			Antennas - Radio / TV Shortwave/ AM/FM
			Lighting Control - Variable
			Dust Collector
			Information Retrieval System
			Tape Deck - Phonograph
		✓	Telephone
✓			Projection Screen - Manual / ~~Electrical~~ classrooms
			Rear Screen Projection
✓			Service Grid - Overhead / Underfloor
			Platform - Dimensions:
		✓	Chalkboards
		✓	Tackboard
		✓	Map Rails
			Projector - Overhead / Slide
			Movie Projector - Sound
			Voltage Analysis Unit
			Jack Plug Receptacles - Input / Output
✓			Machine Lighting - Accent
✓			Wet Waste
✓			Dry Waste
			Safety Wash
✓			Special Floor Drains / Traps
✓			Safety Zone Around Equipment
			Demonstration Unit (type)

	HEATING - VENTILATING - COOLING
	Temperature Range:
	Humidity Range:
	Min. Quantity Outside Air
	Max. Quantity Outside Air
	Air Movement
	Air Changes
	Special Supply
	Return Air
	Exhaust Air % at Ceiling % at Floor
	Special Exhaust
	Fume Hood
	Special Consideration for Heat Producing Equipment
✓	Air Conditioning
	Special Consideration for Humidity Producing Equipment
✓	Special Consideration for Odor Removal
	Noise Level Limitations
✓	Temperature Controls in Room
	Humidity Controls in Room
✓	Ceiling Height Range
	Exterior Glazing
	Skylights Square Feet
	Fixed Partitions
✓	Relocatable Partitions
✓	Operable Partitions
	Lighting Wattage
	Special Windblast Protection

	LIGHTING-CEILING CRITERIA
✓	General Illumination: Foot Candles
	Brightness Ratio Direct Glare
	Brightness Ratio Reflected Glare
✓	Accent Lighting:
	Vertical Surface Lighting:
	Dimming Control
	Special Switching
	Low Intensity
	Average Intensity
	High Intensity
	Incandescent
	Individual
	Sunlight Desired
	Glare Reducing Curtains
✓	Room Darkening Devices classrooms
	Skylights
	Acoustic Rating STC
	Sound Absorption Sabines PSF
	Fire Rated Hours
	Sprinklers
	Relocatable Lighting Fixtures
	Special Finish
	Height

	PARTITION CRITERIA
	Fixed
	Fire Rated: Hours
	Sound Rated: · STC
✓	Relocatable
	Operable Panel Open to:
	Operable Accordion Open to:
	Coiling Open to:
	Chalk Finish
	Tack Finish
	Glazed
	High Humidity Resistant
✓	Special Stain Resistant Finish
	Ordinary Finish
	Veneered
	Lockable Hardware Required
	Height Range
	Sound Absorptive Devices Sabines PSF
✓	Sight and Sound Isolation
	Ceiling Grid Track 10' Modules
	Wing Wall
	Pegboard

	FLOOR COVERING
	Carpet
✓	Concrete
	Smooth Surface resilient
	Special Surface Resilient
	Seamless:
✓	Ceramic Tile
✓	Waterproof with Drains
	Special:
	Hardwood
	Softwood
	Steel Grating
	Tiered Levels
✓	Covered Utility Grids
	Heat Resistant
	Special - Dead/Vibrating Load

At Student Activity	At Perimeter Wall	At Teacher Station	FURNITURE
		✓	Desk and Chair
			Table and Chair(s)
			Lectern and Stool
			Table and Stool
			Fixed Theater Type Chairs - Uph/Writing Arm
✓			Single Chairs - Writing Arm (classrooms)
			Lab Station (see services)
			Open Shelves - Book Storage
			Magazine Racks
			Closed Shelves
✓			Drawers - Locked
	✓		Large Equipment Storage
	✓		Counter Top:
	✓		Sinks:
		✓	Filing Cabinets
		✓	Garment Storage - Open/Closed/Locked
			Maximum Security Storage
			Inflammables Storage
			Temp. and Humidity Controlled Storage
			Special Racks for:
✓			Project Storage Lockers
			Individual Storage Lockers - Open/Closed/Locked
			Individual Carrels - Audio/Video
			Glass Display Case
			Cabinet - General Storage Space
	✓		Portable Storage
			Chart Storage
✓			Student Station Drawer Storage