URBANA-CHAMPAIGN, Ill., Jan. --House plans which permit standardized construction practices and yet avoid the appearance of being "mass produced", are now available under a system of unit planning developed by the University of Illinois Small Homes Council. The system described by the Council in a new publication, "Contemporary Houses Developed From Room Units", a 62-page book, released today. The book presents results of an 18-months' study in house planning made under a research grant given to the University by the Lumber Dealers Research Council.

From a large series of standardized plans for rooms, or groups of rooms, presented in the book, the homeowner can select the four basic units—a living-dining area, a work area, a sleeping area, and a garage—which best fit the living needs of his family. These he can combine in several ways to form a complete house plan. From these several choices, he can select the one that best suits the requirements of his lot.

Twenty-eight house plans designed from these units are shown in the book; an unlimited number of house plans can be developed from the units.

Two of the 28 house plans which use identical units have been built in Champaign this fall as a demonstration of the flexibility of the unit planning principle. A third house demonstrates how additional flexibility can be obtained through variations in exterior materials.

(MORE--house plans)
"Each unit", the report states, "is carefully planned within itself without regard to the rest of the house or the exterior. For example, the bedrooms in the sleeping units have an acceptable relationship to the bathroom and the linen closet which are also part of those units. The bedrooms are large enough to accommodate the usual pieces of bedroom furniture and have a pre-determined amount of storage space (depending on the number of people for whom the room is designed).

"Such a unit of bedrooms and bath can answer the needs of a dozen houses, no two of which might be alike except for this inner relationship within the rooms of the unit."

Since other units are similarly designed, considerable variety in appearance and flexibility in room arrangement are offered in planning a house. This flexibility is essential because different families use a house in different ways.

Moreover, flexibility in the structural design of a house and in the materials is also possible. In combining the units into a house plan, the homeowner or builder has his choice of exterior materials, roof type, floor construction and materials, window type (number and size), interior finish material, heating system, and extra elements, such as fireplaces, and outdoor terraces.

The units are designed for one-story basementless houses; however, alternate schemes for the work area units have been developed to show basement stairways.

Each series of units provides for a wide variety of room sizes. Minimum houses can be built from the units, as can larger, more generous ones.

In order to insure the livability of the units and the houses developed from them, the sizes of the living-dining areas and the bedrooms were determined by studies which involved furniture, traffic lanes, and possible door and window locations. The work areas were designed in accordance with space and storage standards established through research at the University of Illinois
Besides the basic units, optional type units have been developed: extra-room units which can be used to provide a separate dining-room, bedroom, study or porch; also sleeping area expansion units which can be used to give extra bedrooms, or in some units, a children's playroom.

The units are designed to take advantage of the savings which improved building techniques and standardized construction make possible.

"Waste in the use of labor and materials is reduced", according to the report, "because the units are modularly planned; that is, the dimensions are coordinated with those of modular building materials so that the materials can fit into the house with a minimum of cutting and fitting. This is possible because the dimensions of the units and those of modular building materials are each divisible by a common unit of measurement (4 inches—or multiples of 4 inches)."

By making use of the modular principle, the random, unrelated selection of dimensions for rooms, windows, and closets is eliminated. This, in turn, eliminates the inefficient practice of measuring, cutting and assembling the many and various pieces of a house while it is being built.

Because the units are modular, job operations can be easily laid out in the drafting room before construction begins. This makes possible improved framing details which reduce the amount of labor needed on the job.

Lumber can be pre-cut to size by power tools; roof trusses, wall panels, and gable ends can be detailed for pre-assembly on the ground; closet-walls can be used for interior partitions.

The use of roof trusses, as shown in most of the 28 house plans, eliminates load-bearing interior partitions and allows sheet materials to be applied on the entire ceiling of a one-story house efficiently and quickly since the surface is uninterrupted. The same is true of floors and exterior walls. (MORE--house plans)
Working drawings for the 28 house plans shown in the book are being distributed by the Lumber Dealers Research Council through lumber yards.

Initial distribution of the Small Homes Council book was made today at the Council's sixth annual Short Course in Residential Construction for builders and contractors.

In addition to hearing a presentation of the research report, registrants at the two-day short course viewed the three demonstration houses in Champaign.
CONTEMPORARY HOUSES
DEVELOPED FROM ROOM UNITS

A Report of an Architectural Investigation in House
Design Making Use of Improved Building Techniques

Conducted by the Small Homes Council under a
research grant given to the University of Illinois by
the Lumber Dealers Research Council

Price: $1.00
ACKNOWLEDGMENTS

The system of unit planning described in this book is the result of a study in house planning conducted by the Small Homes Council. It was made under a grant given to the University of Illinois by the Lumber Dealers Research Council, an organization of retail lumber dealers interested in housing research.

The objectives of the project and methods of procedure were set up by William H. Scheick, Small Homes Council director (on leave 1949-51). The study was carried out under the direction of James T. Lendrum, acting director of the Small Homes Council.

Elizabeth M. Ranney made the study of room sizes, developed the units, and supervised the assembly of units into house plans. Valuable contributions to the development of the project were made by Howard E. Schroeder, Robert P. Simon and Rudard A. Jones. Drafting personnel included John W. Rock, Frank E. Dushin, Norbert G. Kummer, Robert E. McCracken, Fred L. Creager, Donald M. Engstrom, Frank W. Kurz, Robert J. Piper, Bruce Smith and Ralph W. Clayton.

The entire staff of the Small Homes Council cooperated in contributing basic information and auxiliary research material. The publication was edited by Maxine H. Kennedy. Illustrations and architectural renderings are by William S. Pusey.

Special acknowledgment is due the members of the Lumber Dealers Research Council without whose support and enthusiastic cooperation this study could not have been made.
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"Industry-Engineered" House
UNIT PLANNING—WHAT IT IS

The Small Homes Council study in house planning had two major objectives:

• To help the homeowner get the most for his money by eliminating waste — waste space in the house, waste in the use of materials, waste in the use of labor.

• To make it possible for the homeowner to build a house which fits the needs of his family and the requirements of his site — a house which is not like, and does not look like, his next-door neighbors’.

Since one of the most efficient ways to eliminate waste in construction is through standardization, the problem at first seems contradictory:

**Standardization of construction vs. Flexibility of design**

Both of these are possible to attain, however, through a system of unit planning — that is, through the use of standardized plans for a room, or group of rooms, so designed that they can be combined in different ways to form a variety of complete house plans. (See cover and pages 28 and 30.)

A system such as this requires that each unit be carefully planned within itself without regard to the rest of the house or the exterior. For example, bedrooms in the sleeping unit must have an acceptable relationship to the bathroom and the linen closet which are also part of that unit. The bedrooms themselves must be large enough to accommodate the usual pieces of bedroom furniture, and they must have a pre-determined amount of storage space. (The amount depends on the number of people for whom the room is designed.)

Such a unit of bedrooms and bath will answer the needs of a dozen houses, no two of which might be alike except for this inner relationship within the rooms of the unit.

Since the other units are similarly designed, considerable variety in appearance and flexibility in room arrangement are offered in planning a house. This flexibility makes it possible to meet (1) different site conditions — size, orientation; (2) different living needs of many families; and (3) public desire for variety in exterior appearance.

The use of unit plans is a relatively new method of planning houses. The first such plans made available to the public were those of the “industry-engineered” house developed by the Producers’ Council and the National Retail Lumber Dealers Association in 1947. This house was structurally designed to take advantage of certain time- and materialsaving techniques. It proved valuable as a research house on construction methods. (See Small Homes Council Circular E2.1, “Construction Methods”.)

The house had only a limited acceptance by the public, however, because it was a single house plan — “L”-shaped with two bedrooms. Few variations were possible in the exterior appearance with the result that it became identified as a “mass-produced” house.

The system of unit planning described in this book goes beyond that of 1947-48. The units maintain the basic structural system which makes for economical construction but, in addition, they are designed for flexibility.
Simplified construction methods that save time and material are today possible because of the growing acceptance of the principle of modular design.

This principle has proven the inefficiencies of (1) the random, unrelated selection of dimensions for rooms, windows, closets, etc.; and (2) the long-time practice of measuring, cutting and assembling the many and various pieces of a house while it is being built.

In modular design, the dimensions of a house are coordinated with those of building materials so that materials can fit into a house with a minimum of cutting and fitting.

This is done by establishing a unit of measurement, called a module. The basic unit is 4 inches. If the dimensions of a house and those of building materials are each divisible by 4 inches—or multiples of 4 inches—the two (house and materials) fit together better than if dimensions are unrelated.

Larger modules—multiples of the basic 4-inch—are used throughout a house to establish the spacing of walls, windows, studs and joists. Sixteen inches (4 modules) is frequently used since it corresponds with normal stud spacing. Four feet (12 modules) is also a common module since it corresponds with stock sizes of sheet materials, such as plywood and wallboards.

Modular materials can be related to a basic measurement—the 4-inch unit.
Through Improved Building Techniques

Because the principle of modular design standardizes measurements and does away with most fractional dimensions, job operations can be easily laid out in the drafting room before construction begins. Modular design, therefore, makes possible improved framing details which, in turn, reduce the amount of labor needed on the job.

Lumber can be pre-cut to size by power tools; roof trusses, wall panels, gable ends can be detailed for pre-assembly on the ground; closet-walls can be used for interior partitions. The use of roof trusses to eliminate load-bearing interior partitions allows sheet materials to be applied on the entire ceiling of a one-story house efficiently and quickly since the surface is uninterrupted. The same is true of floors and exterior walls. It is no longer necessary to cut and fit each piece of building material from measurements taken as the work progresses.

These and other building techniques standardize the quality of construction and reduce costs by eliminating waste, both in labor and materials. They make possible quantity production of quality parts.

To take advantage of the savings which standardization makes possible, the unit plans had to be designed — or engineered — at the very beginning for the use of these techniques.
In developing its system of unit planning, the Small Homes Council research architects analyzed the functions of a house from the standpoint of use—i.e., living, eating, sleeping. For each function, a type of unit was developed. There are three basic types: living-dining area units, work area units (kitchen-utility-room) and sleeping units (bedrooms-bath). One of each of the three is all that is necessary to form a complete house.

Besides the basic units; three types of optional units were developed: (1) garage or carport unit; (2) extra room units which can be used to provide a separate dining-room, bedroom, study or porch; and (3) sleeping area expansion units which can be used to give extra bedrooms, or in some units, a children's playroom.

The units are designed for one-story basementless houses; however, alternate schemes for the work area units have been developed which show basement stairways.

**Flexibility in Space Use**

Because different families use a house in different ways, it is essential that the units be as flexible as possible.

Some family requirements are fairly constant. The activities of sleeping, cooking, eating and bathing are carried on in all houses, and standards for minimum areas and equipment have been set up through experience and research.

Individual differences show up especially in requirements for relaxation and recreation. Some families desire a large, all-purpose living area, while others prefer a smaller room plus a separate study or recreation room. Some families desire minimum-size bedrooms, used only for sleeping and dressing, while others want to use bedrooms for study or play space also. These individual differences affect both the size and the arrangement of a house.

Each series of units provides for a wide variety of room sizes. Minimum houses can be built from the units, as can larger, more generous ones.

In order to insure the livability of the units and the houses developed from them, the sizes of the living-dining areas and the bedrooms were
determined by studies which involved furniture, traffic patterns, and possible door and window locations. Basic groups of furniture were arranged as they might normally be used. Space was allowed for traffic lanes as well as for accepted clearances between pieces, and between each piece and a wall. On the basis of these arrangements, minimum dimensions for rooms were established. Other items of furniture were then added to the basic list and arranged in various ways to obtain dimensions for rooms above minimum size.

**Flexibility in Arrangement of Units**

In the interest of flexibility, no attempt has been made to indicate which wall of a unit is to be an exterior wall of a house, or to indicate the exact position of windows (except in the kitchen where arrangements for wall cabinets and windows are interrelated). The planner must therefore provide for the additional thickness of walls to be used for the exterior and also for those between adjoining units.

All the units can be reversed.

**Flexibility as Related to Structure**

The units are designed on a 4-foot module to allow flexibility in the choice of stud spacing (16" or 24"). In a few units, clearances or furniture sizes dictated a room dimension which was not near a 4-foot module. These are shown as 10 feet, 14 feet or 18 feet wide. In the interest of structural economy, these units should be combined with other such units to form a full module, or they should be used with 24-inch stud spacing only.

The units which are 16 feet wide are often roofed with a simple truss of that span; other units are combined to produce 24-foot spans.

As indicated by the variations, the units shown on the following pages are not intended to be completely rigid; however, any change in the units, no matter how slight—even a change in window selection—must be made in accordance with the principles of design and construction which controlled the original design of the units. Otherwise, the modular quality may be destroyed or the use of improved building techniques may be made impossible.
PLANS FOR LIVING-DINING AREA UNITS—"LD" SERIES

The "LD" units contain the living and dining areas plus space for the front entrance. They are either 12 feet or 16 feet in width—predominantly 16 feet which is larger than in living-dining areas found in many small homes today. This extra width was chosen because:

• It permits increased flexibility in furniture arrangements.
• The area is still large enough for use even though space for the entrance and a coat closet (6 feet) is subtracted.

The 12-foot width should be used with caution. It should never be selected when the traffic lanes cut through the long dimension of the room.

The combination of a 16-foot and a 12-foot width produces an interesting "L"-shaped living-dining area. Suggested door and window locations, and possible furniture arrangements are shown in the small drawings. These are useful in combining the "LD" unit with other type units or in adapting it to a particular site. The drawings do not show all arrangements. Many more possibilities will appear when the units are combined with other units to form a house plan.
PLANS FOR EXTRA ROOM UNITS—"X" SERIES

The "X" units may be adapted as a separate dining-room, bedroom, study or porch. These possibilities are shown in the smaller drawings.
PLANS FOR SLEEPING UNITS—"SB" AND "S" SERIES

The large number of units shown in this series is due to the great variation in requirements for this part of the house— not only in number of rooms but also in size of those rooms.

The "SB" units contain bedrooms and bathroom; the "S" units, bedrooms only. The latter are intended for use only with work area units having bathrooms (Series "WB").

The number of bedrooms in a unit varies from one to three. There are three sizes: (1) rooms designed for a single bed; (2) rooms large enough for a double bed; (3) master bedrooms accommodating twin beds in two possible arrangements. Most of the bedrooms are above minimum size. The single bedrooms have floor space for a desk, chair and chest in addition to the bed.

Variations in arrangements and window position are shown in the smaller drawings.

In order to provide maximum flexibility, all bedroom units are planned for expansion. The units to be used for expansion of this area are those in the "E" series.

Closet-walls have been indicated in place of conventional closet construction to save space and cost. In each bedroom, a minimum of four linear feet of hanging space for clothes is allowed for each person. Linen closets are located in the bathroom or as close to it as possible.

Bathrooms in most "SB" units are planned to provide back-to-back plumbing walls when attached to work area units, but this is not a necessary condition of their use.
PLANS FOR EXPANSION UNITS—"E" SERIES

The "E" units are intended for expansion of the house to include more bedrooms and, in some cases, a playroom. The units with which they are to be used and the method of attachment to existing units are shown in the smaller drawings.
PLANS FOR WORK AREA UNITS—"W" SERIES

All "W" units contain full kitchen and laundry facilities plus space for heating equipment. Some of the larger units also provide a space for eating and for a utility closet. A few units include a bathroom ("WB" type). These are designed so that kitchen and bathroom plumbing is concentrated in one wall.

As a variation, all of the units have been adapted for basement construction by substituting a stairway for the laundry-utility space.

In reversing any of the units, the positions of the range and the refrigerator might have to be interchanged so that the refrigerator door will open toward the counter.

Most of the kitchen storage facilities and arrangements meet standards of MEDIUM requirements outlined in the Small Homes Council research report, "Handbook of Kitchen Design." One (W2) has LIMITED storage; several have LIBERAL. In a few plans where wall storage requirements are not met due to the desire for large glass area, this deficiency is compensated for by extra base cabinets.

Alternate equipment layouts have been shown in the smaller drawings to allow for differences in window location.

Laundry equipment space* is provided to take any one of the following combinations:

- Automatic washer and electric dryer.
- Non-automatic washer plus laundry tub.
- Automatic washer plus laundry tub, storage space or ironer (closed).

These combinations add up to six lineal feet of space for laundry equipment, thirty inches deep.

Since sizes of heating equipment, types of chimneys, and required clearances between equipment and walls vary, the heater room is designed for the combination which takes the most space—masonry chimney and furnace or boiler set clear of the walls. If codes permit smaller clearances or if a light-weight chimney requiring no floor space is specified, the extra space should be converted to storage.

* Based on an unpublished research study by Helen E. McCullough, University of Illinois Agricultural Experiment Station.
PLANS FOR GARAGE UNITS—“G” SERIES

The “G” units may be used either as a garage or as a carport. Possibilities of storage space are shown.
THE ASSEMBLY OF UNITS INTO HOUSES

Flexibility, which has been shown to be essential in the planning of a unit, is carried into the material selection and structural design of the house as well. In combining the units into a house plan, the modular nature of each unit makes it possible for the homeowner or builder to choose:

- Exterior materials
- Roof type
- Floor construction and materials
- Window type (number and size)
- Interior finish materials
- Heating systems
- Extra elements

**Exterior Materials**

The choice of exterior finishing material is usually a matter of regional and personal preference. Any material now standard or recommended for exterior walls may be used. (See Small Homes Council Circular E2.1, “Construction Methods,” for comments on selection of materials.) In the house plans on the following pages, a variety of materials for the exteriors is shown — plywood, asbestos board, horizontal siding, vertical siding, shingles, and masonry, as well as combinations of these.

**Roof Types**

In assembling a group of units, a certain amount of restraint is necessary so as to provide a simple roof outline which can be easily and economically framed. Care should be taken to avoid a complicated plan — one involving several wings and projections. The most economical roof for a simple rectangular house is a pitched roof supported by roof trusses.

The houses designed from the units are generally adaptable to clear-span construction. They make use of roof trusses, non-load bearing partitions and closet-wall partitions wherever possible.

A few of the room arrangements shown in the following house plans have irregular outlines for the exterior of the house, and roof trusses could not be used economically. These plans are sufficiently superior to warrant the added costs of other roof construction. They are shown here with flat, shed, or low-pitched roofs. With proper ventilation and insulation, these are satisfactory in any climate.

All of the houses shown with pitched roofs may be built with a shed or a flat roof, but to put pitched roofs on those shown with shed or flat roofs would not be economical construction.

**Floor Construction**

Any unit may be used with any of the three types of floor construction — basement, crawl space, or concrete floor slab. For high, well-drained lots which require a minimum of fill, the concrete slab has been shown to be the most economical. If quantities of fill are needed to bring a lot to the desired finished grade, the crawl-space floor is most economical. Basements may be used. (See alternates for work area units.)
Windows
House plans on the following pages show the following trends in design:

- Large glass areas.
- Control of sun by orientation and roof overhangs.
- Grouping of windows in a room to conserve wall space and to give unity to the design of exterior walls.

Structural simplicity calls for the window size and spacing to conform to the spacing of wall studs (the 2 x 4 structural members). For this reason, all of the plans in this book show window units either 2'-8" wide (two 16" stud spaces) or 4'-0" wide (two 2'-0" or three 16" stud spaces). This somewhat limits the choice of ventilating units to be used with fixed glass.

For economy, the glass areas are extended to the ceiling. This simplifies the structural frame by eliminating all headers over windows and also extra studs at each side of the window. The glass area in a room is increased with no loss of usable wall space. This design detail has been tested by the Small Homes Council and used on more than 30 houses.

Interior Finish Materials
Personal choice, local restrictions and costs often dictate the selection of interior finishing materials. Plaster or dry-wall in any of their forms may be used.

Heating Systems
The type of heating system to be installed depends on regional differences and the type of house construction (basement or basementless), as well as on personal choice. Forced warm-air or hot-water heating systems are recommended for basementless houses. (See Small Homes Council circular G3.1, "Heating the Home," for further information.)

Extra Elements
Many people want fireplaces in spite of the additional costs. Others want fences, terraces or developed outdoor areas. Some of the house plans shown include these elements even though they are not a part of the original unit. These extras may be added where appropriate.

House Plans
This book presents, as a planning guide, a series of house plans assembled from the various units. Working drawings for the plans are being made available to builders and homeowners by the Lumber Dealers Research Council through lumber dealers.

The total living area is given in square feet for each house (the garage or carport is not included in this area), and a minimum frontage for the lot recommended. This frontage is sufficient to assure privacy for windows on the sides of the house.
The combination of the shed and the flat roof makes this 3-bedroom house distinctive in appearance and permits clerestory ventilators. These louver panels provide cross-ventilation of the living-dining area.

The brick fireplace is the focal point of interest in the large living-room. On the outdoor side of the fireplace wall is a grill.

Of equal interest to the barbecue area in outdoor living attractions is the paved terrace and garden on the south side of the house. The garden can be an asset to the living-room, which looks out on it, even in the winter months if it is properly planted for year-around beauty.

Tying the outdoors and the indoors together is important to the feeling of spaciousness which this house achieves in spite of its compact plan. The house has an area of 992 square feet and requires a minimum frontage of 80 feet.

Closet space is plentiful throughout the house. There are built-in chests of drawers in two of the three bedrooms.

Other features of the house are a dining area tucked off in an “L” with a pass-through to the kitchen; a covered passage from the garage to the front door; and a service yard screened from the street. The planting on the service screen can be enjoyed from the house as well as from the street.
UNITS
LD 8
SB 7
W 3
G 1
This house is made up of the same units as are used in the first house plan in this book, thus demonstrating the flexibility of the units. It contains 992 square feet of living space and has three bedrooms—a double and two singles.

The land around the house has been carefully tied in with the family's living activities. The service yard can double as a children's play area. It is well-situated for it can be supervised from the kitchen.

Screen plantings shield both this area and the garden at the side of the house from the street. The garden area is on the south just off the living area. A door connects the two.

The plan requires a lot 80 feet wide.
Seldom do plans utilize the land around the house for living area as well as does this one.

A city-dweller with a narrow lot (60 feet wide) can have not only 960 square feet of house, but also a protected courtyard and a terrace-garden or back-yard playground. The living-dining area of the house opens onto both. The carport hides the courtyard from curious stares of passers-by.

A family living in this house can enjoy a variety of dining places. Meals can be conveniently served on the terrace since the door leading to it is handy to the kitchen. The "L"-shaped kitchen has an eating space in it for informal meals. There is another place for eating in the dining area which is immediately adjacent to the kitchen.

The house is designed for a lot on the north side of the street (the courtyard is on the south). The two bedrooms overlook the side-yard. The bedrooms are easily reached from the front door without cutting through any rooms.
In addition to the usual living and dining space, the living unit of this house has a study. This is in back of the attractive semi-free-standing fireplace. The low brick wall extending from the fireplace divides the study from the rest of the room.

The wall continues on to the outside of the house, forming a screen for the outdoor sitting area. The fireplace and wall are of the same kind of brick that is used in the two exterior wing walls.

The rooms are well-arranged for use by a family with small children. From the play area at the back of the lot, children can have direct access to the bedrooms and the bathroom through the kitchen and utility room. This arrangement saves the living area from much inter-house traffic.

Another convenient feature is the sheltered entrance immediately adjacent to the garage.

Total living space is 1,120 square feet. There are two double bedrooms and a single bedroom.

The house can be placed on the lot in either of two ways — with the living area south to the side of the lot, or with the bedrooms south to the front. A lot with a minimum frontage of 90 feet is required.

The flat roof is well-suited to the design of the house since it is an irregular plan.
Although this two-bedroom house has only 832 square feet, it gains an illusion of spaciousness by the generous use of windows on the south or garden side of the house. It is designed for a lot 75 feet wide located on either the east or west side of a street.

Privacy is offered since the principal living and sleeping areas are away from the street, and there are no "picture windows" on the front of the house. The occupants, however, are not completely shut off from street activities. There is adequate window area in the kitchen so that approaching guests can be seen easily.

The living-room is free from direct circulation paths. Occupants can go from the front door directly into the bedroom wing of the house. The garage is easily accessible from both the front and the back doors.

Storage space is generous in all the rooms of the house, including the kitchen and the laundry.

The exterior is extremely simple and reflects good taste. The vertical siding and the simple, horizontal roof-line gives it a clean-cut, uncluttered appearance.
Ideal for a narrow lot, this flat-roofed house requires only a 60-foot frontage. The privacy from the street which the plan offers makes it especially desirable for an urban site. It is recommended for a street running north and south since the living-room faces south to the garden at the side of the house.

The house contains 832 square feet including a 16' x 16' living-dining area and two bedrooms—one master and one double. In addition, an outdoor living area and a protected service area are shown.

The house illustrates well the principle that beauty can be achieved through structural simplicity. The stone wall, which is a pleasant contrast to the redwood, is a structural part of the house, being exposed on both the interior and the exterior of the house.

The carport, which is easily accessible to the front door, has extra storage.
Space for children's activities is provided for in this house. Two single bedrooms open into a generous-sized playroom. Off the playroom, is a courtyard play area. This children’s wing, made possible by the use of an expansion unit, has its own bathroom.

The playroom separates the children's sleeping rooms from the master bedroom. The latter has a private bath.

The grownups have their own outdoor living area just off the living room which is at the side of the house to the south.

The house has a living area of 1,152 square feet and needs a lot with a minimum frontage of 70 feet. The garage is on the front of the lot, as is a drying yard which is screened from the street by a wall.
Here is a three-bedroom house which is quite flexible as to orientation. It is designed so that the living-dining areas and the kitchen are to the south. This requires a lot on the south side of the street. If such a lot is not available, the plan can be adapted for a north-south street by turning it sideways and constructing a driveway turn-around. In this case, two of the three bedrooms will be to the south.

The house, which has 1,088 square feet of living space, should be on a lot no narrower than 70 feet.

In this house, the kitchen unit has been modified by adding another door so that there is direct access from the kitchen to the front door. A pass-through from the kitchen makes it convenient to serve all meals in the dining area.

Two of the three bedrooms are double; the third is single and has space for either a built-in chest or desk.

There is a generous entryway, and a large living area which opens onto the garden. A covered breezeway between the garage and the house is a shelter in bad weather.
Windows placed high on the walls of the bedroom and the bathroom give these rooms privacy even though they face on the street. The rooms are thus light and well-ventilated.

The other wing of this “U”-shaped plan is the garage which faces onto the street (north). There is a covered walk from the garage to the front door. A planting box gives visual interest to this walk.

The house, which contains 896 square feet of living space, has two ample-sized bedrooms — one master and one double; a living-dining area at the south which opens onto the rear lawn; and a kitchen which has a small eating space in it. A small vestibule at the front door is created by the use of storage units.

The combination of trussed and flat roofs produces an interesting house outline.

Minimum frontage required for this house is 65 feet. This width is necessary for privacy from houses next door.
The living area in this house is a dead-end room — the kind of room, according to some students of human nature, that people like because subconsciously it gives them a feeling of security. No traffic lanes cut through the area with the result that conversation groups are free from interruptions. The living area is south to the rear.

The bedrooms — one double and one single — are well-located in relation to the front entrance. One can enter the house by the front door and go directly to the bedroom area at the front of the house without passing through any other room. The bedrooms look out on the garden at the side of the house.

There is a covered service entrance, the door to the work area being sheltered by a continuation of the garage roof.

The centralized location of the heating equipment and the pass-through from the kitchen to the dining area are other features of the plan which has 896 square feet of living space. It will fit on a lot with a minimum frontage of 60 feet.
Use of an extra-room unit gives this house a playroom which adjoins the kitchen and is easily accessible to the garage.

The kitchen and the playroom are at the rear of the house and face to the south, as does the living room. The outdoor play area on the south can be supervised from either the kitchen or the living room.

In addition to the dining area, which is separated from the front entrance by a closet-unit, there is an eating space in the kitchen.

The arrangement of the rooms allows the heating system to be placed in the center of the house. The two bedrooms — master and double — are off to one side.

The trussed roof makes possible the use of closet-walls. The house has a total area of 1,152 square feet and requires a minimum frontage of 70 feet.
In this house, the stone wall is both a structural and a decorative feature. The stone is exposed on the inside living-room wall as well as on the outside.

The plan is very compact, and traffic circulation within the house is direct. The house has 800 square feet of living space and can be placed on a 60-foot lot, minimum width.

The house has two bedrooms—one double and one single. The smaller bedroom is located so that it can serve as a study (convertible to a guest bedroom on occasion) if it is not needed as a bedroom.
The basementless version of the house has an unusually pleasant eating space in the kitchen. An extended counter forms a breakfast bar which overlooks the garden at the back of the house. This kitchen has plenty of daylight, there being a 12-foot expanse of windows in it.

In the basement version, there is no eating space in the kitchen, but a pass-through simplifies the serving of meals in the dining area.

The living-dining area is large for a house of this size, and its appearance of spaciousness is increased by the high ceilings and the large windows on the south which look out on the garden.

The clerestory windows give cross-ventilation to the living area and light to the hall.

Storage in the house is well-planned. The carport has cabinets for garden and lawn equipment.
Designed primarily for economy, this 24' x 32' house makes maximum use of limited space. It is an adaptation of the smallest of the three houses in the University of Illinois Staff Housing Project completed in 1949.

The house has two bedrooms—one master and one single. Both have cross-ventilation.

For a house of this size (768 square feet), it has a generous amount of closet space. Provision is made for storage of bulky items along one wall of the garage.

The living-dining area is planned so that traffic patterns do not interfere with furniture arrangements. There is a large amount of glass area in the living room.

The kitchen has a compact, "U"-shaped arrangement.

A lot with a minimum frontage of 70 feet is required.
In this house, the work area unit selected was modified by the addition of a door in the kitchen. This change permits direct access from the kitchen to both the front and rear entrances and to the garage. The latter screens the service area from the street.

Closet space in the house is supplemented by an unusually large amount of storage facilities in the garage.

The living-dining area on the south of the house opens onto an outdoor sitting area, thereby giving the house a feeling of considerable more living space than its 816 square feet.

This plan requires a lot 70 feet wide.
This two-bedroom house is designed so that it can be expanded when the family needs more room. The expanded version is on the opposite page.

Because the house requires a minimum lot of 90 feet when it is enlarged, a corner lot is recommended. The frontage can thus be reversed. In this way, maximum use can be made of the depth of the lot.

In selecting the units for the house, allowance was made for increased family activity at a later time. The kitchen was chosen because it has meal-preparation facilities to take care of an increased number of people. The dining area is more secluded from the living area than in many plans — a desirable feature for families with children. A generous amount of storage is provided in the dining area.

The house in its original version has 864 square feet of living space plus a double garage. One of the two bedrooms is a double bedroom; the other, single. The bedrooms and the living-room should face south toward the street.
In expanding the house, 12 feet is added to the length of the structure, thereby gaining two bedroom spaces. The total area of the house becomes 1,152 square feet.

This addition provides for either a 4-bedroom house, or a 3-bedroom house with an enlarged living area. The latter (shown here) is recommended because, with a 4-bedroom house, the living area would be crowded for family use.

The living area is easily enlarged by removing the non-load-bearing partition which separates the living-dining area and the double bedroom. The latter thus becomes part of the living area, making it 16' x 24'. The easy shifting of interior partitions is one of the advantages of houses designed for clear-span construction and roof trusses.
The kitchen in the work area unit selected for this house has an unusual amount of wall cabinet storage. It is a kitchen with a pleasant view since it faces the south onto the rear garden.

The master bedroom and the living room also look on the garden. In addition to the master bedroom, there is a double bedroom which faces the street. High windows are used in the latter room and also in the bathroom to assure privacy.

Separation of the dining area from the vestibule at the front entrance is accomplished by means of a closet-unit, 6 feet high.

A combination of the trussed and flat roofs form an interesting, but simple, exterior outline. The entrance to the work area is in a sheltered alcove adjacent to the garage.

The plan has 864 square feet and needs a lot 70 feet wide.
A separate dining room (12' x 14') and a small eating terrace with a fireplace are provided in this house, which is well-suited for families who consider gracious dining facilities important in entertaining and every-day living.

The dining terrace, which is covered by the roof overhang, is on the south and off from the dining room. It is secluded and sheltered from the side lawn and garden by the fireplace wall.

The house has a second fireplace in the living room.

A powder room is near the front entrance. This room was made possible by selecting a work area unit having a bathroom.

There are three bedrooms—a double and two singles. The total living space is 1,184 square feet.

A minimum frontage of 80 feet is required for this plan which is designed to face west on the street. The front walk is parallel to the driveway leading to the detached garage. A walled-off drying area and a supervised play area are provided in the plan.
Rear Units
LD 4
WB 1

Living-Dining Area
16'-0" x 19'-8"

Bedroom
9'-8" x 16'-0"

Bedroom
12'-0" x 15'-8"

Bath
7'-6" x 12'-8"

Kitchen
7'-6" x 12'-8"

Garage
31'-4"
This solar house is designed strictly for a lot on the south side of the street. All the areas devoted to living activities (the living-dining area and the two bedrooms) are on the south of the house and have a large expanse of glass which admits the warming rays of the sun in winter. An overhang protects these rooms from glare and from summer sun.

The living-dining unit has a floor-to-ceiling window area which is 20 feet wide. In the bedrooms, the ribbon of glass is held high enough to allow for furniture placement below the windows. The outdoor sitting area and garden can be enjoyed from all these rooms.

A shed roof is used over this part of the house, and the ceilings in all of these rooms follow the slope of the roof. A flat roof is used on the rest of the house—bathroom, kitchen and utility room. This combination of roofs makes possible clerestory ventilation.

The feeling of spaciousness, which is achieved in the living-dining area through the use of the large windows and the slanted ceiling, is further encouraged by the use of a low closet-unit to form a screen for the front entrance.

The entrance is convenient to the garage which contains well-planned storage space.

The house has 960 square feet of living space and requires a lot with a minimum frontage of 70 feet. One of its two bedrooms is a master room; the other, a double.
Although this house is designed so that the south garden area is at the side of the lot, privacy from the street (on the west) is insured by a masonry wall.

The living room is at the side of the house and opens onto the garden. This garden door is convenient to the kitchen, thereby making it simple to serve meals outdoors. There are also two eating spaces in the house itself — one in the kitchen; the other in the dining area.

A pleasant detail in the exterior design is the planting box which separates the front walk from the service entrance.

The garage is detached from the house, a consideration of interest to those living in localities which have building codes requiring detached garages.

Total area of the house is 816 square feet. There are two bedrooms — master and single. Double-deck bunks can be used in the latter.

Minimum lot frontage recommended is 75 feet.
A definite separation between the bedroom wing and the rest of the house is obtained in this plan through a well-daylighted entrance hall or foyer. The foyer is the connecting link between the living room and the sleeping area and serves as an excellent sound barrier for those occasions when part of the family is entertaining.

The living room, foyer, terrace and master bedroom are south to the rear of the lot. Besides the master room, there are two single bedrooms.

A stone fireplace adds to the attractiveness of the living room. The dining area is off to one side of this area and has a pass-through from the kitchen. Closet space throughout the house is generous.

The service courtyard is walled off from the walk leading to the front entrance.

A lot with a minimum frontage of 70 feet is required for this house which contains 1,120 square feet.
The work area unit in this house provides an excellent kitchen with plenty of possibilities for glamor. "U"-shaped, the kitchen has 16 feet of glass on the south wall. A pleasant view of the outdoor sitting area can thus be enjoyed during meals served in the family dining space adjoining the kitchen. For larger groups and more formal meals, the dining area in the living room can be used.

The front entrance is screened by a storage unit, 6 feet high. This gives the living-dining area the effect of a larger room than would a ceiling-high partition.

Bigger than many two-bedroom homes built today, this house has a total of 1,024 square feet of living space. It is a modification of one of the larger houses built in the University of Illinois Staff Housing Project. The plan requires a lot having a minimum frontage of 70 feet.

Although the house has a rambling floor plan, the central location of the heating unit makes its installation economical.

The bedrooms are well-placed. They are off to one side of the house but can be reached directly from the front door. Both are sufficiently large to be used as double bedrooms — one, a master bedroom.

Direct access from the garage to the front door, and excellent storage provisions are other outstanding features of the house.
The circulation of traffic within this house is good because the entrances are well-placed.

The front entrance is in a central position, easily reached from all parts of the house including the kitchen. To provide this direct access from kitchen to front door required the modification of the work area unit to include another door.

Both entrances are convenient to the garage. The latter serves a double purpose, being not only a shelter for the car but also a storage area. A deep roof overhang provides a cover for the short walk from the garage to the front door. Decorative screens at the front door and the garage add a dash of color to the exterior of the house.

The front entrance is shielded from the living-dining area by a coat-closet unit, 6 feet high, which does not seriously cut into the 16' x 24' room.

The house has two bedrooms — one double and one master — and contains 960 square feet of living space. It requires a lot at least 70 feet wide. The living-dining area faces to the rear of the lot and should be on the south.
The wall of the fireplace in this house is extended to the outdoors to form a protection from the wind for the outdoor sitting area. Although the fireplace can also be of stone or brick, concrete block was chosen to show how this relatively inexpensive material can be used for smart interiors if it is flanked by warm colors.

The total area of this 3-bedroom (one master and two single) house is 1,000 square feet. The house can be placed on the lot with the bedrooms on the south (lot on north-south street) or on the west (lot on south side of east-west street). Minimum frontage required is 75 feet.
The "U"-shaped arrangement of the plan permits convenient access to both front and back entrances from the carport. The carport is open to the street and has protecting walls on two other sides.

The dining area faces the street, but is well set back on the lot so that privacy is insured.

Storage is particularly well thought-out in this plan. The carport has space for storage of children's outdoor playthings and for garden equipment. A general storage area is provided in the hallway of the house. In addition, there are the usual bedroom, linen and coat closets. In the master bedroom, the closets are only 5 feet high so that windows can be placed over them, thus providing cross-ventilation for the bedroom.

By using a flat roof on the house as well as on the carport, a feeling of unity is achieved.

**UNITS**
- LD 4
- SB 11
- W 4
- G 4
The kitchen, the bedrooms and the living area of this house can be reached directly from the front door without cutting through any other rooms.

A small entryway at the front entrance makes this excellent inter-house traffic arrangement possible. It is also to be noted that the bathroom is convenient to all parts of the house.

The plan contains 960 square feet, and has two bedrooms — a master and a double. The living-dining area is 16' x 24'. There is a second eating space in the kitchen.

The entrance to the kitchen is convenient to the garage — a detached unit at the front. The service area between the garage and the house is screened from the walk and the front entrance. The house faces the street on the north (the living area and one bedroom are at the rear).

A 60-foot lot is required.
A paved courtyard, shielded from the street by a wall, is part of the approach to the house shown here. The front of the house faces south onto this courtyard.

Even though the living area on the front has a large expanse of glass, there is no problem of "picture-window gazers" since the wall thwarts such passers-by. In addition to the courtyard, the large living room (16' x 24') has a second outdoor living space which is shielded from the street by the garage.

The sleeping area unit chosen for this house has only two bedrooms, but by the use of one of the extra-room units, the number of bedrooms is increased to three — a master and two doubles. Total area of the house is 1,128 square feet.

The work area unit has been modified by the addition of another door in the utility room. Access to the bathroom from this part of the house is thus made more direct. The service entrance has a small screened-in porch.

A lot at least 75 feet wide is required.
Enthusiasts of fireplaces will find this house much to their liking. In addition to the fireplace in the living-dining area, there is a second one on the terrace designed particularly to add to the pleasures of outdoor living and entertaining.

The whole living unit of this house is unusually pleasant and flexible from the standpoint of use and creates the impression that the house is much larger than its 896 square feet.

Generous in size (16' x 24'), the living-dining area is made to seem even larger as the result of several design techniques. These include designing the south wall so that it has a big glass area; allowing the ceiling to follow the slope of the low-pitched roof; and opening the indoor living area onto the paved terrace.

But though all these add to the feeling of spaciousness, the living room conveys an intimate note, for it is a dead-end area free of traffic lanes that tend to interrupt conversation. The fireplace adds to the intimate effect. A convenient feature for the fireplace is the wood-box which can be filled from the outside.

The dining space is also a dead-end area and is conveniently serviced from the kitchen by means of a pass-through.

The bedrooms (a master and a double) which are off to one side of the house are given additional privacy by closet-units which flank the living-dining area.

The house is extremely flexible in orientation. As originally designed, the living area and the terrace are on the south; however, the house can be turned so that the bedrooms are to the south, or so that the kitchen and the dining area face the south.

Minimum frontage required for this plan is 70 feet.
UNITS
LD 8
SB 3
W 3
G 2
Children's play, both indoors and outdoors, can be supervised from the kitchen in this house which is particularly well-suited for a family with small children.

A large playroom (or workroom) adjoining the kitchen is created by using one of the extra-room units. The work area unit has been modified to include a half-bath for added convenience.

A ribbon of windows on the east wall of the dining area, the kitchen and the playroom permits supervision of the outdoor play area.

Storage provisions throughout the house are excellent. Storage for playthings, hobby paraphernalia and lawn equipment is provided in the playroom and the carport. There is a closet-unit which screens the front entrance.

The bedrooms — two doubles and a single — are given additional privacy by their placement at one side of the house.

Total living space within the house is 1,280 square feet. In addition, there is a paved terrace on the south onto which the living room opens. Designed for a lot on the south side of a street, the house is approached by a long informal walk which is given eye-appeal by plantings.

The plan can be placed on a lot having a frontage of 70 feet.
TO PROSPECTIVE HOMEOWNERS:

Working drawings for the house plans shown in this book may be secured:

• By employing the services of a licensed architect to develop working drawings for you, as an individual client, using the plans for reference. Special permission from the Small Homes Council is not needed provided that the name of the University of Illinois or the Small Homes Council does not appear on the architect's drawing.

      (or)

• Through your local lumber dealer.
## Closet Front (4'0 Wide - 8'0 High)

<table>
<thead>
<tr>
<th>Material Quantity</th>
<th>Labor Costs Lo</th>
<th>Labor Costs Hi</th>
<th>Material Cost Lo</th>
<th>Material Cost Hi</th>
<th>Subcontractor's Overhead &amp; Profit Lo</th>
<th>Subcontractor's Overhead &amp; Profit Hi</th>
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CLOSET FRONT (4' WIDE - 8' HIGH)
4 Sliding Doors - Job Built Doors and Frame

Credit or Extra for Finishing
One Side of Doors Only

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<thead>
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<th>Material or Wage Rate</th>
<th>Labor Factor</th>
<th>Net Units or Material Units</th>
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<tr>
<td>Credit for Omitting Hardboard &amp; Painting on Back of Doors</td>
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Fir Plywood; Make and Install 4 Flush Doors

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### Closet Front (4'0 Wide - 8'0 High)

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<tr>
<td>4 gal.</td>
<td>1.20</td>
<td>1.56</td>
<td>4 gal.</td>
<td>1.20</td>
</tr>
<tr>
<td></td>
<td>1.68</td>
<td>48.68</td>
<td></td>
<td>1.68</td>
</tr>
<tr>
<td></td>
<td>-7.65</td>
<td>-12.95</td>
<td></td>
<td>-7.65</td>
</tr>
</tbody>
</table>
**Closet Front (4'0 Wide - 8'0 High)**
4 Sliding Doors - Job Built Doors and Frame

<table>
<thead>
<tr>
<th>Material or Wage Rate</th>
<th>Labor Factor</th>
<th>Net Units or Material Units</th>
</tr>
</thead>
</table>

Credit or Extra for Finishing
One Side of Doors Only

Birch Plywood;
Make and Install 4 Flush Doors

<table>
<thead>
<tr>
<th>Carpenter</th>
<th>Laborer</th>
<th>1/4&quot; Birch Plywood - Grade A-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2.35/hr.</td>
<td>1.70/hr.</td>
<td>$.45/SF</td>
</tr>
</tbody>
</table>

Painting

<table>
<thead>
<tr>
<th>Painter</th>
<th>Clear Brushing Lacquer (2 coats)</th>
<th>Liquid Wax (1 coat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.25/hr.</td>
<td>3.90/gal.</td>
<td>3.00/gal.</td>
</tr>
</tbody>
</table>

2 to 2 1/2 hrs./100 SF of Area Covered

1.6 CSF

Total Cost of Door & Painting Operations
Allowance for Same Above

Extra for Birch Plywood with Clear Lacquer Finish
## CLOSET FRONT (4'0 WIDE - 8'0 HIGH)

<table>
<thead>
<tr>
<th>Hours or Material Quantity</th>
<th>Labor Costs</th>
<th>Material Cost</th>
<th>Subcontractor's Overhead &amp; Profit</th>
<th>Total Production Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lo</td>
<td>Hi</td>
<td>Lo</td>
<td>Hi</td>
</tr>
<tr>
<td>7-1/4 to 10-7/8 hrs.</td>
<td>$17.04</td>
<td>$25.56</td>
<td>$17.04</td>
<td>$25.56</td>
</tr>
<tr>
<td>1-2/3 to 4-7/8 hrs.</td>
<td>2.83</td>
<td>8.29</td>
<td>2.83</td>
<td>8.29</td>
</tr>
<tr>
<td>32 SF</td>
<td></td>
<td>$14.40</td>
<td>14.40</td>
<td>14.40</td>
</tr>
<tr>
<td>3-1/5 to 4 hrs.</td>
<td>7.20</td>
<td>9.00</td>
<td>10.08</td>
<td>13.95</td>
</tr>
<tr>
<td>4/5 gal.</td>
<td>3.12</td>
<td>4.06</td>
<td>4.06</td>
<td>4.37</td>
</tr>
<tr>
<td>1/5 gal.</td>
<td>.60</td>
<td>.78</td>
<td>.78</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td>39.66</td>
<td>39.66</td>
<td>39.66</td>
<td>39.66</td>
</tr>
<tr>
<td></td>
<td>61.63</td>
<td></td>
<td>61.63</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9.53</td>
<td></td>
<td>5.78</td>
<td></td>
</tr>
</tbody>
</table>
CLOSET FRONT (4' O WIDE = 8' O HIGH)
4 Sliding Doors and Frames

<table>
<thead>
<tr>
<th>Material or Labor Factor</th>
<th>Material Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wage Rate</td>
<td></td>
</tr>
<tr>
<td>$ 2.35/hr.</td>
<td></td>
</tr>
<tr>
<td>1 1/2 to 2 hrs. /100 LF of Blocking</td>
<td></td>
</tr>
<tr>
<td>.109/lfC</td>
<td></td>
</tr>
<tr>
<td>2.35/hr.</td>
<td></td>
</tr>
<tr>
<td>2 1/2 yr 2 Yellow Pine (Sides and Head)</td>
<td></td>
</tr>
<tr>
<td>57.00 ea. T(1)</td>
<td></td>
</tr>
<tr>
<td>.25/lfL</td>
<td></td>
</tr>
<tr>
<td>.05/lfL</td>
<td></td>
</tr>
<tr>
<td>1 1/2 to .7 hrs./100 SF of Area Covered</td>
<td></td>
</tr>
<tr>
<td>1.6 CSF</td>
<td></td>
</tr>
</tbody>
</table>

Extra Cost for Plywood Doors — Natural Finish

Mill-made closet front with Birch Plywood Doors, all equipped with sliding door hardware (unpainted).

| Painting Painter | 2.25/hr. | 2 to 2 1/2 hrs. /100 SF of Area Covered |
| Casein Paint (1 coat) | 2.98/gal. C |                                           |

Total Cost of Doors and Finishing Allowance for Same Above

Extra Cost of Birch Plywood Doors with Clear Lacquer Finish
<table>
<thead>
<tr>
<th>Hours or Material Quantity</th>
<th>Labor Costs</th>
<th>Material Cost</th>
<th>Subcontractor’s Overhead &amp; Profit</th>
<th>Total Production Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lo</td>
<td>Hi</td>
<td>Lo</td>
<td>Hi</td>
</tr>
<tr>
<td>1/3 to 1/2 hr.</td>
<td>$ .78</td>
<td>$ 1.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 BF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 to 3 hrs.</td>
<td></td>
<td></td>
<td>4.70</td>
<td>7.05</td>
</tr>
<tr>
<td>1 Closet Front</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 BF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 LF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/3 to 1 1/3 hrs.</td>
<td>1.50</td>
<td>2.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4 gal.</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$ 6.98</td>
<td>$10.75</td>
<td>$60.77</td>
<td></td>
</tr>
<tr>
<td>1 Closet Front</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 1/5 to 4 hrs.</td>
<td>7.20</td>
<td>9.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/5 gal.</td>
<td>3.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/5 gal.</td>
<td>.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$89.92</td>
<td>$94.16</td>
<td>$60.07</td>
<td>$61.97</td>
</tr>
</tbody>
</table>
CLOSED UNIT (4’0 WIDE – 8’0 HIGH)
Prefabricated Closet with 4 Doors, 2 Drawers and Double Shelf

<table>
<thead>
<tr>
<th>Material or Labor Factor</th>
<th>Net Units or Material Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backup Grades Carpenter</td>
<td>$2.35/hr.</td>
</tr>
<tr>
<td>2” x 4” #2 Yellow Pine (Sides and Head)</td>
<td>.109/100 LF</td>
</tr>
<tr>
<td>Prefabricated Closet Carpenter</td>
<td>2.35/hr.</td>
</tr>
<tr>
<td>Millwork including:</td>
<td></td>
</tr>
<tr>
<td>Drawers precut, knocked down</td>
<td></td>
</tr>
<tr>
<td>Drawer Guides, Shelf Stops,</td>
<td></td>
</tr>
<tr>
<td>Shelves, Wall Stop, Rod, Trim</td>
<td></td>
</tr>
<tr>
<td>all precut.</td>
<td></td>
</tr>
<tr>
<td>Front assembled with doors fit</td>
<td></td>
</tr>
<tr>
<td>and ready to install.</td>
<td></td>
</tr>
<tr>
<td>All of above unfinished.</td>
<td>$77.50/Unit</td>
</tr>
<tr>
<td>Painting Painter</td>
<td>2.25/hr.</td>
</tr>
<tr>
<td>Primer (1 coat)</td>
<td>.24/lb. S</td>
</tr>
<tr>
<td>Casein Paint (1 coat)</td>
<td>2.92/gal. C</td>
</tr>
<tr>
<td>Credit for Interior Finish Materials that are required for comparable closets.</td>
<td></td>
</tr>
<tr>
<td>Asphalt Tile</td>
<td>See &quot;Single Closet&quot;</td>
</tr>
<tr>
<td>Base Moulding</td>
<td>See &quot;Single Closet&quot;</td>
</tr>
<tr>
<td>2 Shelves, Shelf Strips and Rod</td>
<td>See &quot;2 Wall Closet – Demonstration Houses&quot;</td>
</tr>
<tr>
<td>Painting Shelf and Rod Painter</td>
<td>2.25/hr.</td>
</tr>
<tr>
<td>Primer (1 coat)</td>
<td>.24/lb. S</td>
</tr>
<tr>
<td>Casein Paint (1 coat)</td>
<td>2.92/gal. C</td>
</tr>
</tbody>
</table>

Source of Material Cost
A = Associated Door and Plywood Co., Springfield, Illinois
<table>
<thead>
<tr>
<th>Hours or Material Quantity</th>
<th>Labor Costs</th>
<th>Subcontractor's Overhead &amp; Profit</th>
<th>Total Production Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lo</td>
<td>Hi</td>
<td>Lo</td>
</tr>
<tr>
<td>1/3 to 1/2 hr.</td>
<td>$ 0.78</td>
<td>$ 1.17</td>
<td>$ 0.78</td>
</tr>
<tr>
<td>14 BF</td>
<td>$ 1.52</td>
<td>$ 1.52</td>
<td>$ 1.52</td>
</tr>
<tr>
<td>4 1/2 to 6 1/2 hrs.</td>
<td>10.57</td>
<td>15.27</td>
<td>10.57</td>
</tr>
</tbody>
</table>

1 Unit

3 to 5 1/4 hrs. 6.75 11.81 40% to 55% 9.45 16.53
6 lb. 1.44 2.33 30% to 40% 1.87 2.02
.6 gal. 1.79 2.51 30% to 40%
TOTAL $18.10 $28.25 $82.25 $104.02 $116.52

$ 2.39 $ 2.61
2.77 3.17
8.13 8.91

1/4 to 1/2 hr. $ 0.66 $ 1.12 40% to 55%
.6 lbs. $ .14 .18 30% to 40%
.06 gal. $ .18 .23 30% to 40%
TOTAL CREDIT $14.62 $16.88
CLOSET FRONT (4'0 WIDE - 8'0 HIGH)
Single Accordion Type Door - Fabric Covered

<table>
<thead>
<tr>
<th></th>
<th>Material or Wage Rate</th>
<th>Labor Factor</th>
<th>Net Units or Material Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backup Grounds Carpenter</td>
<td>$2.35/hr.</td>
<td>1 1/2 to 2 hrs /100 LF of Blocking</td>
<td>$.20/LF</td>
</tr>
<tr>
<td>2&quot; x 4&quot; #2 Yellow Pine</td>
<td>.109/FC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accordion Type Doors</td>
<td>2.35/hr.</td>
<td>4 1/4 to 5 1/10 hrs.</td>
<td>1 pr.</td>
</tr>
<tr>
<td>Carpenter</td>
<td></td>
<td>/Door</td>
<td></td>
</tr>
<tr>
<td>Single Accordion Type Door</td>
<td>covered with vinyl coated cloth - complete with hardware</td>
<td>75.00M to 76.00F/pr.</td>
<td></td>
</tr>
</tbody>
</table>

Extra for Special Colors on one side

Extra for Latch 4.50 ea.
<table>
<thead>
<tr>
<th>Hours or Material Quantity</th>
<th>Labor Costs</th>
<th>Subcontractor's Overhead &amp; Profit</th>
<th>Total Production Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3 to 1/2 hr. 14 BF</td>
<td>$ .78 $ 1.17</td>
<td>$ 1.52</td>
<td>$ .78 $ 1.17</td>
</tr>
<tr>
<td>4 1/4 to 5 1/10 hrs.</td>
<td>$10.00 12.00</td>
<td></td>
<td>$10.00 12.00</td>
</tr>
<tr>
<td>1 pr.</td>
<td>$75.00 $76.00</td>
<td></td>
<td>$75.00 $76.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$10.78 $13.17</td>
<td>$76.52 $77.52</td>
<td>$87.30 $90.69</td>
</tr>
</tbody>
</table>

$ 8.00

$ 4.50
SECTION IV

Conclusions
CLOSET WALL PROJECT (LDRC)
In-Place Costs

Bearing Partitions - with Doors

Single
4'

$100

Double
8'

$200

Triple
12'

$300

End Wall

$20

Non-Bearing Partitions - Open Fronts

$35

$62

$129

$12
CLOSET WALL PROJECT (LDRC)
In-Place Costs

2 Wall Closet (4'0" wide)

Demonstration Houses (LDRC)

Non-Bearing Partition with 4 sliding doors

\[ L = 4'0" \]
\[ W = 2'0" \]
\[ (2 \text{ shelves} - 4 \text{ Birch plywood doors}) \]

<table>
<thead>
<tr>
<th>Labor</th>
<th>Material</th>
<th>Lo</th>
<th>Hi</th>
</tr>
</thead>
<tbody>
<tr>
<td>$48.00</td>
<td>$64.50</td>
<td>$69.00</td>
<td>$67.00</td>
</tr>
<tr>
<td>$112.50</td>
<td>$136.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conventional Construction

Non-Bearing Partition with 1 door

\[ L = 4'2" \]
\[ W = 2'1/2" \]
\[ (1 \text{ shelf} - 2 \text{ panel door}) \]

<table>
<thead>
<tr>
<th>Labor</th>
<th>Material</th>
<th>Lo</th>
<th>Hi</th>
</tr>
</thead>
<tbody>
<tr>
<td>$27.00</td>
<td>$45.50</td>
<td>$35.50</td>
<td>$48.50</td>
</tr>
<tr>
<td>$73.50</td>
<td>$84.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Storage Wall (12'0" wide)

Staff Housing Project

Non-Bearing Partitions with 5 doors 7'6" high

\[ L = 12'4" \]
\[ W = 2'1/2" \]
\[ (2 \text{ shelves in 4 sections} - 6 \text{ shelves in 1}) \]

<table>
<thead>
<tr>
<th>Labor</th>
<th>Material</th>
<th>Lo</th>
<th>Hi</th>
</tr>
</thead>
<tbody>
<tr>
<td>$72.00</td>
<td>$235.00</td>
<td>$107.00</td>
<td>$287.00</td>
</tr>
<tr>
<td>$357.00</td>
<td>$394.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conventional Construction

Bearing Partitions with 3 doors 6'8" high

\[ L = 12'0" \]
\[ W = 3'0" \]
\[ (1 \text{ shelf per section}) \]

<table>
<thead>
<tr>
<th>Labor</th>
<th>Material</th>
<th>Lo</th>
<th>Hi</th>
</tr>
</thead>
<tbody>
<tr>
<td>$117.00</td>
<td>$171.00</td>
<td>$164.00</td>
<td>$171.00</td>
</tr>
<tr>
<td>$288.00</td>
<td>$335.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Material Cost for Non-Bearing Partitions with 4 Sliding Doors includes the following Subcontractor's Overhead & Profit: Lo - $3.50 - - - - - Hi - $6.00.*

*Material Cost for Non-Bearing Partition with 1 Door includes the following Subcontractor's Overhead & Profit: Lo - $1.50 - - - - - Hi - $3.00.*
Pair of Drapes or Screen on Sliding Ceiling Track

Cotton, Monks Cloth, or Woven Bamboo hung from ceiling drapery tracks

Woven Basswood Splints on fold-back ceiling track and fastened at both sides

<table>
<thead>
<tr>
<th>Material</th>
<th>Labor</th>
<th>Paintings</th>
<th>Backup</th>
<th>In-Place Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton Rayon Fraille</td>
<td>$8.50</td>
<td>$1.50</td>
<td>-</td>
<td>$10.00</td>
</tr>
<tr>
<td>Monks Cloth</td>
<td>11.00</td>
<td>1.50</td>
<td>-</td>
<td>12.50</td>
</tr>
<tr>
<td>Woven Bamboo</td>
<td>23.50</td>
<td>1.50</td>
<td>-</td>
<td>24.00</td>
</tr>
</tbody>
</table>

Pair of Basswood Screens on Foldback Ceiling Track:

<table>
<thead>
<tr>
<th>Finish</th>
<th>Labor</th>
<th>Paintings</th>
<th>In-Place Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Lacquer Finish</td>
<td>29.00</td>
<td>1.50</td>
<td>30.50</td>
</tr>
<tr>
<td>Colored Lacquer Finish</td>
<td>33.00</td>
<td>1.50</td>
<td>34.50</td>
</tr>
</tbody>
</table>
# Closet Front Cost Comparison

**SINGLE HINGED DOOR IN NON-BEARING PARTITION**

Doors—Mill Made.
Partition—Finished with gypsum board drywall

<table>
<thead>
<tr>
<th>Door Style</th>
<th>Material</th>
<th>Labor</th>
<th>Painting Finish Cost</th>
<th>Backup Grounds</th>
<th>Total In-Place Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2/8 x 6/8 x 1 3/8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single hinged</td>
<td>$35.50</td>
<td>$18.50</td>
<td>$5.50</td>
<td>$2.00</td>
<td>$61.50</td>
</tr>
<tr>
<td>door (Mill made)</td>
<td></td>
<td></td>
<td>Casein</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Panel Pine</td>
<td>$36.25</td>
<td>$18.50</td>
<td>$7.00</td>
<td>$2.00</td>
<td>$63.75</td>
</tr>
<tr>
<td>Hollow Core</td>
<td>$36.75</td>
<td>$18.50</td>
<td>Wax on 11.75</td>
<td>$2.00</td>
<td>$69.00</td>
</tr>
<tr>
<td>Flush; Gum Birch</td>
<td></td>
<td></td>
<td>Lacquer</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3/0 x 6/8 x 1 3/8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single hinged</td>
<td>$38.00</td>
<td>$18.50</td>
<td>$5.50</td>
<td>$2.00</td>
<td>$64.00</td>
</tr>
<tr>
<td>door (Mill made)</td>
<td></td>
<td></td>
<td>Casein</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Panel Pine</td>
<td>$37.50</td>
<td>$18.50</td>
<td>$7.00</td>
<td>$2.00</td>
<td>$65.00</td>
</tr>
<tr>
<td>Hollow Core</td>
<td>$40.00</td>
<td>$18.50</td>
<td>Wax on 11.75</td>
<td>$2.00</td>
<td>$72.25</td>
</tr>
<tr>
<td>Flush; Gum Birch</td>
<td></td>
<td></td>
<td>Lacquer</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3/4 x 7/11 x 1 3/8</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single hinged</td>
<td>$48.75</td>
<td>$14.00</td>
<td>$6.25</td>
<td>$2.00</td>
<td>$71.00</td>
</tr>
<tr>
<td>door (Mill made)</td>
<td></td>
<td></td>
<td>Waxed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Panel Pine</td>
<td>$48.75</td>
<td>$14.00</td>
<td>Wax on 14.00</td>
<td>$2.00</td>
<td>$78.75</td>
</tr>
<tr>
<td>Hollow Core</td>
<td></td>
<td></td>
<td>Lacquer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flush; Gum Birch</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PAIR OF HINGED DOORS

Doors - 6'-8" high, Mill Made  
Partition Finished with gypsum board drywall

<table>
<thead>
<tr>
<th>Material</th>
<th>Labor</th>
<th>Paintings</th>
<th>Backup Grounds</th>
<th>Total In-place Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core flush, Gum</td>
<td>41.75</td>
<td>15.00</td>
<td></td>
<td>$68.25</td>
</tr>
<tr>
<td>Core flush, Birch</td>
<td>43.25</td>
<td>15.00</td>
<td></td>
<td>$69.50</td>
</tr>
<tr>
<td>Hallow Core Flush, Gum</td>
<td>69.75</td>
<td>12.25</td>
<td></td>
<td>$93.25</td>
</tr>
<tr>
<td>Hallow Core Flush, Birch</td>
<td>69.75</td>
<td>12.25</td>
<td></td>
<td>$106.25</td>
</tr>
</tbody>
</table>

Coastal Paint $0.75 $0.00

Birch $0.25 $0.00


Waxed 10.75 2.00 69.50

Wax on 21.25 2.00 81.50

Lacquer 9.25 2.00 93.25

Lacquer 22.25 2.00 106.25
**Closet Front Cost Comparison**

**PAIR OF SLIDING DOORS**

2/0 x 8/0 with bottom rollers and floor track

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Material Cost</th>
<th>Labor Cost</th>
<th>Paintings Cost</th>
<th>Backup Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardboard reinforced with steel</td>
<td>$27.25</td>
<td>$7.75</td>
<td>$8.50</td>
<td>$2.50</td>
<td>$46.00</td>
</tr>
<tr>
<td>Fir Plywood on face of wood frame, reinforced with pipe</td>
<td>34.00</td>
<td>7.75</td>
<td>Waxed Finish</td>
<td>8.25</td>
<td>2.50</td>
</tr>
<tr>
<td>Birch Plywood on face of wood frame, reinforced with pipe</td>
<td>46.75</td>
<td>7.75</td>
<td>Clear Lacquer</td>
<td>23.00</td>
<td>2.50</td>
</tr>
</tbody>
</table>

**Pair of Sliding Doors—(Job Built)**

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Material Cost</th>
<th>Labor Cost</th>
<th>Paintings Cost</th>
<th>Backup Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardboard on wood frame—on face only—on both sides—</td>
<td>17.50</td>
<td>27.50</td>
<td>Casein Paint</td>
<td>4.50</td>
<td>2.50</td>
</tr>
<tr>
<td>Fir Plywood on wood frame—on face only—on both sides—</td>
<td>20.75</td>
<td>27.50</td>
<td>Waxed Finish</td>
<td>4.25</td>
<td>2.50</td>
</tr>
<tr>
<td>Birch Plywood on wood frame—on face only—same with fir plywood on back</td>
<td>28.00</td>
<td>27.50</td>
<td>Clear Lacquer</td>
<td>10.75</td>
<td>2.50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Material Cost</th>
<th>Labor Cost</th>
<th>Paintings Cost</th>
<th>Backup Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardboard on wood frame—on face only—on both sides—</td>
<td>21.25</td>
<td>30.50</td>
<td>Casein Paint</td>
<td>8.75</td>
<td>2.50</td>
</tr>
<tr>
<td>Fir Plywood on wood frame—on face only—on both sides—</td>
<td>27.75</td>
<td>30.50</td>
<td>Waxed Finish</td>
<td>8.75</td>
<td>2.50</td>
</tr>
<tr>
<td>Birch Plywood on wood frame—on face only—same with fir plywood on back</td>
<td>35.00</td>
<td>30.50</td>
<td>Finish</td>
<td>21.25</td>
<td>2.50</td>
</tr>
</tbody>
</table>
FOUR SLIDING DOORS

Job built door frame, mill made doors installed with rollers and slide tracks.
<table>
<thead>
<tr>
<th>Sliding Doors—(Mill Made Doors, Job Built Frame)</th>
<th>Material</th>
<th>Labor</th>
<th>Paintings</th>
<th>Backup Grounds</th>
<th>Total In-Place Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fir Panel Door—2-2 panel</td>
<td>$41.75</td>
<td>$23.00</td>
<td>Casein Paint 11.75</td>
<td>$2.50</td>
<td>$79.00</td>
</tr>
<tr>
<td>and 2-1 panel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flush Gum Door—2—Hollow core and 2-7 ply</td>
<td>42.75</td>
<td>23.00</td>
<td>Waxed Finish 11.50</td>
<td>2.50</td>
<td>79.75</td>
</tr>
<tr>
<td>Flush Birch Door—2—Hollow core and 2-7 ply</td>
<td>47.25</td>
<td>23.00</td>
<td>Clear Lacquer 31.00</td>
<td>2.50</td>
<td>103.75</td>
</tr>
</tbody>
</table>

| Sliding Doors—(All Job Built)                |          |        |                    |                |                     |
| Hardwood on wood frame—                      |          |        |                    |                |                     |
| on face only—                                |          |        |                    |                |                     |
| on both sides—                               |          |        |                    |                |                     |
| $24.00                                       | $40.00   | Casein Paint 6.50 | 2.50          | 73.00             |
| $28.00                                       | $44.25   | Casein Paint 11.75 | 2.50          | 86.50             |
| Fir Plywood on wood frame                    |          |        |                    |                |                     |
| on face only—                                |          |        |                    |                |                     |
| on both sides—                               |          |        |                    |                |                     |
| $27.00                                       | $40.00   | Waxed Finish 6.50  | 2.50           | 76.00             |
| $34.25                                       | $44.25   | Waxed Finish 11.50 | 2.50           | 92.50             |
| Birch Plywood on wood frame                  |          |        |                    |                |                     |
| on face only—                                |          |        |                    |                |                     |
| on both sides—                               |          |        |                    |                |                     |
| $34.75                                       | $40.00   | Clear Lacquer 17.00| 2.50           | 94.25             |
| same with fir plywood on                     |          |        | and wax finish     |                |                     |
| back—                                        |          |        |                    |                |                     |
| $41.75                                       | $44.25   | Clear Lacquer 17.00| 2.50           | 94.25             |

| Sliding Doors—(All Mill Built)               |          |        |                    |                |                     |
| Hardboard Flush Door—                        |          |        |                    |                |                     |
| on face only—                                |          |        |                    |                |                     |
| $58.50                                       | $5.75    | Casein Paint 4.00  | 2.50           | 70.75             |
| $75.50                                       | $5.75    | Clear Lacquer     | 17.00          | 101.75            |

<table>
<thead>
<tr>
<th>Paintings</th>
<th>Backup Grounds</th>
<th>Total In-Place Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casein Paint 11.75</td>
<td>$2.50</td>
<td>$79.00</td>
</tr>
<tr>
<td>Waxed Finish 11.50</td>
<td>2.50</td>
<td>79.75</td>
</tr>
<tr>
<td>Clear Lacquer 31.00</td>
<td>2.50</td>
<td>103.75</td>
</tr>
<tr>
<td>and wax finish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casein Paint 6.50</td>
<td>2.50</td>
<td>73.00</td>
</tr>
<tr>
<td>Casein Paint 11.75</td>
<td>2.50</td>
<td>86.50</td>
</tr>
<tr>
<td>Waxed Finish 6.50</td>
<td>2.50</td>
<td>76.00</td>
</tr>
<tr>
<td>Waxed Finish 11.50</td>
<td>2.50</td>
<td>92.50</td>
</tr>
<tr>
<td>Clear Lacquer 17.00</td>
<td>2.50</td>
<td>94.25</td>
</tr>
<tr>
<td>and wax finish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casein Paint 4.00</td>
<td>2.50</td>
<td>70.75</td>
</tr>
<tr>
<td>Clear Lacquer 17.00</td>
<td>2.50</td>
<td>101.75</td>
</tr>
</tbody>
</table>
Closet Front Cost Comparison

PREFABRICATED CLOSET
WITHOUT REAR OR SIDE WALLS

Mill work delivered knocked down and assembles on site. Includes closet front with 4 doors, 2 drawers, 2 shelves, rod and closet floor.

<table>
<thead>
<tr>
<th>Material</th>
<th>Labor</th>
<th>Paintings</th>
<th>Backup</th>
<th>In-Place Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Doors, 2 Drawers and Double Shelves</td>
<td>$77.50</td>
<td>$13.00</td>
<td>$17.00</td>
<td>$2.50</td>
</tr>
</tbody>
</table>

* Recommended depth is 4" less and recommended width is 4" wider than manufactured unit on which cost is based.
**Closet Front Cost Comparison**

**FABRIC COVERED ACCORDIAN DOOR**


<table>
<thead>
<tr>
<th>Material</th>
<th>Labor</th>
<th>Paintings</th>
<th>Backup</th>
<th>Grounds</th>
<th>Total In-Place</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$75.50</td>
<td>$11.00</td>
<td></td>
<td></td>
<td>$2.50</td>
<td>$89.00</td>
<td></td>
</tr>
<tr>
<td>83.50</td>
<td>11.00</td>
<td></td>
<td>2.50</td>
<td>97.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>88.00</td>
<td>11.00</td>
<td></td>
<td>2.50</td>
<td>101.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**CLOSET FRONT COST COMPARISON**

Cost of:
- Closet Front
- Closet Walls, Shelves and Rod*
- House Space**

<table>
<thead>
<tr>
<th>Drapes</th>
<th>Raytex</th>
<th>2 Sliding Doors 2/0 x 8/0</th>
<th>2 Hinged Doors</th>
<th>4 Sliding Doors</th>
</tr>
</thead>
<tbody>
<tr>
<td>$160.50</td>
<td>$189.00</td>
<td>$194.00</td>
<td>$216.25</td>
<td>$221.00</td>
</tr>
</tbody>
</table>

**Closet Front**
- Closet Walls, Shelves and Rod*
- House Space**

<table>
<thead>
<tr>
<th>Door in Wall 3/4 x 8/0</th>
<th>Door in Wall 2/8 x 6/8</th>
<th>Prefabricated Closet</th>
<th>Accordion Door</th>
</tr>
</thead>
<tbody>
<tr>
<td>$245.50</td>
<td>$250.00</td>
<td>$254.00</td>
<td>$269.00</td>
</tr>
</tbody>
</table>

* Based on Non-bearing Partition—Open Front Closet costs of $35.00 and side wall costs $13.00 for a closet 4/0 wide and 2/4 deep. $0.50 for each additional inch of length on side wall.

* Shelf, rod and drawer costs are included in this closet front cost.

** House space cost is charged at a rate of $5.00 / sq. ft.
CONVENTIONAL CONSTRUCTION
3/8" gypsum board on studs - 16" o.c. o.
Nominal thickness 4"

a - 4 studs - 16" o. c.
  2 x 4 #2 Douglas Fir

b - Top and bottom plate
  2 x 4 #2 Douglas Fir

c - 3/8" gypsum board 4/0 x 2/0
  nailed to one side of stud frame

d - 16d common nails through
  top and bottom plate - 2
  per junction

e - 4d cement coated nails
  8" o. c., 3/8" minimum
  edge distance.

Date Built _______________________
Date Tested _______________________
Trade Names _______________________

CLOSET WALL PROJECT
L.P.E.C.  8/5/51
TEST STAGE 1A

TEST PANEL - BX

CONVENTIONAL CONSTRUCTION
1/2" fiberboard on studs = 16" o.c. o.c.
Nominal 4" thickness

a = 4 studs - 16" o.c. o.c.
2 x 4 #2 Douglas Fir

b = Top and bottom plate
2 x 4 #2 Douglas Fir

c = 1/2" fiberboard 4/0 x 8/0
nailed to one side of stud frame

d = 16d common nails through top and bottom plate - 2
per junction

e = 4d cementcoated nails
8" o.c. o.c., 3/8" minimum
edge distance

Date Built _________________________
Date Tested _______________________
Trade Names _______________________

---

L.D.R.C.
8/5/51
CONVENTIONAL CONSTRUCTION

1/4" fir plywood, Grade A-D
Nominal 4" thickness

- 4 studs - 16" o. c.
2 x 4 #2 Douglas Fir

- Top and bottom plate
2 x 4 #2 Douglas Fir

- 1/4" fir plywood, grade A-D
4/0 x 8/0 nailed to one side of stud frame

- 16d common nails through top and bottom plate - 2 per junction

- 4d finish nails, bright 6"
5. 9. along edges and 12"
6. 9. at intermediate studs
3/8" minimum edge distance

Date Built
Date Tested
Trade Names
CONVENTIONAL CONSTRUCTION
1/2" gypsum board
Nominal 4" thickness

a = 3 studs - 24" o. c.
   2 x 4 #2 Douglas Fir

b = Top and bottom plate
   2 x 4 #2 Douglas Fir

c = 1/2" gypsum board 4/0 x 3/0
   nailed to one side of stud

d = 16d common nails through
   top and bottom plate - 2
   per junction

e = 5d cement coated nails
   8" o. c., 3/8" minimum
   edge distance

Date Built ______________________
Date Tested ____________________
Trade Names ___________________
TEST PANEL FRAME
FOR STUDLESS WALLS

a - 2" x 6" Douglas Fir
b - 16d common nails
c - Shelf strip, 1 x 6
#1 Yellow Pine nailed
through frame "a" and
to 2 x 4's "d"
d - 2 shelf strip stiffeners,
Douglas Fir 2 x 4's 16"
oc., end nailed through
top frame member and shelf
strip
e - 1" x 2" perimeter strip
nailed to 2" x 6" frame
with 8d common nails 6"
oc.
f - Dimension equals panel
thickness

closet wall project
L.D.R.C.
5/5/51

Date Built ___________________________
Date Tested _________________________
Trade Names _________________________
STUDLESS WALL

Single gypsum board A backed

a - 1/2" gypsum board 4/0 x 8/0 nailed to 1 x 2 perimeter strip, shelf strip and "b"

b - Diagonally ripped 2 x 2 reinforcing 18" o.c., nailed to back of wallboard before erection and toenailed into 1 x 2 perimeter strips with 8d nails

c - Blue plasterboard nails, large head, 3" o.c., around edge and on shelf strip; 8" o.c. on horizontal reinforcing. 1/2" minimum edge distance

Date Built _______________________
Date Tested _____________________
Trade Name (a) ___________________
STUDLESS WALL

Laminated gypsum board

a - 1/2" gypsum board 4/0 x 8/0 nailed to 1 x 2 perimeter strip and shelf strip

b - Blue plasterboard nails, large head, 3" o.c., 1/2" minimum edge distance

c - 1/2" gypsum board 4/0 x 8/0 laminated to "a" with perf-a-tape cement

Date Built
Date Tested
Trade Name (a)
STUDLESS WALL

Laminated gypsum board reinforced with wire

Position of wire before stretching tight

a - 1/2" gypsum board 4/0 x 8/0 nailed to 1 x 2 perimeter strip and shelf strip

b - 4d cement coated box nails 6" o.c., 1/2" minimum edge distance. Set first nails on right side 3" from top and bottom edges. Set nails on edge partially, then apply wire "c", stretch it tight by hooking it over nails along top and bottom edges, and finish setting nails.

c - 18 ga. galvanized wire stretched on nails "b"

d - 1/2" gypsum board 4/0 x 8/0 laminated to "a" over wires "c" with perf-s-tape cement

Date Built ____________________
Date Tested ____________________
Trade Name (a) ____________________
Trade Name (d) ____________________
TEST STAGE 2A
TEST PANEL - H

STUDLESS WALL

Gypsum board, 1" scrap and gypsum board

NOTE: Build laminated panel, steps "a" through "e", before attaching to frame

a = 1/2" gypsum board 4/0 x 8/0

b = 1" wood scrap edge strips, continuous, with 1/2" maximum space between blocks, glued to "a"

c = 18 pcs. of 1" wood scrap center blocking, minimum area 4 sq. in. (Note: any piece 12" long equal to 2 pieces) glued to "a"

d = 1" wood scrap shelf backing with 1/2" maximum space between blocks glued to "a"

e = 1/2" gypsum board 4/0 x 8/0 glued to "b", "c", and "d"

NOTE: Above three layers shall be glued together with weldwood glue, prior to erection and pressed 12 hours with other panels or sheet material weighing 10 lbs/sq.ft.

f = 2" No. 5 flat head wood screws 6" o.c., fastened to 1 x 2 perimeter strip and shelf strip. Drill through panel, and countersink screws 1/2"

Date Built ____________________________
Date Tested __________________________
Trade Name (a) _______________________
Trade Name (e) ________________________
TEST STAGE 2A

TEST PANEL - I

STUDBESS WALL

Gypsum board, 2" scrap, and gypsum board

NOTE: Build laminated panel, steps "a" through "e", before attaching to frame

a - 1/2" gypsum board 4/0 x 8/0

b - 2" wood scrap edge strips, continuous, with 1/2" maximum space between blocks, glued to "a"

c - 18 pcs. of 2" wood scrap center blocking, minimum area 4 sq.in. (Note: any piece 12" long equal to 2 pieces) glued to "a"

d - 2" wood scrap shelf backing with 1/2" maximum space between blocks, glued to "a"

e - 1/2" gypsum board 4/0 x 8/0 glued to "b", "c", and "d"

NOTE: Above three layers shall be glued together with weldwood glue, prior to erection, and pressed 12 hours with other panels or sheet material weighing 10 lbs/sq.ft.

f - 3" No. 8 flat head wood screws 6" o.c., fastened to 1 x 2 perimeter strip and shelf strip. Drill through panel, and countersink 1/2"
STUDELESS WALL
Gypsum wallboard sandwich
with wood lath - 6" o.c. between

NOTE: Build laminated panel, steps "a" through "c", before attaching to frame

a - 1/2" gypsum board 4/0 x 8/0
b - 3/8" x 1 1/2" wood lath 6" o.c. glued to "a" with weldwood glue
c - 1/2" gypsum board 4/0 x 8/0

NOTE: Above three layers shall be glued together with weldwood glue, prior to erection, and pressed 12 hours with other panels or sheet material weighing 10 lbs/sq.ft.

d - 5d box nails 6" o.c., countersink 1/2", and fastened to 1 x 2 perimeter strip and shelf strip. 1/2" minimum edge distance

Date Built ____________________
Date Tested ___________________
Trade Name (a) (c)
STUDLESS WALL
Gypsum board, chicken wire mesh
and gypsum board

NOTE: Build laminated panel,
steps "a" through "c", before attaching to
frame

a - 1/2" gypsum board 4'0" x 8'0"

b - 1" hexagon mesh 20 ga. gal-
vanised chicken wire

c - 1/2" gypsum board 4'0" x 8'0"

NOTE: Above three layers shall
be glued together with
perf-a-tape cement, prior
to erection, and pressed
12 hours with other panels
or sheet material weighing
10 lbs/sq.ft.

d - 6d box nails 6" o.c., 1/2"
minimum edge distance.
Nail laminated panel to
1 x 2 perimeter strips and
shelf strip
STUDLESS WALL
Gypsum board lath and gypsum board

a - 1/2" gypsum board 4/0 x 8/0

b - Blue plasterboard nails, large head, 3" o.c., on 1 x 2 perimeter strips and shelf strip. 1/2" minimum edge distance.

c - 6 pcs. 3/8" x 16" x 45" gypsum board lath laminated to "a" with perfor-a-tape cement.

d - 3/8" gypsum board 4/0 x 8/0 laminated to "c" with perfor-a-tape cement.
STUDDLESS WALL
Gypsum board, wood lath, eggcrate, and gypsum board

NOTE: Build laminated panel, steps "a" through "d", before attaching to frame

a = 1/2" gypsum board 4/0 x 8/0
b = 1" board ripped to width of lath and notched 8" o.c., as shown
c = 3/8" x 1 1/2" wood lath notched 8" o.c., as shown. Build "b" and "c" into eggcrate. Notches in horizontals on top and vertically on bottom. Joints in vertically staggered as shown on Sheet No. 2. Glue eggcrate to "a" with weldwood glue
d = 1/2" gypsum board 4/0 x 8/0

NOTE: Above three layers shall be glued together with weldwood glue, prior to erection, and pressed 12 hours with other panels or sheet material weighing 10 lbs/sq.ft.
e = 3" No. 8 flat head wood screws 6" o.c., fastened to 1 x 2 perimeter strip and shelf strip. Drill through panel and countersink 1/2"

Date Built ____________________________
Date Tested ____________________________
Trade Name (a) ____________________________
 (d) ____________________________
All verticals notched on bottom

All horizontals notched on top

* Note joints in verticals

Rip from 1" board

Rip from 1" board

3/8" x 1 1/2" wood lath
TEST STAGE 2A

TEST PANEL - N

STUDLESS WALL
Gypsum board, 1 x 4 yellow pine 24" o.c., and gypsum board.

NOTE: Build laminated panel, steps "a" through "d", before attaching to frame.

a = 1/2" gypsum board 4/0 x 8/0
b = 1 x 2 #3 yellow pine around perimeter glued to "a" with weldwood glue
c = 3 pcs. 1 x 4 #3 yellow pine 24" o.c. glued to "a" with weldwood glue
d = 1/2" gypsum board 4/0 x 8/0 glued to "b" and "c" with weldwood glue

NOTE: Above three layers shall be glued together with weldwood glue, prior to erection, and pressed 12 hours with other panels or sheet material weighing 10 lbs/sq.ft.

e = 2" No. 5 flat head wood screws 6" o.c., fastened to 1 x 2 perimeter strip and shelf strip. Drill through panel, and counter-sink screws 1/2"

Date Built ____________________
Date Tested ____________________
Trade Name (a) ____________________
(d) ____________________
STUDBLASS WALL
Tempered hardboard and gypsum board

a - 1/2" tempered hardboard 4/0 x 8/0

b - 1/2" gypsum board 4/0 x 8/0 laminated to "a" with wood glue

c - 1 1/4" blue plasterboard nails 6" c.c., 1/2" minimum edge distance. Nail laminated panel to 1 x 2 perimeter strips and shelf strip

Date Built __________________________
Date Tested _________________________
Trade Name (a) _____________________
(b) _______________________________
CONVENTIONAL CONSTRUCTION
1/2" fiberboard on studs - 16" o. c. o.
Nominal 2" thickness

a1 - 2 studs - 16" o. c. o.
    2 x 4 #2 Douglas Fir

a2 - 2 studs - ripped
    2 x 4 #2 Douglas Fir

b - Top and bottom plate
    2 x 4 #2 Douglas Fir

c - 1/2" fiberboard 4/0 x 8/0
    nailed to one side of stud frame

d - 16d nails toenailed into
top and bottom plate. 2
    per junction

e - 4d cement coated nails
    8" o. c. o., 3/8" minimum
    edge distance

Date Built

Date Tested

Trade Name

____________________

____________________

____________________
CONVENTIONAL CONSTRUCTION

1/4" fir plypanel, Grade A-D
Nominal 2" thickness

al - 2 studs - 16" c. c.
2 x 4 #2 Douglas Fir

a2 - 2 studs - ripped
2 x 4 #2 Douglas Fir

b - Top and bottom plate
2 x 4 #2 Douglas Fir

8'-0"

z - 1/4" fir plypanel, grade A-D
4/0 x 8/0 nailed to one side
of stud frame

d - 16d nails toenailed into
top and bottom plate. 2
per junction

e - 4d finish nails, bright, 6"
c. c. along edges and 12"
c. c. at intermediate studs,
3/8" minimum edge distance

Date Built _______________________
Date Tested _____________________
Trade Name ______________________
TEST STAGE 1B

TEST PANEL - DY

CONVENTIONAL CONSTRUCTION
3/8” gypsum board on studs - 16” o.c.
Nominal 2” thickness

al - 1 stud - 24” o.c.
   2 x 4 #2 Douglas Fir

a2 - 2 studs - ripped
   2 x 4 #2 Douglas Fir

b - Top and bottom plate
   2 x 4 #2 Douglas Fir

c - 1/2” gypsum board 4/0 x 8/0
   nailed to both sides of stud frame

d - 16d nails toenailed into
   top and bottom plate, 2
   per junction

e - 4d cement coated nails
   8” o.c., 3/8” minimum
   edge distance

Date Built ___________________________
Date Tested _________________________
Trade Name _________________________
Test #11
Concentrated load between studs - platform support
On Front Side

Test #22
Impact over studs - Roller and knife support
On Front Side

Test #32
Impact between studs - Roller and knife support
On Front Side

Three panels shall be built to start. If any panel fails as a result of tests No. 11 and No. 21, an additional panel shall be built for the remaining tests.

NOTE: All dimensions are to edge of covering material.
Three panels shall be built to start. If any panel fails as a result of tests No. 11 and No. 21, an additional panel shall be built for the remaining tests.

NOTE: All dimensions are to edge of covering material.
WALL TEST PROCEDURE

PANEL - CX

DIAGRAMS (Stage 1-A)

Test #11
Concentrated load between studs - Platform support
On Front Side

Test #32
15# impact between studs - Roller and knife support
On Front Side

Test #22
60# impact over studs - Roller and knife support
On Front Side

One panel shall be built to start. If it fails as a result of tests #1 or #2, a new panel shall be built for the remaining tests. If either test #11 or #32 reveals that panel CX would liberalize the Performance Standards more than panels AX and BX, two additional panels shall be tested as above.

Test #22 will be given to panels that do not fall under the earlier tests. No new panels will be built for this test.

NOTE: All dimensions are to edges of covering material.
WALL TEST PROCEDURE

PANEL - DX

DIAGRAMS (Stage 1-A)

Test #11
Concentrated load between studs - Platform support
On Front Side

Test #32
15# impact between studs - Roller and knife support
On Front Side

Test #22
60# impact over studs - Roller and knife support
On Front Side

One panel shall be built to start. If either test #11 or #32 reveals that panel DX would liberalize the performance standards more than AI, IX, or CX, two additional panels shall be tested as above.

Test #22 will be given to panels that do not fail under the earlier tests. No new panels will be built for this test.

NOTE: All dimensions are to edges of covering material.
WALL TEST PROCEDURE

PANEL - E

DIAGRAMS (Stage 2-A)

Test #11
Concentrated load between ribs - Perimeter and shelf support
Platform support

On Front Side

Test #34
15# impact load between ribs - Perimeter and shelf support

On Front Side

Test #14
Concentrated load between ribs - Perimeter and shelf support

On Front Side

Test #24
60# impact load over ribs - Perimeter and shelf support

On Front Side

(a) Fully support ribs

One panel shall be built and tested only to the limits required under the "Performance Standards" developed under Stage 1-A.

If the panel fails under tests #11 or #34, it will be rejected and no further tests made.

If tests #11 and #34 show that the panel complies with those "Performance Standards", two additional panels will be built and tested.

Tests #14 and #24 will be given to panels that do not fail under earlier tests. No new panels will be built for these tests.
WALL TEST PROCEDURE

PANEL - F

DIAGRAMS (Stage 2-A)

Test #14

Concentrated load -
Perimeter and shelf support

On Front Side

Test #34

15# impact load
mid panel -
Perimeter and shelf support

On Front Side

Test #24

60# impact load
mid panel -
Perimeter and shelf support

On Front Side

One panel shall be built and tested only to the limits required under the "Performance Standards" developed under stage 1-A.

If the panel fails under tests #14 or #34, it will be rejected and no further tests made.

If tests #14 and #34 show that the panel complies with those "Performance Standards", two additional panels will be built and tested.

Test #24 will be given to panels that do not fail under earlier tests. No new panels will be built for this purpose.

NOTE: All dimensions are to edges of covering material.
One panel shall be built and tested only to the limits required under the "Performance Standards" developed under stage 1-A.

If the panel fails under tests #14 or #34, it will be rejected and no further tests made.

If tests #14 and #34 show that the panel complies with those "Performance Standards", two additional panels will be built and tested.

Test #24 will be given to panels that do not fail under earlier tests. No new panels will be built for this purpose.

NOTE: All dimensions are to edges of covering material.
### WALL TEST PROCEDURE

**PANEL - H**

**CONCENTRATED LOAD BETWEEN BLOCKS - PLATFORM SUPPORT**

**ON FRONT SIDE**

<table>
<thead>
<tr>
<th>Test #13</th>
<th>Test #34</th>
<th>Test #14</th>
<th>Test #24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrated load between blocks - Platform support</td>
<td>15#/ impact load between blocks - Perimeter and shelf support</td>
<td>Concentrated load between blocks - Perimeter and shelf support</td>
<td>60#/ impact load over blocks - Perimeter and shelf support</td>
</tr>
</tbody>
</table>

---

One panel shall be built and tested only to the limits required under the "Performance Standards" developed under Stage 1-A.

If the panel fails under tests #13 or #34, it will be rejected and no further tests made.

Two additional panels will be built and tested if tests #13 and #34 on the first panel show that the panel complies with those "Performance Standards".

Test #14 and #24 will be given to panels that do not fail under earlier tests. No new panels will be built for these tests.
WALL TEST PROCEDURE

PANEL - I

DIAGRAMS - (Stage 2-A)

Test #13  Test #34  Test #14  Test #24

Concentrated load  15# impact load  Concentrated load  60# impact load
between blocks -  between blocks -  between blocks -  over blocks -
Platform support  Perimeter and  Perimeter and  Perimeter and
shelf support

On Front Side  On Front Side  On Front Side  On Front Side

8/0                   7/6
2/6                   2/6                  3/0                  3/0
4/0                   4/0                   4/0                   2/0

One panel shall be built and tested only to the limits required under the
"Performance Standards" developed under Stage 1-A.

If the panel fails under tests #13 or #34, it will be rejected and no further
tests made.

Two additional panels will be built and tested if tests #13 and #34 on the
first panel show that the panel complies with those "Performance Standards".

Tests #14 and #24 will be given to panels that do not fail under earlier tests.
No new panels will be built for these tests.
WALL TEST PROCEDURE

PANEL - J

DIAGRAMS (Stage 2-A)

CLOSET WALL PROJECT
L.D.R.C.
8/5/51

Test #13
Concentrated load between lath - Platform support

On Front Side

<table>
<thead>
<tr>
<th>8/0</th>
<th>7/3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/0</td>
<td>4/0</td>
</tr>
</tbody>
</table>

Test #14
15# impact load between lath - Perimeter and shelf support

On Front Side

<table>
<thead>
<tr>
<th>3/3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/9</td>
</tr>
</tbody>
</table>

Test #14
Concentrated load between lath - Perimeter and shelf support

On Front Side

<table>
<thead>
<tr>
<th>2/9</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/9</td>
</tr>
</tbody>
</table>

Test #24
60# impact load over center of lath - Perimeter and shelf support

On Front Side

<table>
<thead>
<tr>
<th>2/9</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/9</td>
</tr>
</tbody>
</table>

One panel shall be built and tested only to the limits required under the "Performance Standards" developed under Stage 1-A.

If the panel fails under tests #13 or #34, it will be rejected and no further tests made.

Two additional panels will be built and tested if tests #13 and #34 on the first panel show that the panel complies with those "Performance Standards".

Tests #14 and #24 will be given to panels that do not fail under earlier tests. No new panels will be built for these tests.
WALL TEST PROCEDURE

PANEL - K

DIAGRAMS (Stage 2-A)

Test #14
Concentrated load - Perimeter and shelf support
On Front Side

Test #34
15# impact load mid panel - Perimeter and shelf support
On Front Side

Test #24
60# impact load mid panel - Perimeter and shelf support
On Front Side

One panel shall be built and tested only to the limits required under the "Performance Standards" developed under stage L-A.

If the panel fails under tests #14 or #34, it will be rejected and no further tests made.

If tests #14 and #34 show that the panel complies with those "Performance Standards", two additional panels will be built and tested.

Test #24 will be given to panels that do not fail under earlier tests. No new panels will be built for this purpose.

NOTE: All dimensions are to edges of covering material.
WALL TEST PROCEDURE

PANEL - L

DIAGRAMS (Stage 2-A)

CLOSET WALL PROJECT
L.D.R.C.
8/5/51

Test #14
Concentrated load
mid panel -
Perimeter and
shelf support
On Front Side

Test #34
15# impact load
mid panel -
Perimeter and
shelf support
On Front Side

Test #24
60# impact load
mid panel -
Perimeter and
shelf support
On Front Side

One panel shall be built and tested only to the limits required under the "Performance Standards" developed under Stage 1-A.

If the panel fails under tests #14 or #34, it will be rejected and no further tests made.

Two additional panels will be built and tested if tests #14 and #34 on the first panel shows that the panel complies with those "Performance Standards".

Test #24 will be given to panels that do not fail under earlier tests. No new panels will be built for this test.
WALL TEST PROCEDURE
PANEL - M
DIAGRAMS (Stage 2-A)

Test #13
Concentrated load
between lath -
Platform support

On Front Side

Test #14
Concentrated load
between lath -
Perimeter and
shelf support

On Front Side

Test #14
Concentrated load
between lath -
Perimeter and
shelf support

On Front Side

Test #24
60# impact load
mid panel -
Perimeter and
shelf support

On Front Side

One panel shall be built and tested only to the limits required under the "Performance Standards" developed under Stage 1-A.

If the panel fails under tests #13 or #34, it will be rejected and no further tests made.

Two additional panels will be built and tested if tests #13 and #34 on the first panel show that the panel complies with those "Performance Standards".

Test #14 and #24 will be given to panels that do not fail under earlier tests. No new panels will be built for these tests.
One panel shall be built and tested only to the limits required under the "Performance Standards" developed under Stage 1-A.

If the panel fails under tests #13 or #34, it will be rejected and no further tests made.

Two additional panels will be built and tested if tests #13 and #34 on the first panel show that the panel complies with those "Performance Standards".

Tests #14 and #24 will be given to panels that do not fail under earlier tests. No new panels will be built for these tests.
WALL TEST PROCEDURE

Test #32
Uniform load -
Roller and
knife support

On Front Side
8/0
4/0
4/0

Test #42
15# impact load
between studs -
Roller and knife
support

On Front Side

Test #42
60# impact load
over stud -
Roller and knife
support

On Back Side

8/0
4/0
2/0
4/0
2/3

Three panels shall be built to start. If any panel fails as a result of the Test #11, new panels shall be built for the Tests #32 and #42.

NOTE: All dimensions are to edges of covering material.
WALL TEST PROCEDURE

PANEL CY

DIAGRAMS (Stage 1-B)

CLOSET WALL PROJECT
L.D.R.C.
8/5/51

Test #42
Uniform load -
Roller and
knife support

Test #32
15# impact load
between studs -
Roller and knife
support

Test #42
60# impact load
over stud -
Roller and knife
support

On Front Side

On Front Side

On Back Side

Three panels shall be built to start. If any panel fails as a result of the Test #11, new panels shall be built for the Tests #32 and #42.

NOTE: All dimensions are to edges of covering material.
Three panels shall be built to start. If any panel fails as a result of the Test #11, new panels shall be built for the tests #32 and #42.

NOTE: All dimensions are to edges of covering material.