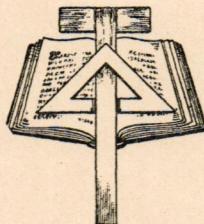


GOOD PRACTICE IN CONSTRUCTION

Part II

By

PHILIP G. KNOBLOCH



THE PENCIL POINTS LIBRARY

New York
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1925

THE PENCIL POINTS LIBRARY

THE idea behind THE PENCIL POINTS LIBRARY has met with an enthusiastic response from the time we brought out the first book of this Library, "Sketching and Rendering in Pencil," by Arthur L. Guptill. "Good Practice in Construction," Part I, by Philip G. Knobloch followed and was equally well received. Both of these books have met with a sale which has made additional large printings necessary, a striking recognition of their usefulness to the men engaged in architectural work and the study of architecture everywhere. The present volume, "Good Practice in Construction," Part II, is the third book of THE PENCIL POINTS LIBRARY.

As we said in the original announcement of this Library, the fundamental idea is to provide books to meet the definite needs of large numbers of men in the architectural field, and to do this at as moderate a price as is found consistent with the satisfactory presentation of the matter; not costly publications of limited appeal, but a practical working library, covering broadly all matters of architectural interest, with especial reference to the many problems centering in the drafting room. It is our purpose to add books to this Library as the need for them is determined and as arrangements with the authors best qualified to produce them can be made.

The publishers desire to thank all who have, by their suggestions or otherwise, encouraged and aided them in the production of this Library and to ask for further suggestions either from those desiring to offer manuscripts for publication or from those who see the need for a book on some given subject that would fit logically into THE PENCIL POINTS LIBRARY.

October, 1925.

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P R E F A C E

THE daily use of "Good Practice in Construction," Part I, in architectural offices throughout the country has shown clearly that material of the kind it contains meets the requirements of architects and draftsmen and since it was possible to cover but a portion of the subject within the limits of a volume of the convenient size adopted for the books of "The Pencil Points Library," the publishers have recognized the desirability of making available additional material of this nature. Also the desire for a second volume of Mr. Knobloch's work has been expressed in many letters from users of the book. The present volume, Part II of "Good Practice in Construction," has been prepared partly for the purpose of supplying more of the details of a generally useful nature and partly for the purpose of showing details of a more or less special character but of wide usefulness.

For more than a year Mr. Knobloch has been engaged in the preparation of this work, following the same method of procedure he employed in the preparation of the first part. He has examined a large number of drawings from some of the best architectural offices, choosing details, modifying and combining them in the light of his experience and working out details that may be used as the starting point by the draftsman in solving his own similar problems. These details were then subjected to the criticism of men whose life work has given them a thorough knowledge of some one type of construction or some one material. In this way the work has been built up, not as the result of the experience of any one man, but of many, in an effort to make it truly representative of good practice in construction. It is hoped that the architectural profession may find it as useful as Part I and accord it as cordial a reception.

EUGENE CLUTE.

GOOD PRACTICE in CONSTRUCTION, PART I

By Philip G. Knobloch

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The first part of "Good Practice in Construction" was published in 1923. Since that time new printings have been made to meet the demand. The publishers are in a position to supply Part I of this work. Price \$4.00, Postpaid.

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19 East 24th Street, New York City

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FOREWORD

IN THE preparation of this, the second part of "Good Practice in Construction," the aim has been to present further useful details in a convenient form for use in the drafting room. Details that the architect and draftsman are the most likely to have occasion to employ in their work have been selected rather than those of a special character. Though many of the plates embody special knowledge, such as the details for theatres, store fronts, log cabins, etc., all are for buildings that are constantly being built in most, if not all, parts of the country and that may well come within the practice of any architect.

Recognition is due to the architects who gave access to their files of drawings, namely: Grosvenor Atterbury; Bohard & Parsson; Boyd, Abel & Gugert; C. Howard Crane; Paul P. Cret; Day & Klauder; Dennison & Hirons; Guilbert & Betelle; Harry Creighton Ingalls; Ingham & Boyd; E. A. Josselyn; Harry Lee; McCarthy & Kelly; Mellor, Meigs & Howe; Frederic W. Mellor; John Russell Pope; C. E. Schermerhorn (deceased); Louis Stevens; Edward Stotz; Philip J. Turner; Hobart B. Upjohn; also to H. Robins Burroughs and A. J. St. Louis.

The value of the assistance received from many men in the building trades, is gratefully acknowledged. Their criticisms and suggestions have contributed towards making these plates of the greatest practical value.

PHILIP G. KNOBLOCH

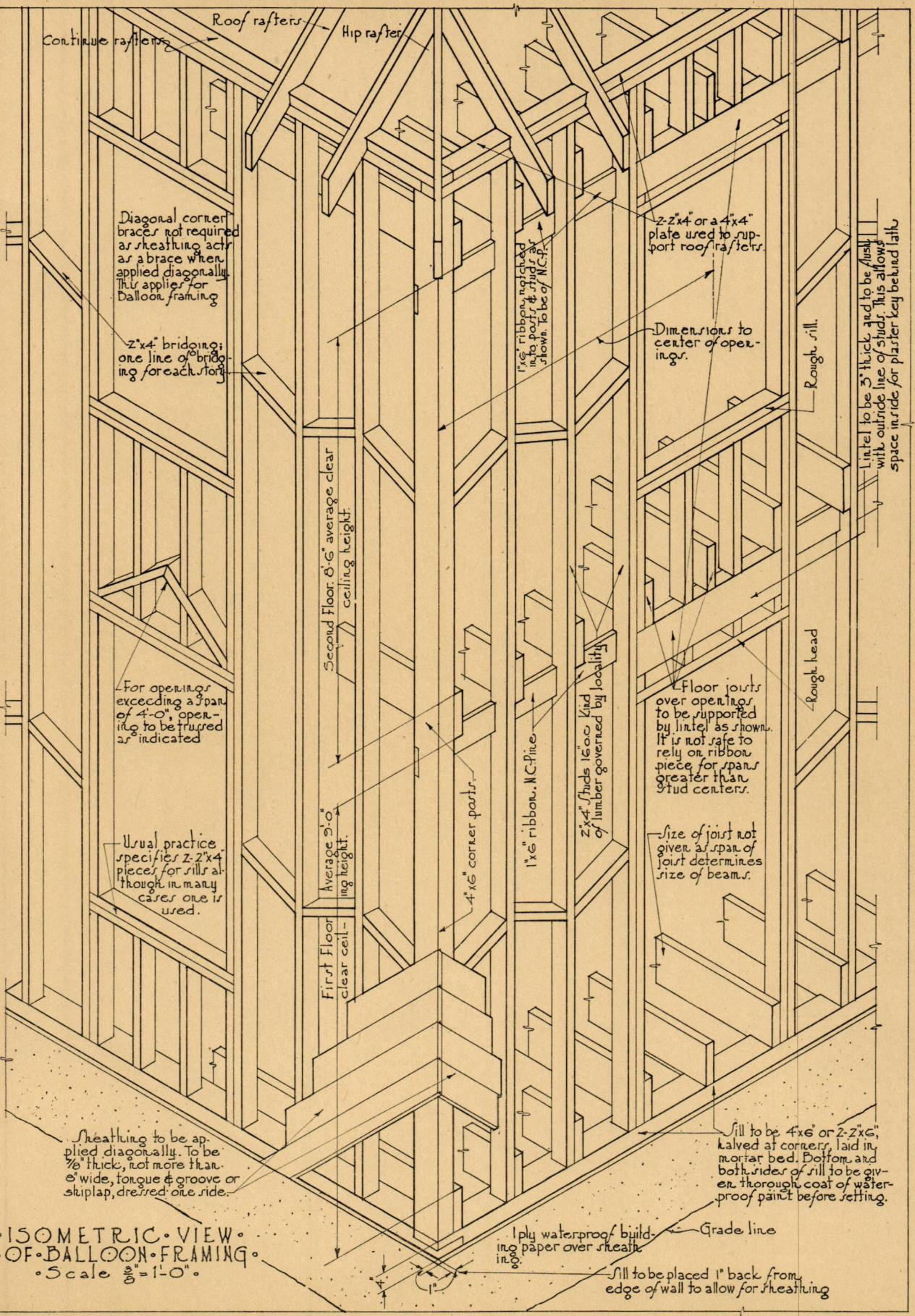


PLATE 1, BALLOON FRAMING

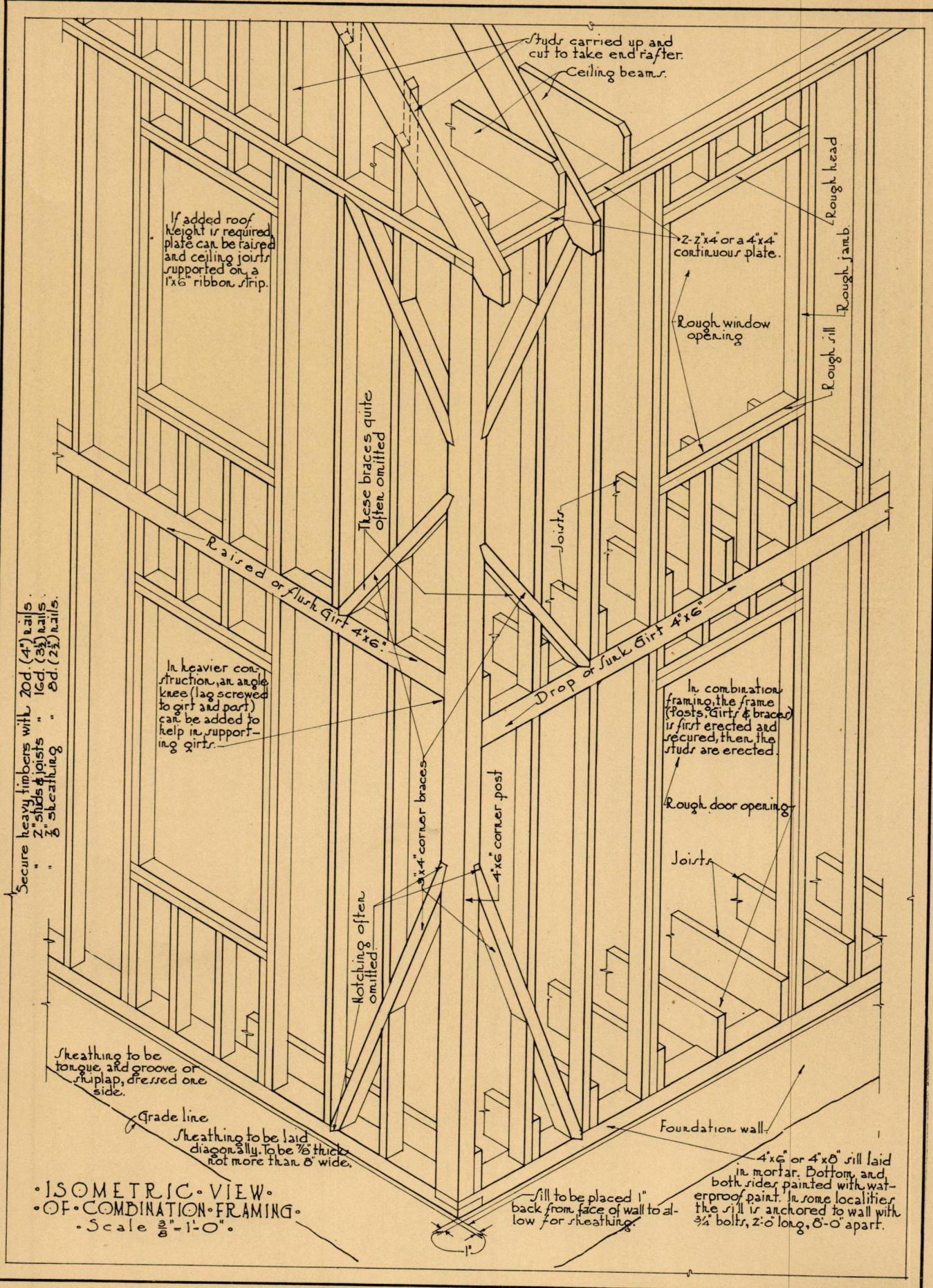
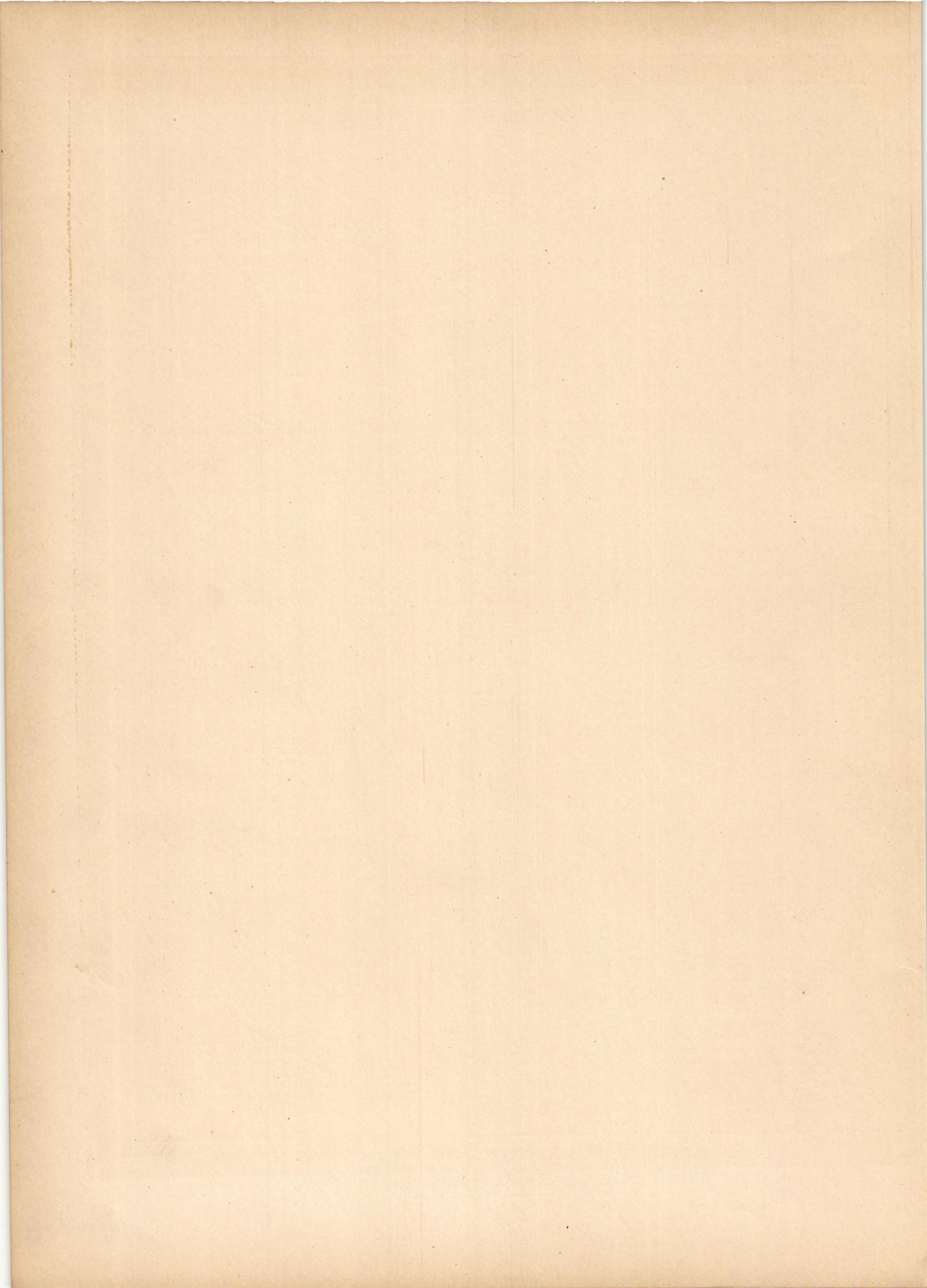
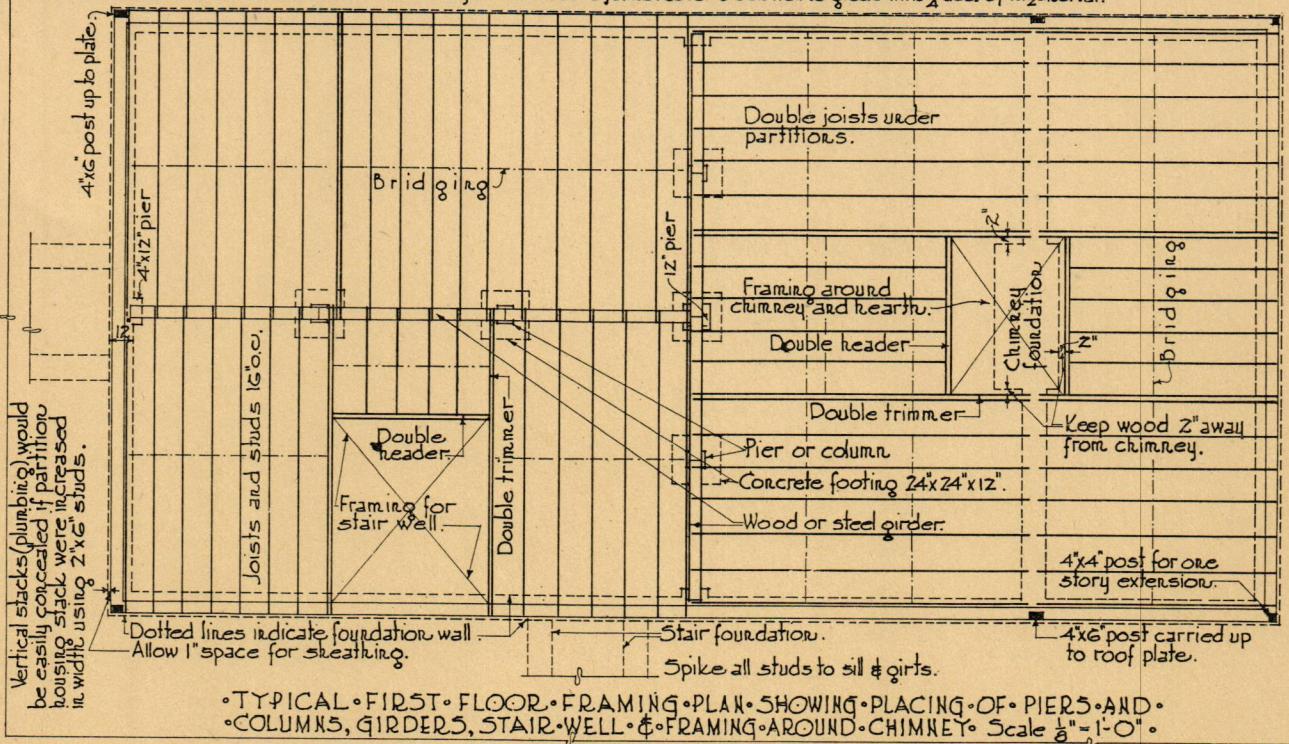


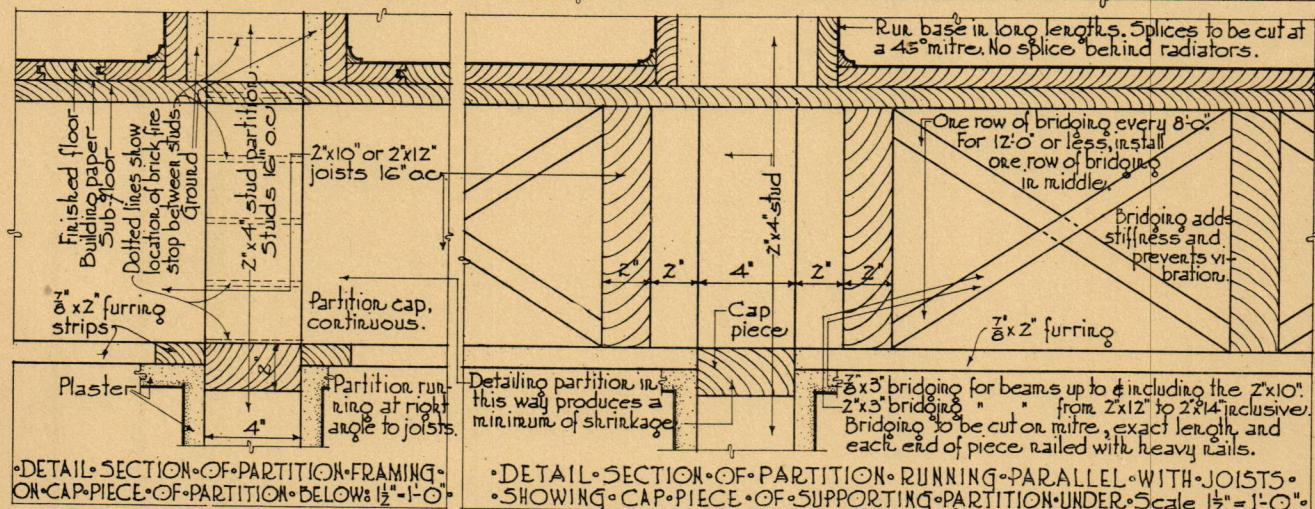
PLATE 2, BRACED FRAMING



For the average $2\frac{1}{2}$ story house the foundation walls are of 12" brick, 10" concrete (1:2:4 mix), 18" stone, or 12" concrete block. Blocks to be evenly laid with solid joints. Cover block wall to grade with $\frac{3}{4}$ " coat of 1.12 mortar.

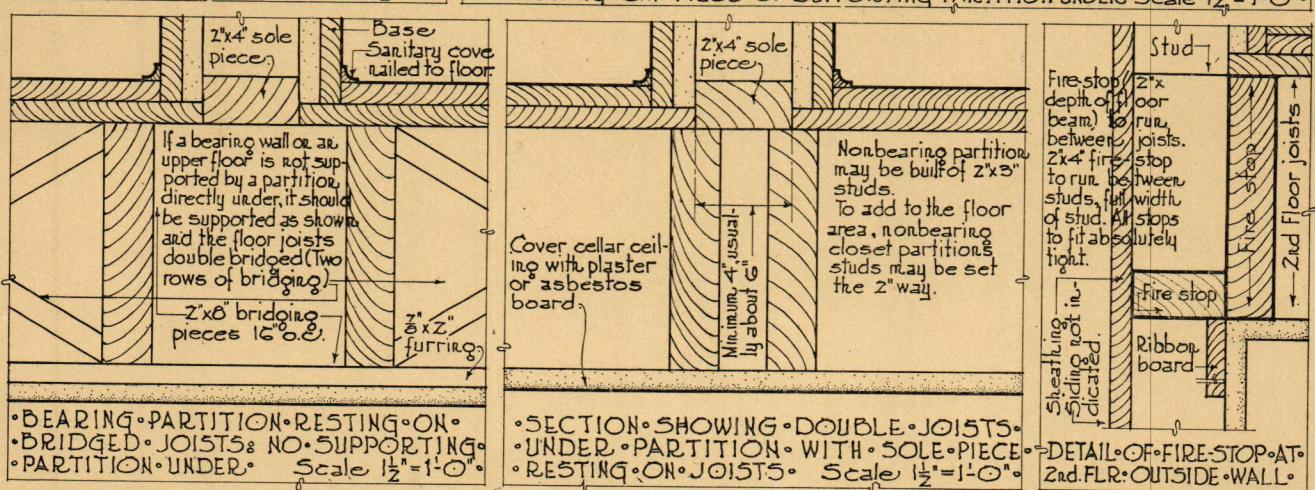


TYPICAL FIRST FLOOR FRAMING PLAN SHOWING PLACING OF PIERS AND COLUMNS, GIRDERS, STAIR WELL & FRAMING AROUND CHIMNEY. Scale $\frac{1}{8}'' = 1'-0''$.



DETAIL SECTION OF PARTITION FRAMING ON CAP PIECE OF PARTITION BELOW $1\frac{1}{2}' = 1'-0''$

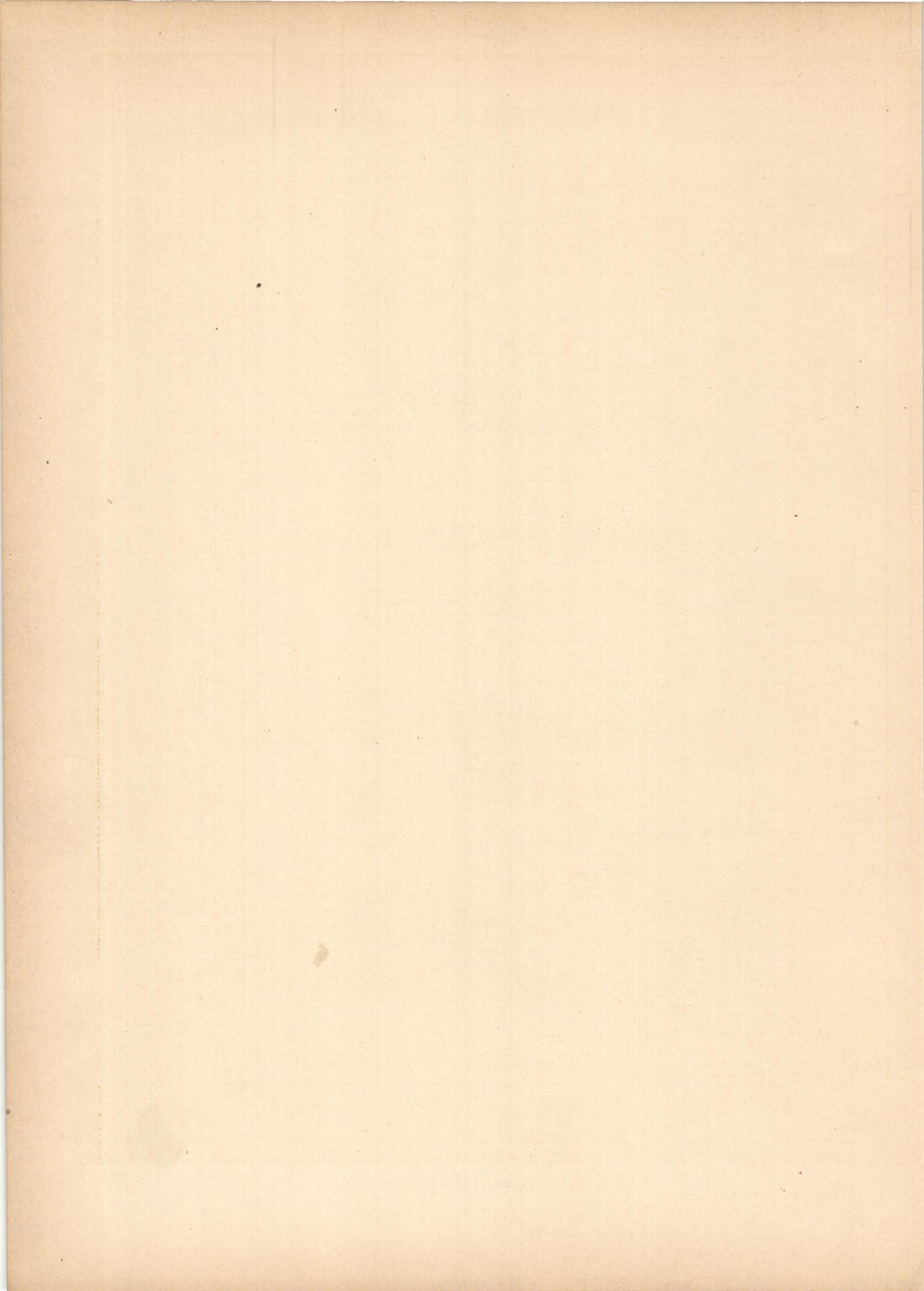
DETAIL SECTION OF PARTITION RUNNING PARALLEL WITH JOISTS SHOWING CAP PIECE OF SUPPORTING PARTITION UNDER. Scale $1\frac{1}{2}'' = 1'-0''$



BEARING PARTITION RESTING ON BRIDGED JOISTS NO SUPPORTING PARTITION UNDER. Scale $1\frac{1}{2}'' = 1'-0''$

SECTION SHOWING DOUBLE JOISTS UNDER PARTITION WITH SOLE PIECE RESTING ON JOISTS. Scale $1\frac{1}{2}'' = 1'-0''$

DETAIL OF FIRE STOP AT 2nd FLR OUTSIDE WALL.



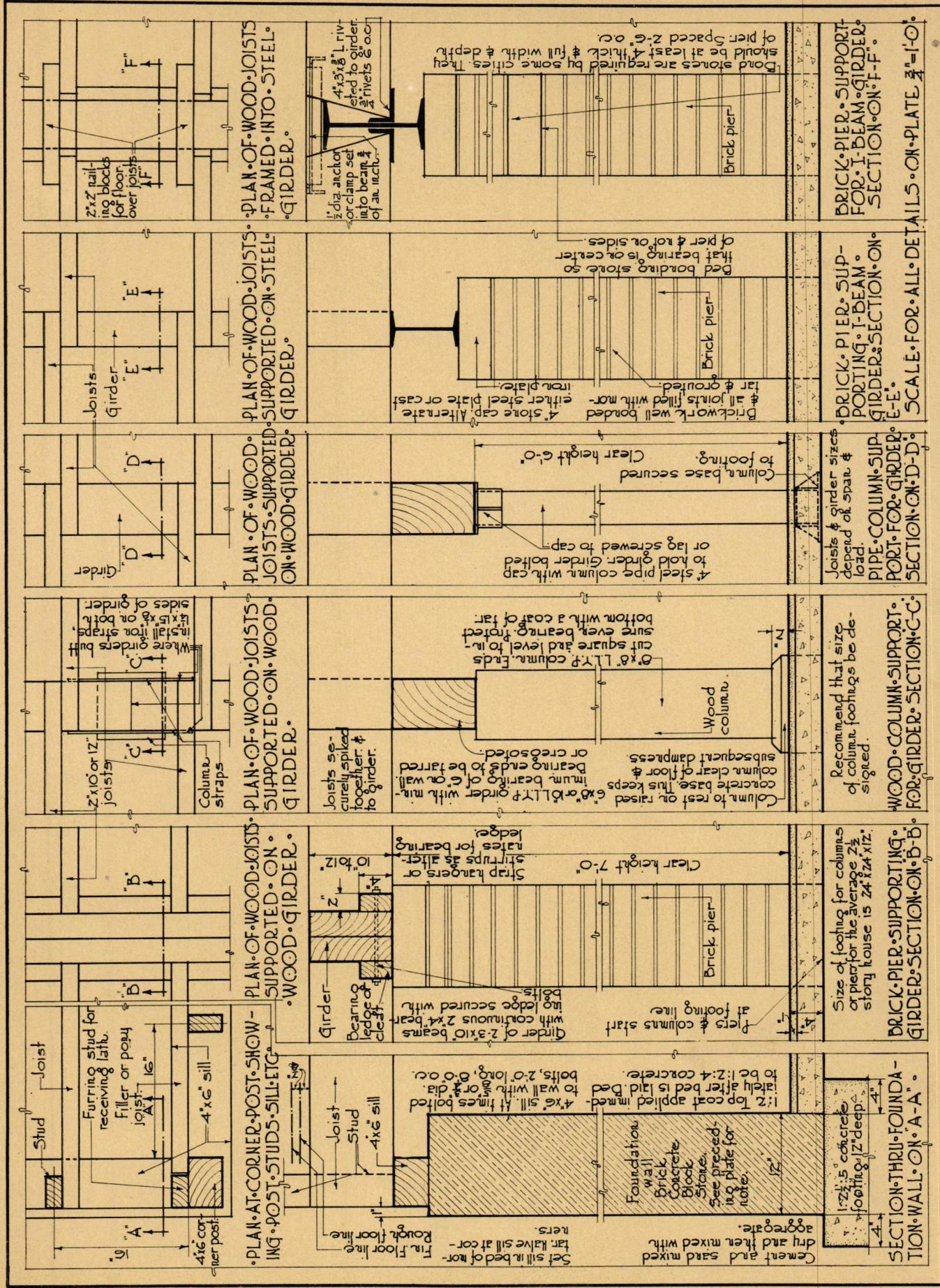


PLATE 4, FLOOR FRAMING, II

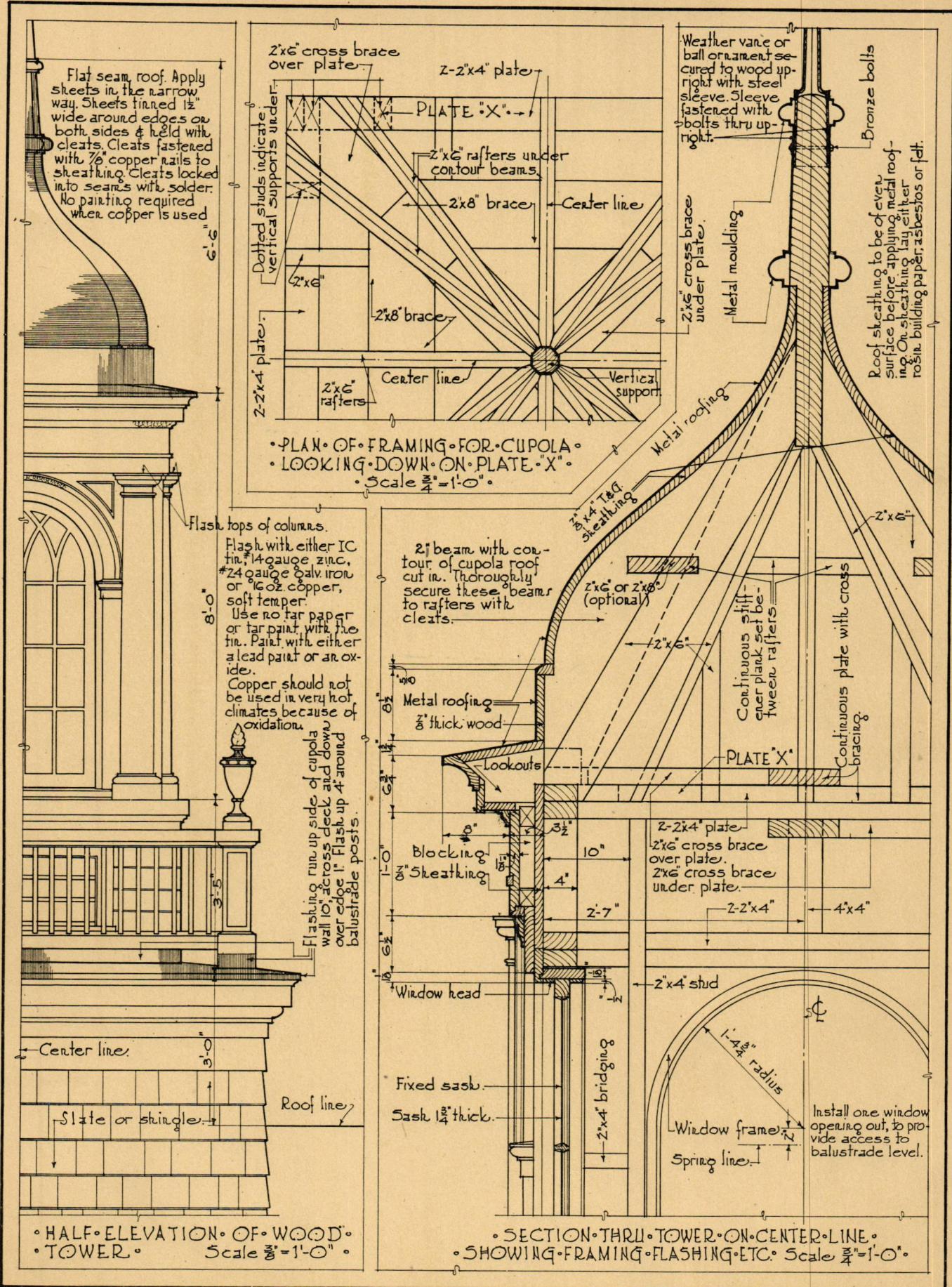


PLATE 5, TOWER FRAMING, I

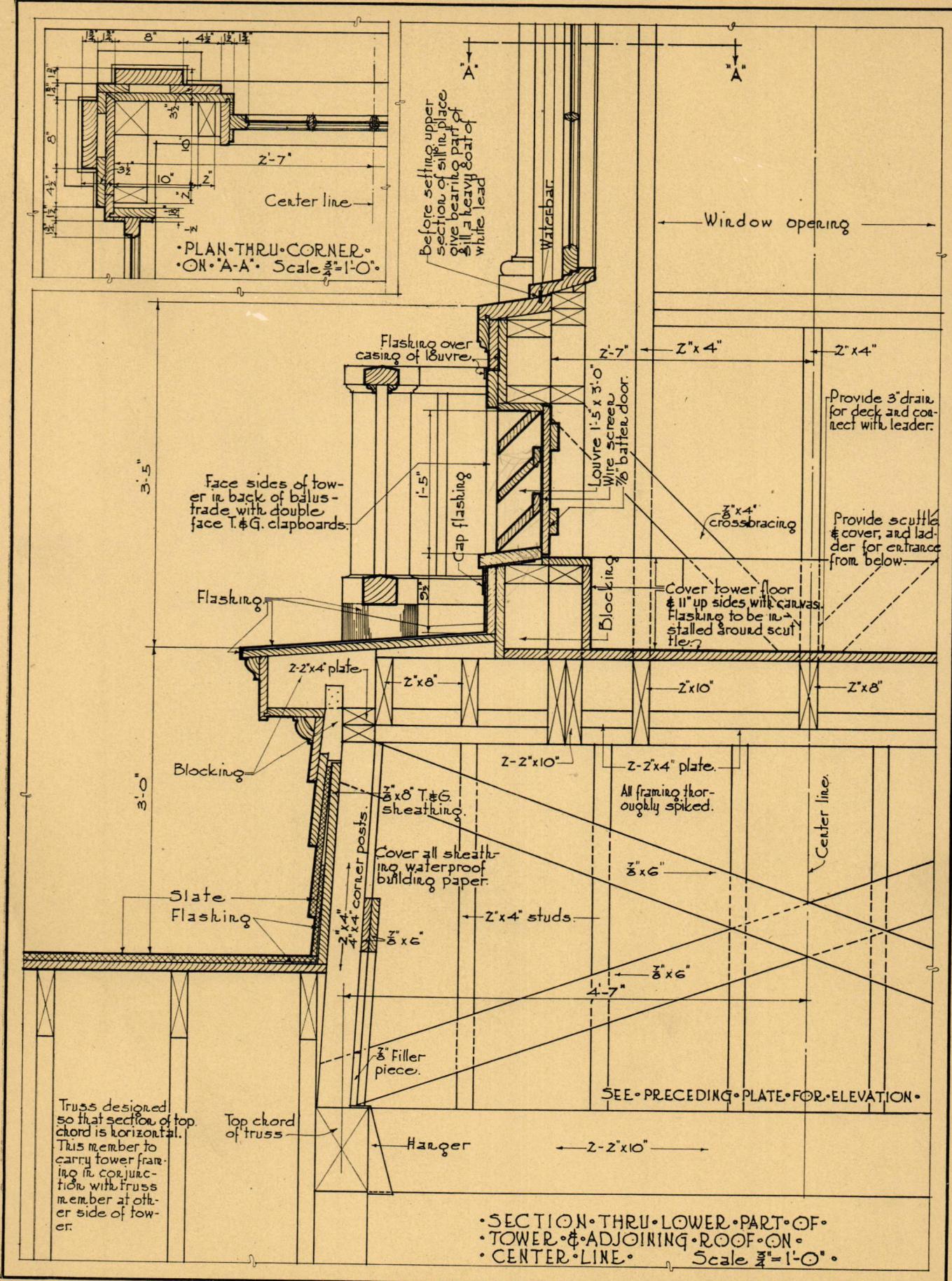
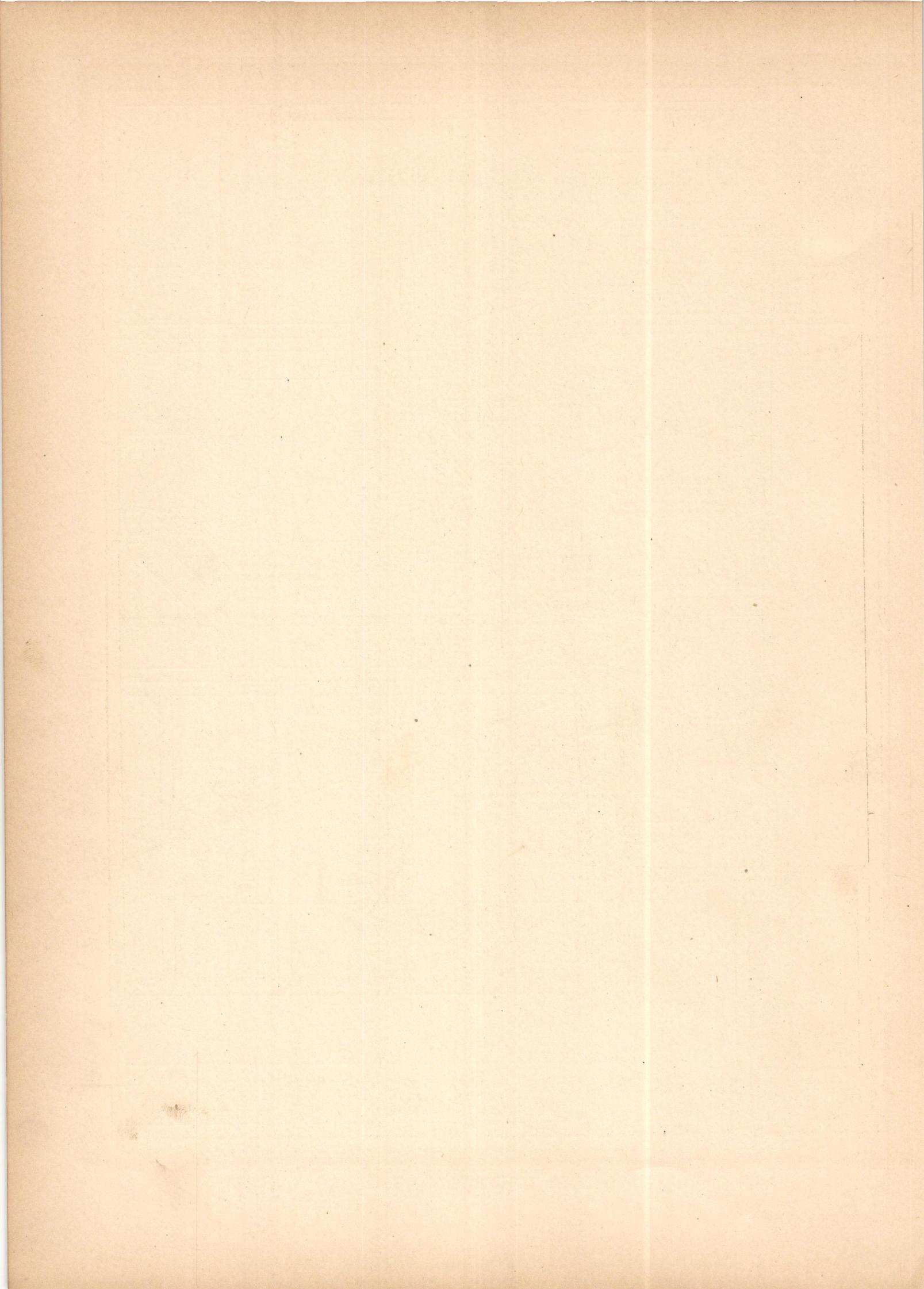
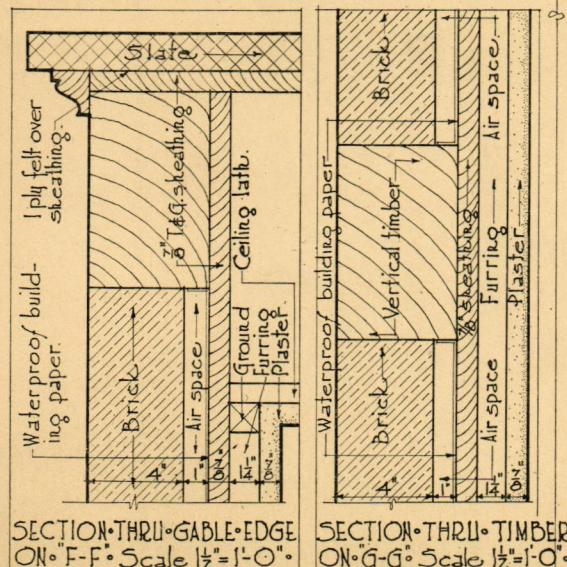
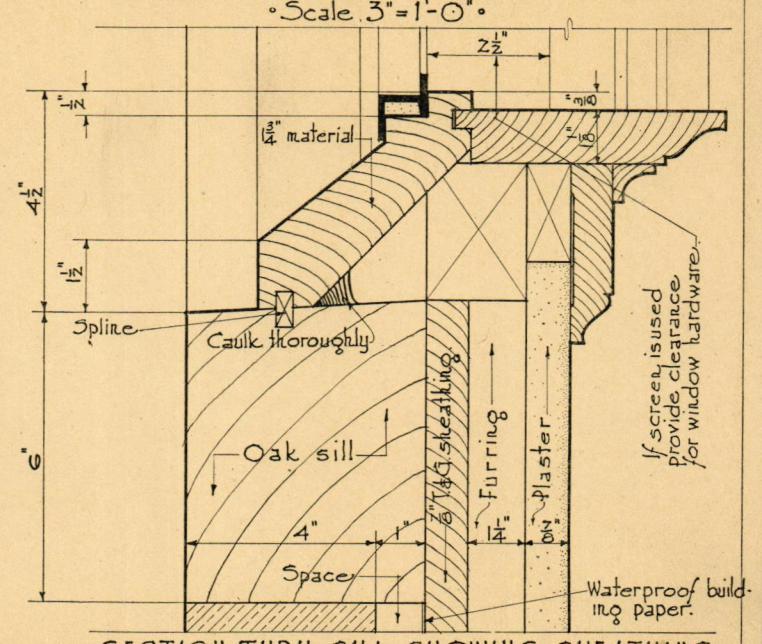
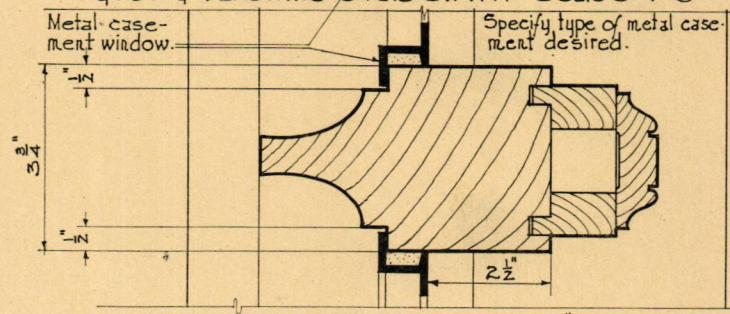
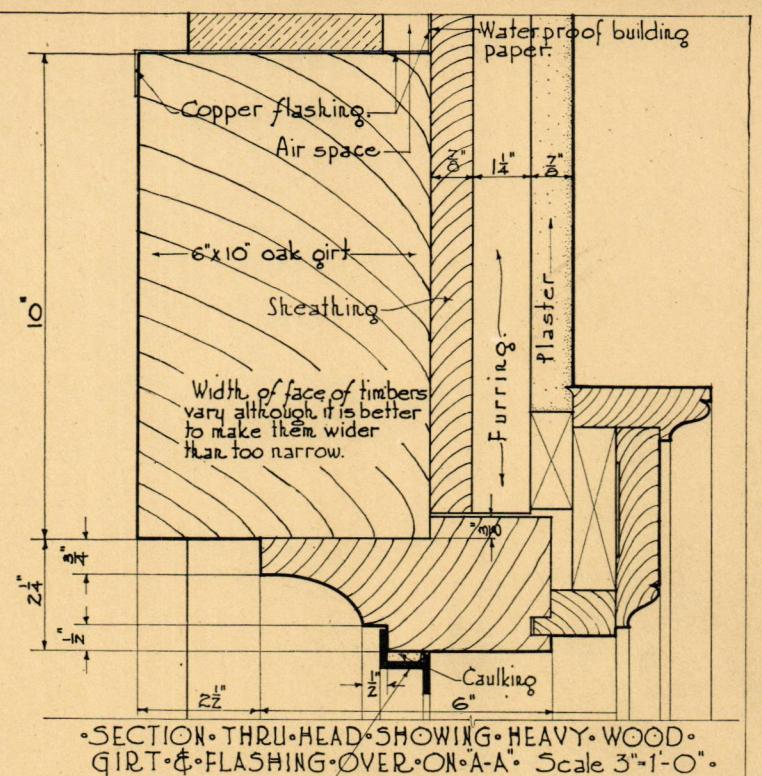
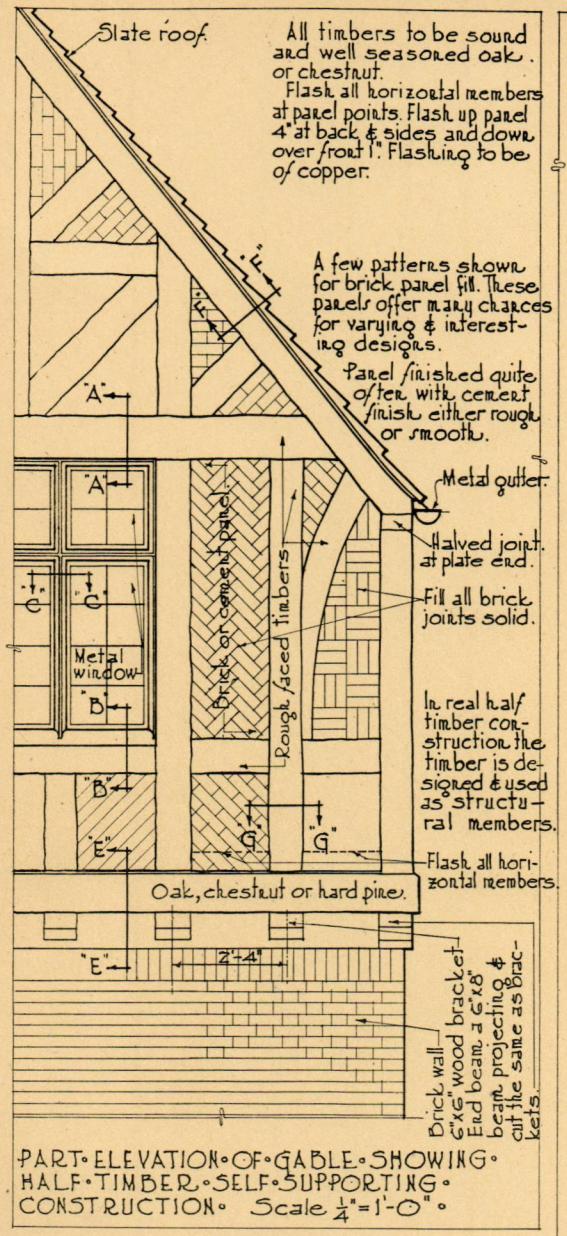


PLATE 6, TOWER FRAMING, II





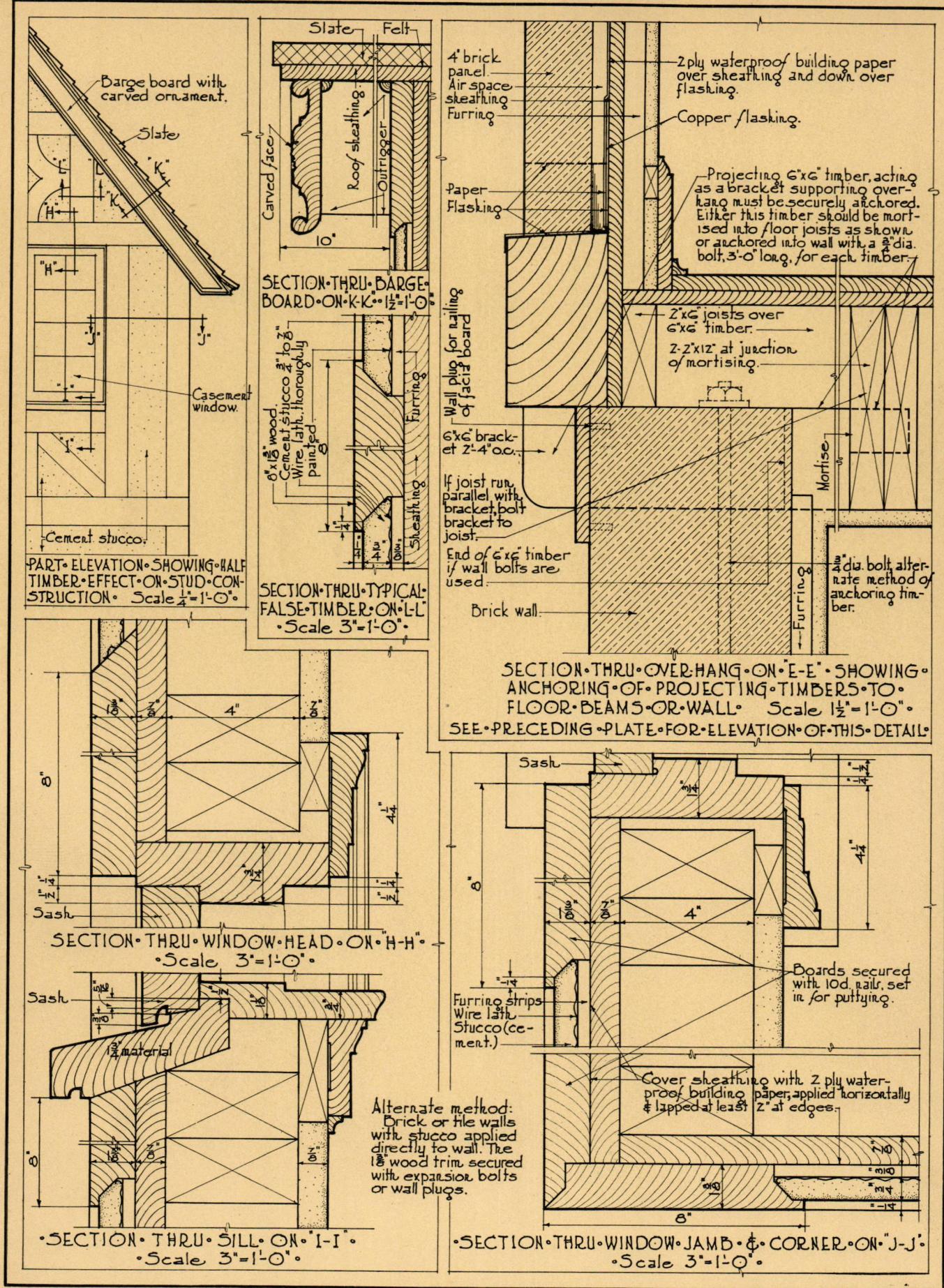


PLATE 8, IMITATION HALF TIMBER

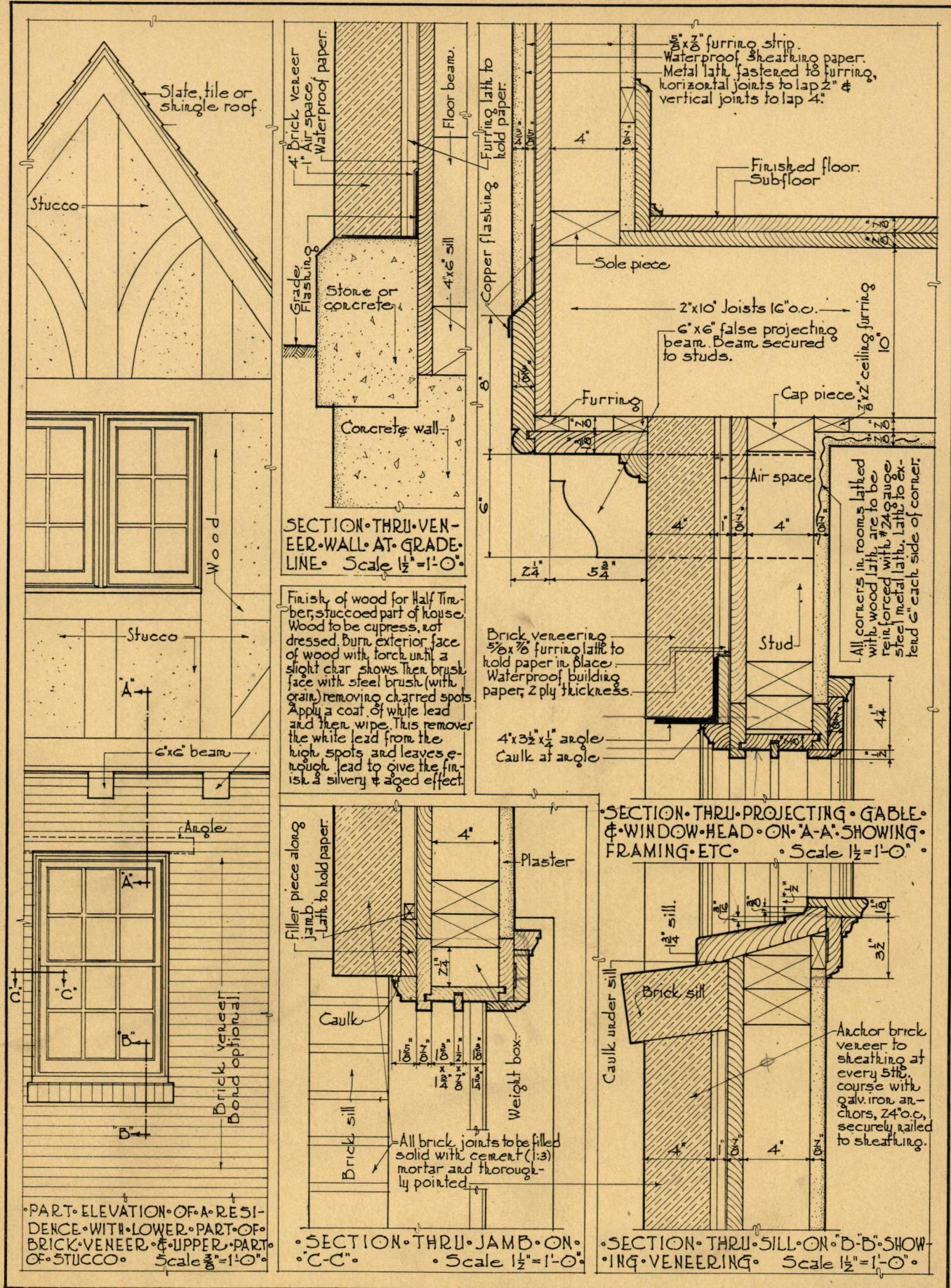
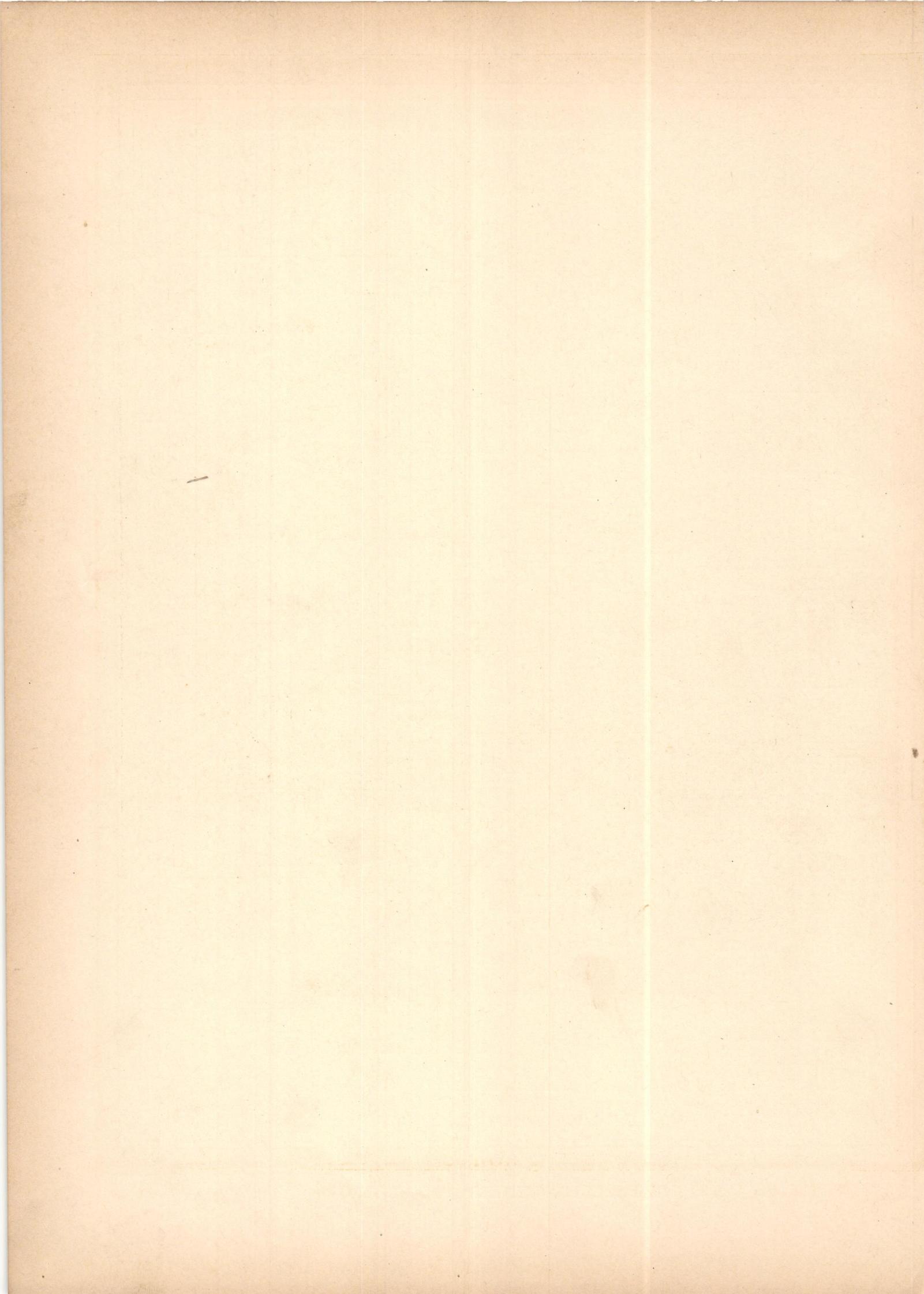


PLATE 9, BRICK VENEER AND STUCCO



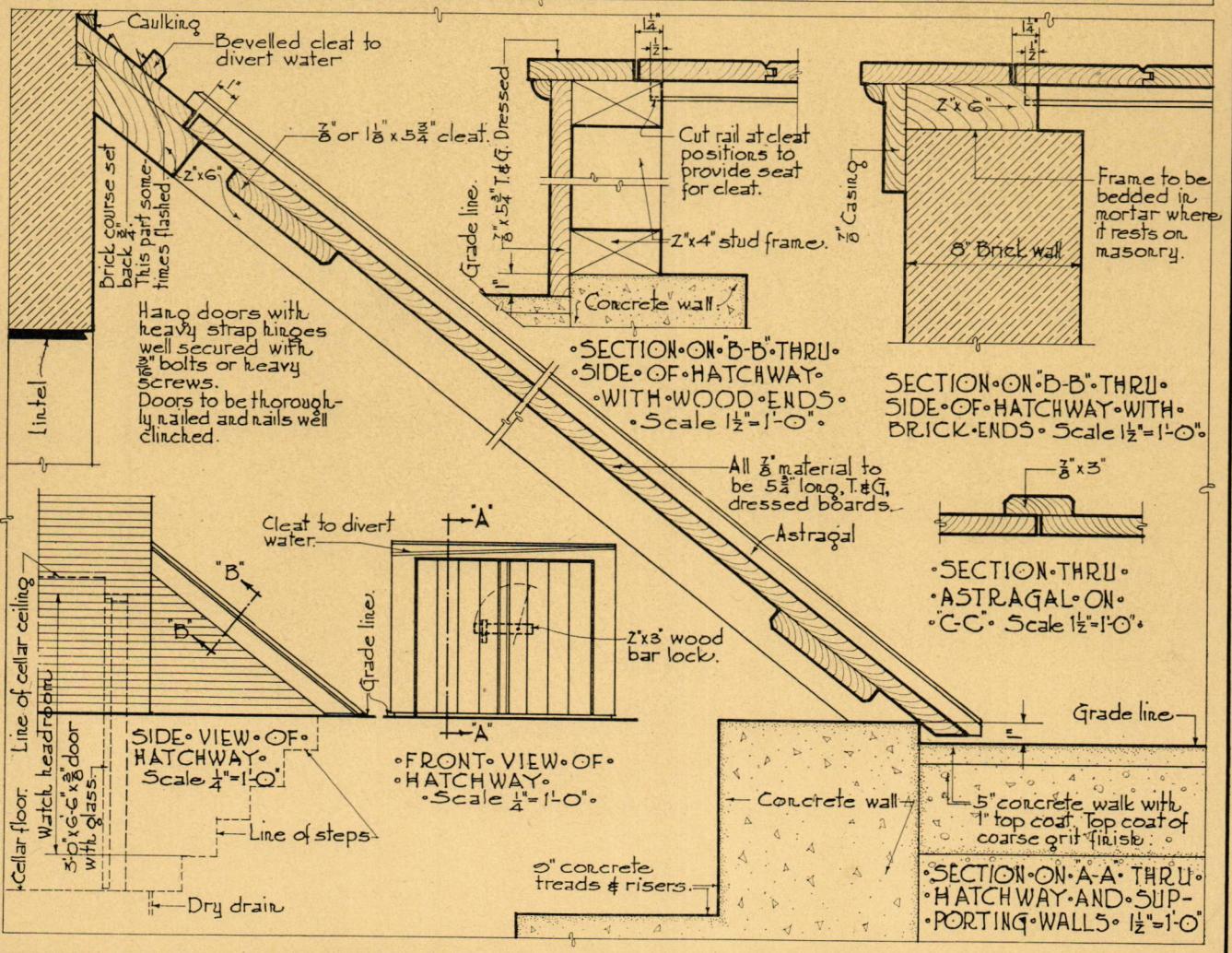
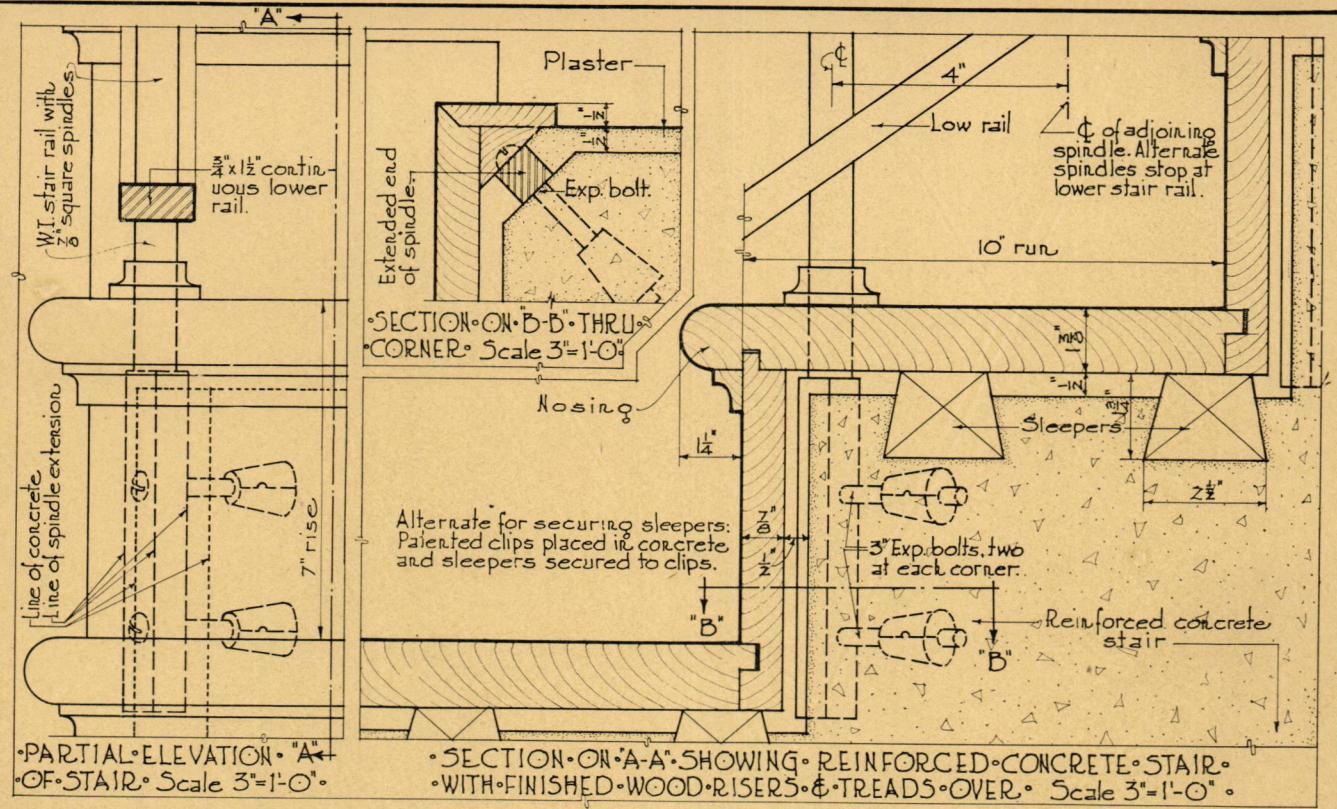
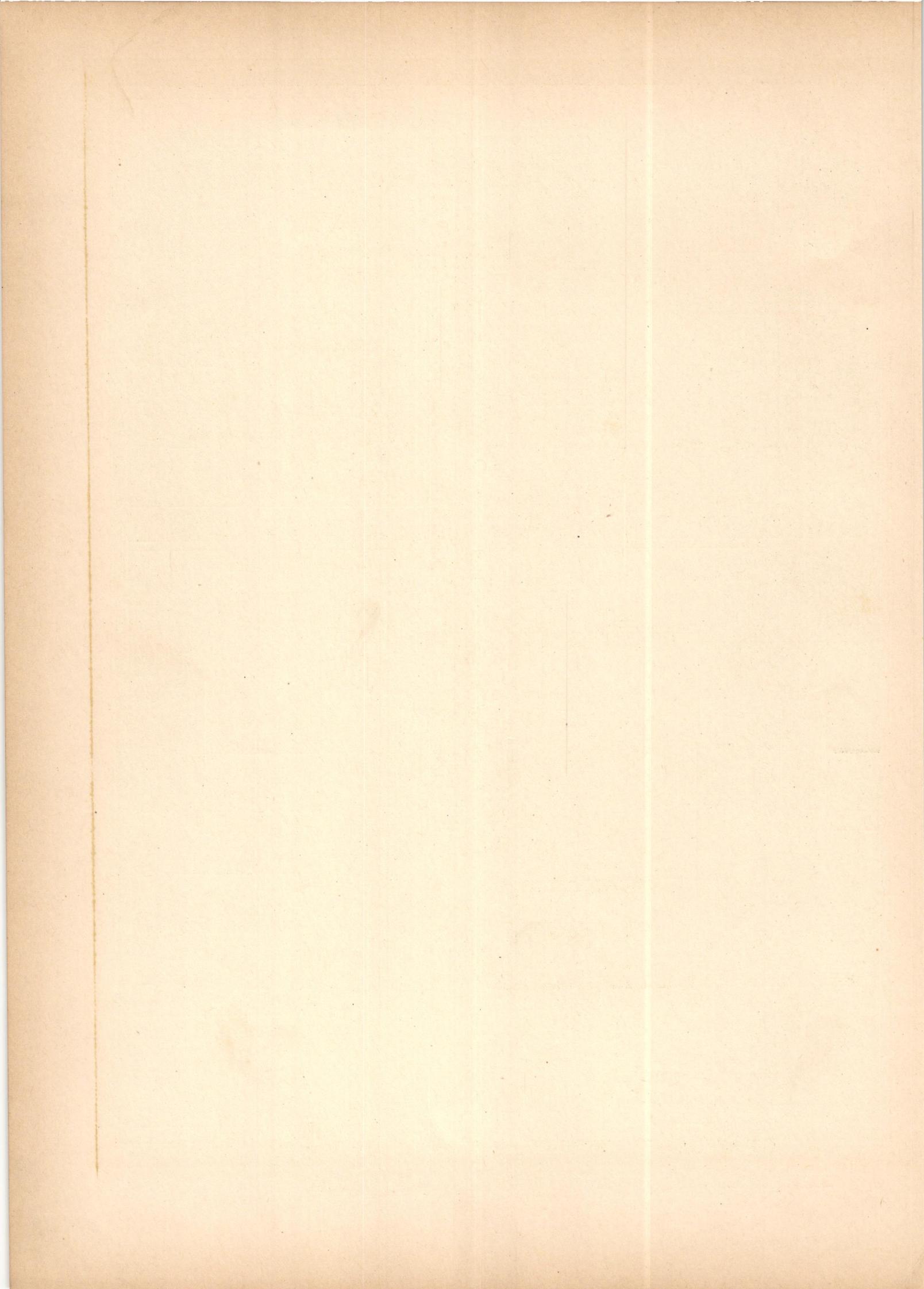
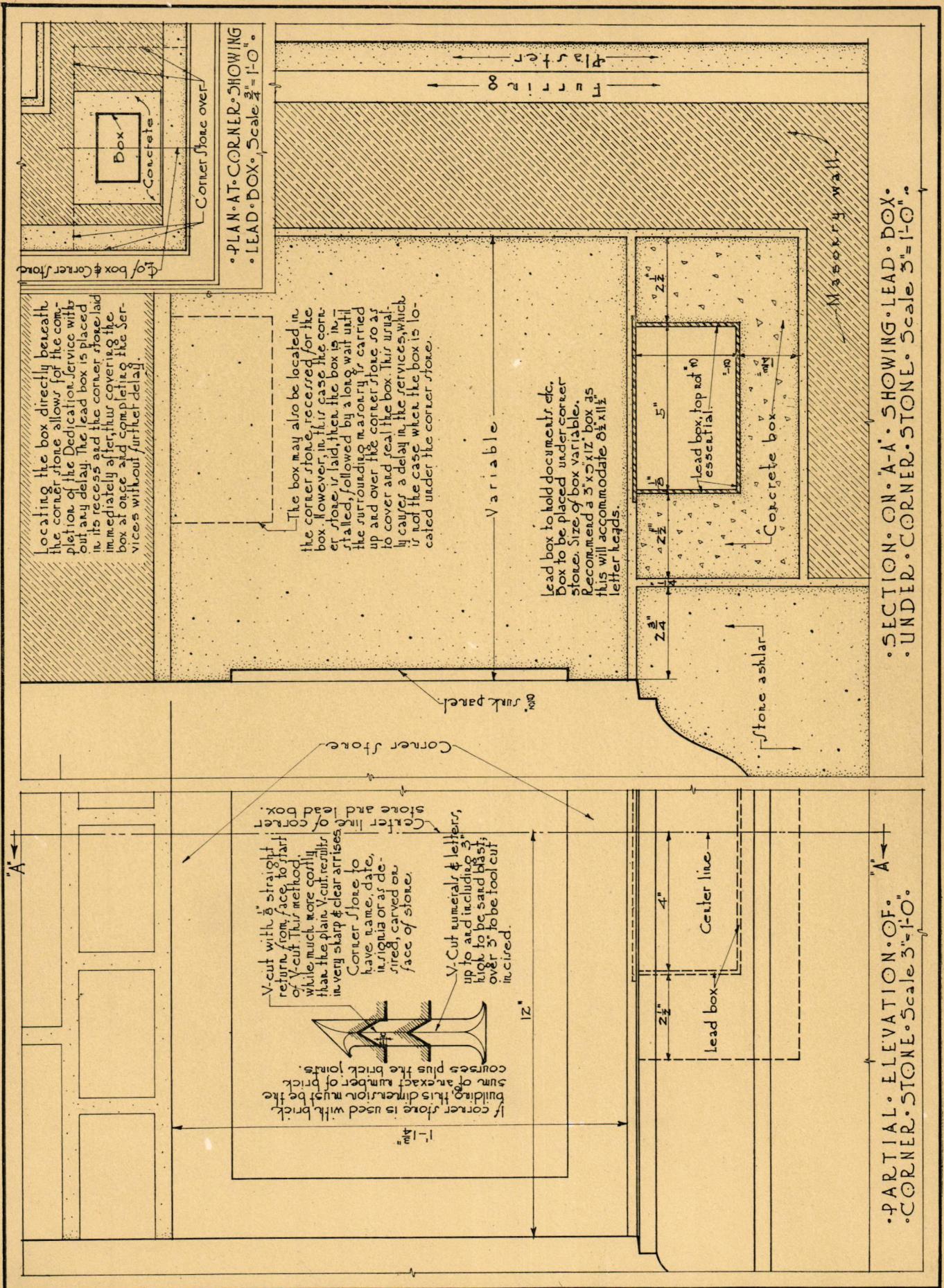


PLATE 10, WOOD COVERED CONCRETE STEPS AND OUTSIDE CELLARWAY





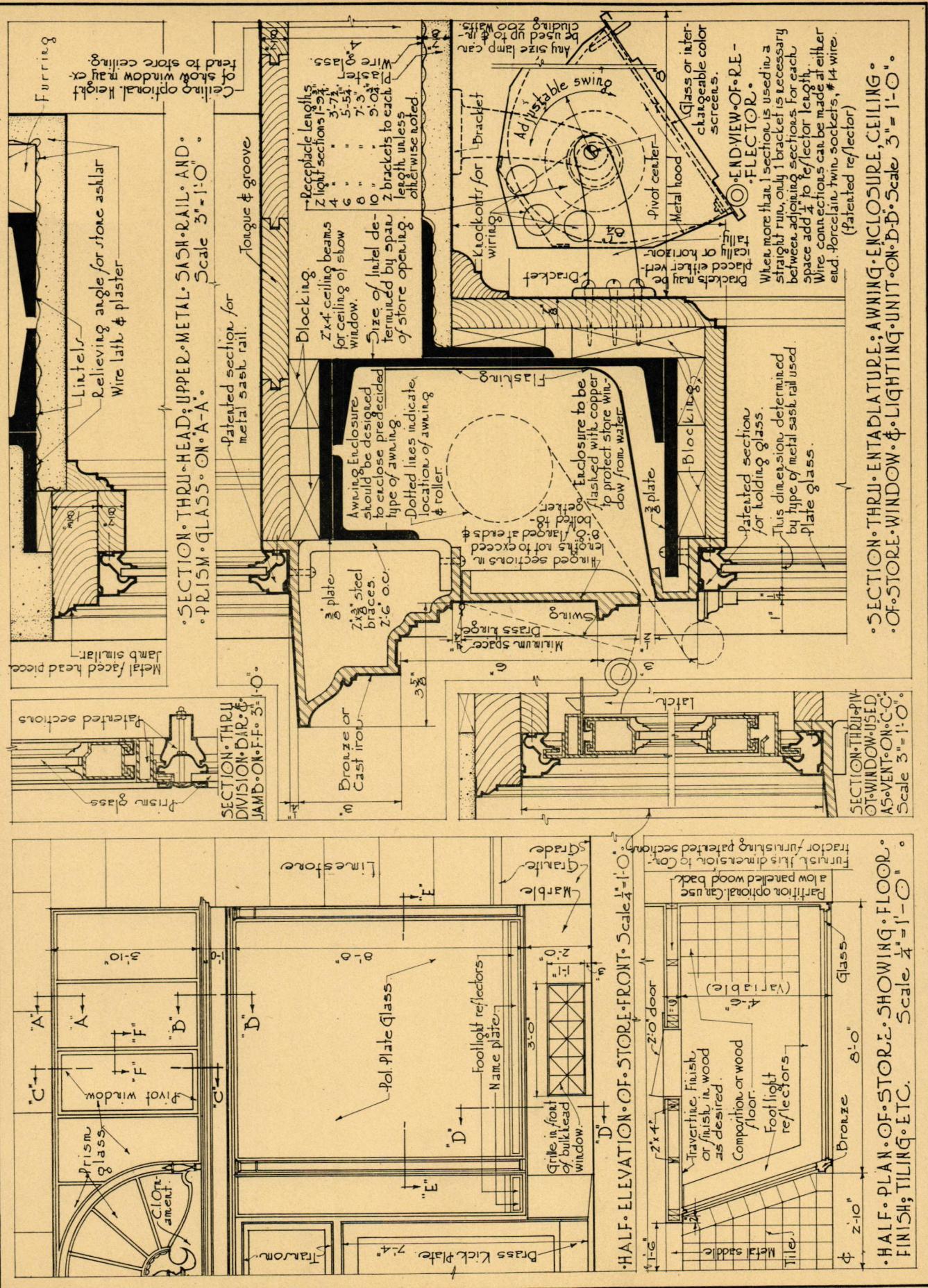


PLATE 12, STORE FRONTS, I

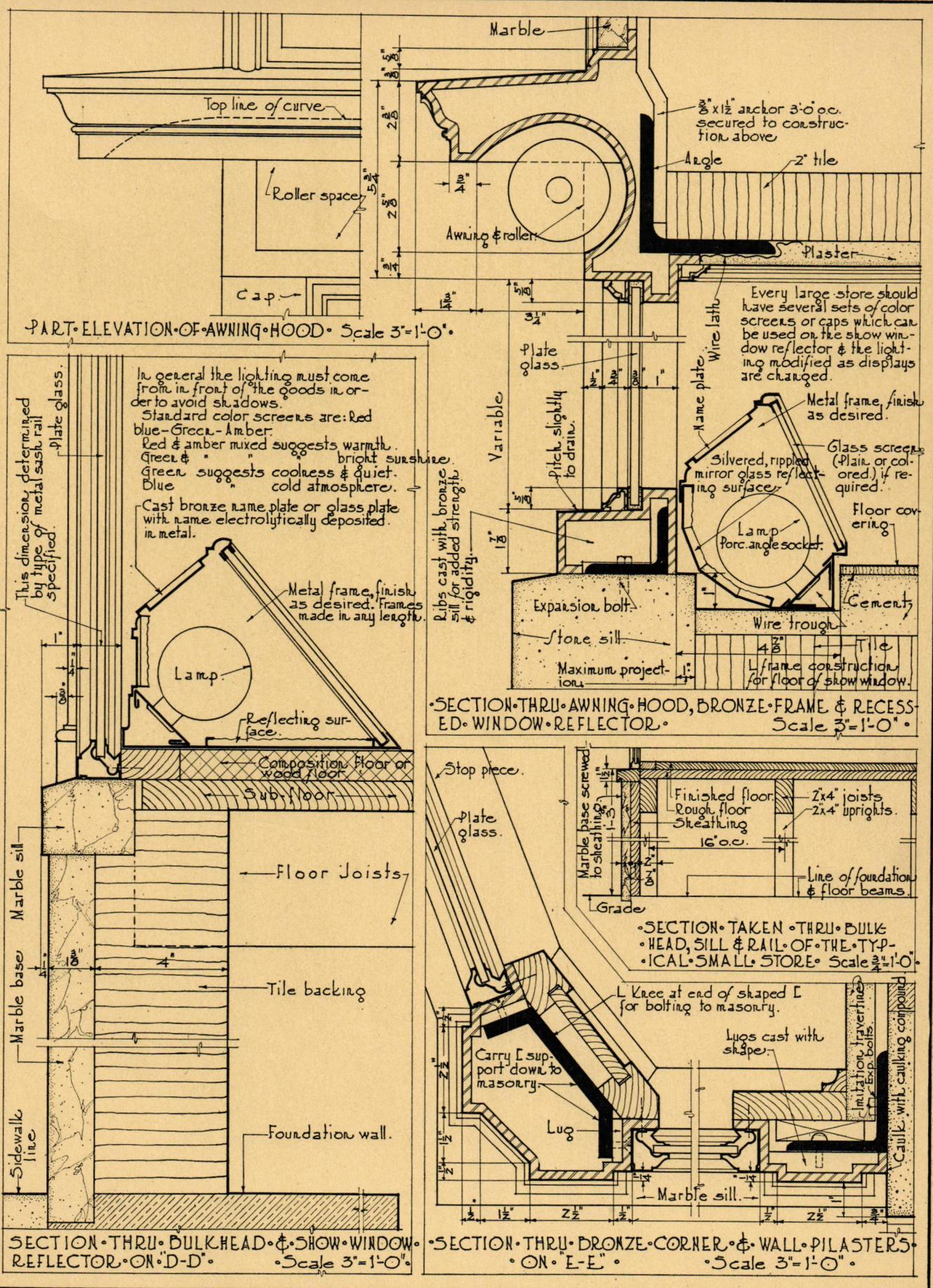
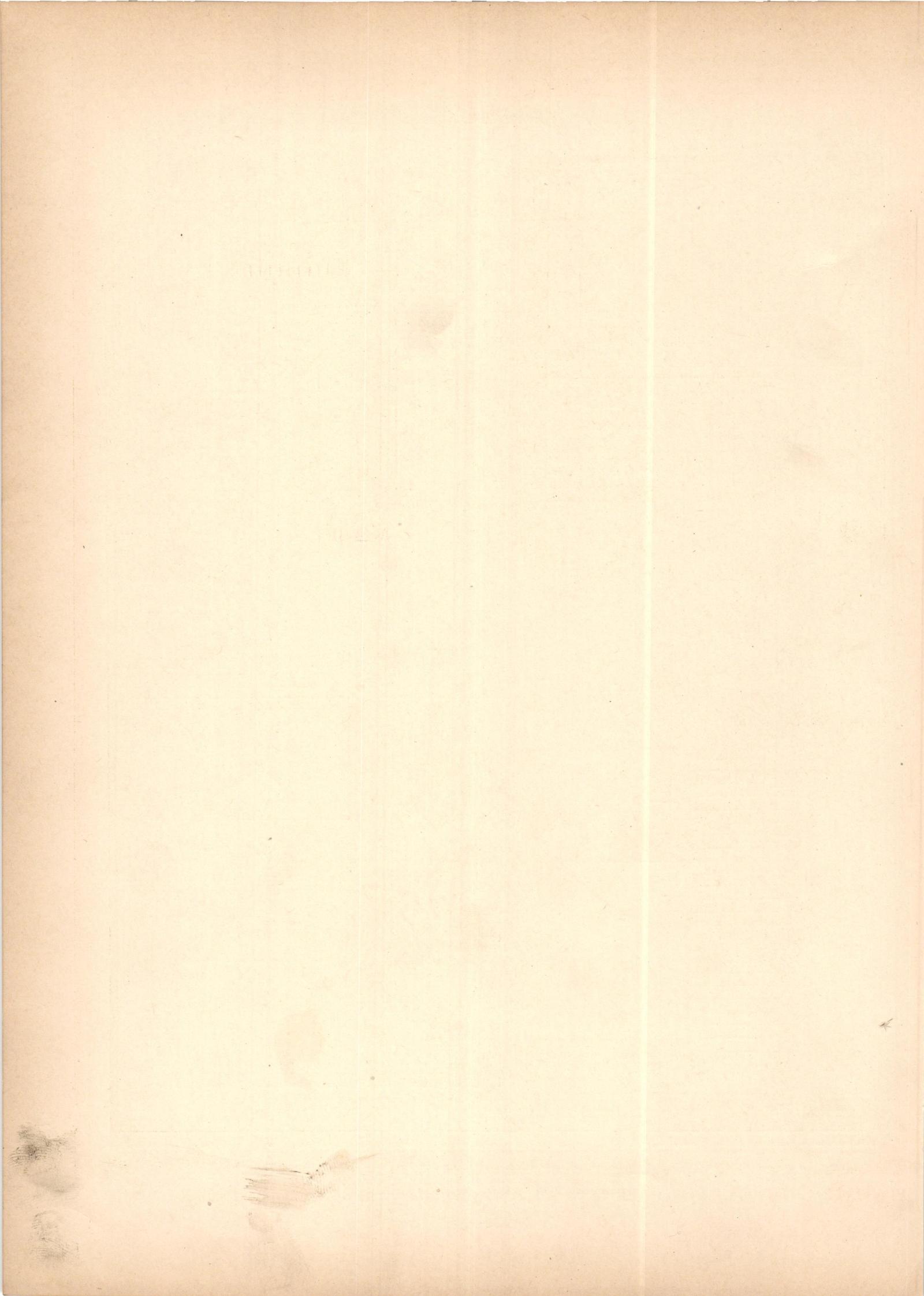


PLATE 13, STORE FRONTS, II



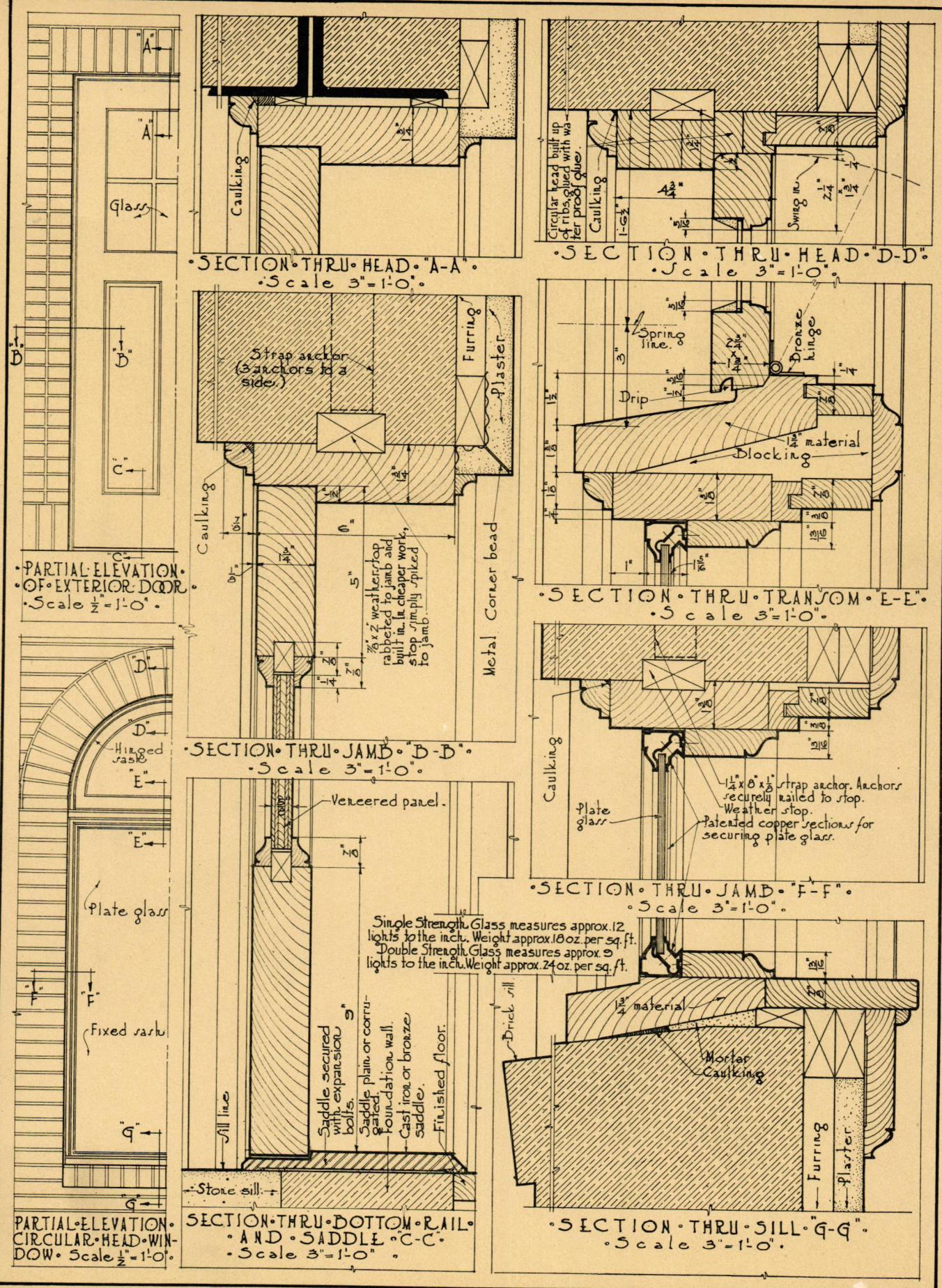
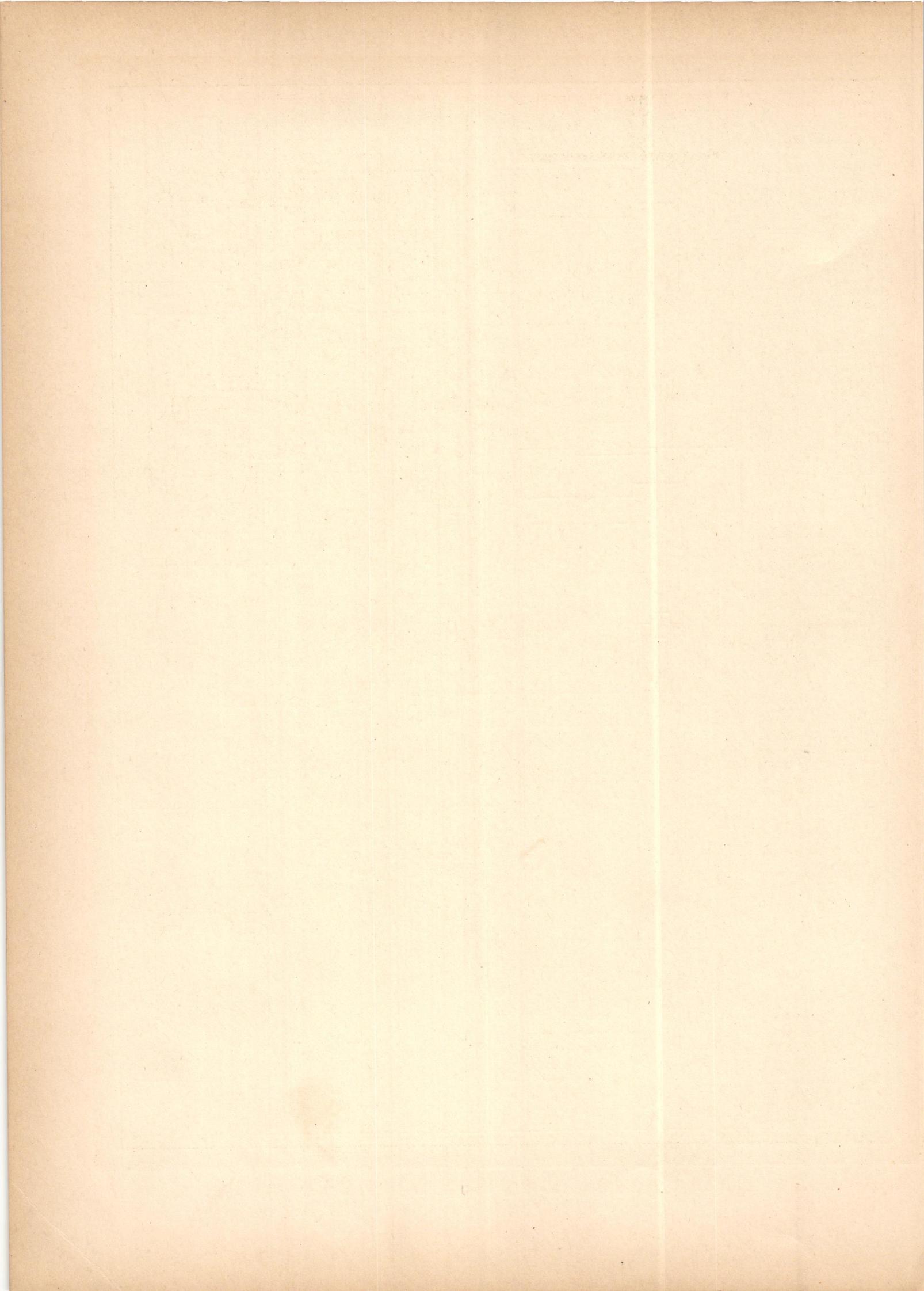


PLATE 14, EXTERIOR DOOR IN BRICK WALL AND CIRCULAR HEAD WINDOW IN BRICK WALL



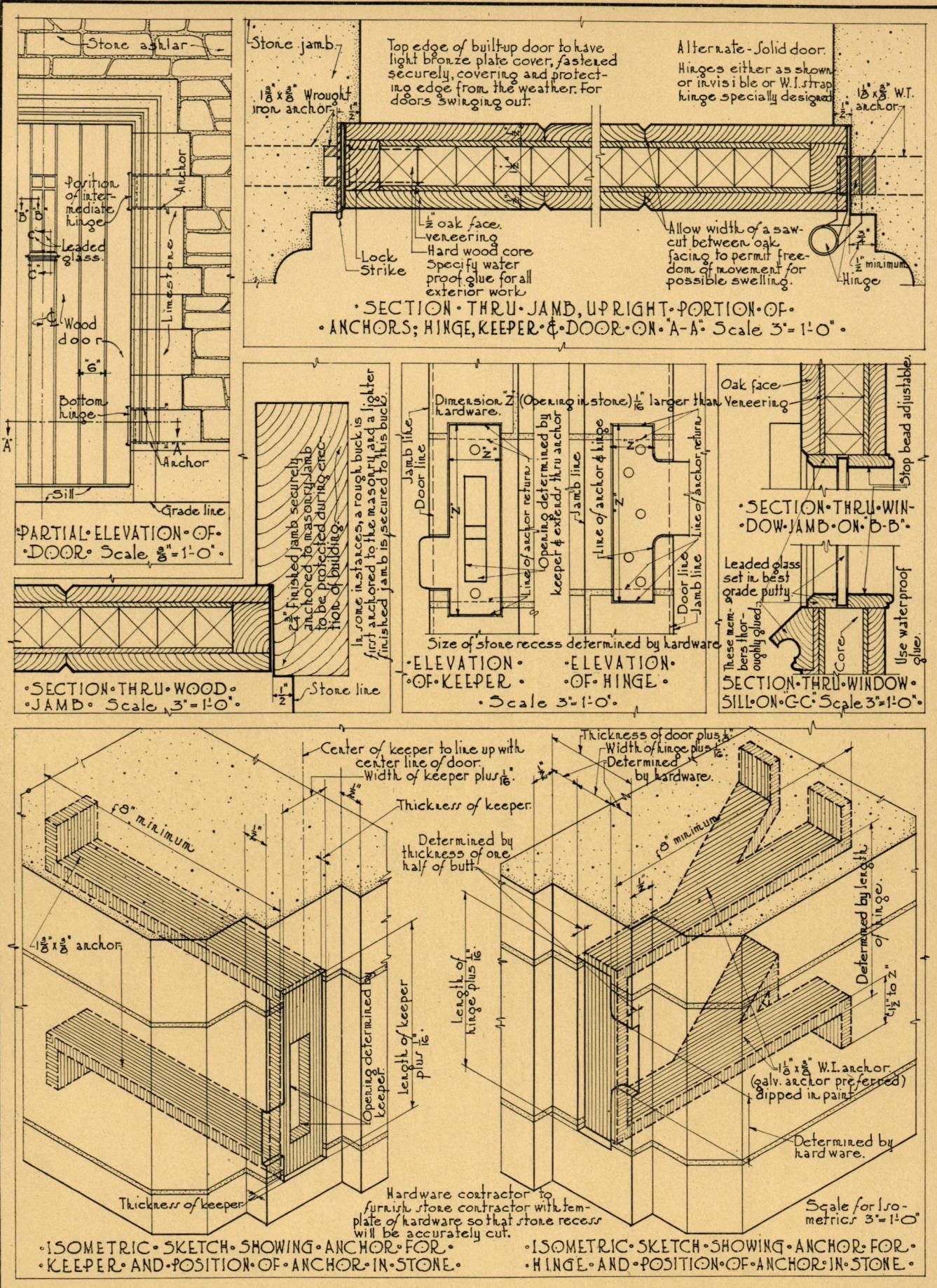


PLATE 15, EXTERIOR DOOR IN STONE WALL

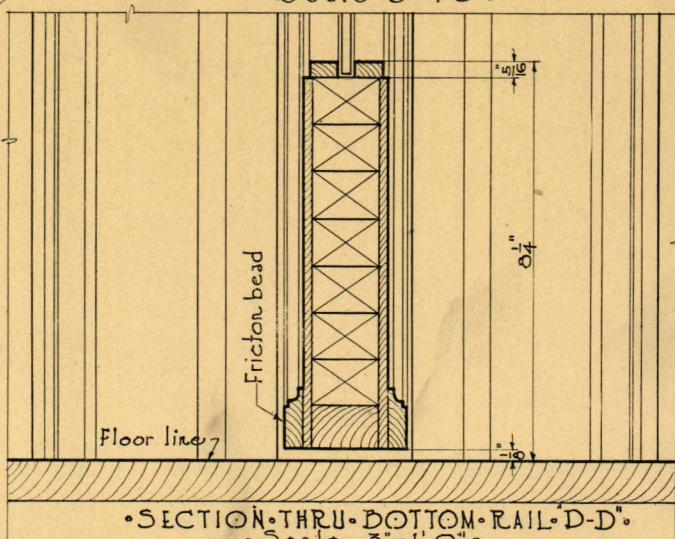
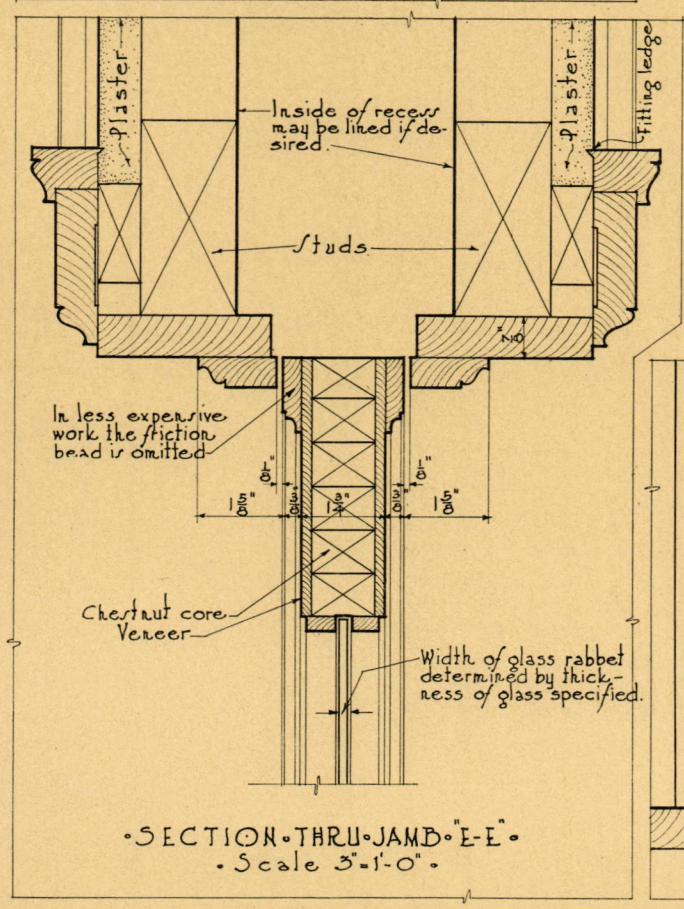
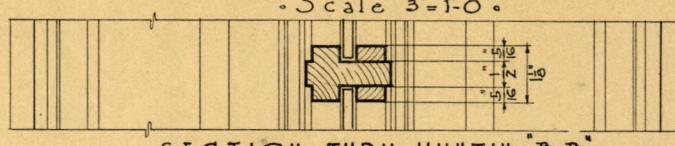
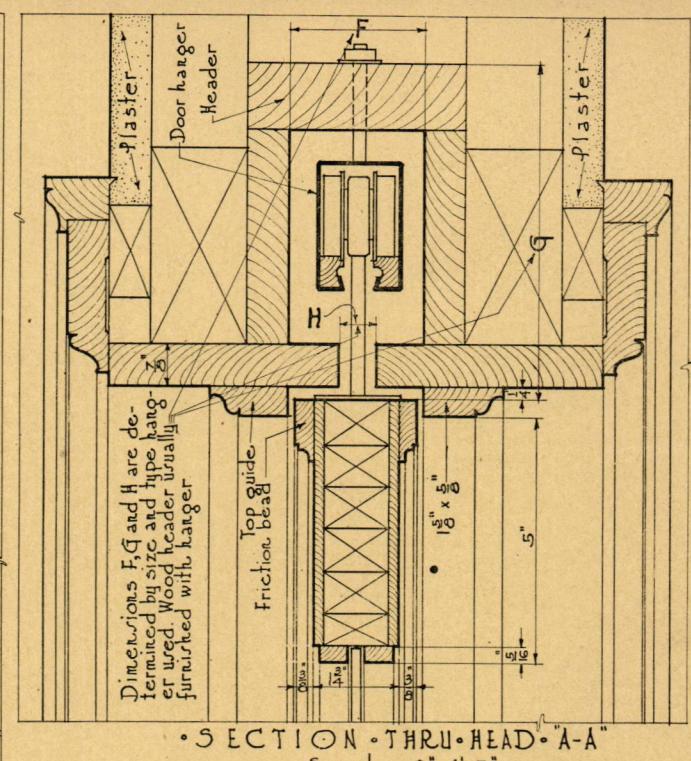
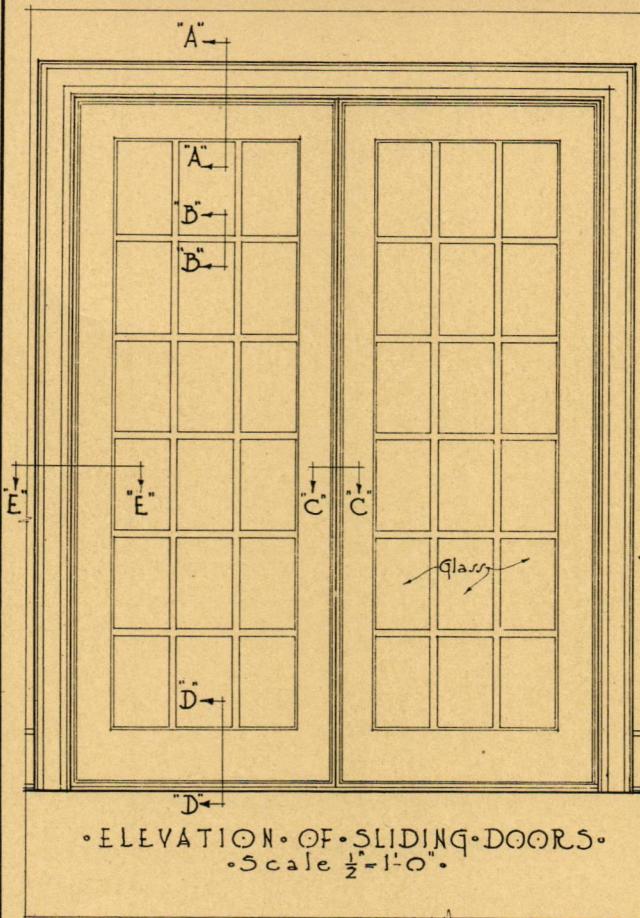


PLATE 16, SLIDING DOOR

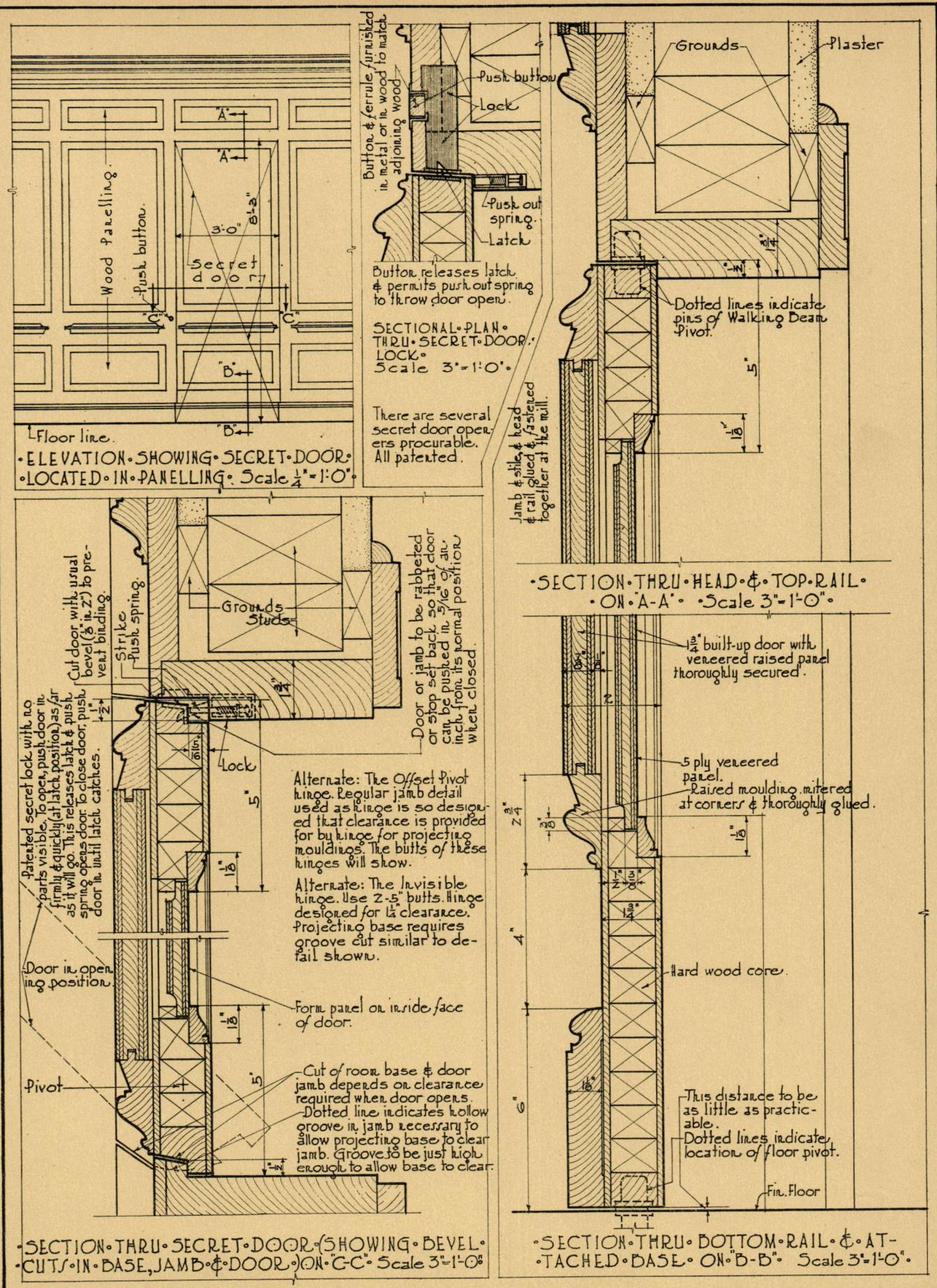


PLATE 17, SECRET DOOR

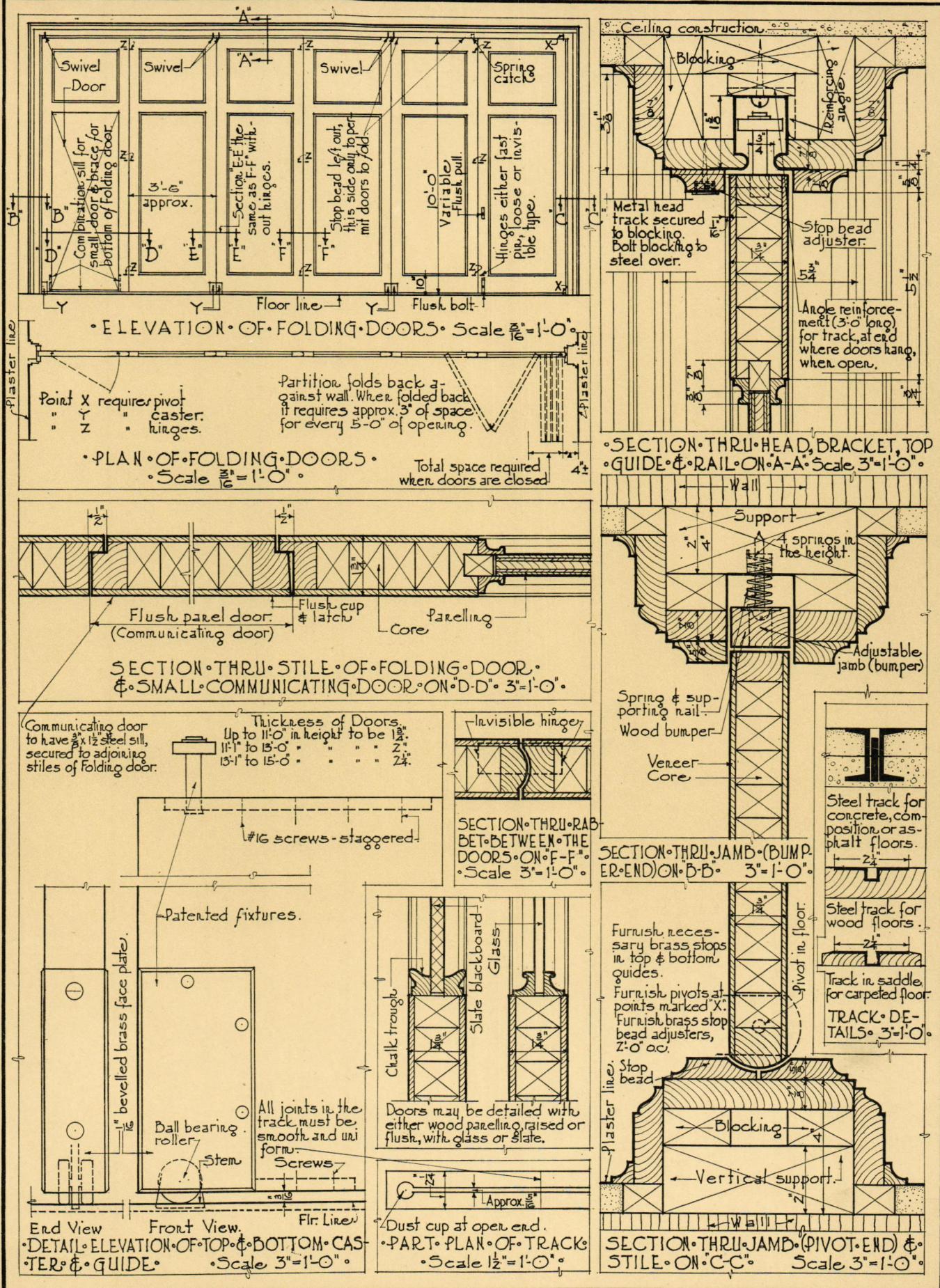


PLATE 18, ROLLING DOOR PARTITION

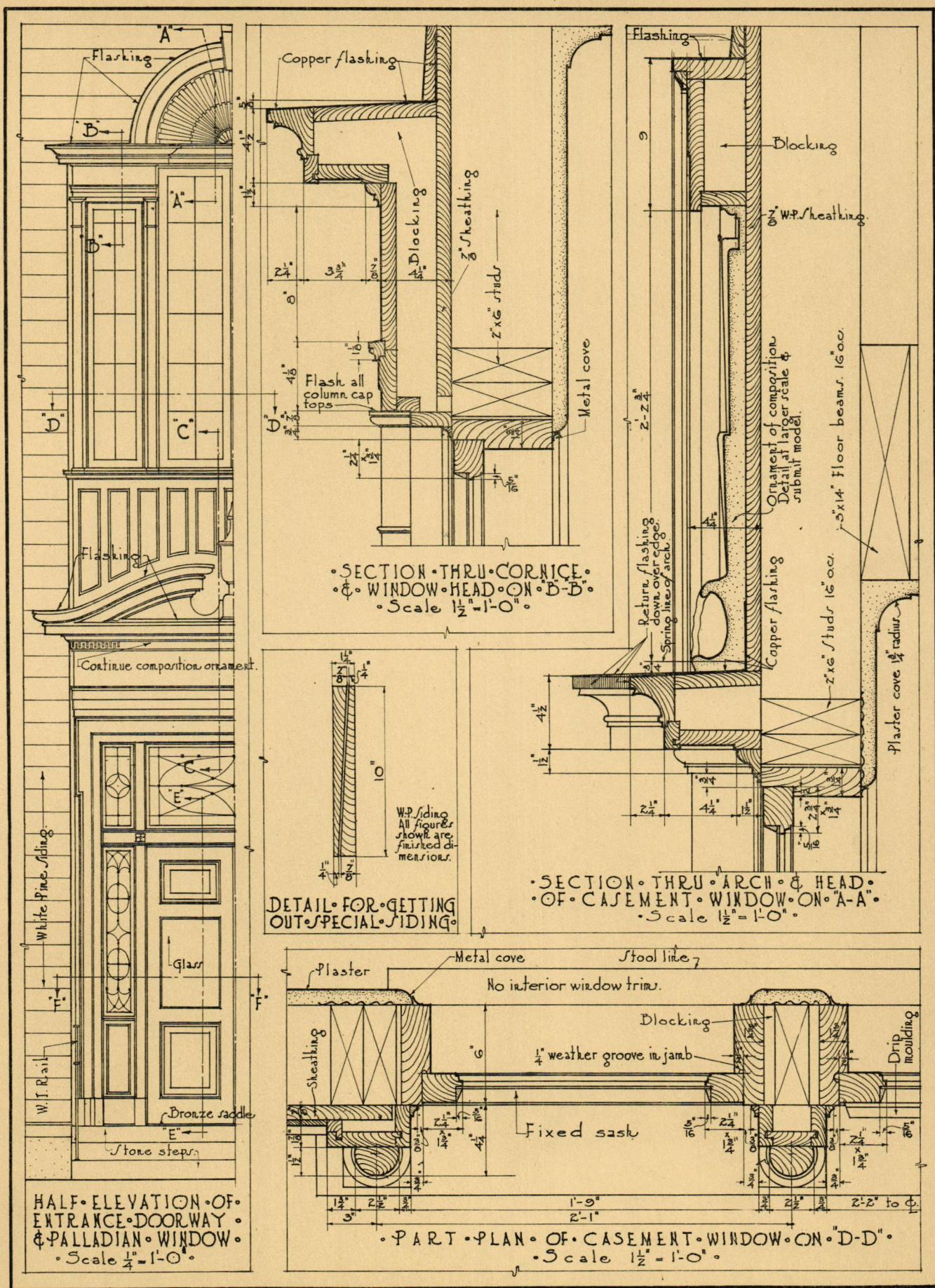


PLATE 19, ENTRANCE DOORWAY AND PALLADIAN WINDOW, I

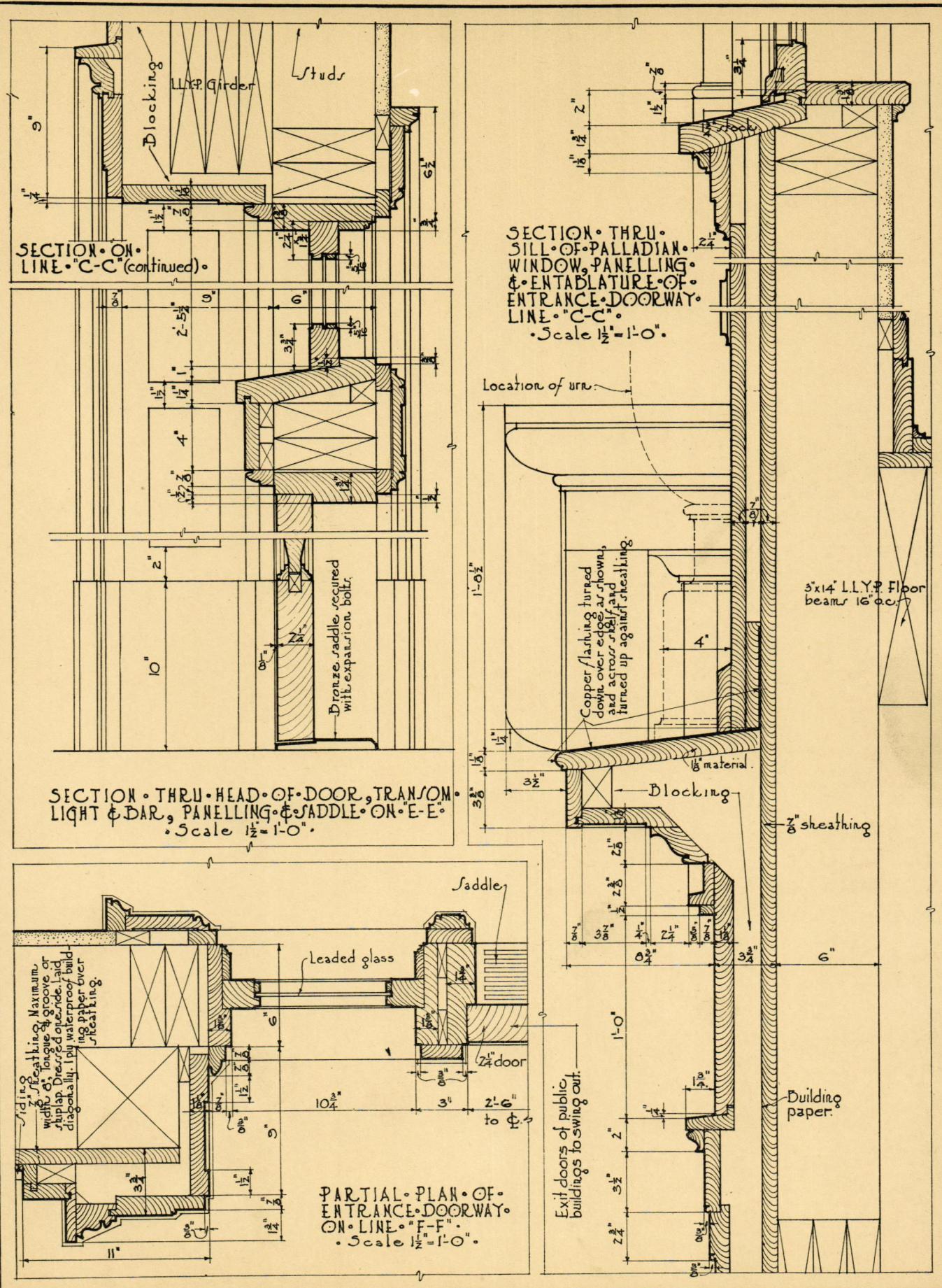


PLATE 20, ENTRANCE DOOR AND PALLADIAN WINDOW, II

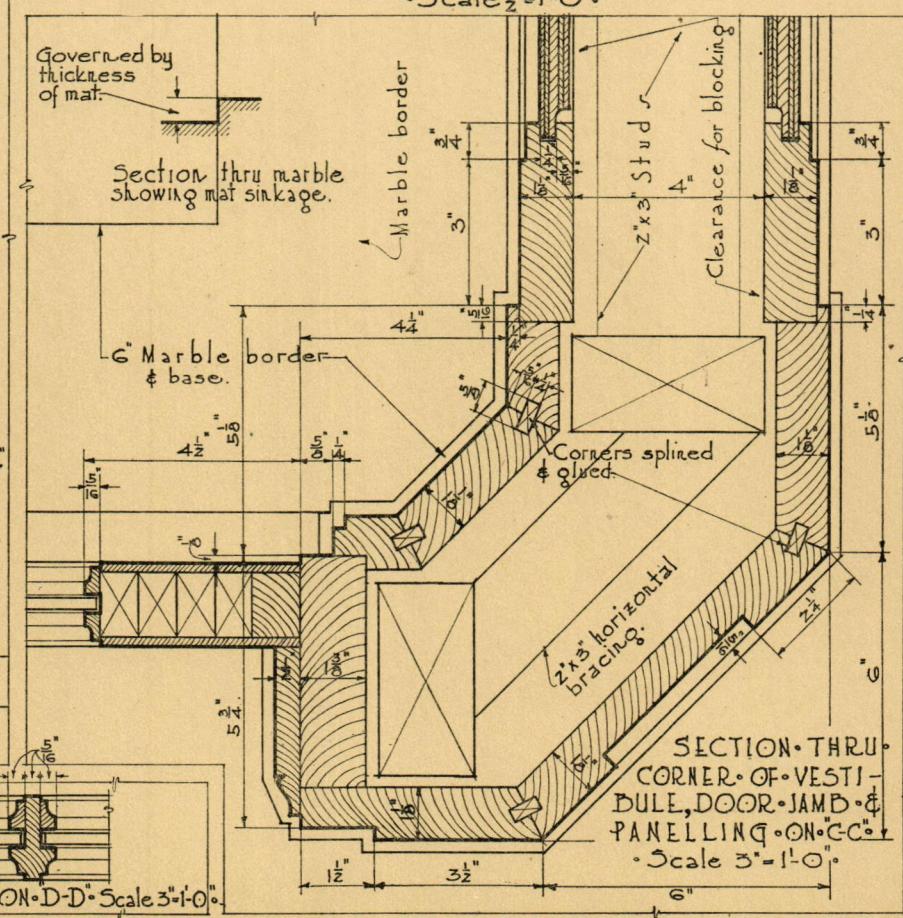
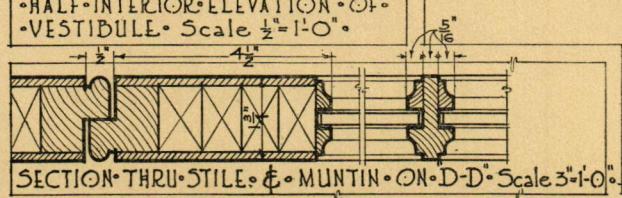
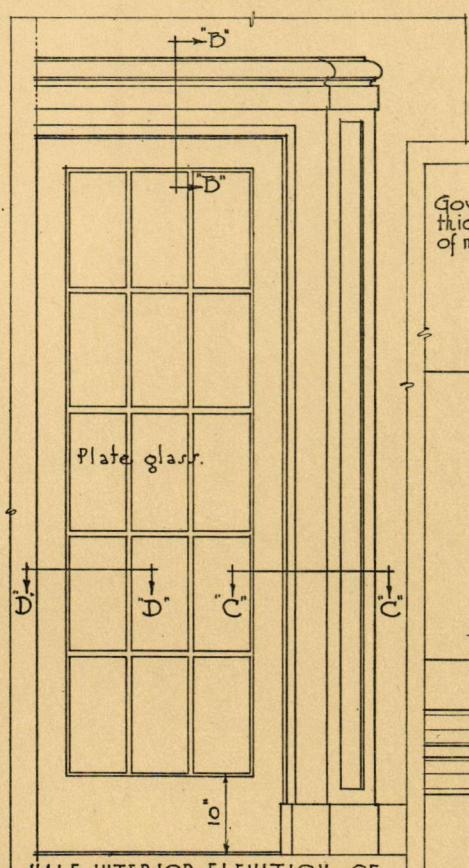
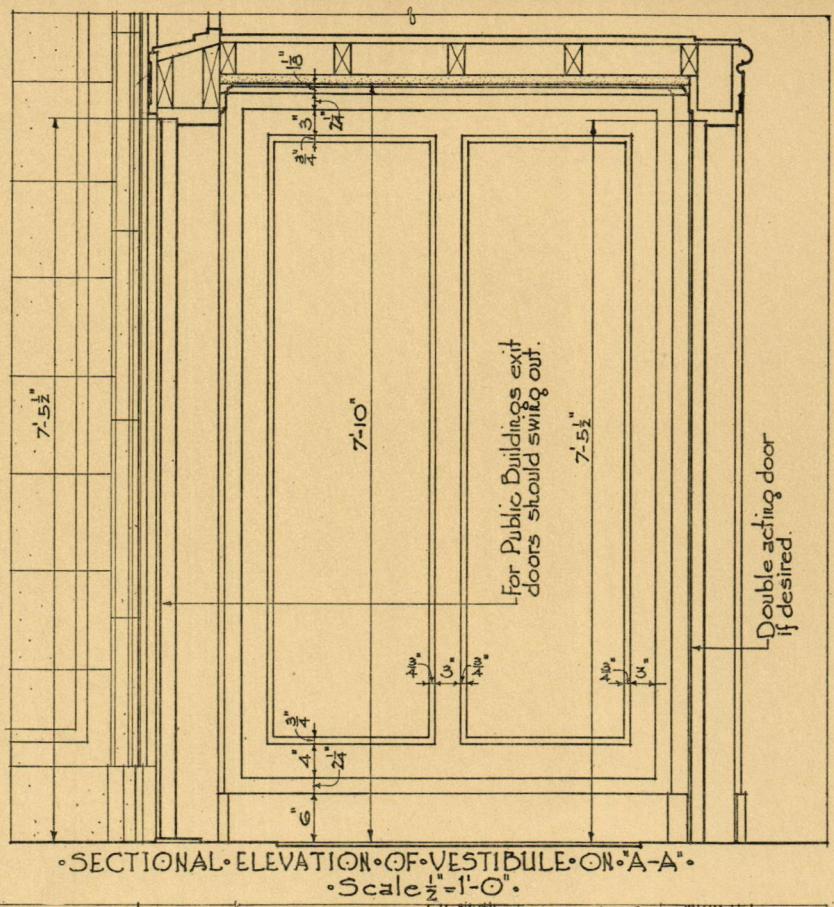
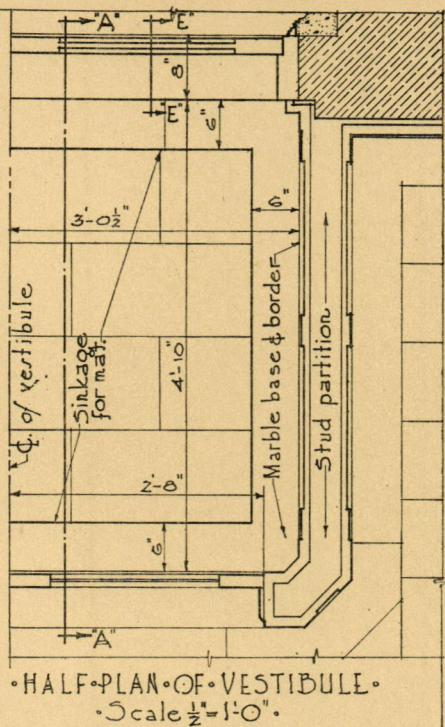


PLATE 21, WOOD VESTIBULE, I

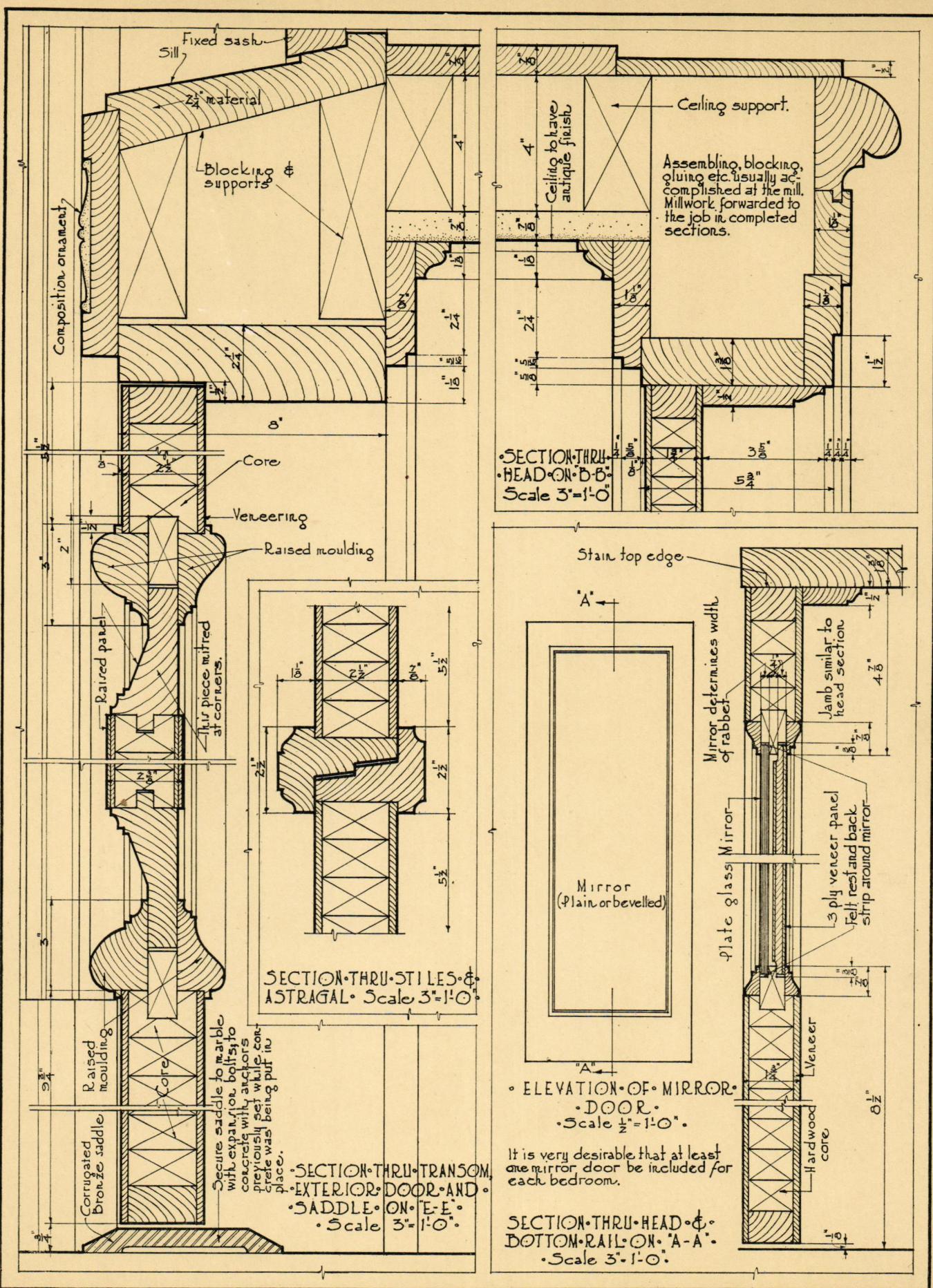


PLATE 22, WOOD VESTIBULE, II, AND MIRROR DOOR

SEE PLATE 8 FOR STUCCO DETAILS.

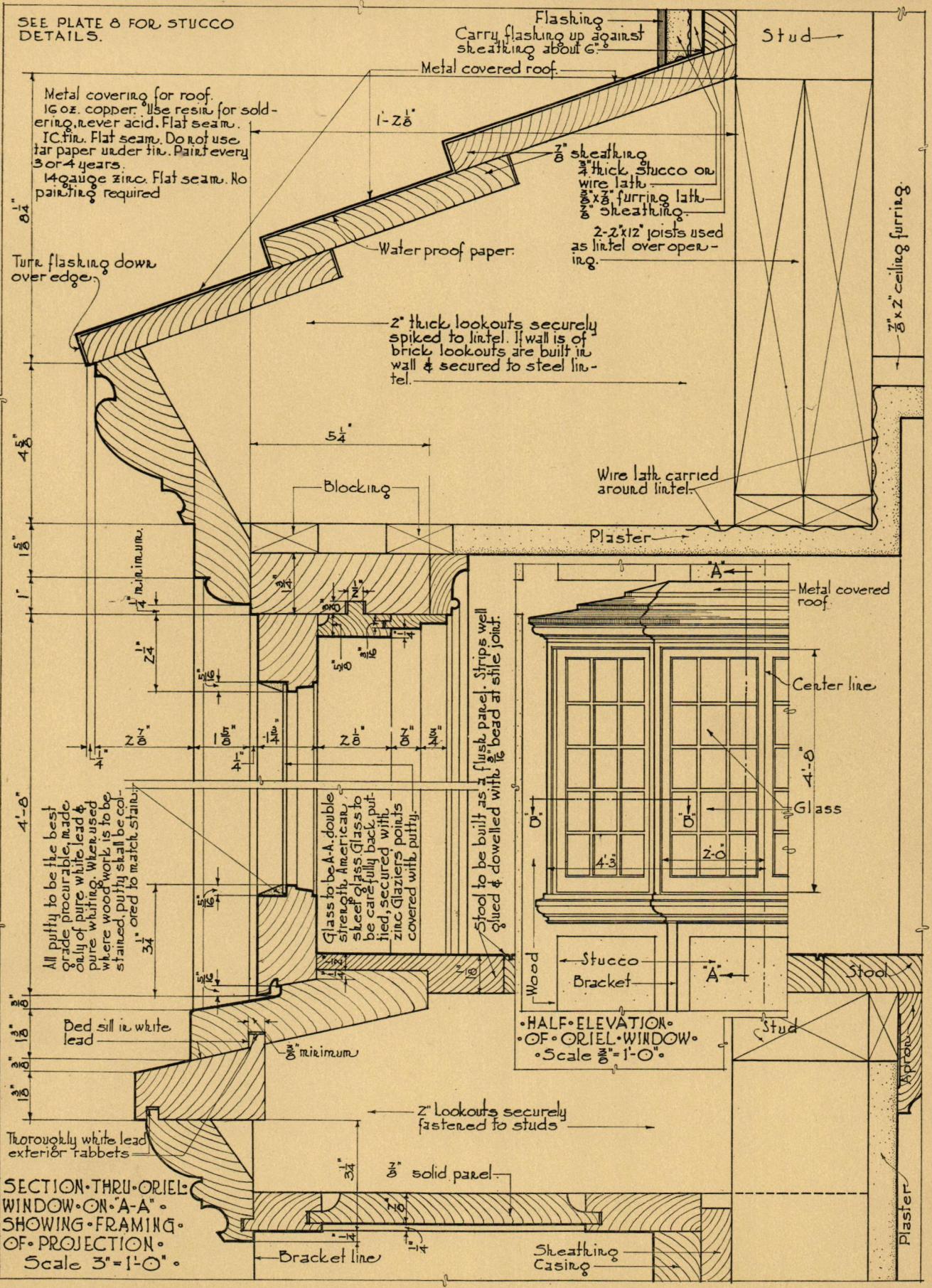


PLATE 23, ORIEL WINDOW, I

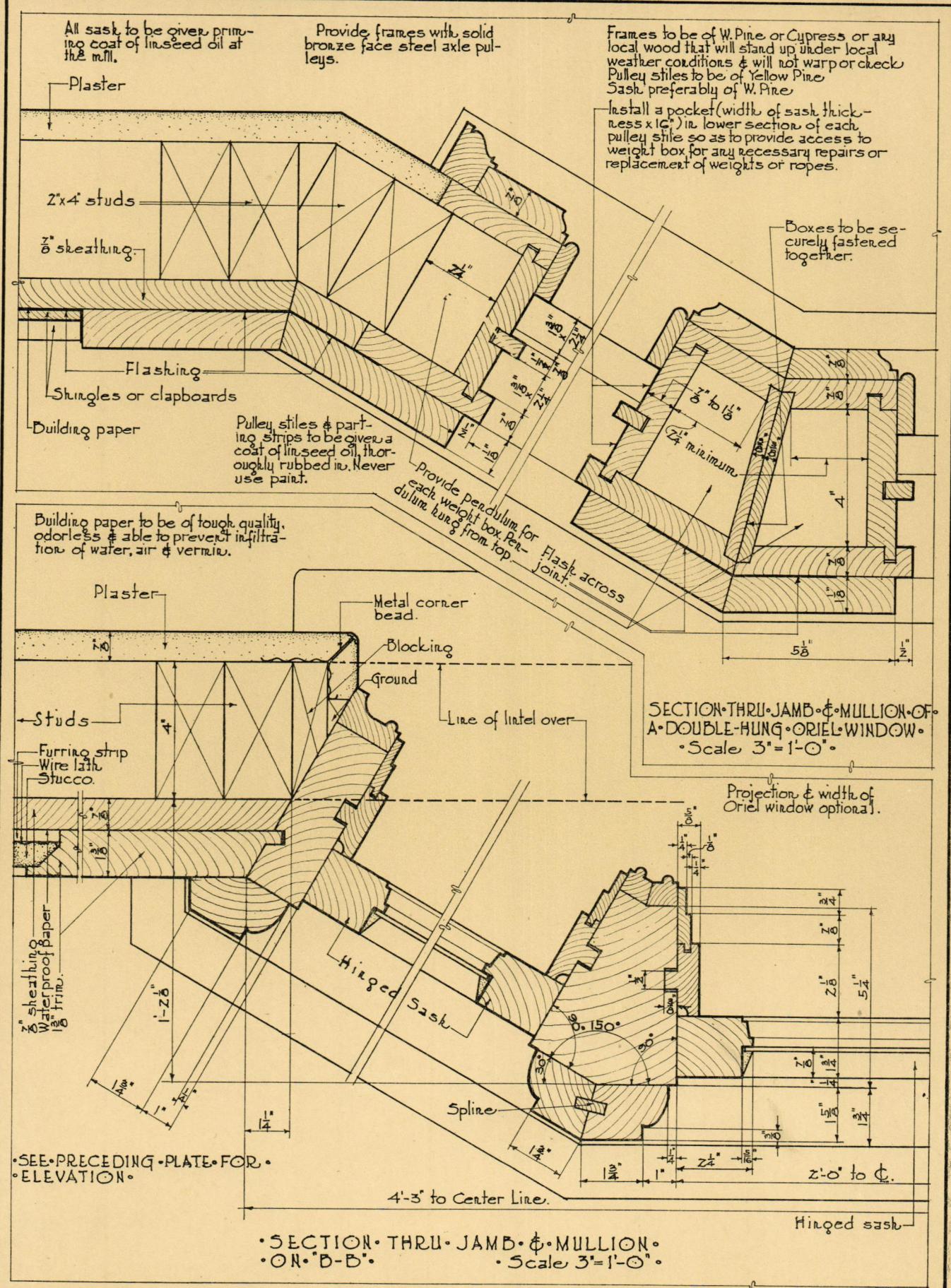
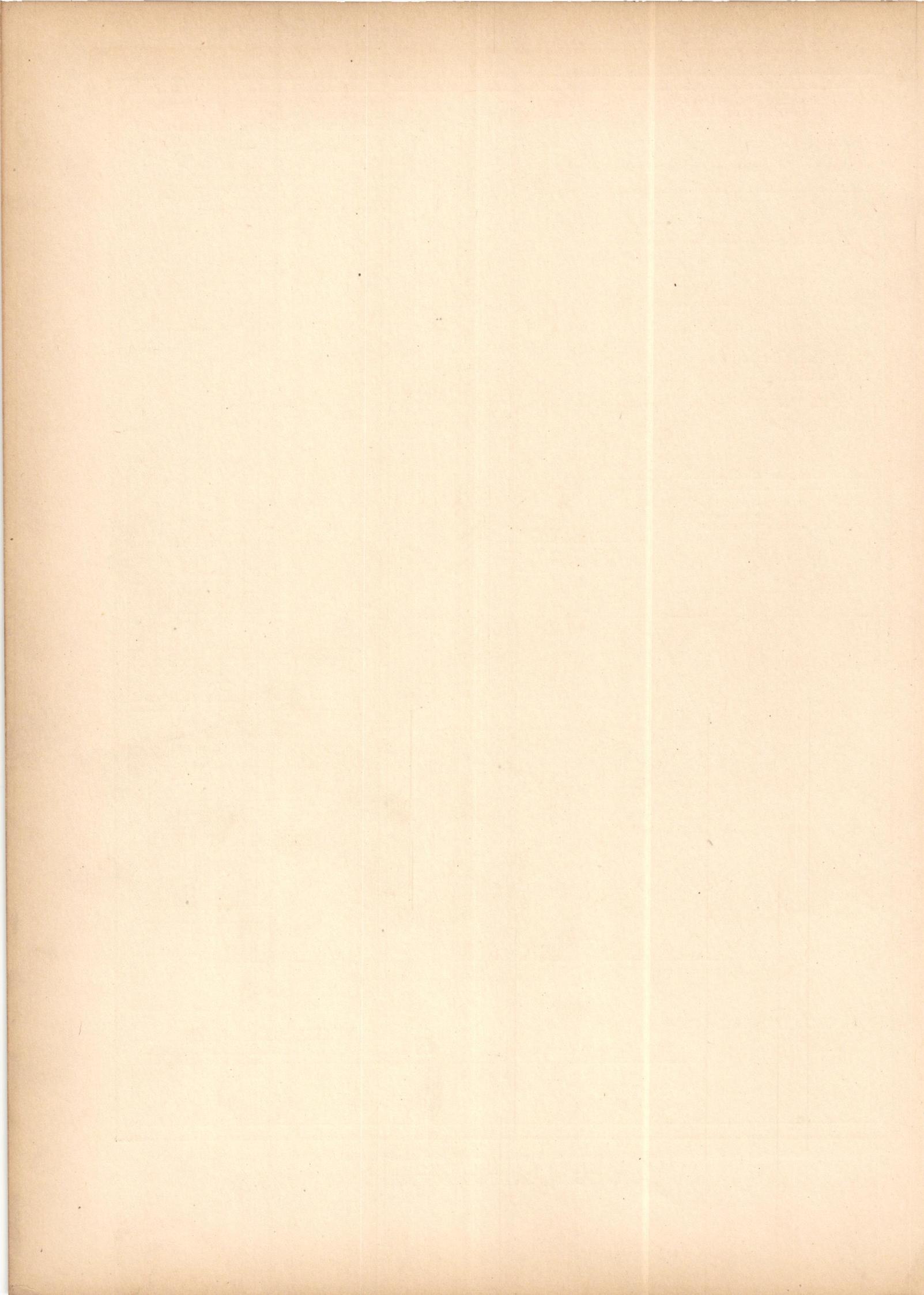


PLATE 24, ORIEL WINDOW, II



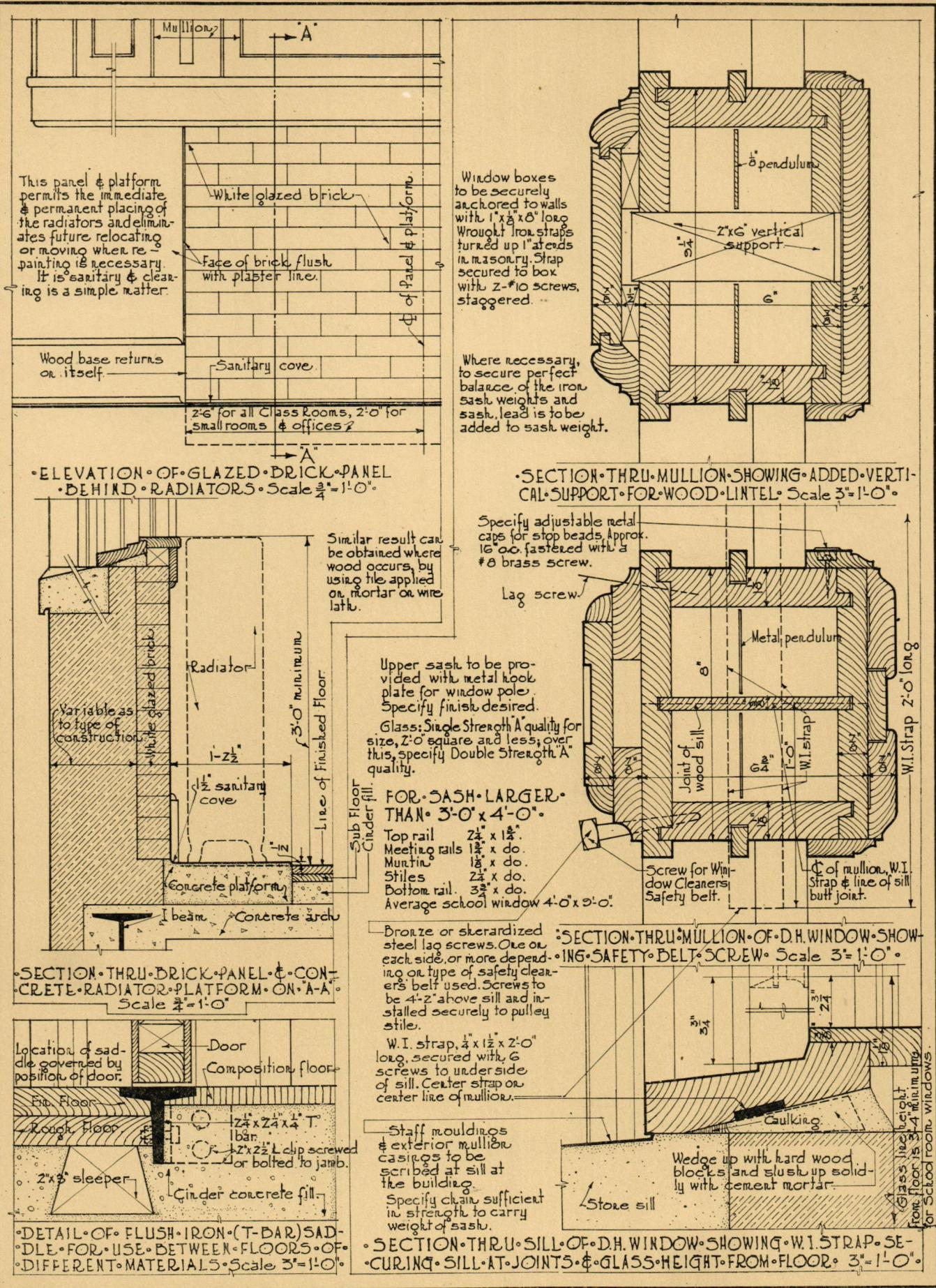


PLATE 25, RADIATOR BASE AND BACKING AND DOUBLE HUNG WINDOW MULLIONS

In the best work, either lead or copper flashing is installed over the arch of the window. Flashing to start 1" back of exterior wall face and thru to furring & turned up 2", covering arch all the way down to spring line. See section F-F.

There are two types of ventilators, the double ventilator for the single glass & the double double type for the double glass window.

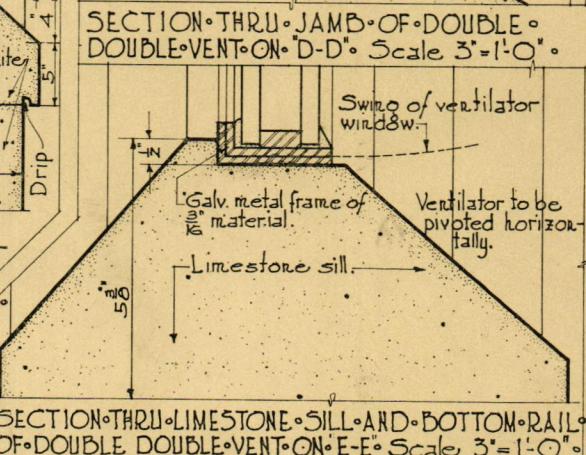
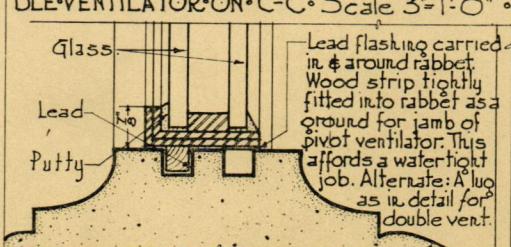
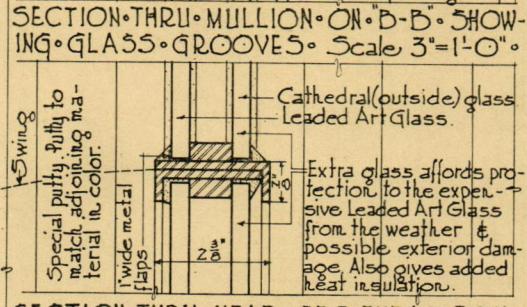
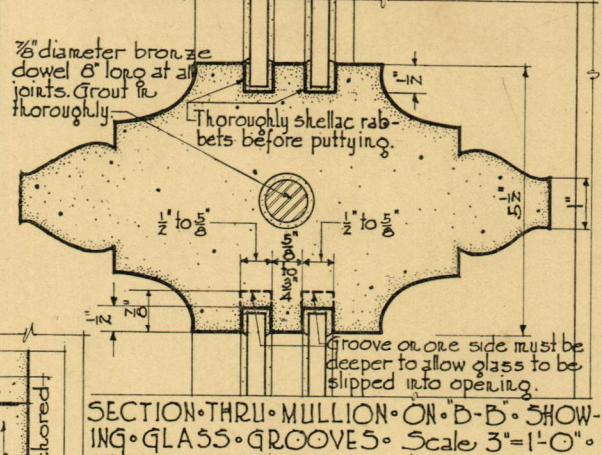
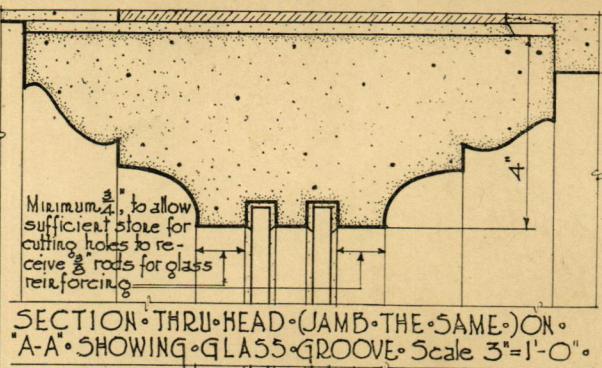
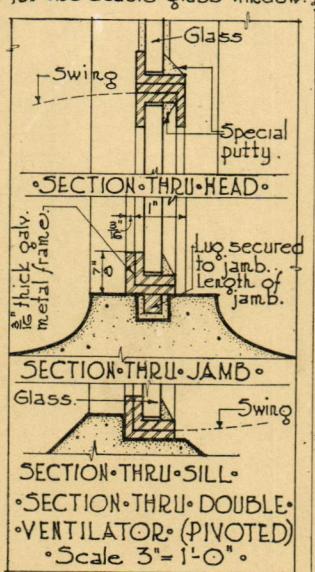
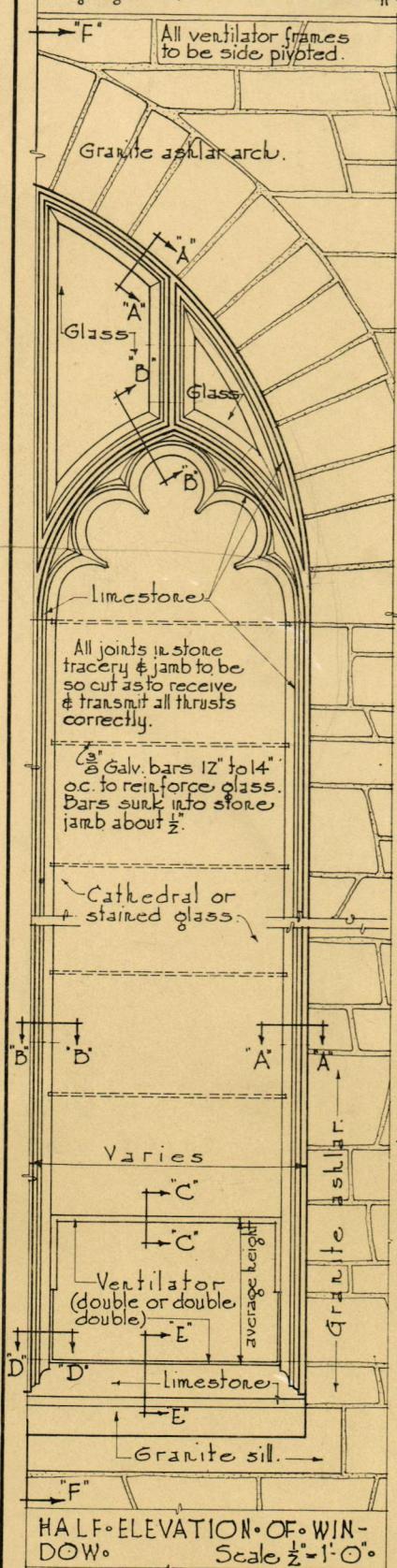


PLATE 26, LEADED GLASS WINDOW IN STONE WALL

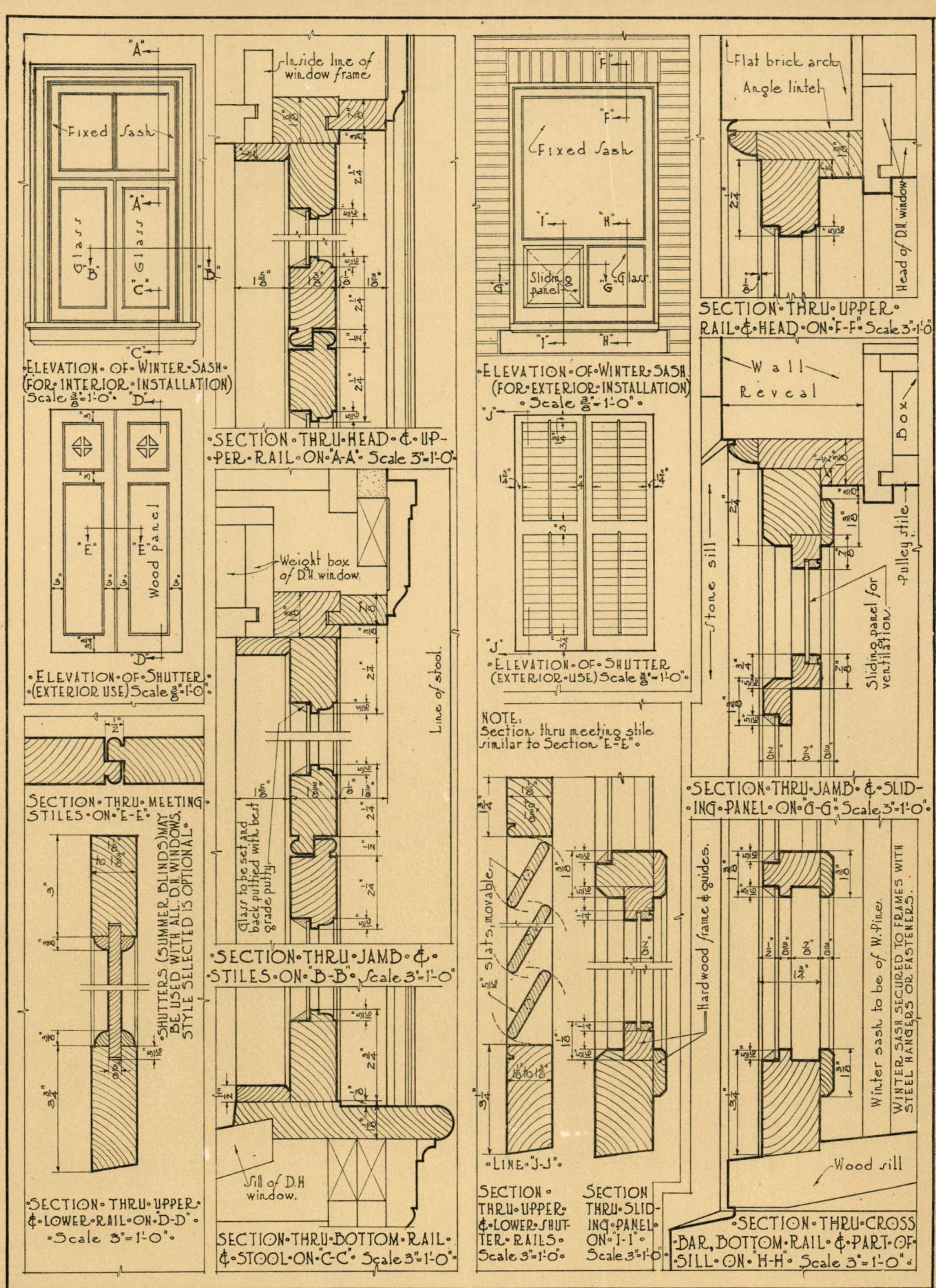
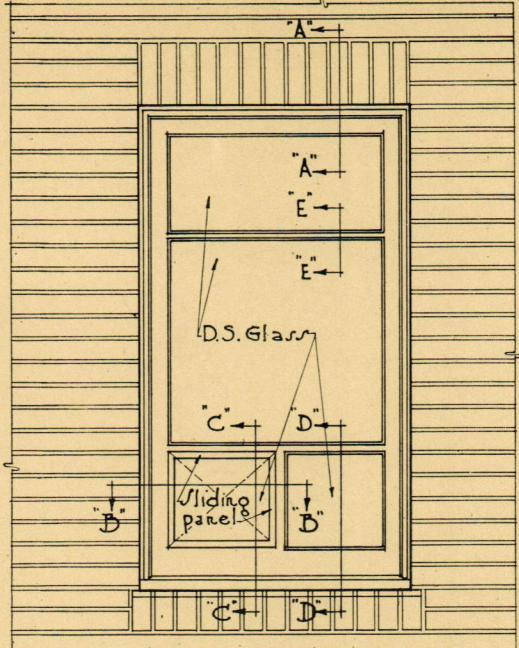
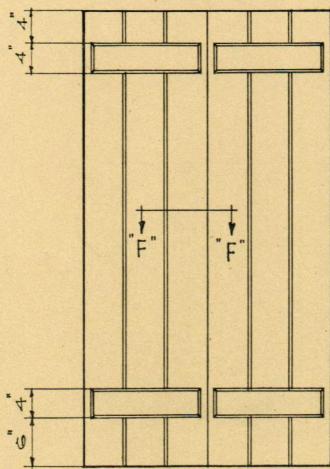


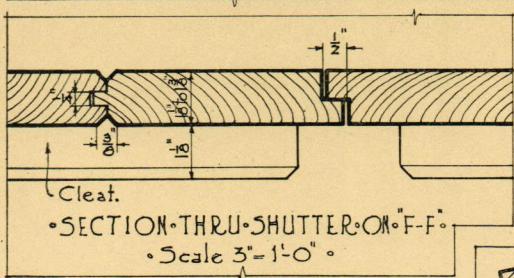
PLATE 27. STORM SASH FOR DOUBLE HUNG WINDOW



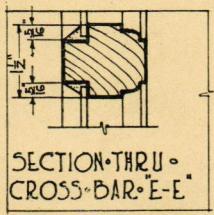
ELEVATION OF WINTER SASH.
(FOR EXTERIOR INSTALLATION)
Scale $\frac{1}{2} = 1'-0''$



ELEVATION OF SHUTTER.
Scale $\frac{1}{2} = 1'-0''$



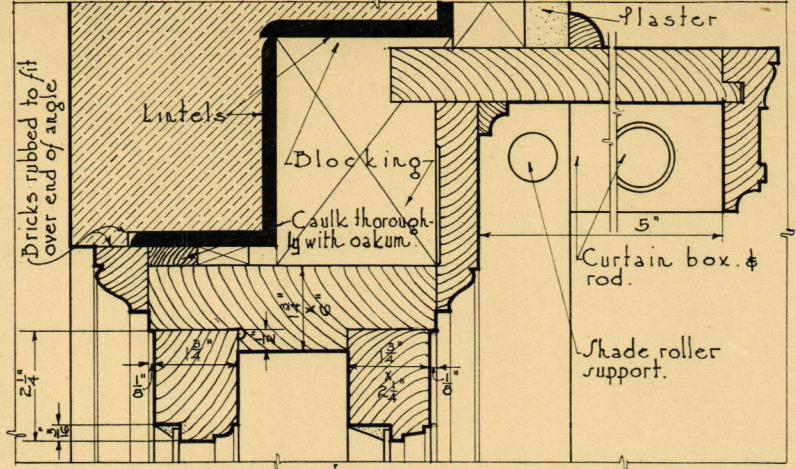
SECTION THRU SHUTTER ON "F-F".
Scale 3'-0"



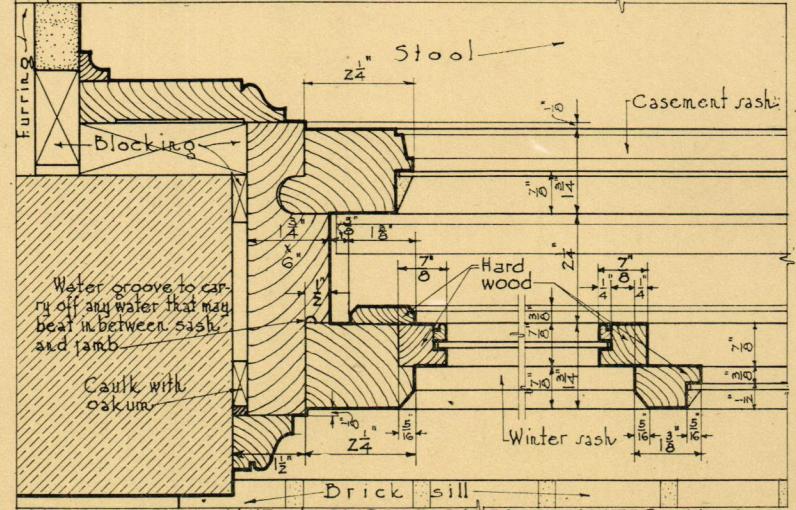
SECTION THRU CROSS BAR E-E

NOTE: For additional information concerning Casement Windows, see Plates 15-16, Part I. of Good Practice in Construction.

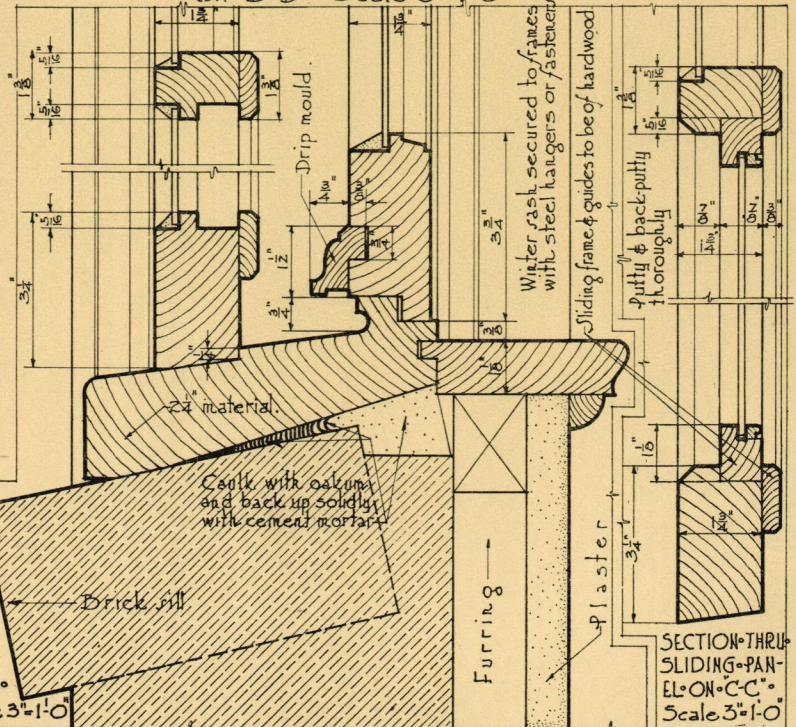
SECTION THRU CROSS BAR LOWER WINTER SASH RAIL & SILL ON D-D Scale 3'-0"



SECTION THRU HEAD & UPPER RAILS OF WINTER SASH & CASEMENT SASH ON "A-A". Scale 3'-0"



SECTION THRU JAMB & SLIDING PANEL OF WINTER SASH
ON D-D Scale 3'-0"



SECTION THRU SLIDING PANEL ON C-C Scale 3'-0"

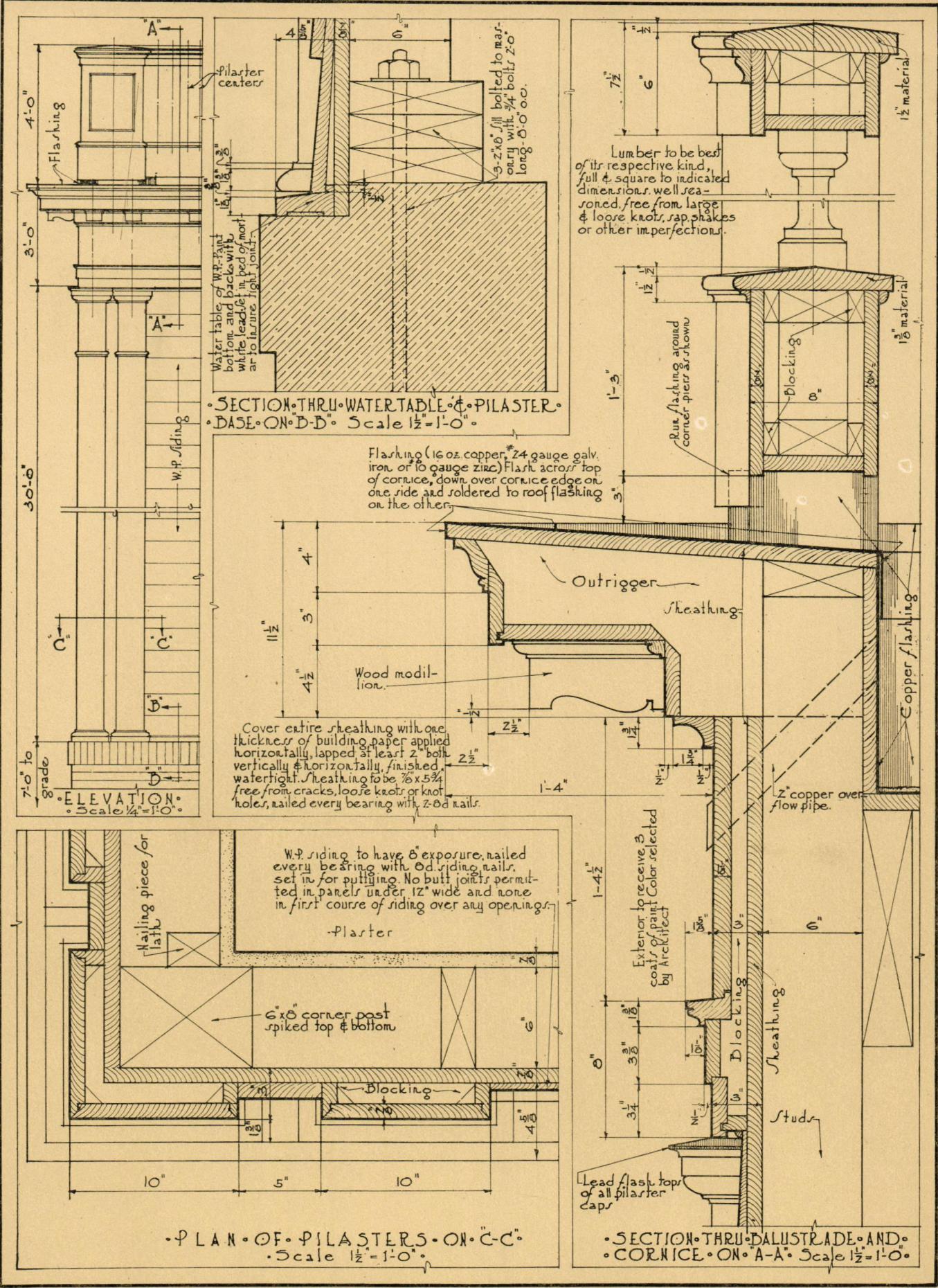
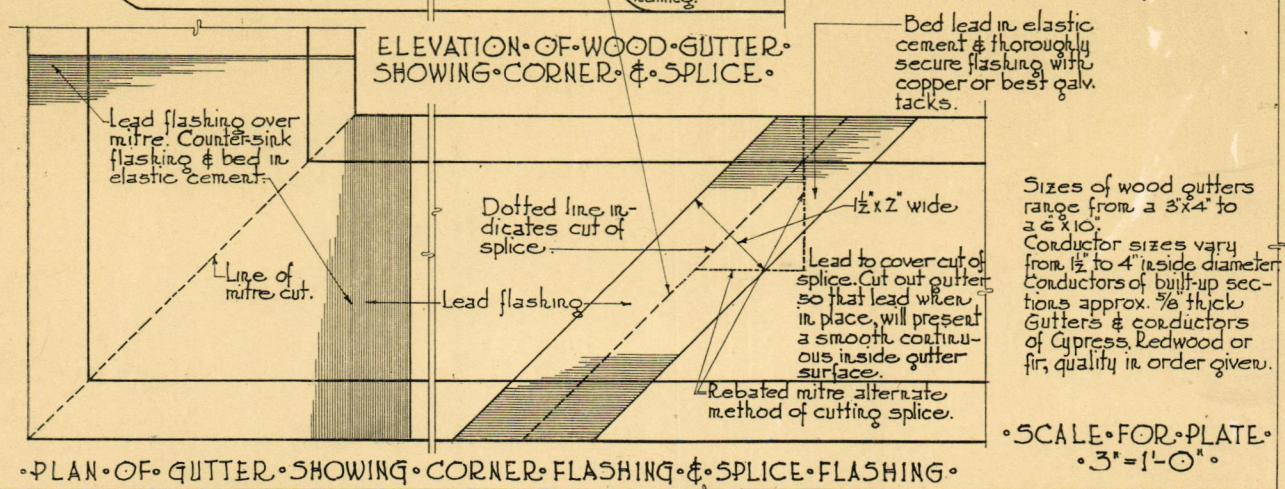
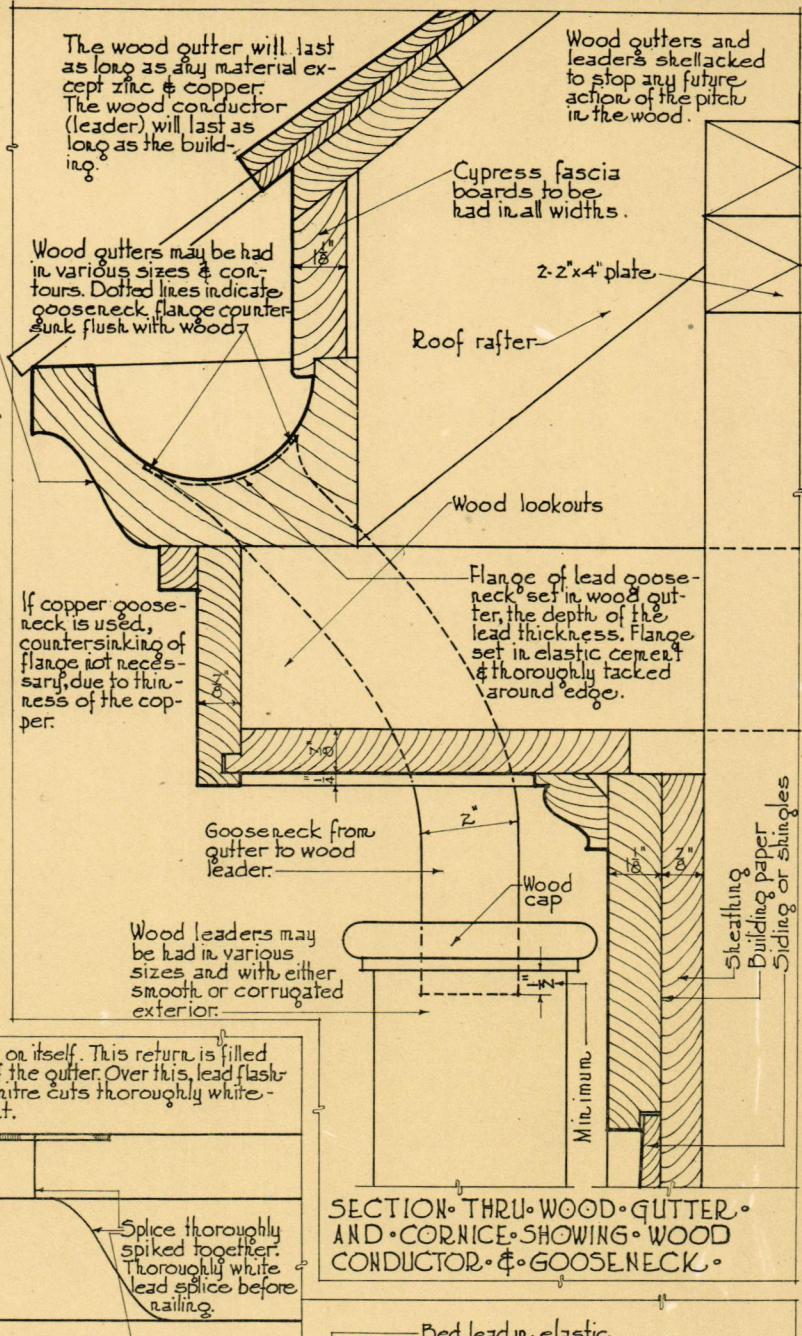
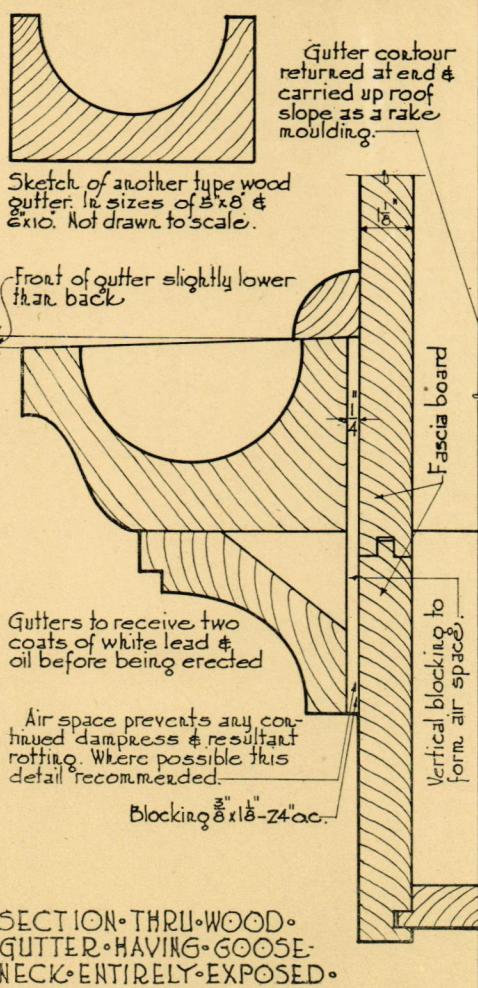


PLATE 29, WOOD ENTABLATURE



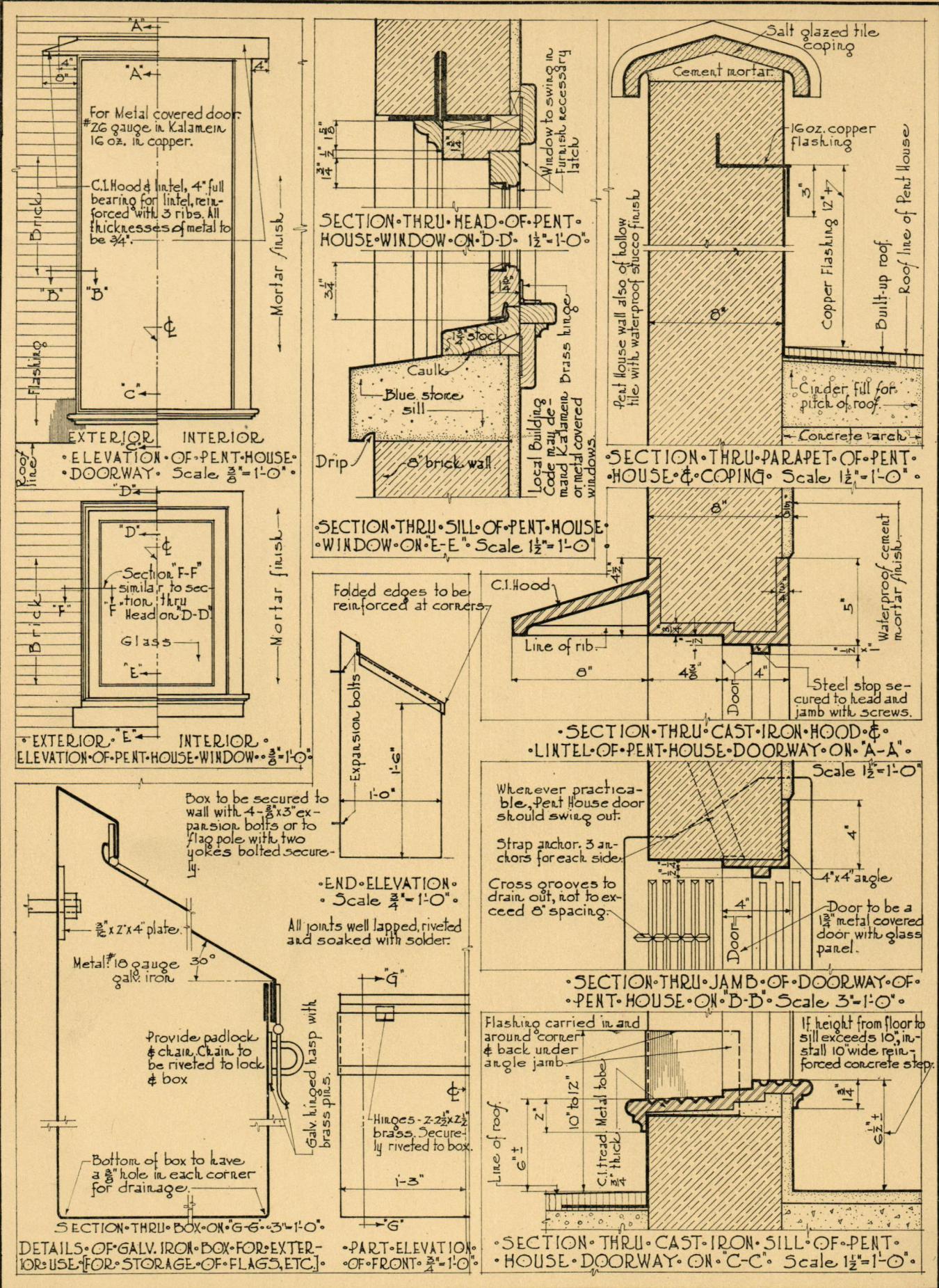


PLATE 31, PENT HOUSE AND FLAG BOX

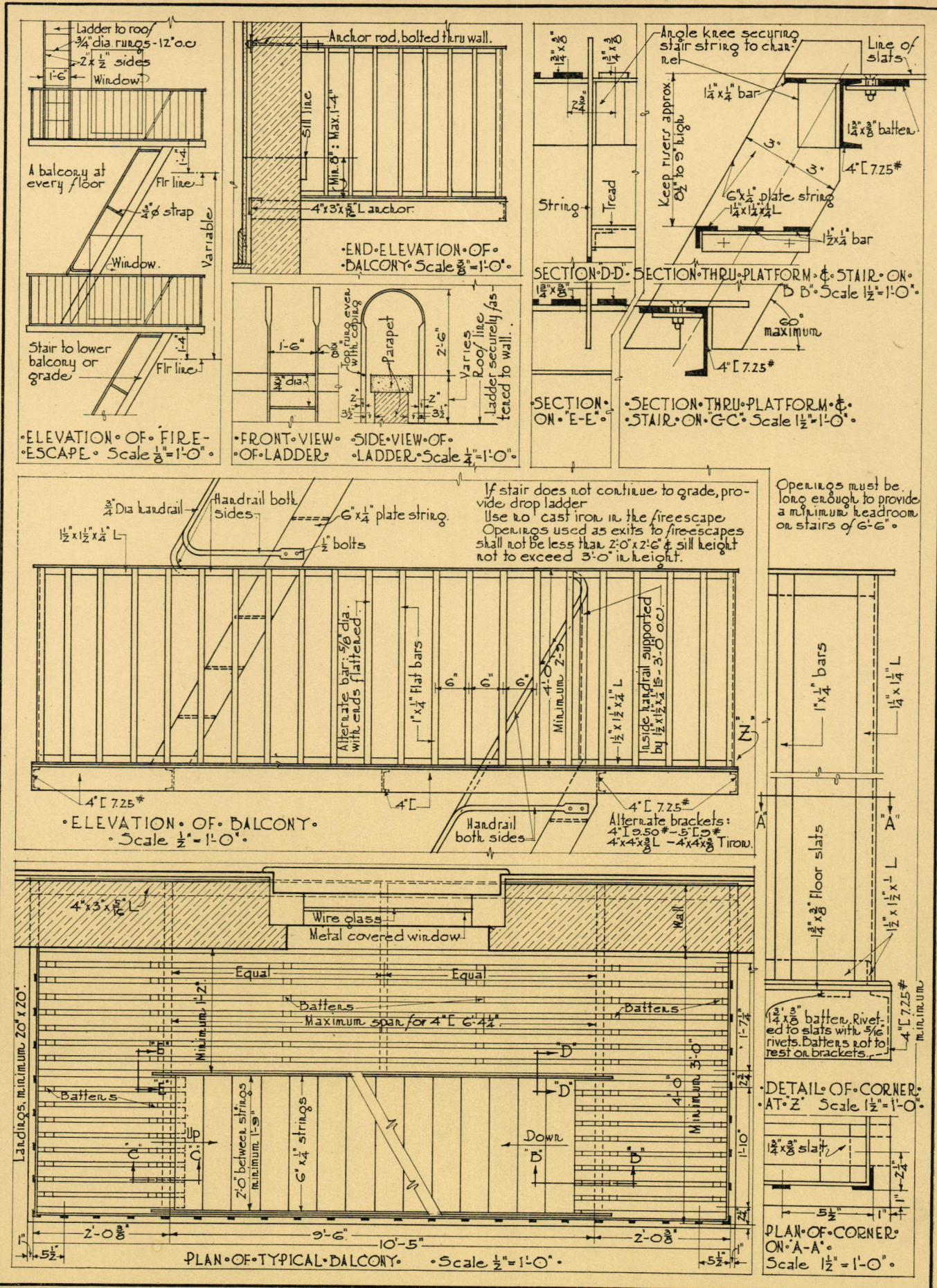


PLATE 32, FIRE ESCAPE

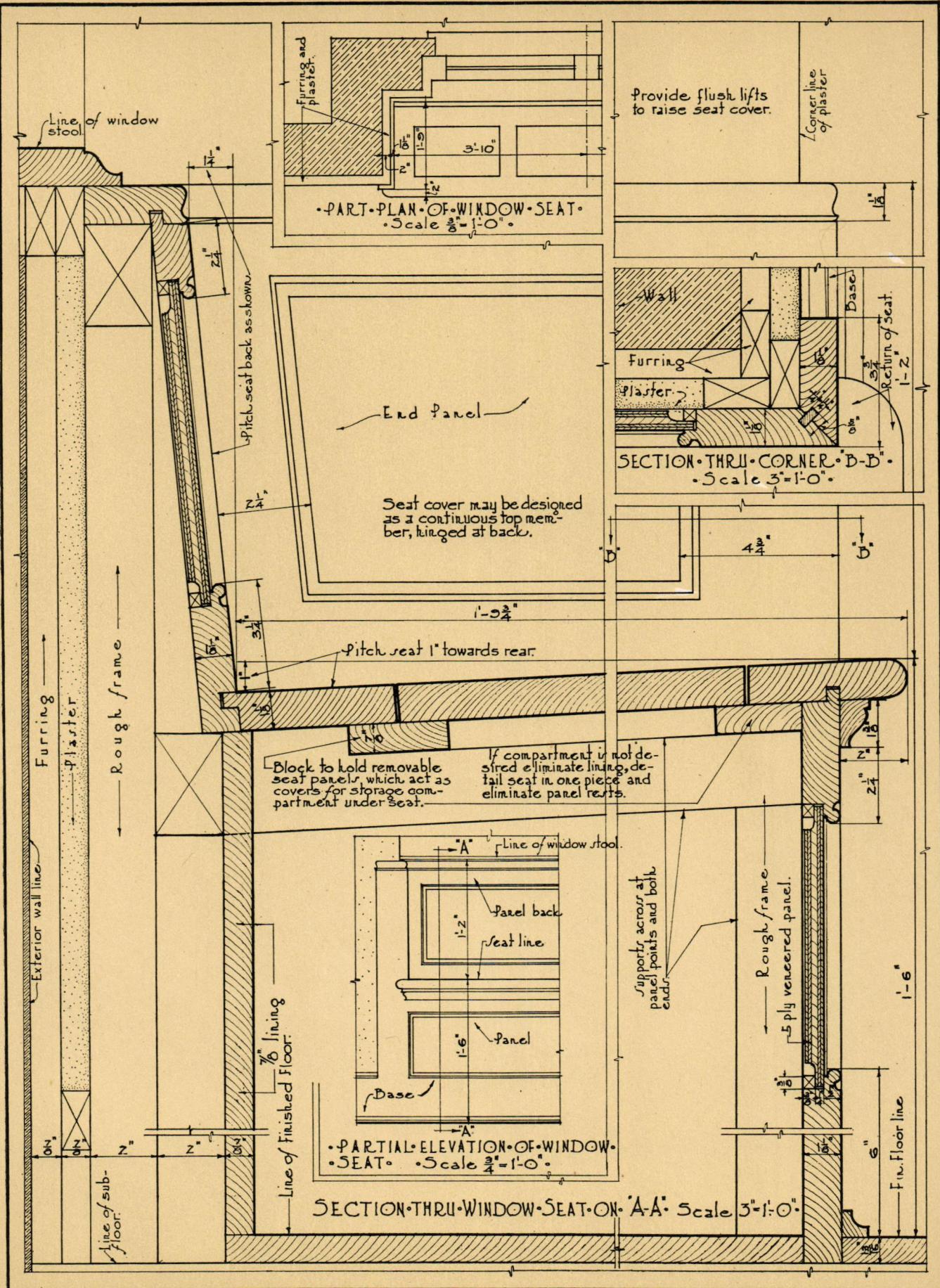
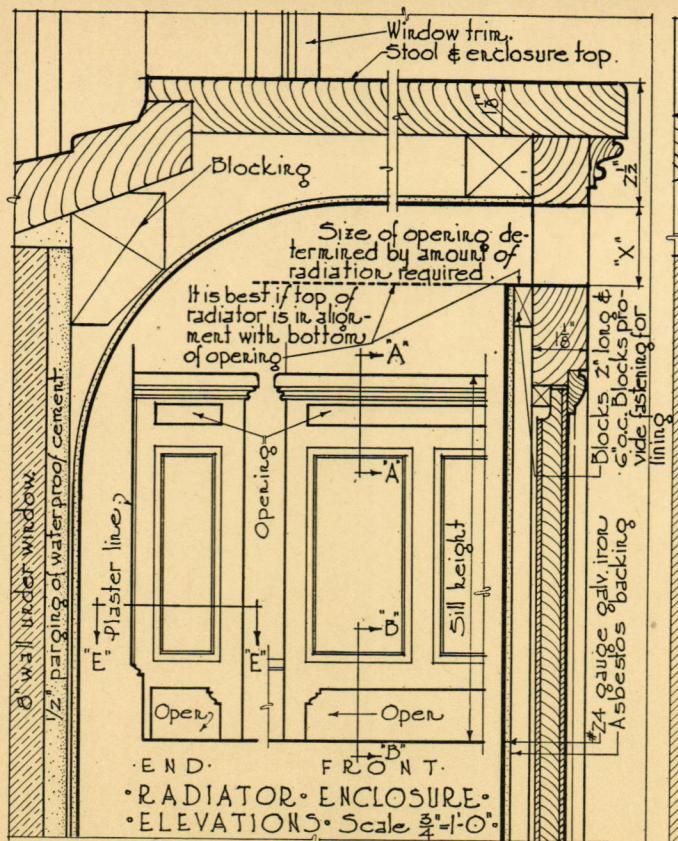
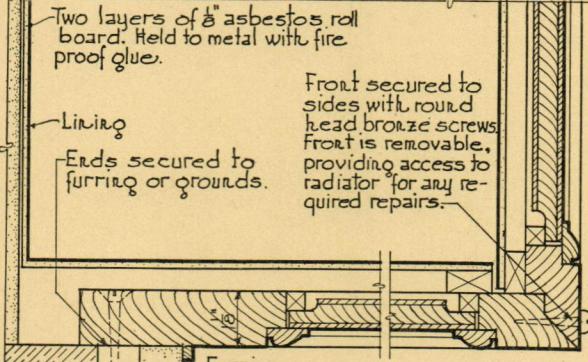


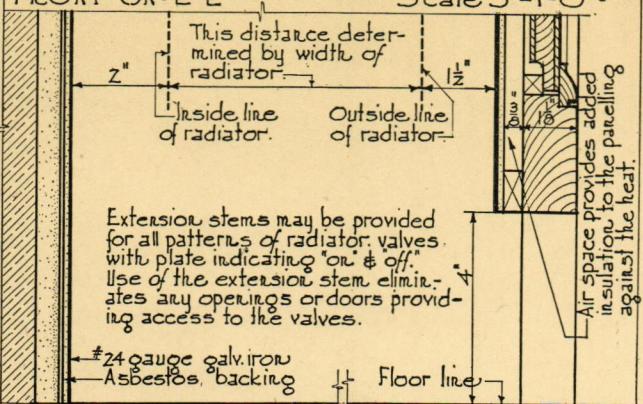
PLATE 33, WOOD WINDOW SEAT



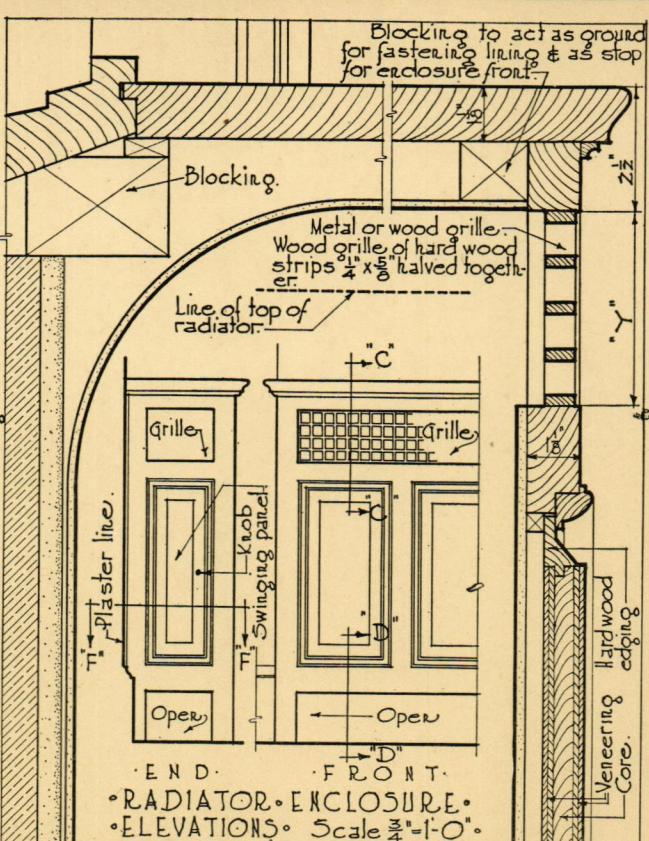
SECTION THRU TOP OF ENCLOSURE SHOWING OPENING WITHOUT THE GRILLE. Scale 3"-1'-0".



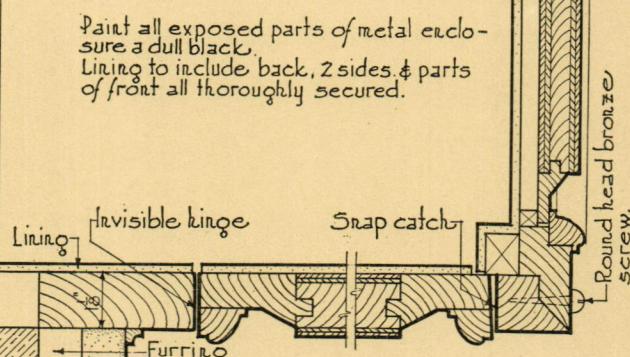
SECTION THRU SIDE SHOWING REMOVABLE FRONT ON "E-E". Scale 3"-1'-0".



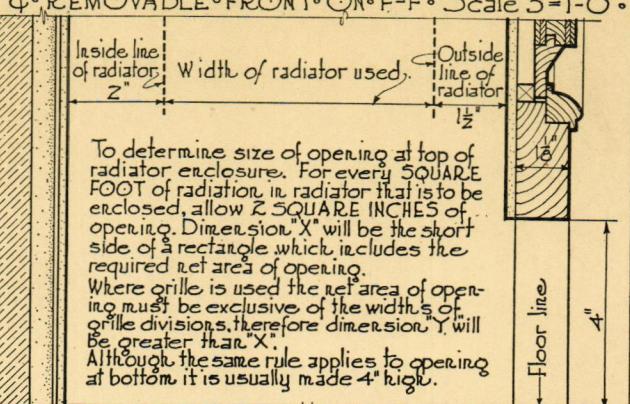
SECTION THRU BOTTOM OF ENCLOSURE ON "D-D". Scale 3"-1'-0".



SECTION THRU TOP OF ENCLOSURE HAVING METAL OR WOOD GRILLE ON "C-C". Scale 3"-1'-0".



SECTION THRU SIDE SHOWING PANEL DOOR & REMOVABLE FRONT ON "F-F". Scale 3"-1'-0".



SECTION THRU BOTTOM OF ENCLOSURE ON "D-D". Scale 3"-1'-0".

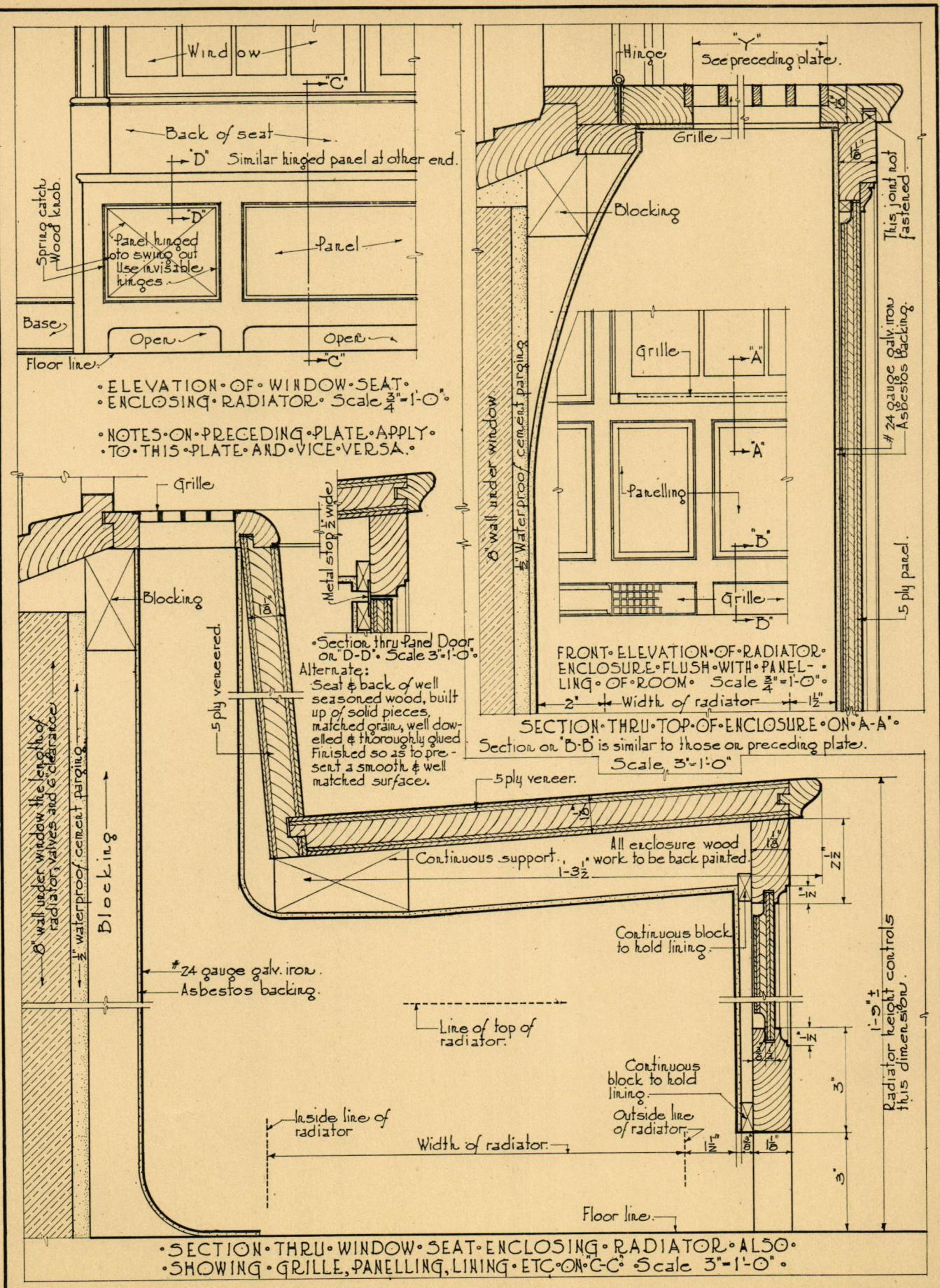


PLATE 35, RADIATOR ENCLOSURES, II

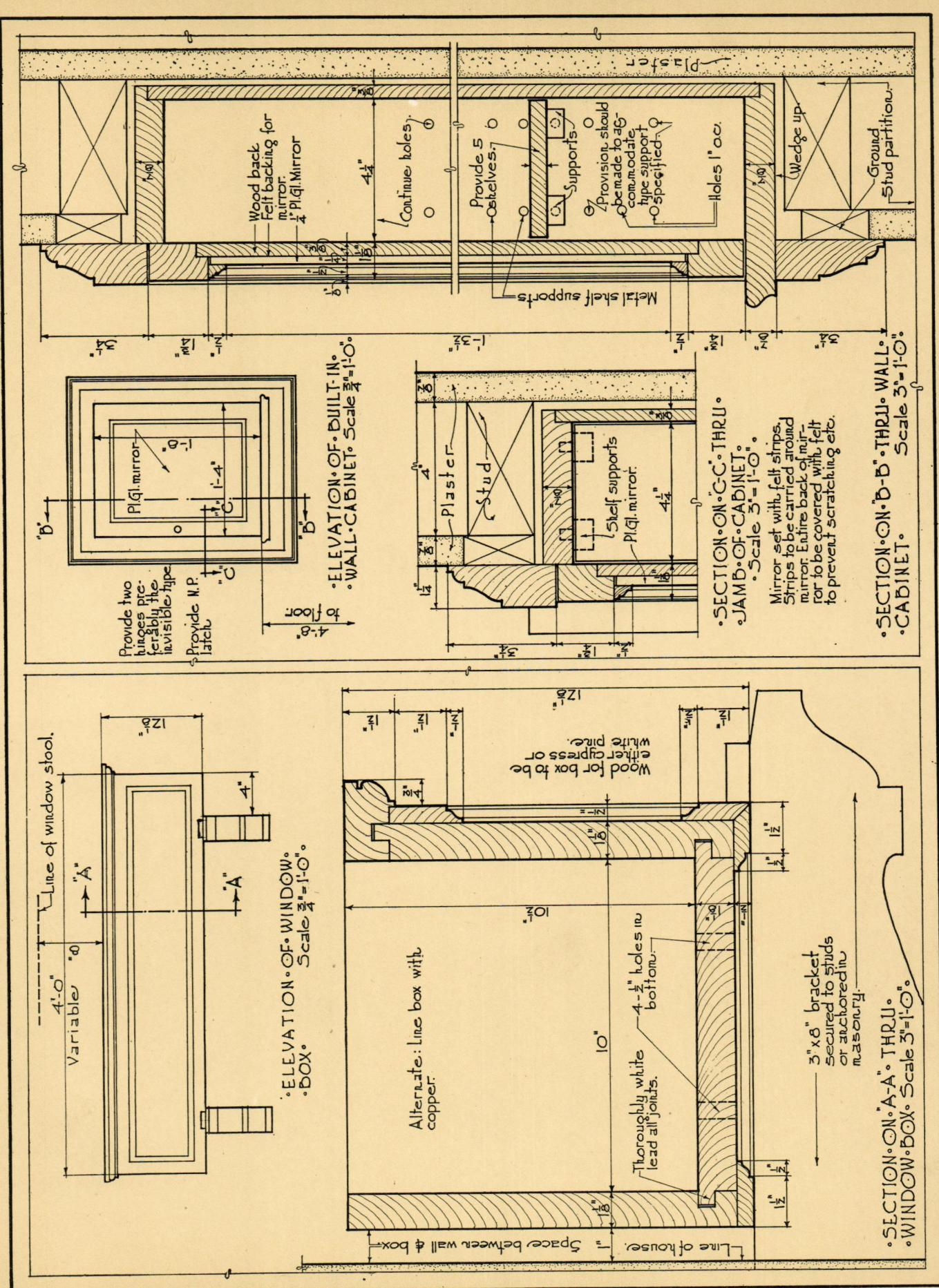


PLATE 36, WINDOW BOX AND WALL CABINET

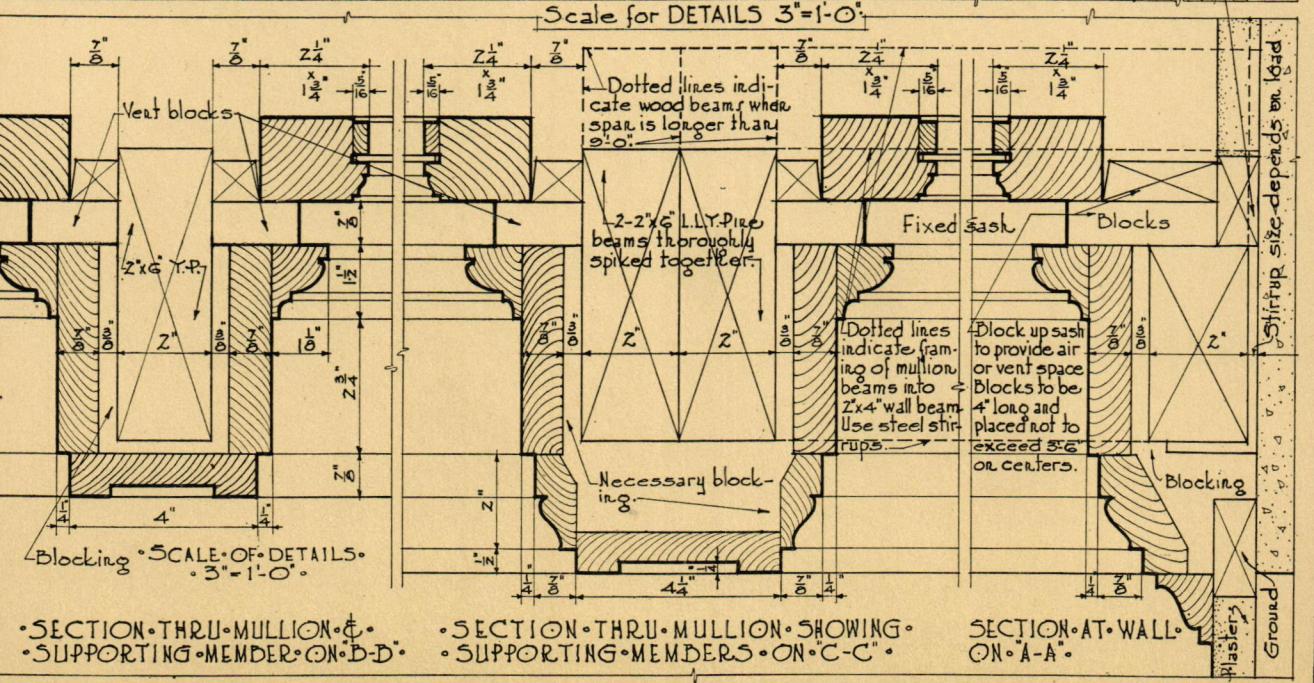
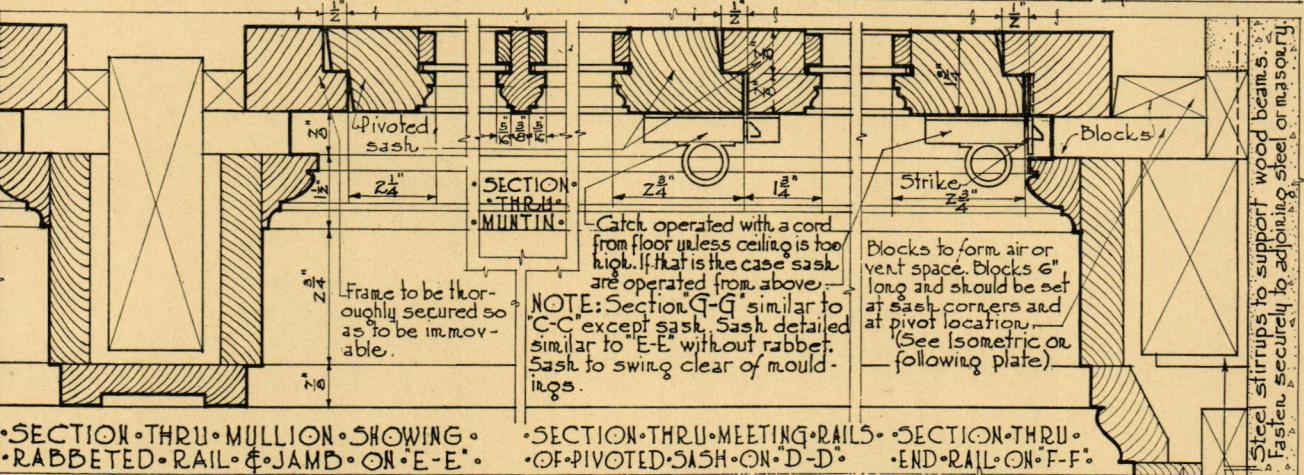
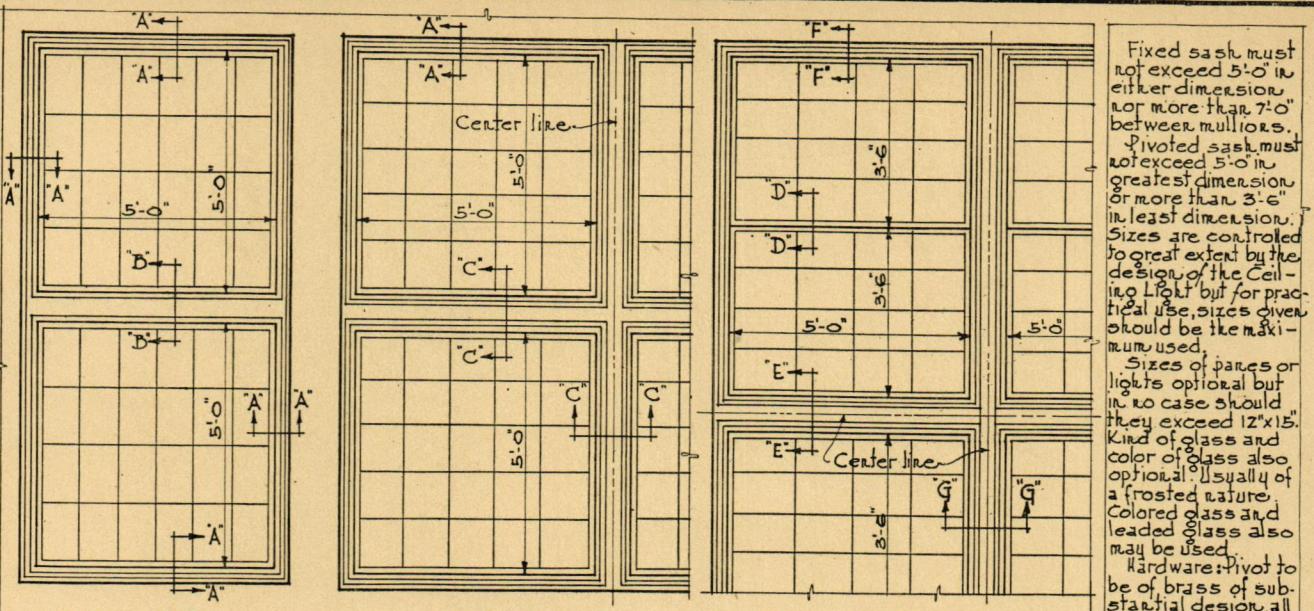
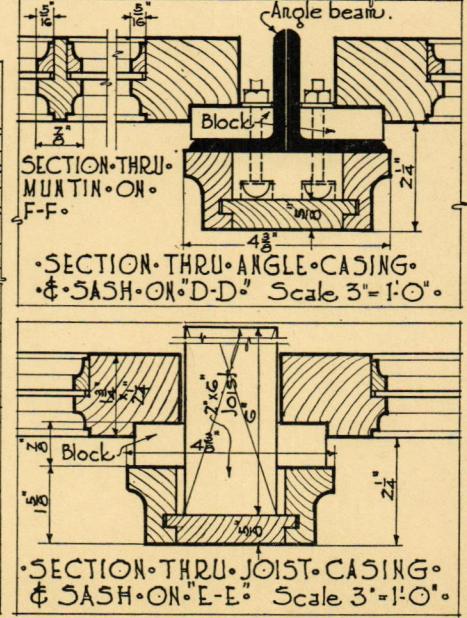
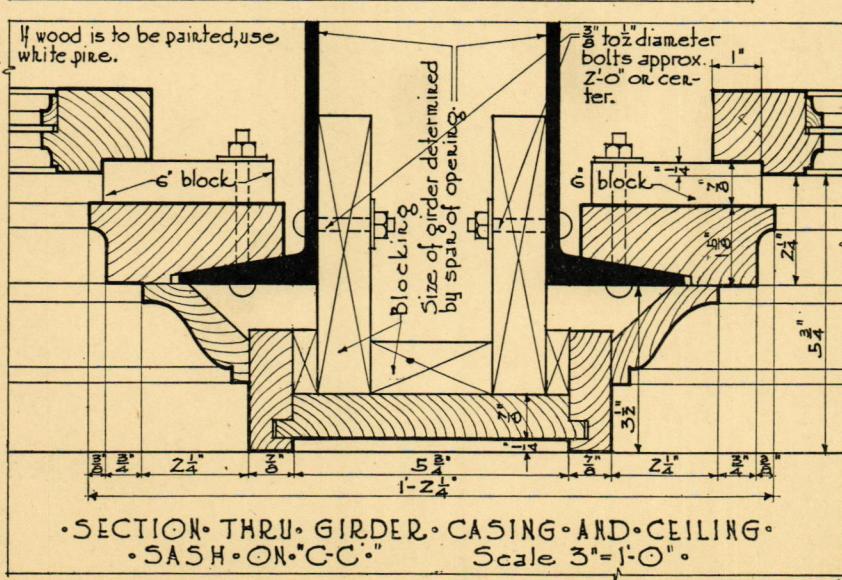
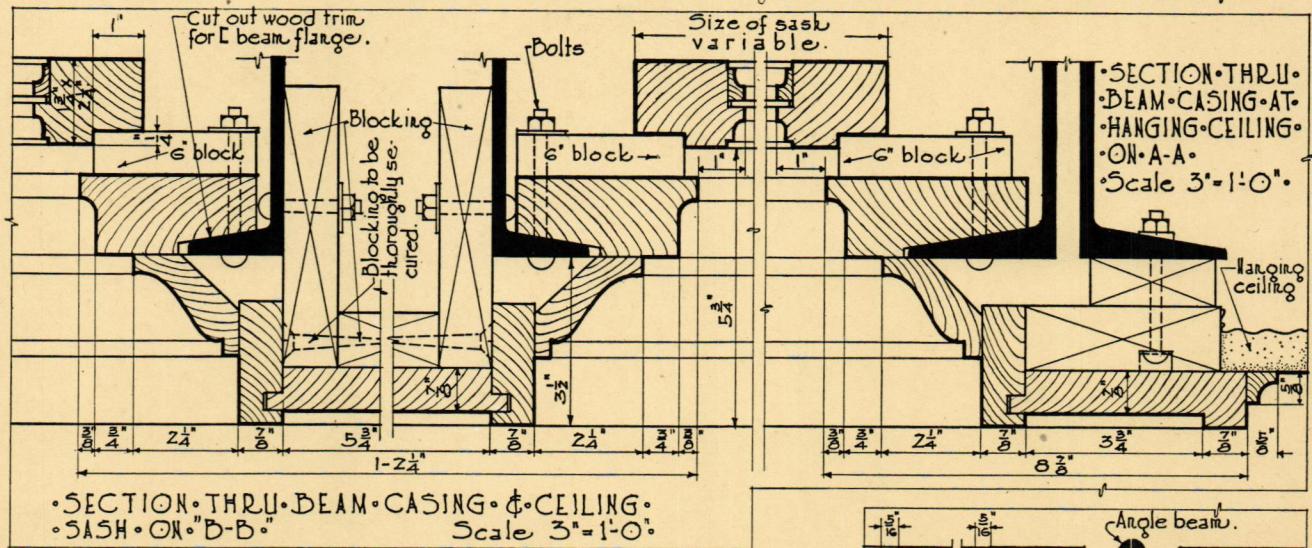
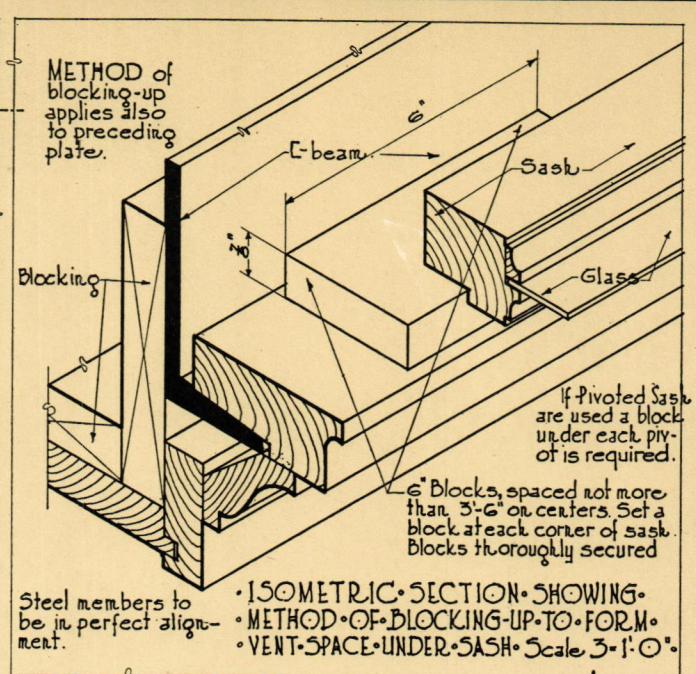
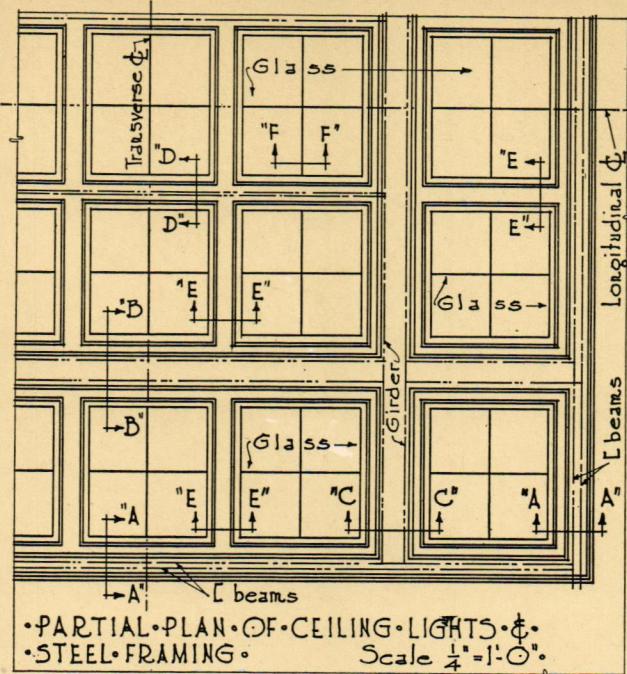


PLATE 37, CEILING LIGHTS, WOOD FRAMING



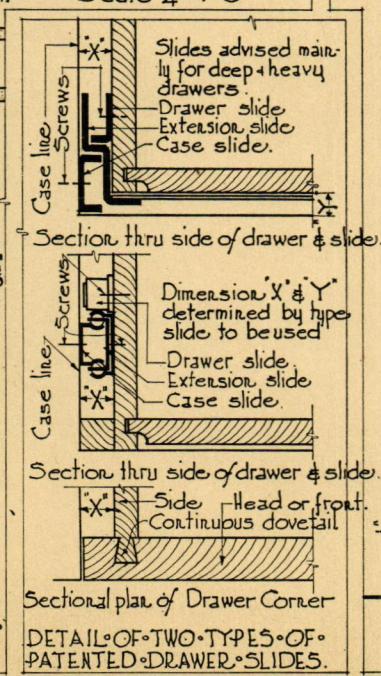
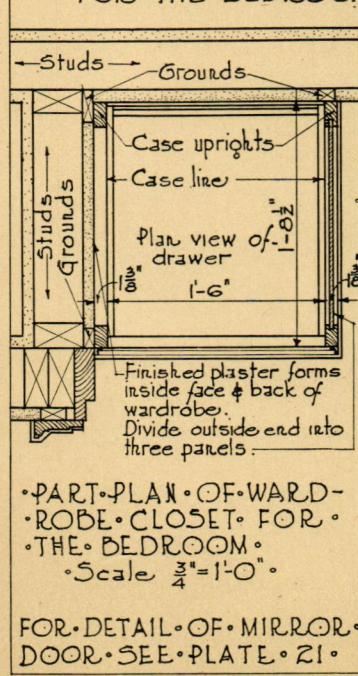
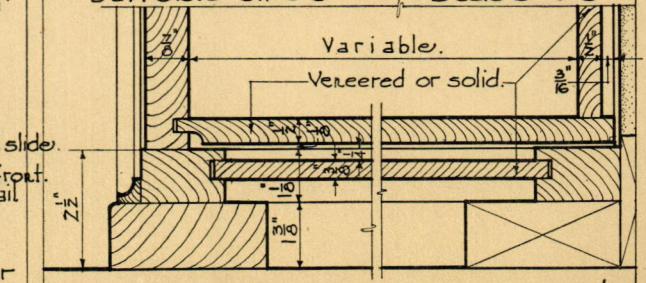
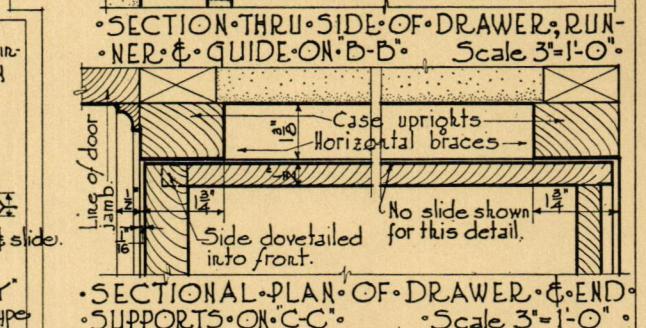
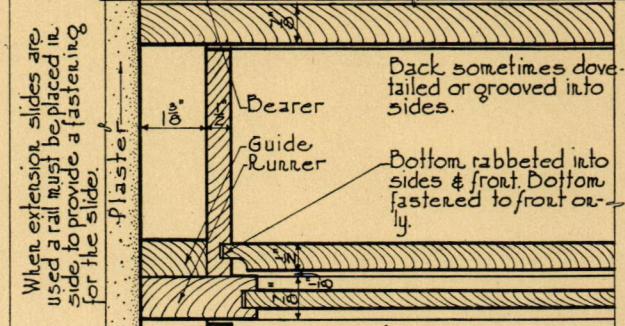
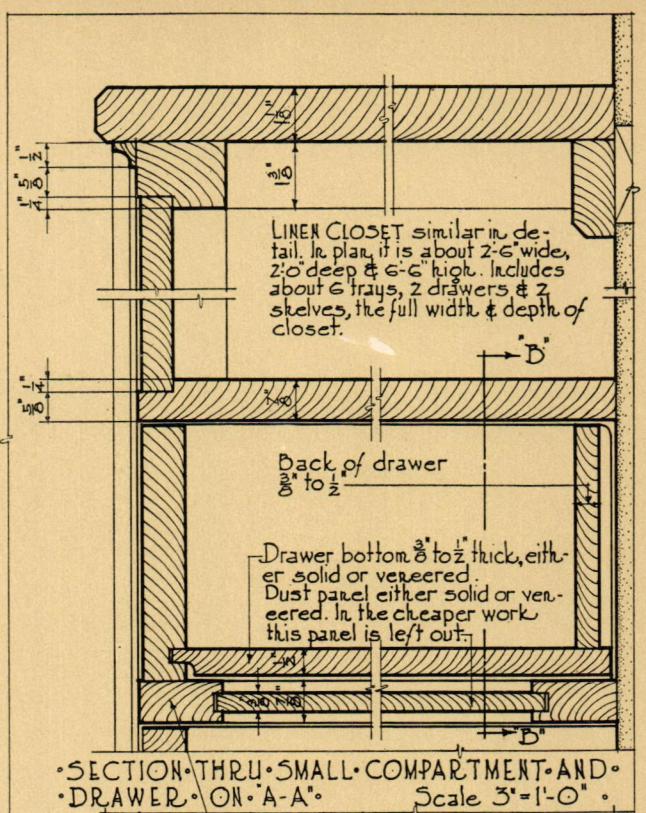
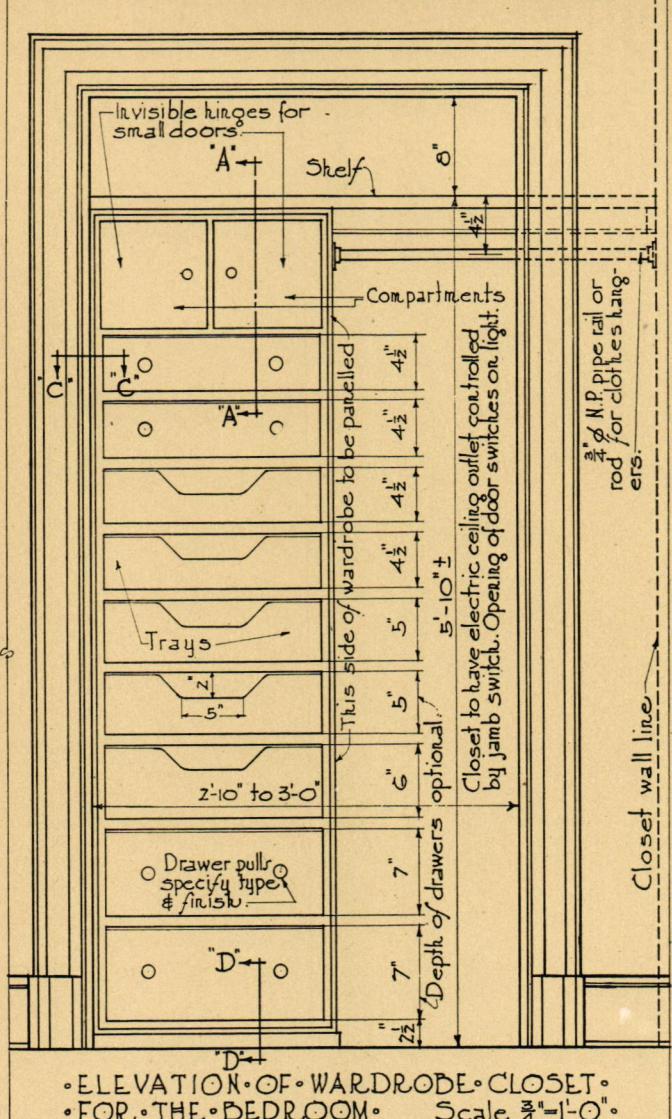


PLATE 39, BUILT-IN WARDROBE

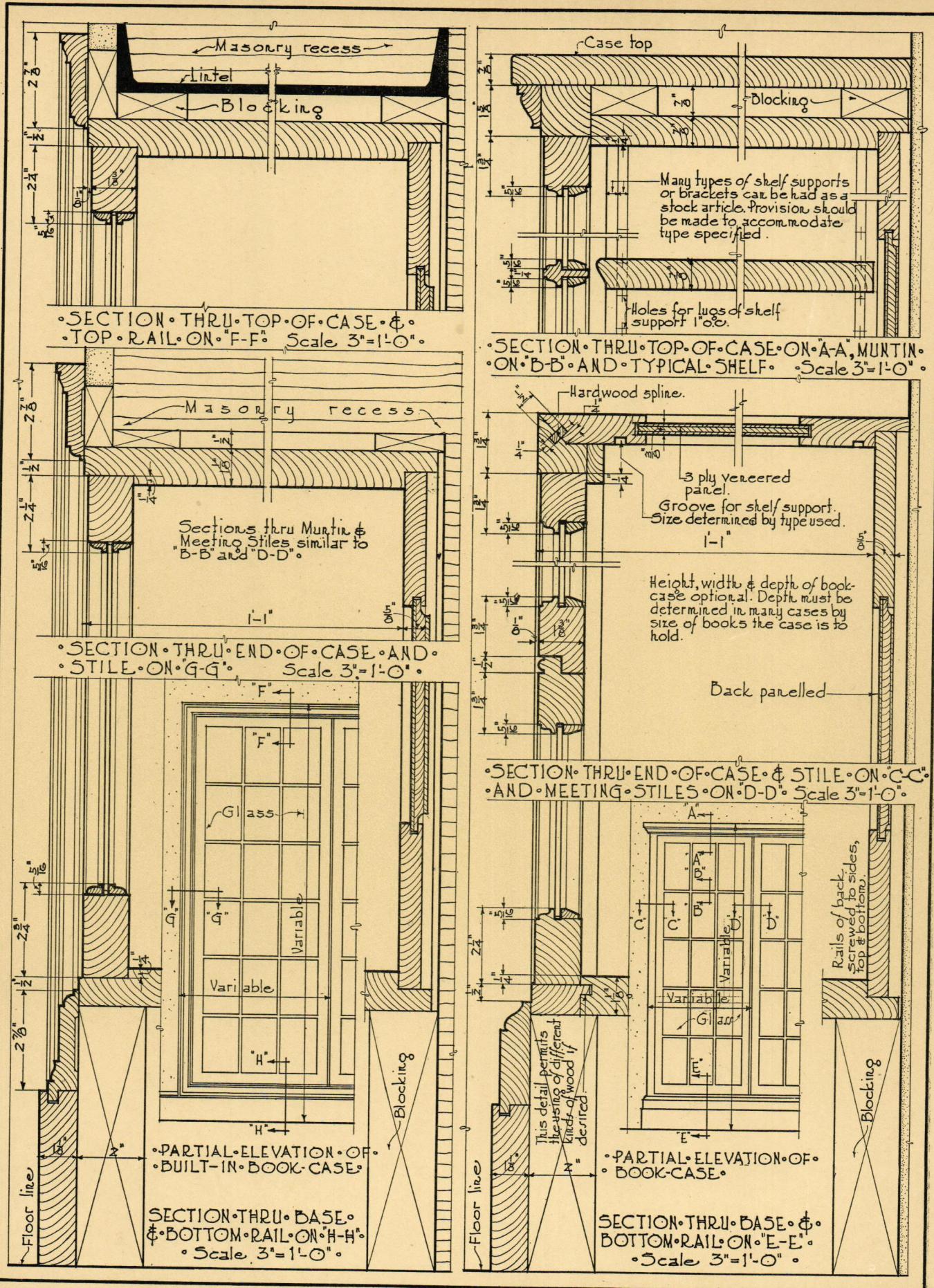


PLATE 40, BOOKCASES

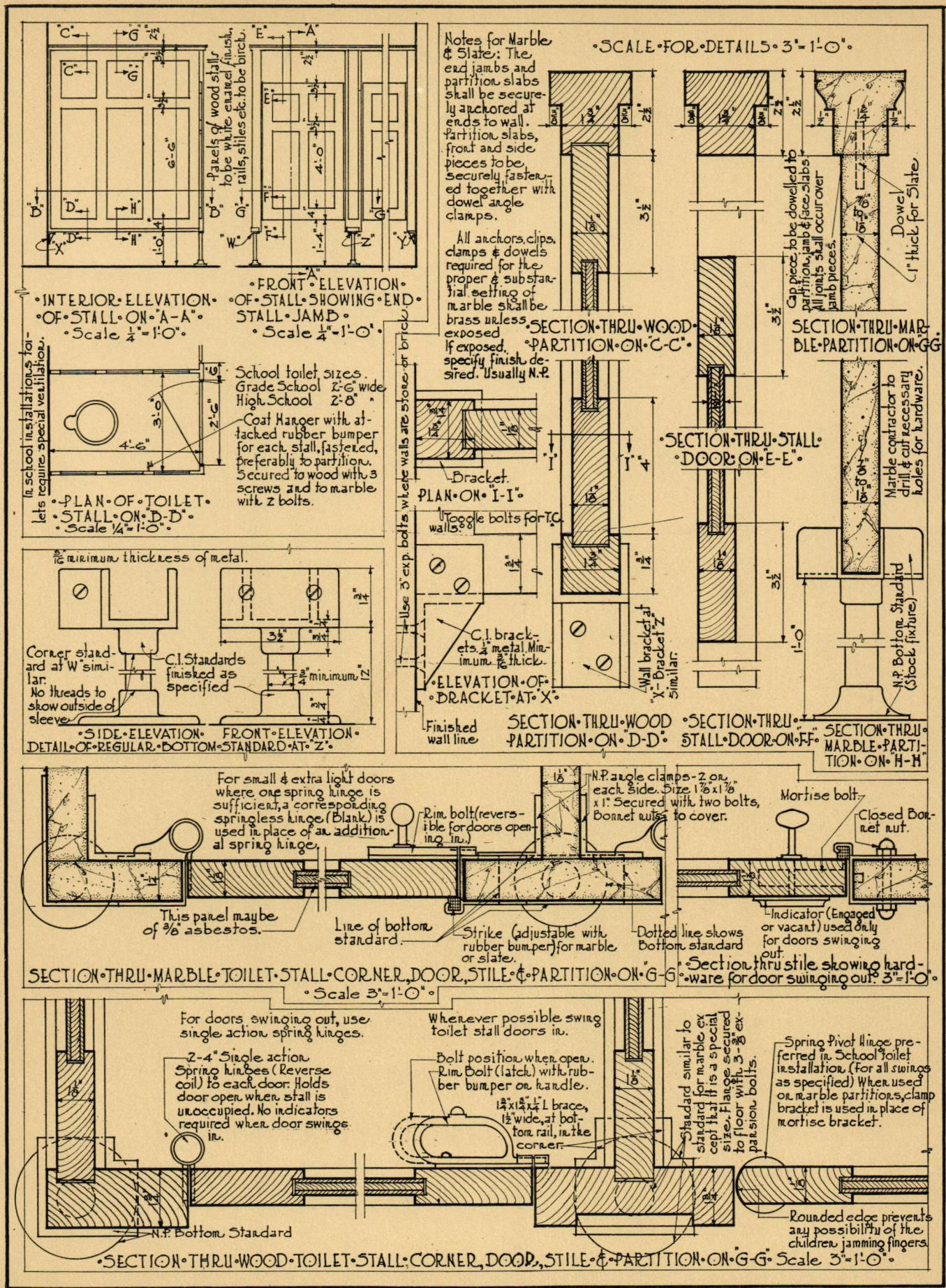
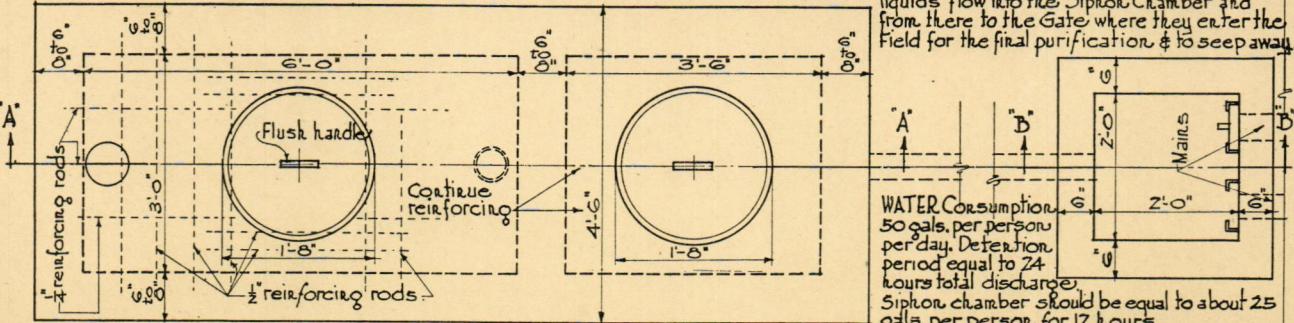


PLATE 41, TOILET STALLS

Oversize tank allows for efficient handling of sewage and prevents trouble later of clearing prematurely due to clogging of sludge.

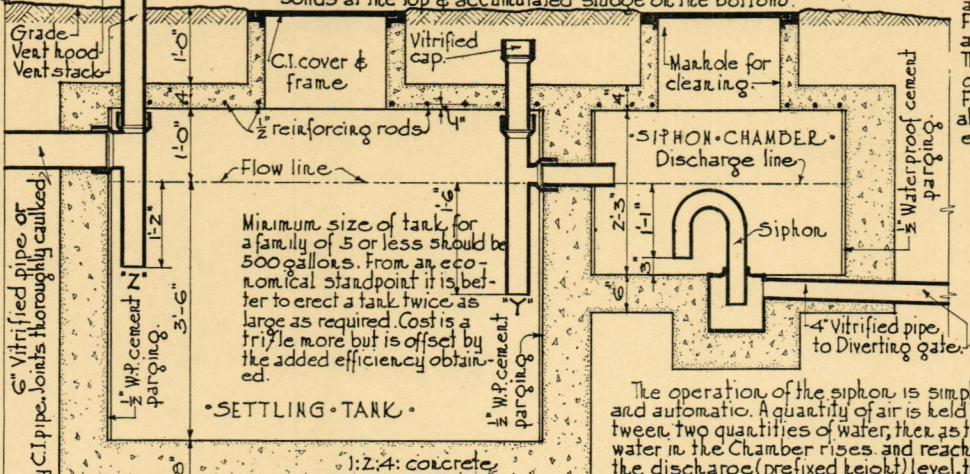
PROCEDURE: Sewage enters Settling Tank from House Sewer. Here settlement & septicization commences. The organic matter, by action of the bacteria, is broken up & partly converted into liquids & gases. The liquids flow into the Siphon Chamber and from there to the Gate where they enter the Field for the final purification & to seep away.



Tile from House to Tank to be sewer pipe (bell spigot type) laid on even grade & in alignment, joints filled solid with mortar with full bevel.

• PLAN OF SEPTIC TANK. Scale $\frac{3}{8} = 1'-0"$.

Submerged inlet 'Z' allows sewage to enter tank without disturbing floating solids. Submerged outlet 'Y' allows overflow from a point between floating solids at the top & accumulated sludge at the bottom.

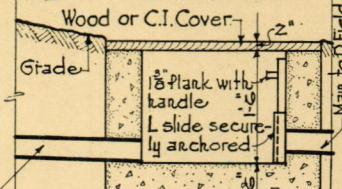


Various siphons are to be had and instructions for installation are furnished with siphon.

- SECTION THRU SEPTIC TANK (SETTLING TANK & SIPHON OR DOSING CHAMBER) ON "A-A".
- Scale $\frac{3}{8} = 1'-0"$.

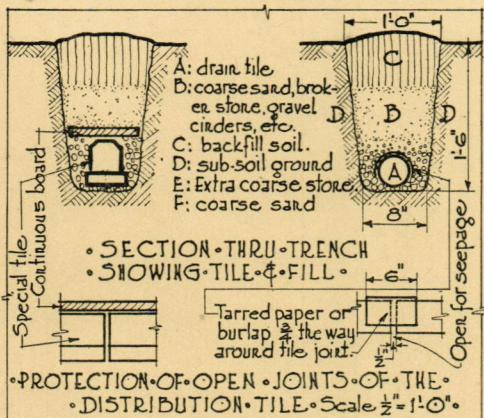
No chemicals to be used in tank

The Diverting Gate permits us to alternate in using the Distribution Field & allows half of Field to drain & aerate while balance is in use. This method especially desired in close or hard soil. The effectiveness of the Field will be aided & extended. It will also allow the cleaning & repairing of either $\frac{1}{2}$ without inconvenience.



Patented metal gates may be had; also specially shaped tile connections.

- SECTION THRU DIVERTING GATE ON "B-B".
- Scale $\frac{3}{8} = 1'-0"$.

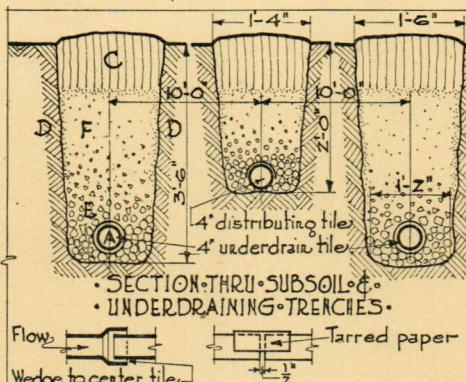


- SECTION THRU TRENCH SHOWING TILE & FILL.

• PROTECTION OF OPEN JOINTS OF TILE.

• DISTRIBUTION TILE. Scale $\frac{3}{8} = 1'-0"$.

MISCELLANEOUS NOTES: Tile may underdrain into stream if stream is not used for drinking purposes and is flowing with sufficient volume. Where soil is only 2 or 3 ft. above water level, system will not be satisfactory. Where soil possesses extreme porosity, tile may be placed directly in trench with use of cinders or other fill omitted. It is better to install tile in excess of that required. Tile to be Hard Burned Drain Tile, 1'-0" lengths.

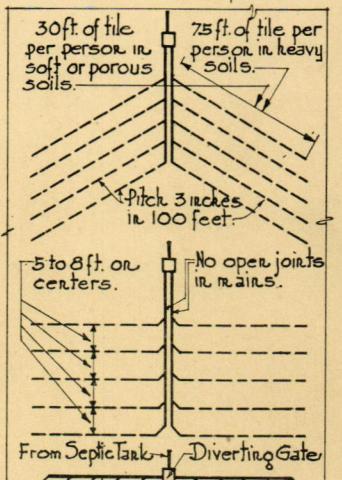


- SECTION THRU SUBSOIL & UNDERDRAINING TRENCHES.

• PROTECTION OF OPEN JOINTS OF DISTRIBUTION TILE.

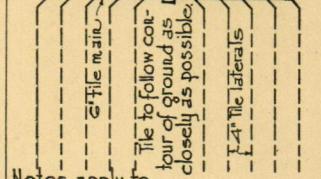
• Scale $\frac{3}{8} = 1'-0"$.

In very heavy soil it will be necessary to underdrain the subsoil area thoroughly. It is best to run the underdrain lines between the distributing lines. If there is not sufficient area for this plan the under & distributing drains should be located in one trench. In this case the underdrain is laid on the bottom of the 4 ft. trench with the distributing drain 3 ft. above and the trench filled in a similar manner as per above details.



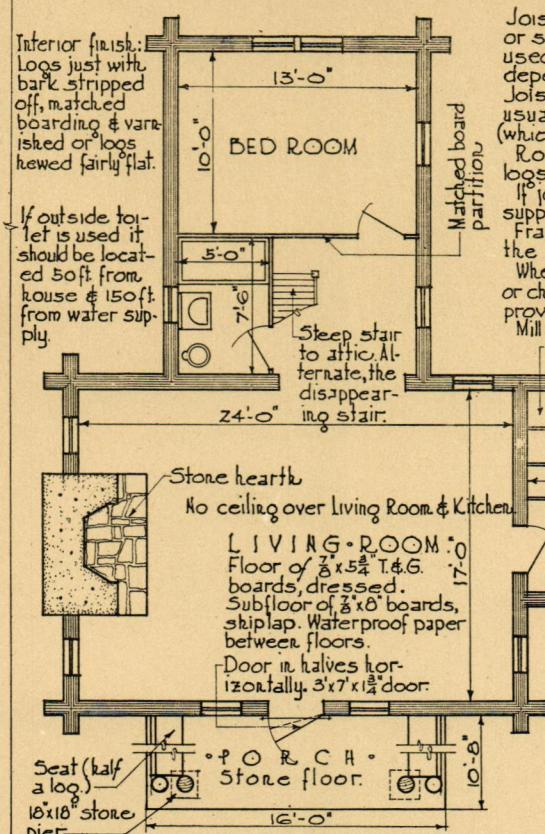
5 to 8 ft. on centers. No open joints in mains.

From Septic Tank Diverting Gate



Notes apply to all 3 field plans

- SUGGESTION FOR TILE.
- FIELD INSTALLATIONS FLAT OR SLIGHTLY SLOPING GROUND.

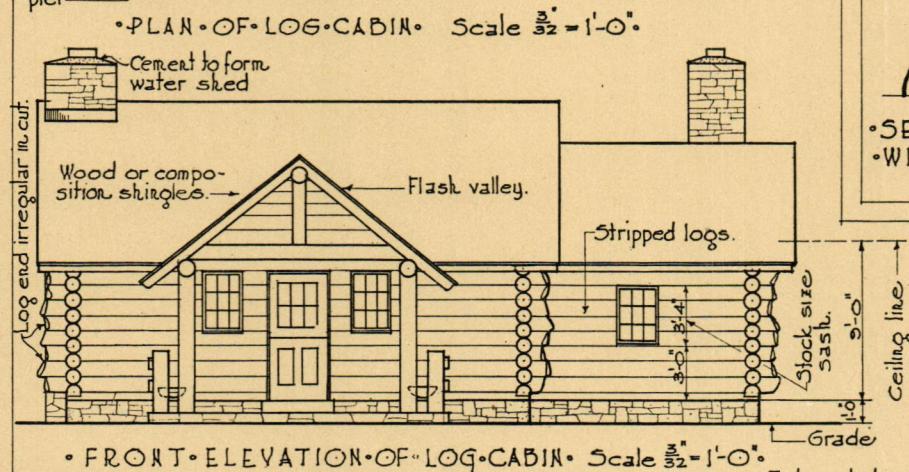


Interior finish: Logs just with bark stripped off, matched boarding & varnished or logs hewed fairly flat.

If outside toilet is used it should be located 50 ft. from house & 150 ft. from water supply.

Joists cut from log with broadaxe, or smaller stripped logs can be used. Size of joists or girders depends on length of span. Joists tenoned into wall log (which will receive them) is in place. Roof rafters 6' to 8' rough hewed logs.

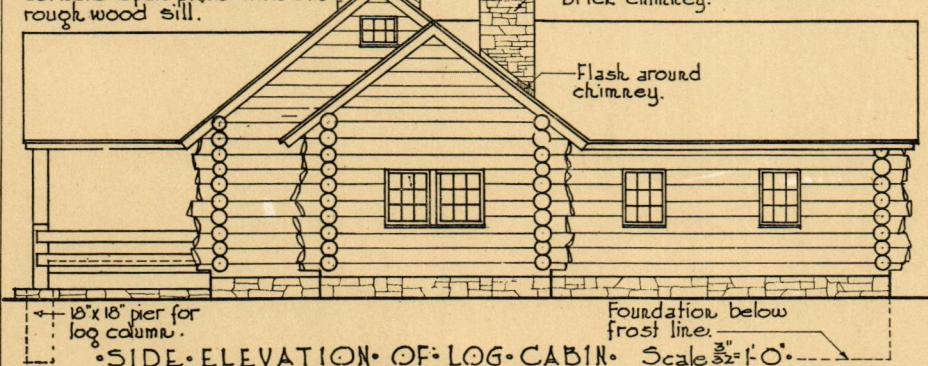
If joist span is too great, vertical supports must be installed. Framing of stair well, done in the usual way. When inside toilet is used, a septic or chemical tank must be used to provide for sewage disposal. Mill cut joist & rafters also used. Dresser



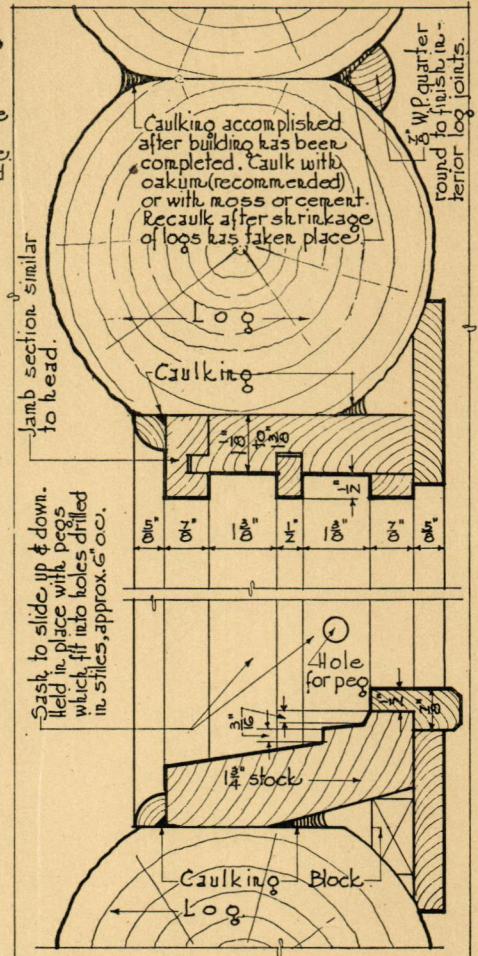
FRONT ELEVATION OF LOG CABIN. Scale $\frac{3}{32} = 1'-0"$.

Alternate foundation: Stone pier - 18"x18"-at each corner and 8'-0" o.c. between corners. Span piers with 8x8 rough wood sill.

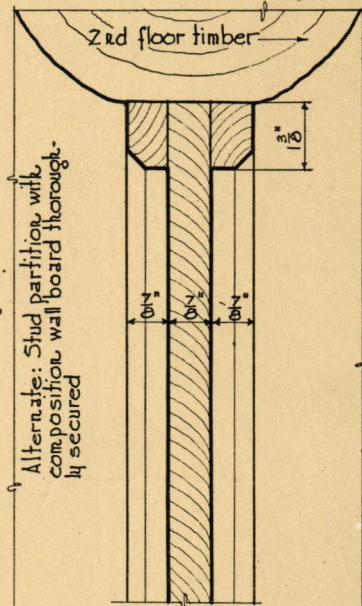
Timbers to be sound, straight & uniform. Either hemlock, spruce or fir, 6" to 10" diameter.



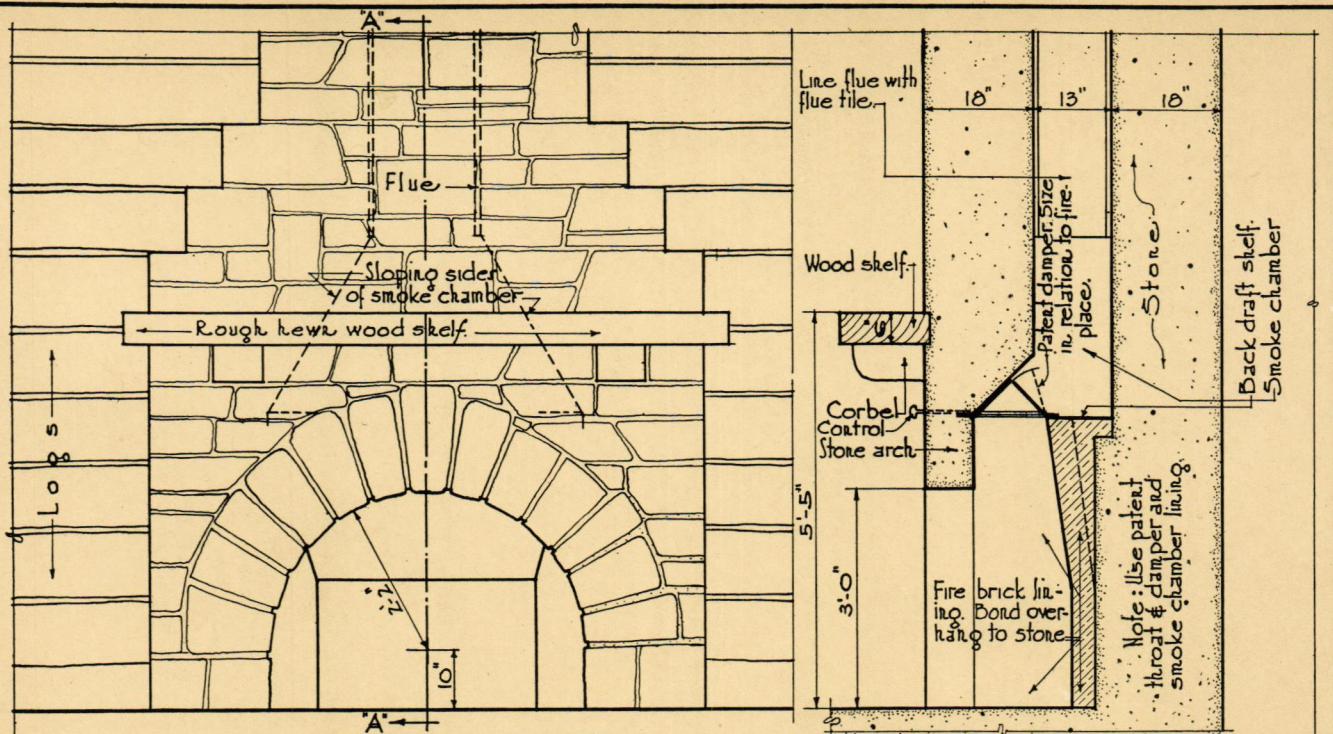
SIDE ELEVATION OF LOG CABIN. Scale $\frac{3}{32} = 1'-0"$.



SECTION THRU SILL & HEAD OF WINDOW SHOWING CAULKING. Scale $3" = 1'-0"$.

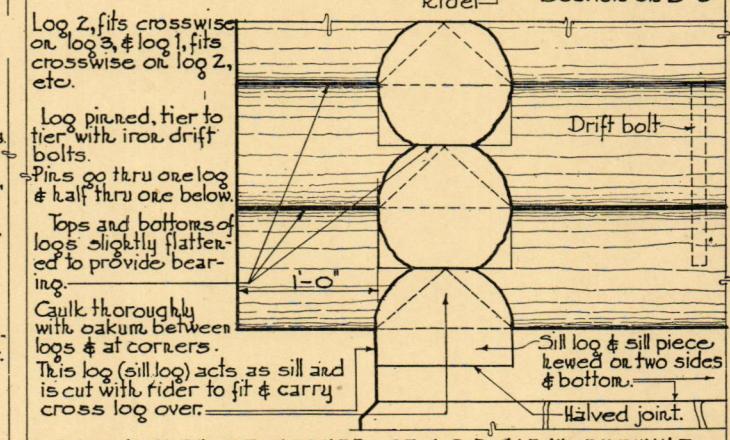
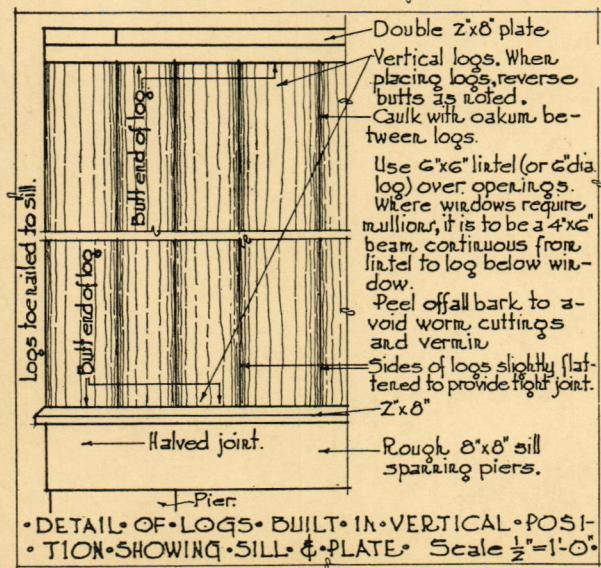
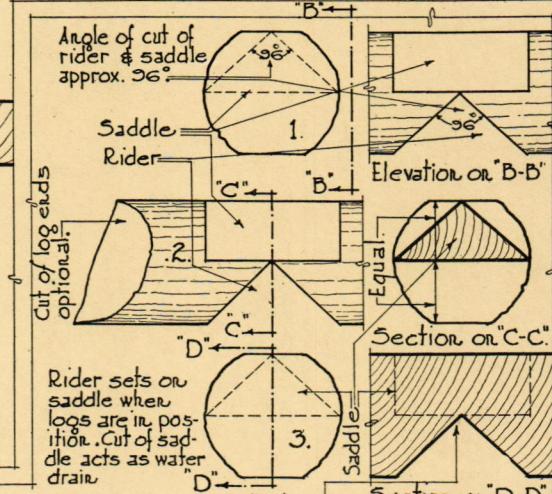
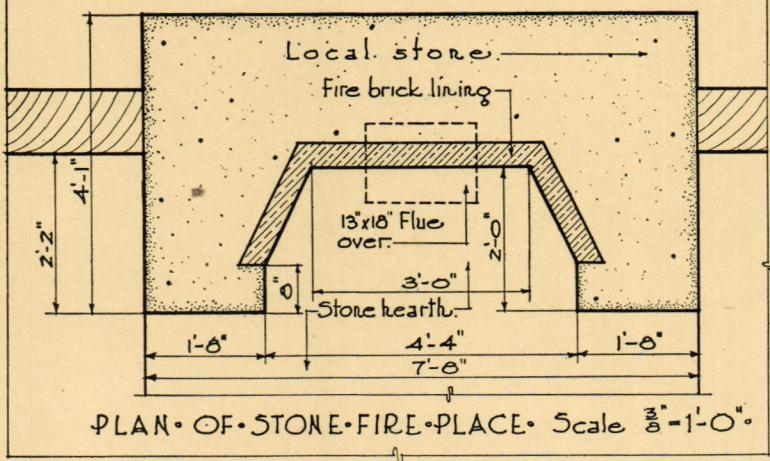


SECTION THRU PARTITION OF MATCHED & BEADED T&G BOARDS. Scale $3" = 1'-0"$.



ELEVATION OF CHIMNEY IN.
LIVING ROOM. Scale $\frac{3}{8}'' = 1'-0''$.

SECTION THRU FIRE-PLACE.
ON LINE "A-A". Scale $\frac{3}{8}'' = 1'-0''$.



ELEVATION OF CORNER OF LOG CABIN SHOWING LOGS IN POSITION... UPPER PART OF DRAWING... SHOWS LOGS RAISED TO PRESENT METHOD OF JOINING LOGS AT CORNER. Scale $\frac{1}{2}'' = 1'-0''$.

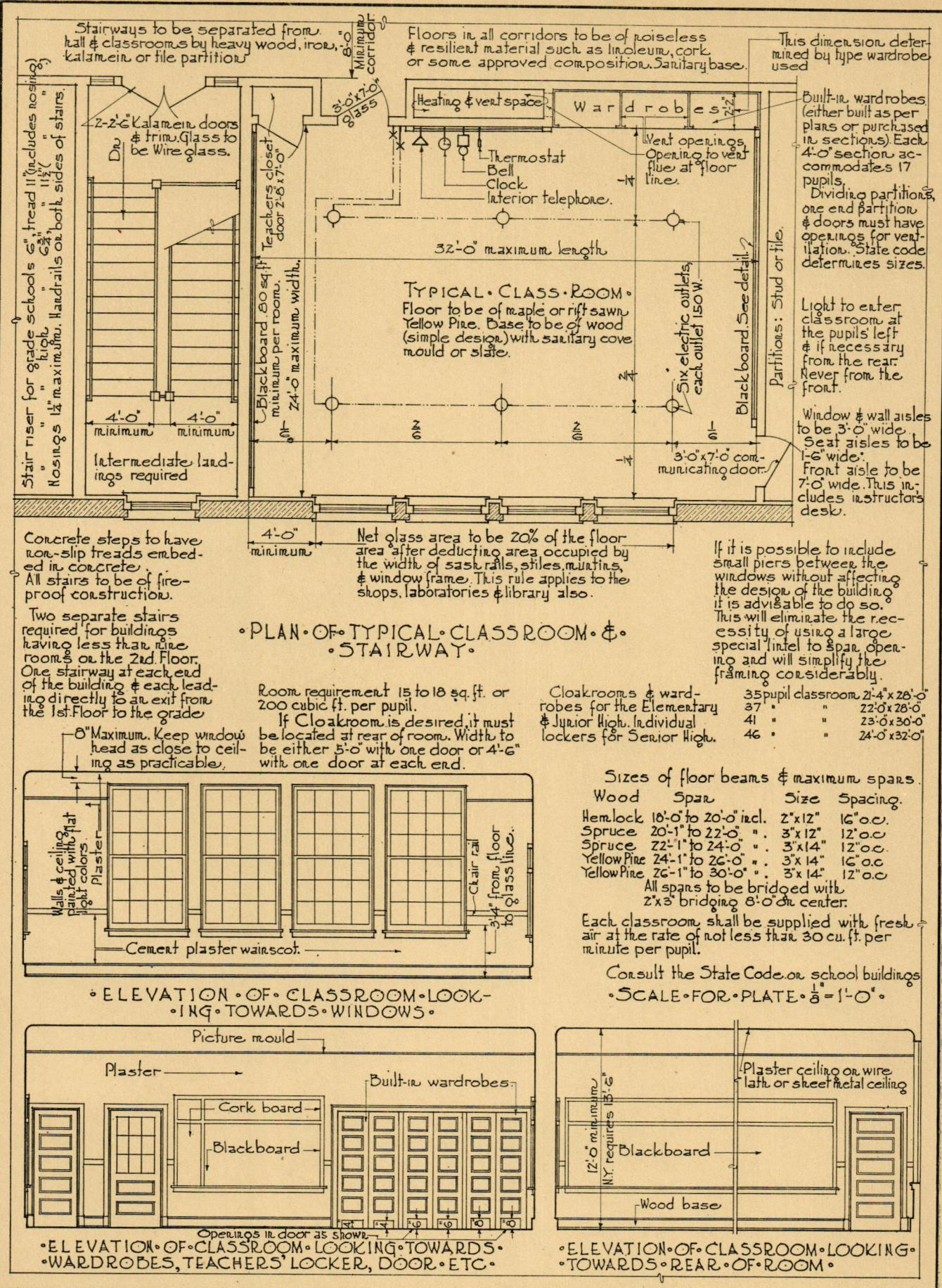


PLATE 45, TYPICAL SCHOOL CLASSROOM

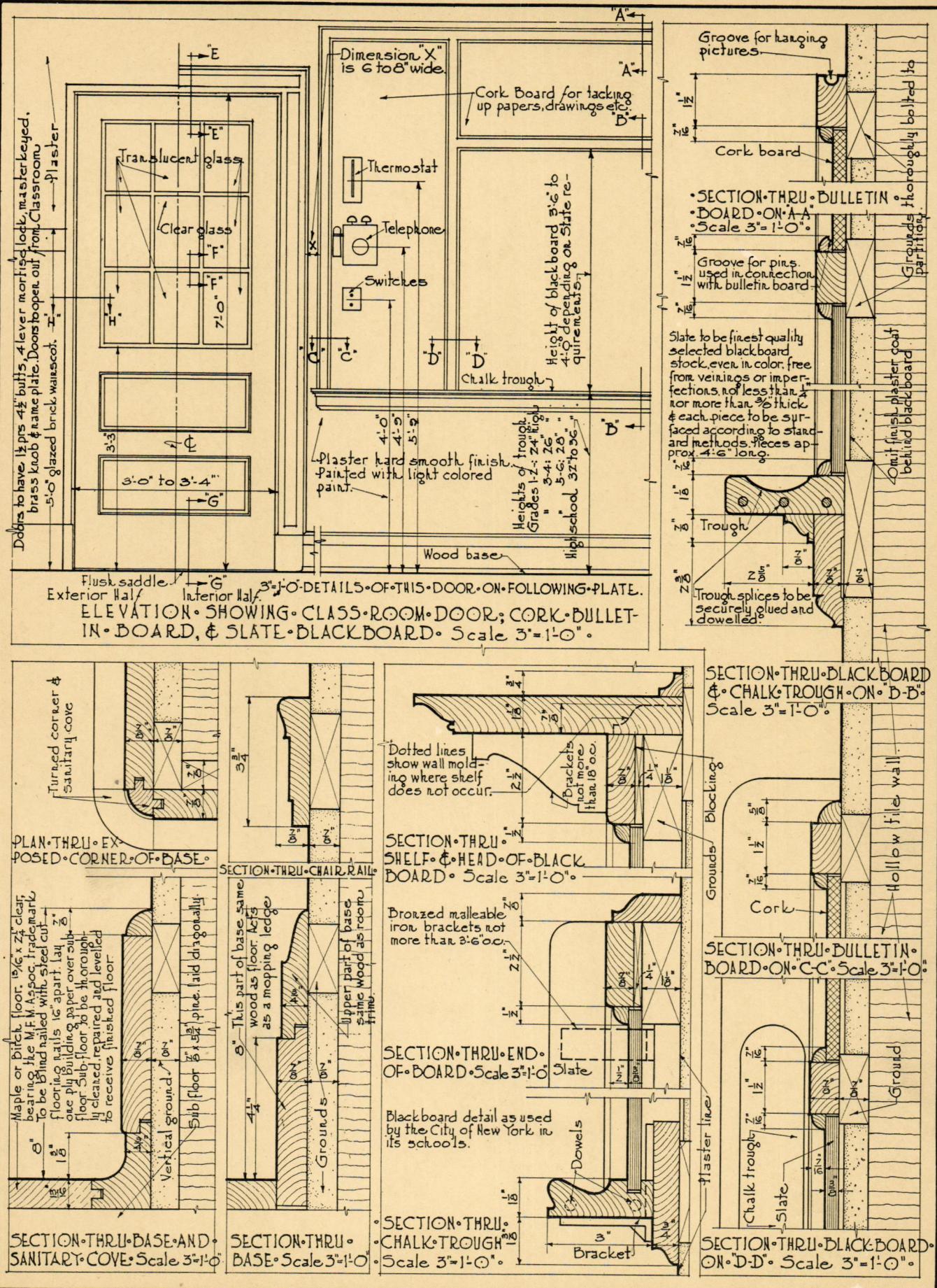


PLATE 46, BLACKBOARDS

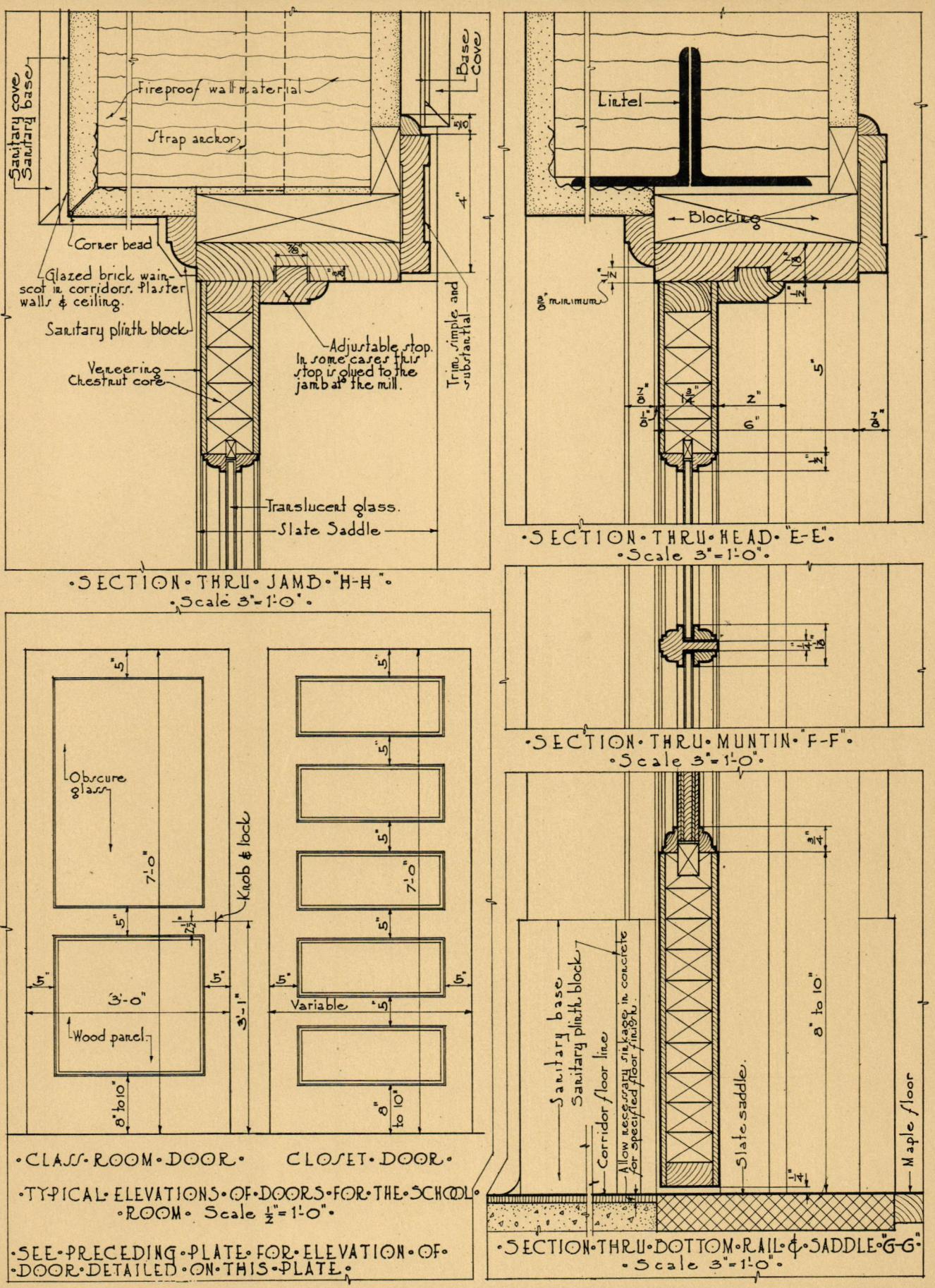


PLATE 47, SCHOOL DOORS

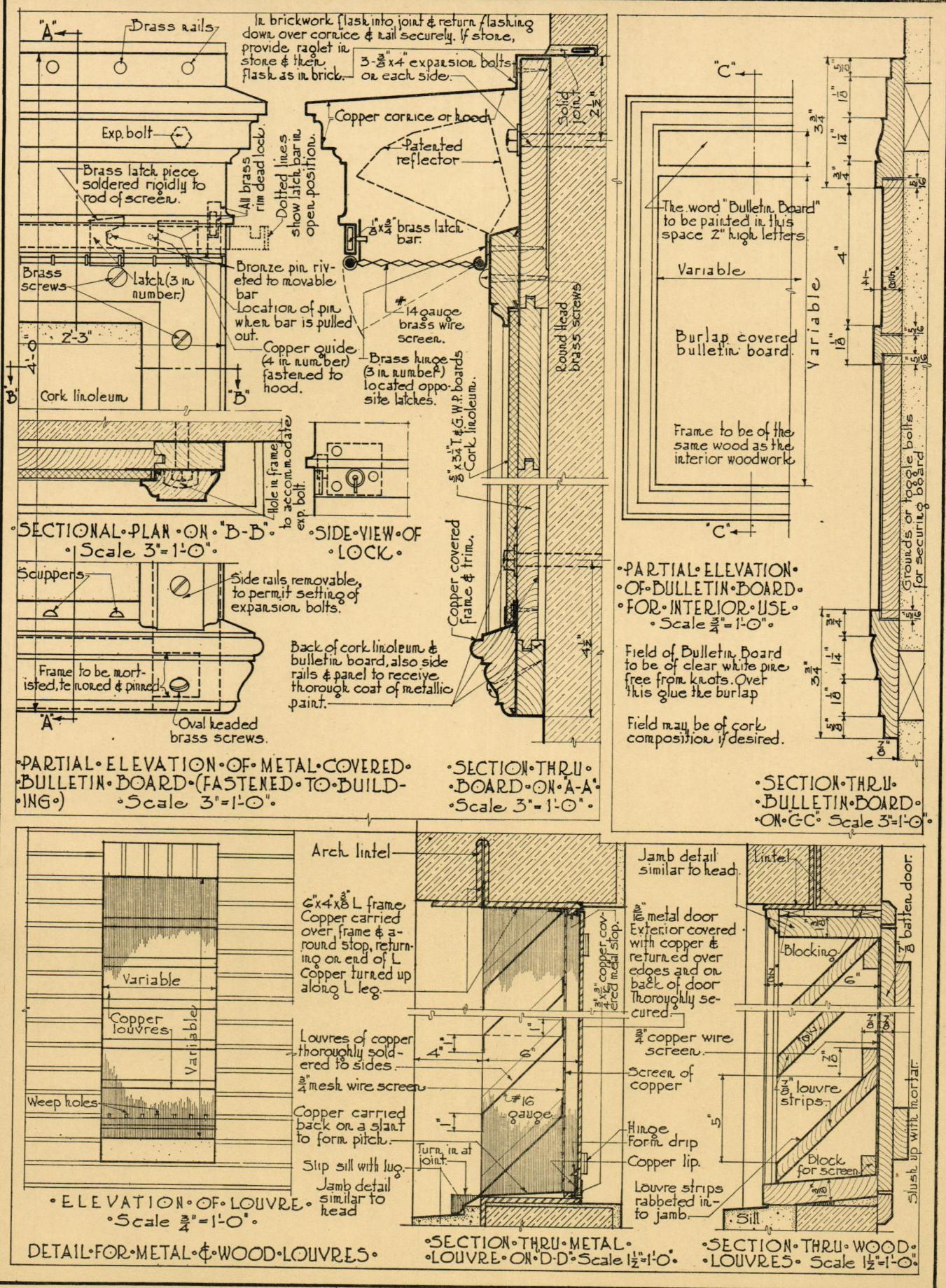


PLATE 48, BULLETIN BOARDS AND LOUVRES

Dimension "X" usually determined by theatre officials. This extra floor is placed as directed, usually where the director believes it most advantageous for the orchestra. Sometimes individual platforms are used so that some of the musicians are at different levels, in such cases these small platforms can be taken care of at a later date.

Proscenium opening approx. $\frac{3}{4}$ of width of the stage. Stage about 40 ft wide, and 50 ft deep.

Gridiron is the name given to framework that supports the scenery drops, etc. It is usually about 2 ft. higher than the proscenium arch.

For vaudeville, where more light is required, use double row of reflectors.

Orchestra floor pitched to provide a clear view of stage. Dimension "Y" to be as small practicable.

Minimum distance 3'-0".

7"x5" hardwood border pieces

Cement finish Double floor.

Continuous

gyp boarded to concrete.

Approx. 1'-3"

Variable.

Approx. 2'-0"

Variable.

Approx. 1'-3"

Maximum

allowance

for

reflectors.

Approx. 2'-0"

Variable.

Maximum

allowance

for

reflectors.

Approx. 2'-0"

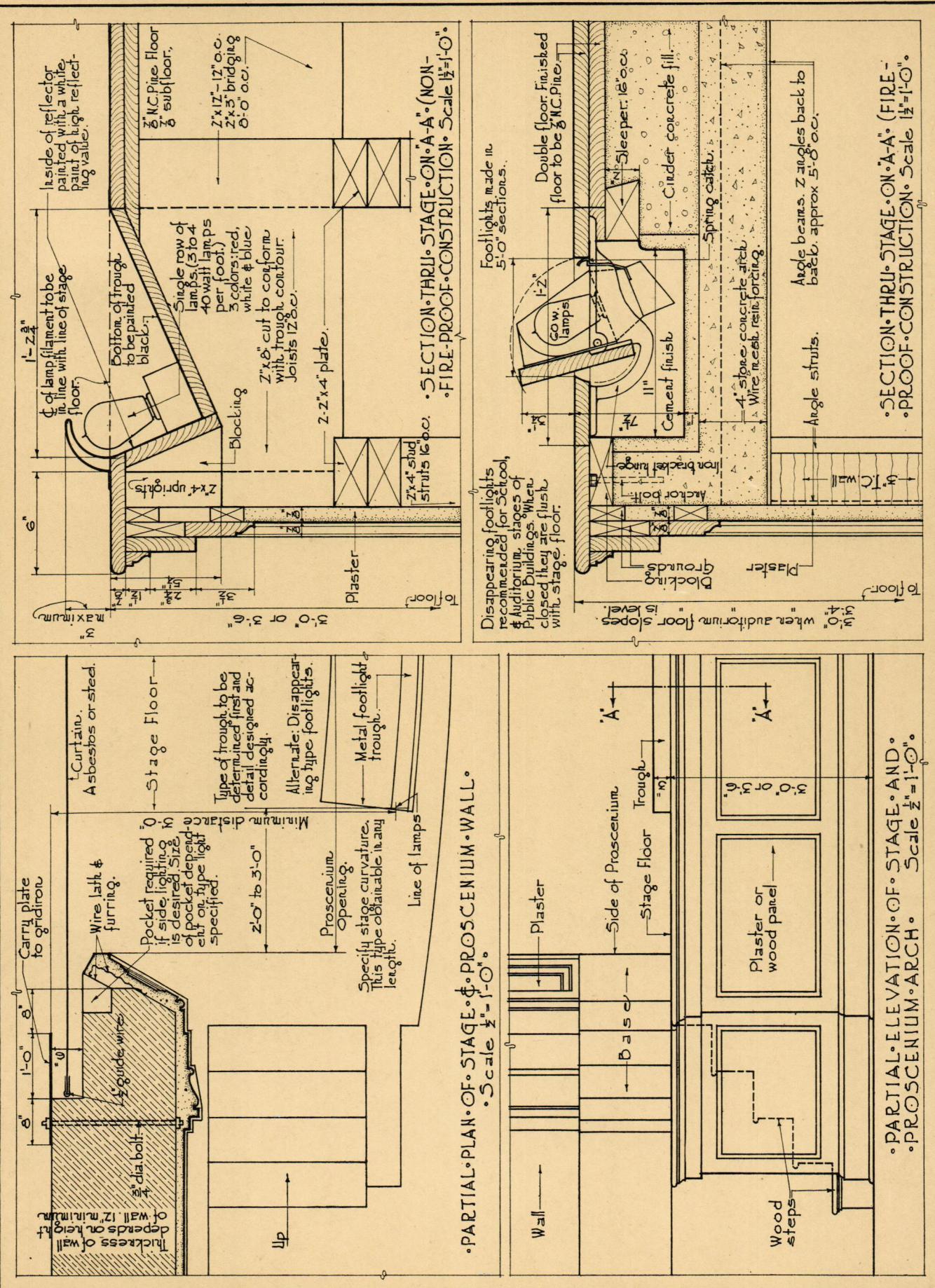


PLATE 50, STAGE DETAILS, II

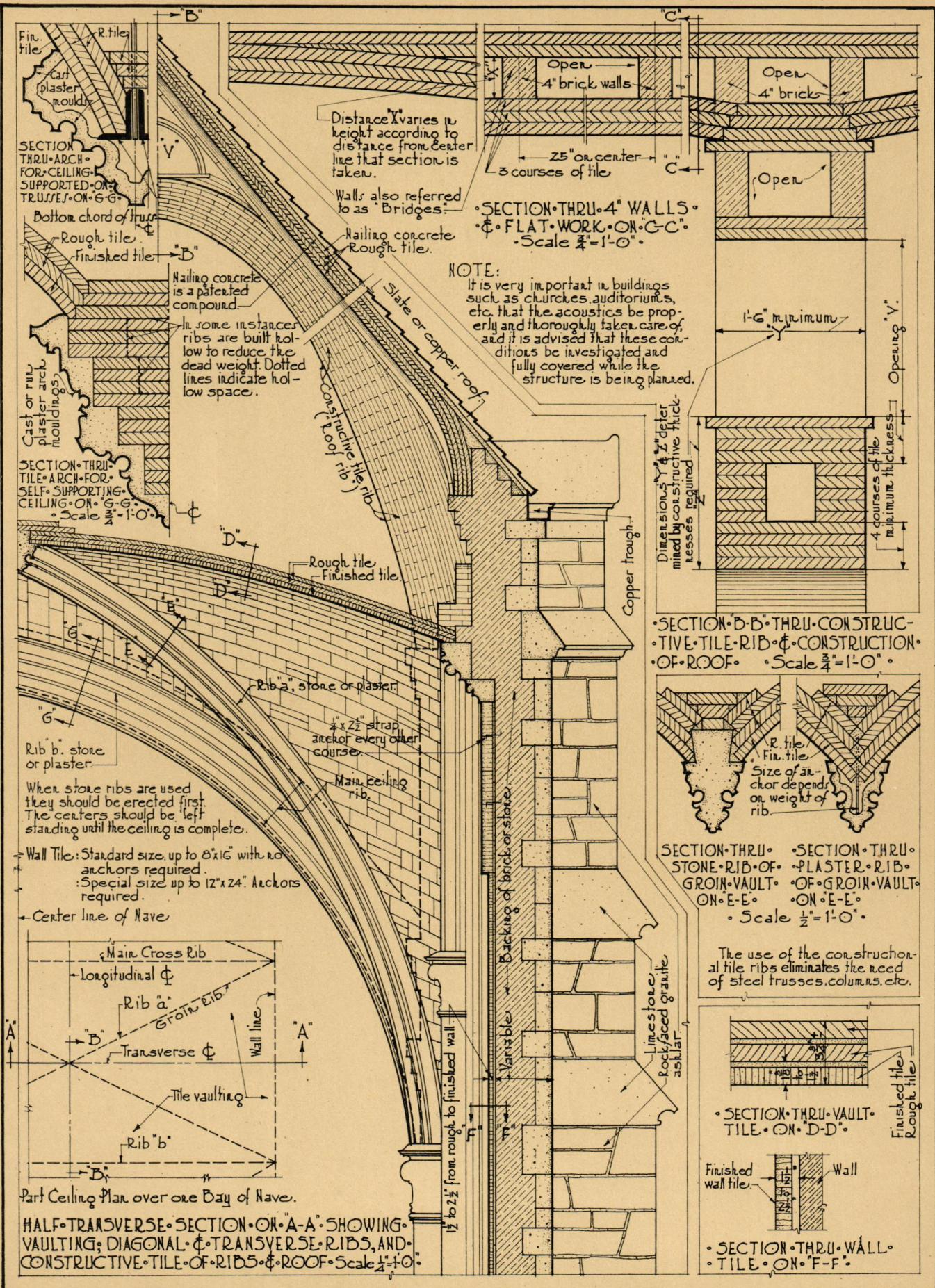


PLATE 51, TILE CEILING, VAULT CONSTRUCTION

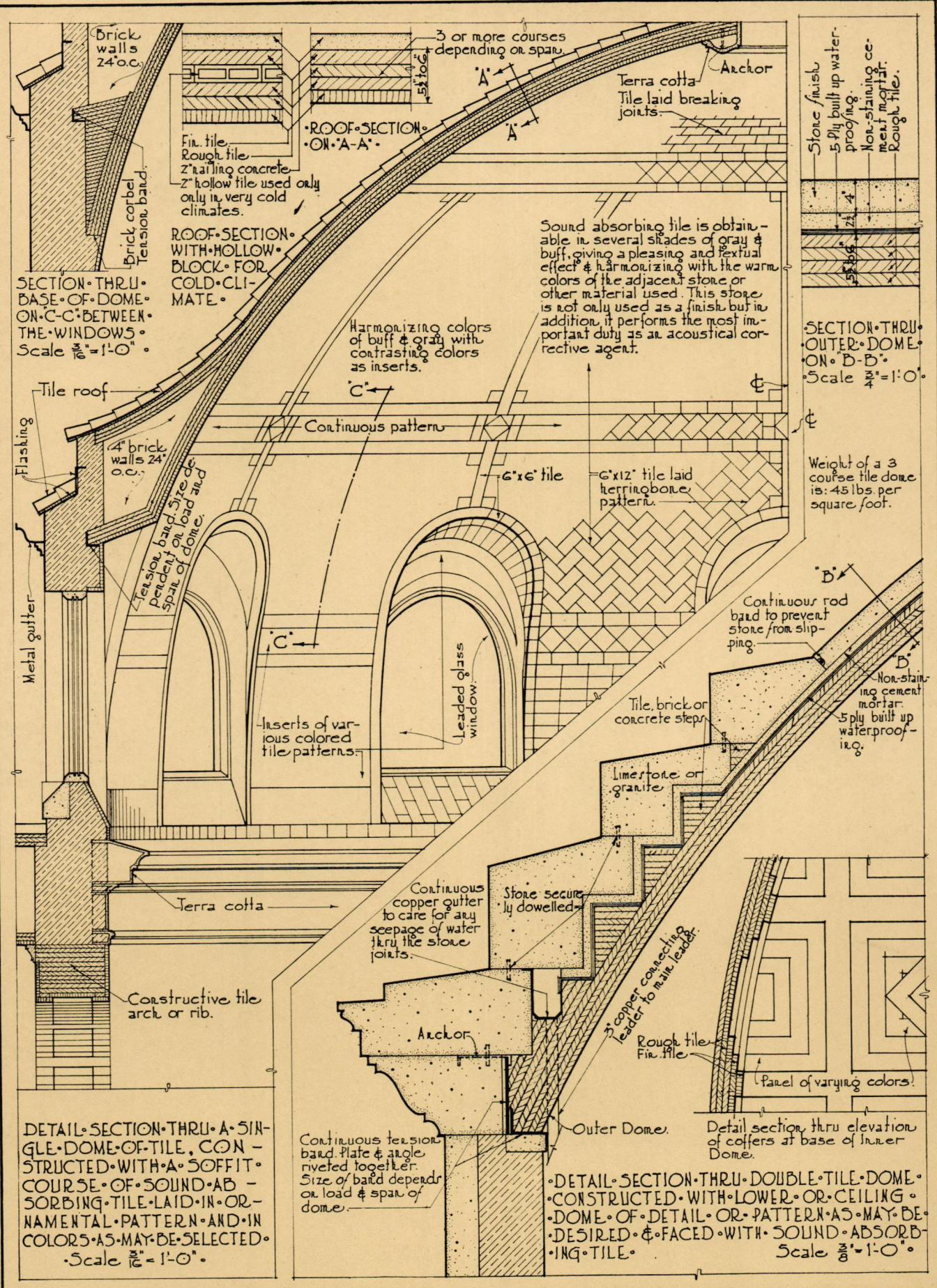


PLATE 52, TILE CEILING, DOME CONSTRUCTION

