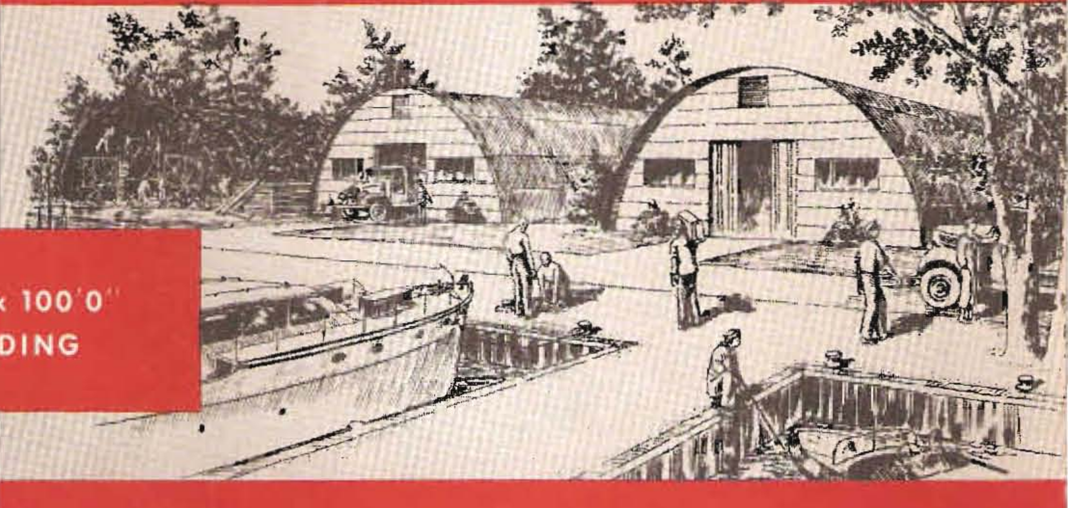
ERECTION INSTRUCTIONS

FOR THE

U. S. NAVY

QUONSET 40 BUILDINGS

40'0" x 100'0"
BUILDING



MANUFACTURED FOR NAVY DEPARTMENT
BUREAU OF YARDS AND DOCKS
BY

GREAT LAKES STEEL CORPORATION
Stran-Steel Division • Ecorse, Detroit 29, Michigan

NATIONAL STEEL CORPORATION

DESIGN
AUGUST 1950

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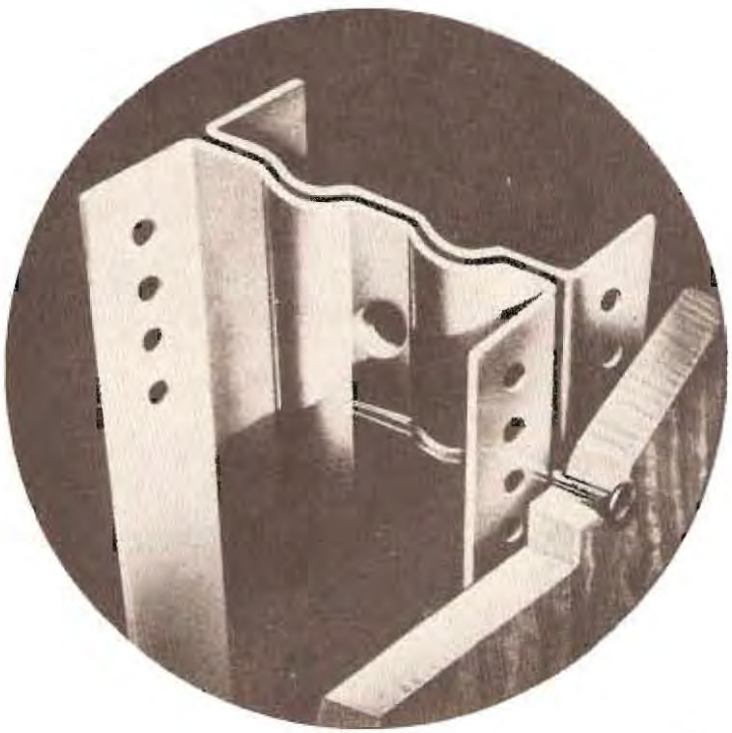


THE STRAN-STEEL NAILING GROOVE

The distinctive feature of Stran-Steel is the nailing groove. This groove is in all Stran-Steel joists, arch ribs and studs, which are made by welding two pieces of steel together. The small space remaining between these pieces is just large enough to admit an ordinary nail. When a nail is driven into the groove, it is deformed and clinched in a grip of steel with a holding power much greater than that of wood. In this manner collateral materials are secured to the steel framework with the ordinary hammer-and-nails method. Construction in which Stran-Steel framing is used proceeds in the same way as with ordinary framing. Dimensions of Stran-Steel members conform exactly to the requirements of the collateral materials used with it.

SUGGESTIONS TO ERECTOR

ORGANIZATION. The erection of the Quonset 40 Building is simple and fast if the operations are done in sequence and properly. It is important to get off to the right start by being careful to set anchor bolts properly and starting ribs plumb. Likewise the bulkhead framing must be square and level so the windows and corrugated steel sheets will fit and so the doors will operate.

A logical division of personnel is into crews for (1) building the foundation and setting anchor bolts, (2) raising the ribs, (3) framing the bulkhead and (4) applying the covering.

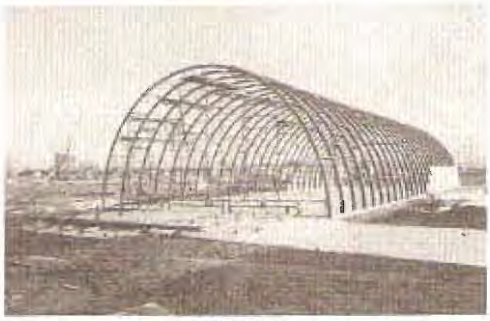
The instructions give each operation complete in its proper order. It is not always necessary, however, to finish an operation throughout the entire building before the next one is begun. Much time can be saved by having the crews working on their respective portions of the work simultaneously. For example, the rib crew can be assembling ribs, and the bulkhead crew can be assembling the bulkhead framing while the channels are being laid. Then, after the first four ribs from the end have been raised, plumbed, and braced, the bulkhead frame can be pulled up into position while the erection staging is still near the end of the building. The men applying the corrugated steel covering can begin their work after the first bulkhead frame is raised and their work should follow closely behind that of the crew raising the remainder of the ribs. Meanwhile, the bulkhead crew should assemble the other bulkhead framing and have it ready for erection when the last rib is in position.

HINTS. If any of the steel members have become damaged in shipment, the easiest way to straighten them is by placing the bent part over a crate or sawhorse and having a man bear down on each end. The hardest way to straighten is by using a hammer.

There is a trick to opening the banded crates. When this is known and used, much time and effort can be saved. Use a large screwdriver, as used for assembling the frame, insert flat side under steel band about an inch or inch-and-half. Turn the screwdriver about the handle roughly an eighth turn. This brings the sharp edge of the screwdriver in contact with the band. Pull up quickly. This motion cuts the band rather than breaking it. When the knack of using a screwdriver is learned, opening the crates is an easy job. Open crates carefully so lumber can be reused in building erection staging.

The importance of using the right nails, screws, and attachments cannot be too strongly stressed. Follow the instructions closely in this regard.

FOUNDATION

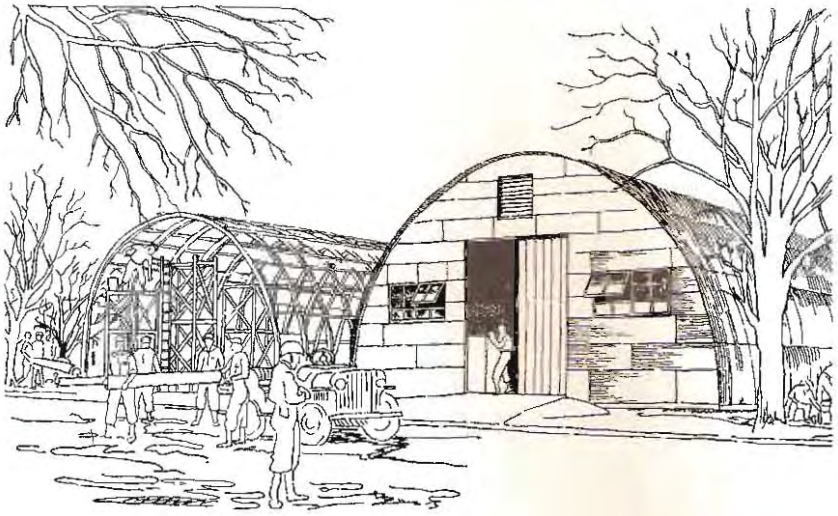


FRAME

SIDE COVERING

BULKHEAD FRAME

BULKHEAD COVERING



1. **Foundation.** Set anchor bolts, pour concrete. Lay bottom channels. (See pages 4 and 5.)

2. **Frame.** Assemble and raise ribs. Install purlins and channel bridging. (See pages 6 and 7.)

3. **Bulkhead Frames.** Assemble bulkhead frames of steel studs. (See pages 8 and 9.)

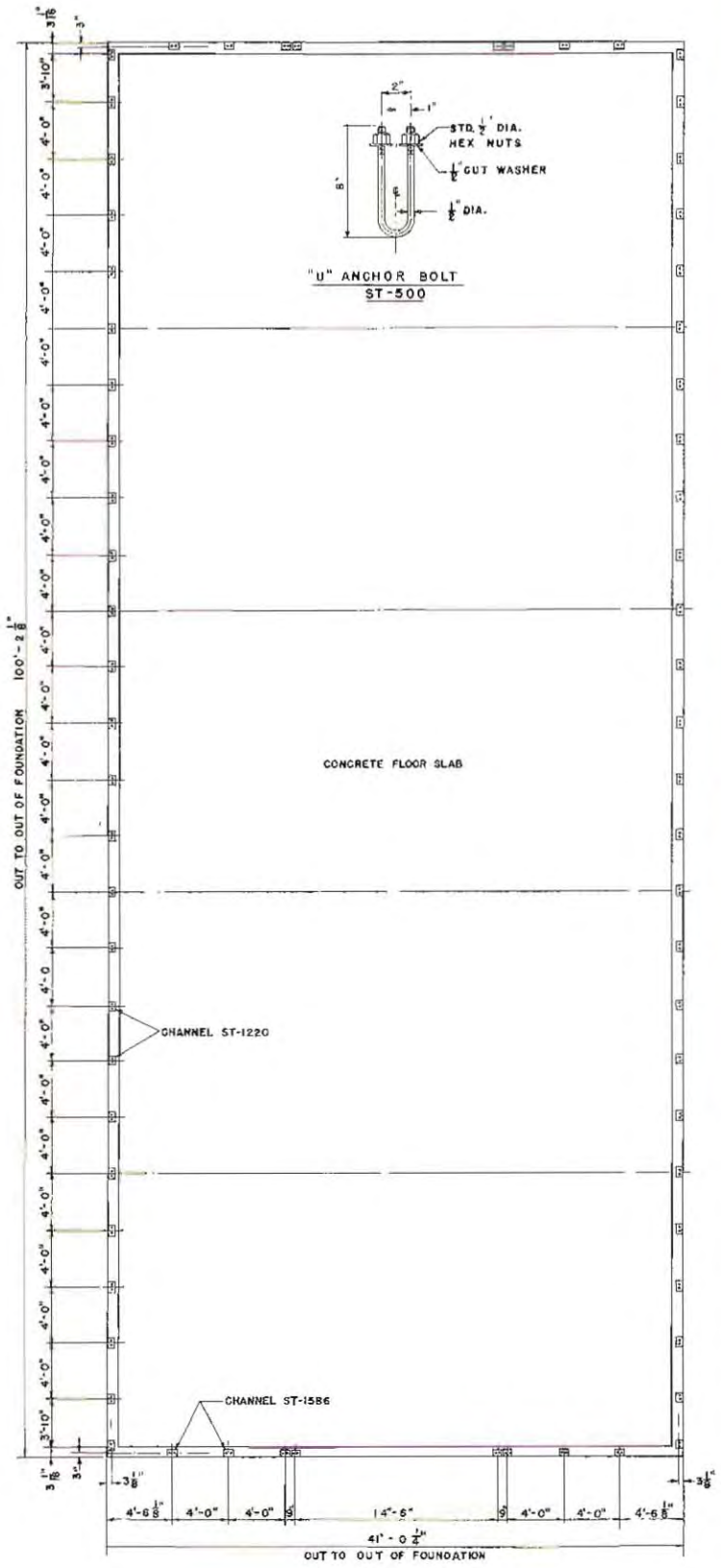
4. **Side and Roof Covering.** Nail flat corrugated sheets to ribs on sides of building. Install flashing. Nail curved corrugated sheets to purlins at crown of building. (See pages 10 and 11.)

5. **Bulkhead Covering.** Apply corrugated sheets. Install windows, doors and louvers. (See pages 12 and 13.)

6. **Clean Up.** Save all scraps, bands, blocks, nails, screws and crating material not used. Sort and store for future use.

COMPLETED BUILDING

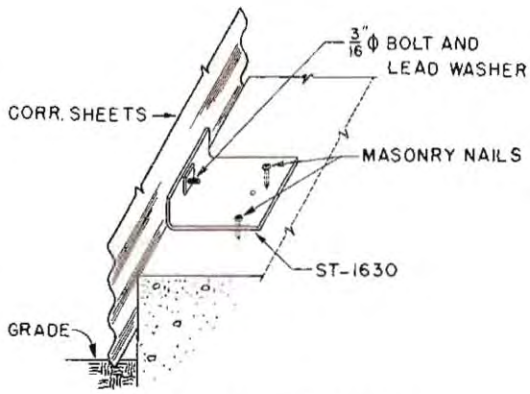
FOUNDATION



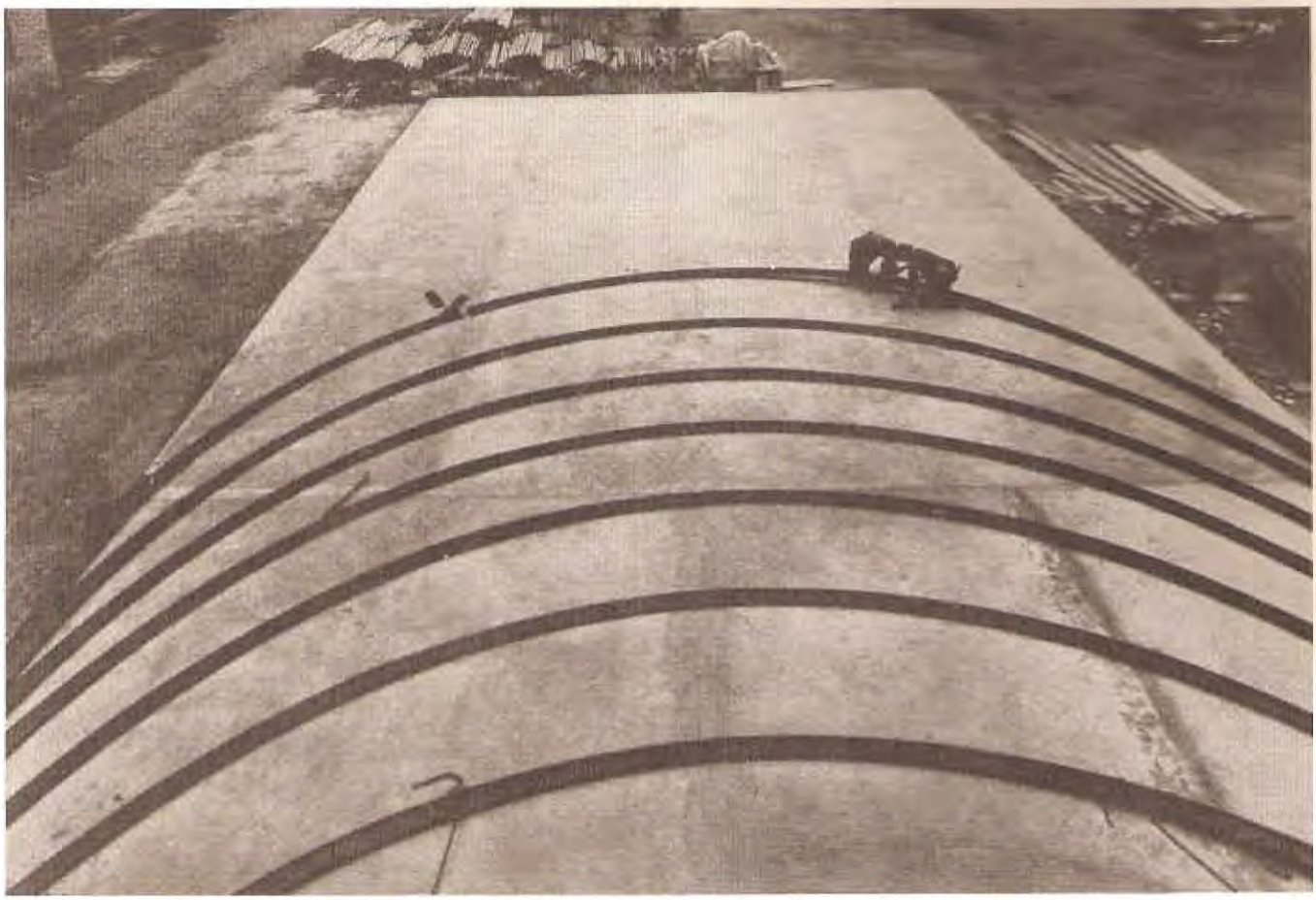
PLAN OF ANCHOR BOLTS AND BOTTOM CHANNELS

BOTTOM CHANNELS PLACED OVER ANCHOR BOLTS

BOTTOM CHANNELS BOLTED DOWN



DETAIL OF CLIP ANGLE AT FOUNDATION



ASSEMBLING RIBS ON FOUNDATION

STEP 1 Place the 6¼"x 6" bottom channels (ST-1220) over the anchor bolts set in the concrete and bolt them down. Do this as follows:

(a) Place concrete forms, pour the concrete. Place the ½" round by 8" long "U" anchor bolts (ST-500) accurately (see foundation plan) by measuring along forms and using points on the forms as off-sets to locate the center lines of anchor bolts. The 4'06" dimension across the building from centerline to centerline of anchor bolts must be maintained.

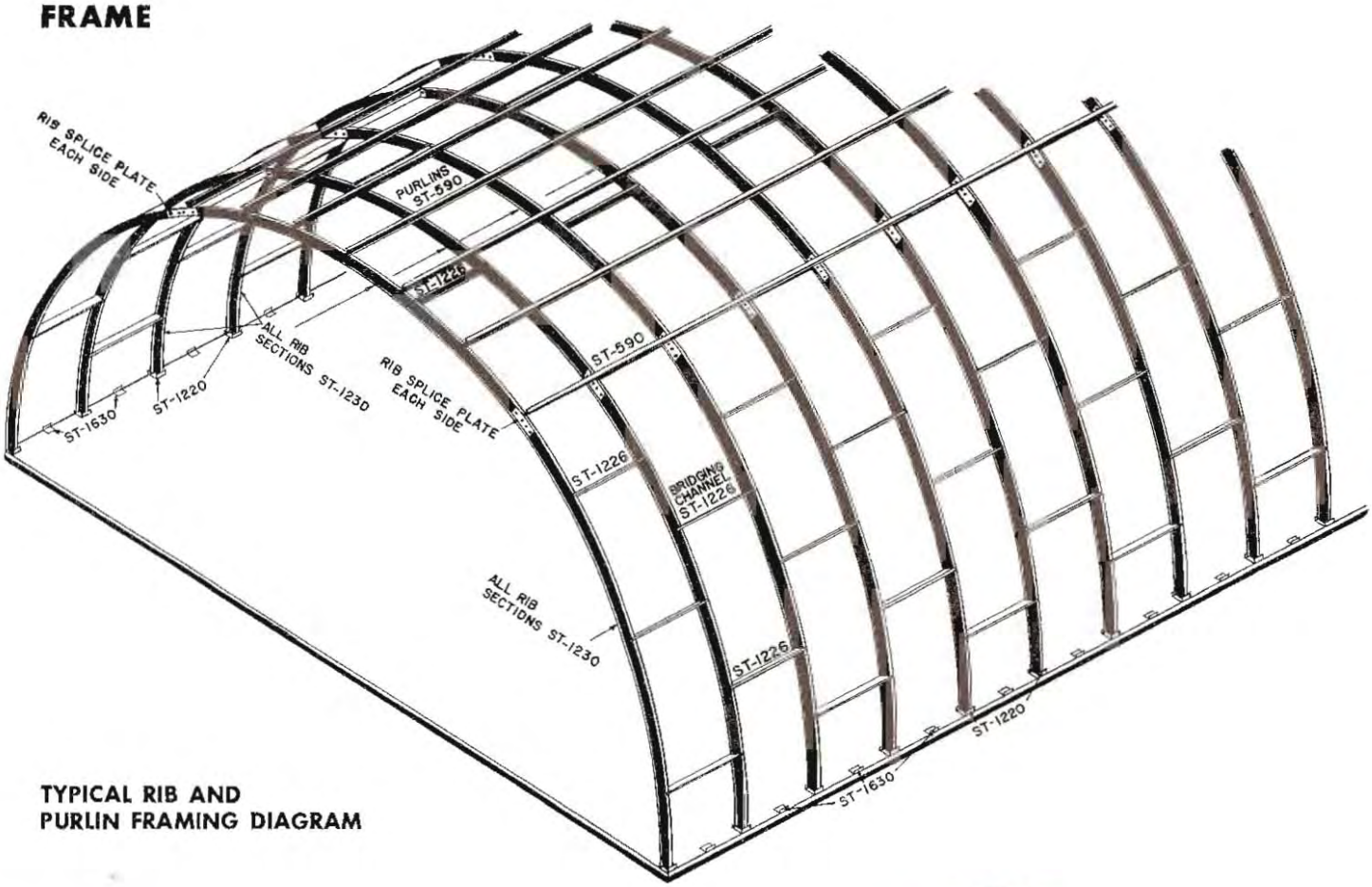
(b) After the concrete has hardened remove the wooden formwork.

(c) Lay the 6¼" x 6" bottom channels (ST-1220), which are punched to fit over the bolts, into position.

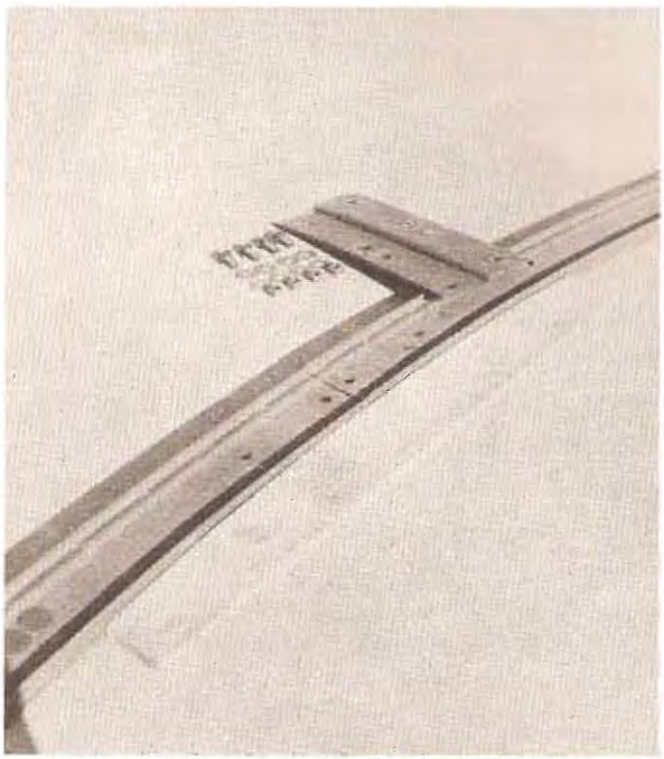
(d) Carefully level the channels with small wedges at the bolts. When channels are level, grout underneath them with cement mortar, slip washers over tops of anchor bolts and draw nuts down tight. Suggestion—floor slab can be poured conveniently in four longitudinal strips about 10 feet wide to make screeding easy.

(e) Fasten angles (ST-1630) to concrete with two masonry nails before concrete has hardened but not later than 2 days after concrete has been poured. One angle is placed in center between rib channels. Upstanding leg of angles should be flush with outer edge of concrete.

FRAME



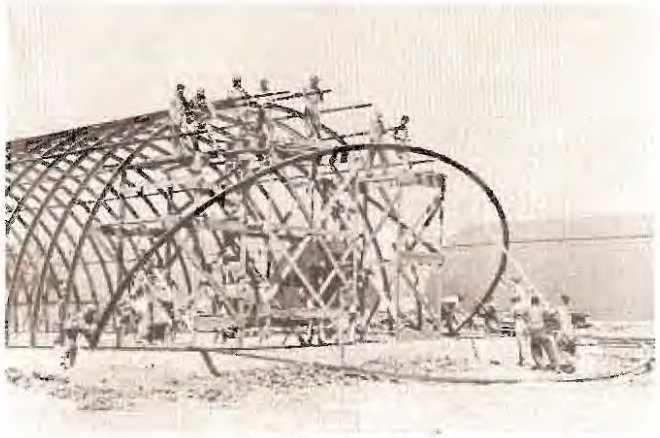
TYPICAL RIB AND PURLIN FRAMING DIAGRAM



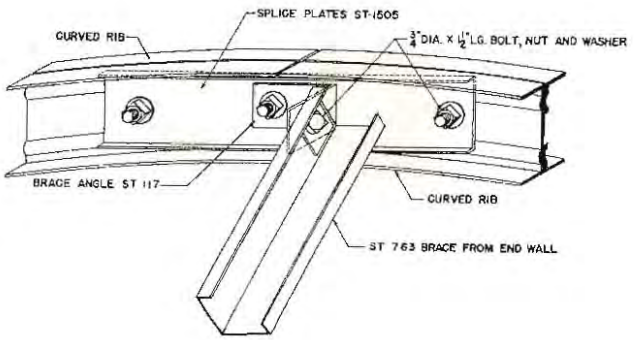
SPLICING PARTS AND RIB SECTIONS

END RIB

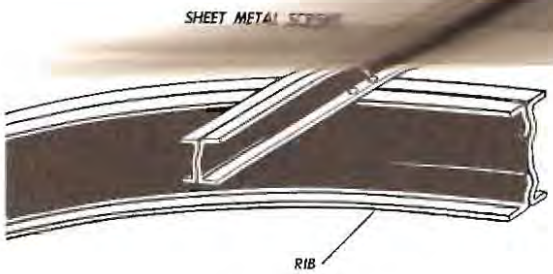
COMPLETED SPLICE



ERECTING RIBS



BRACE FROM END WALL



RIB AND PURLIN

FASTENING BRIDGING

STEP 2 The frame consists of a series of semi-circular ribs assembled from three sections and spaced at 4′0″ on center. The ribs are secured to the channels at the bottom. At the top of the building there are seven rows of steel purlins which run lengthwise of the building and are screwed to the ribs. Seven pieces of channel bridging are fastened to ribs in each 4′ spacing. Procedure:

(a) Assemble all the ribs on the ground. Each rib consists of three sections, each marked ST-1230. Assemble the ribs near their location in the building. To do this, place the sections on the ground near their location in the bottom channels. Join the three sections with two splice plates (ST-1505) at each joint, one on each side of the ribs, and four ¾″ dia. x 1½″ bolts with washers on one side only. (See photos.)

(b) To raise the ribs construct three light, movable platforms out of crating lumber. Two sections 13′0″ high and one section 15′6″ high will be satisfactory. (See page 14.) The ribs can then be easily raised in the manner shown in the accompanying photographs.

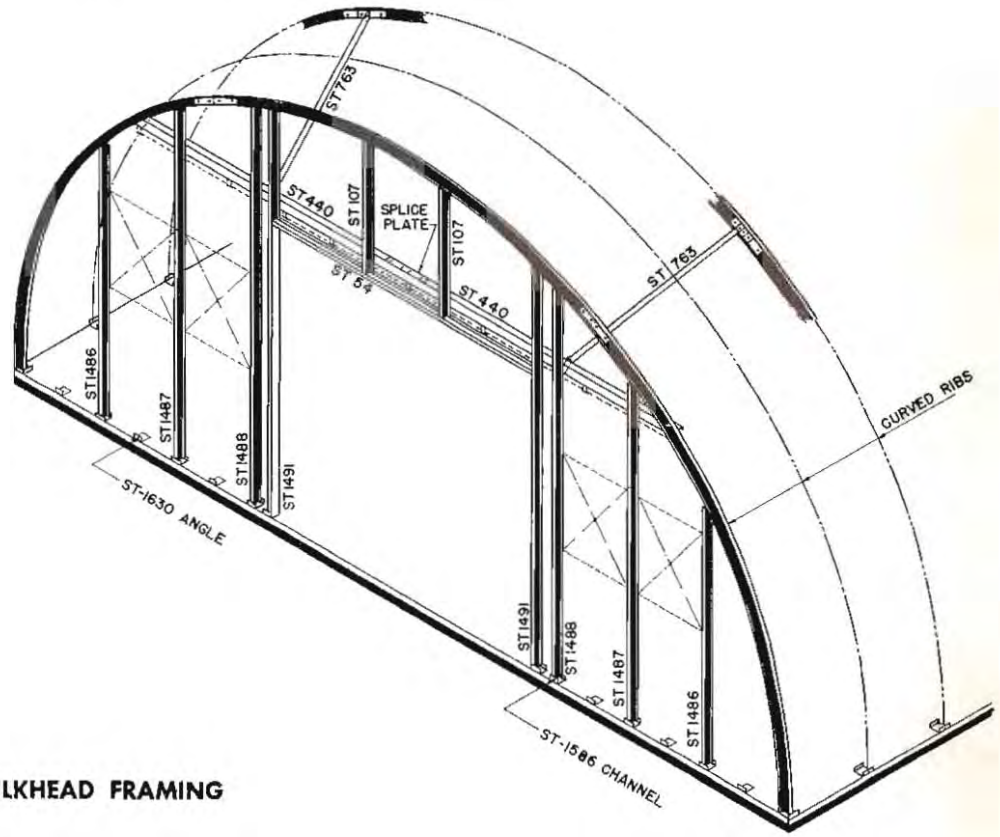
(c) Raise an end rib first, then follow with four others in sequence, securing each rib as it is raised to the channels with four screws. (See detail.)

(d) As successive ribs are raised, install the purlins (ST-590) and channel bridging (ST-1226) in their proper location. Attach the purlins to the ribs with at least two screws placed diagonally on each rib (see detail), but use four screws where two purlins join. The purlins should be erected as the ribs are raised, using the staging that is then in position for the rib raising operation.

Fasten bridging to ribs by driving in screws into top flanges and then bending ends of bridging around both rib flanges. (See photo.)

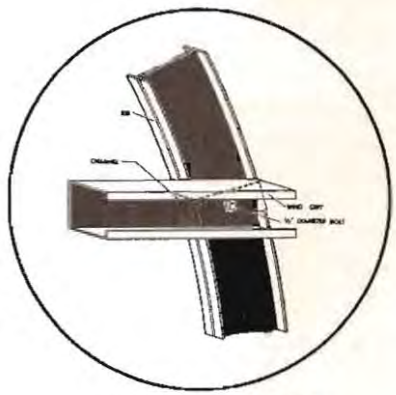
(e) After the first four ribs have been raised, plumb them and brace them temporarily with planks crossed diagonally and nailed to the inside of the ribs. With this bracing in place, raise the remaining ribs, attaching purlins and bridging as the successive ribs are erected.

BULKHEAD FRAMING

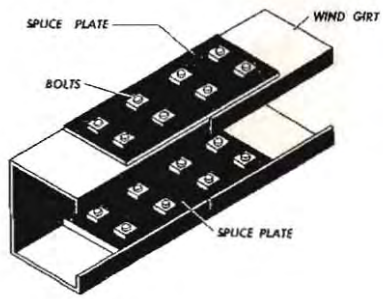


BULKHEAD FRAMING

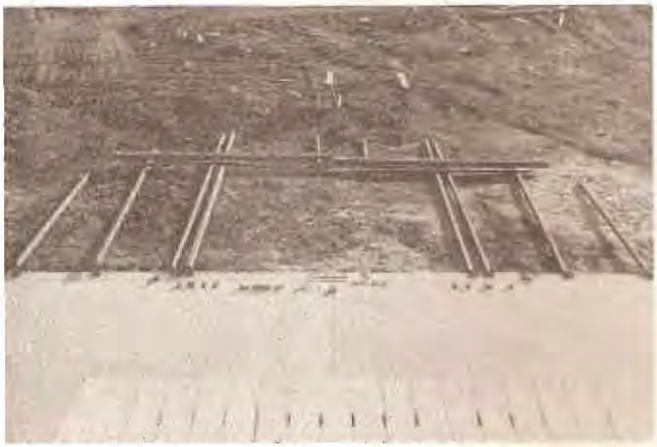
RAFTER CLIP



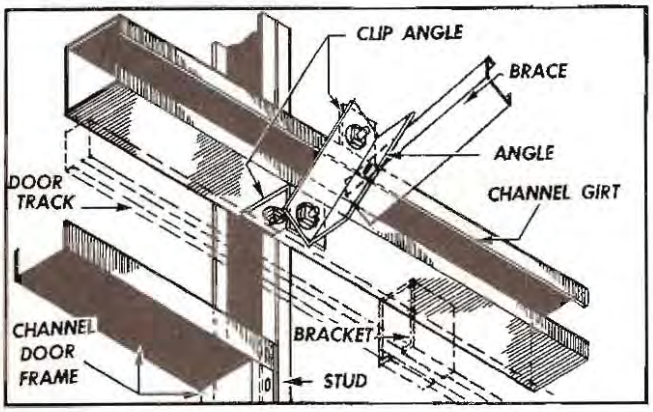
WIND GIRT AT RIB



WIND GIRT SPLICE



BULKHEAD FRAME PARTS READY FOR ASSEMBLY



CONNECTION OF BRACE TO WIND GIRT

BULKHEAD FRAME HOISTED INTO POSITION

DOOR JAMB AND GUIDE CHANNEL

STEP 3

Assemble the bulkhead frame on ground. Raise the complete frame, utilizing the scaffold previously built for erection of the ribs. Procedure:

(a) Attach bottom channels (ST-1586) to foundation with anchor bolts.

(b) Lay the vertical studs (ST-1487, 1488 and 1491) with their lower ends at their position in the channels and their upper ends resting on sawhorse.

(c) Connect the two pieces of wind girt (ST-440) with two splice plates (ST-743) using 16 bolts (½" dia. x 1").

(d) Fasten wind girt with four screws at each stud.

(e) Connect clip angles (ST-444 and ST-362) to wind girt as per drawings.

(f) Fasten doorhead channel (ST-54) to door jamb studs with screws. Then position studs (ST-107) and connect to wind girt and doorhead channel.

(g) Attach rafter clips (ST-2) to tops of all vertical studs. Slip the clip over the flange of the stud, and bend the projecting part of the clip to the approximate angle it will be when in place against the rib. Do not nail the clips to the studs until later, since they may have to be adjusted in height after frame is raised.

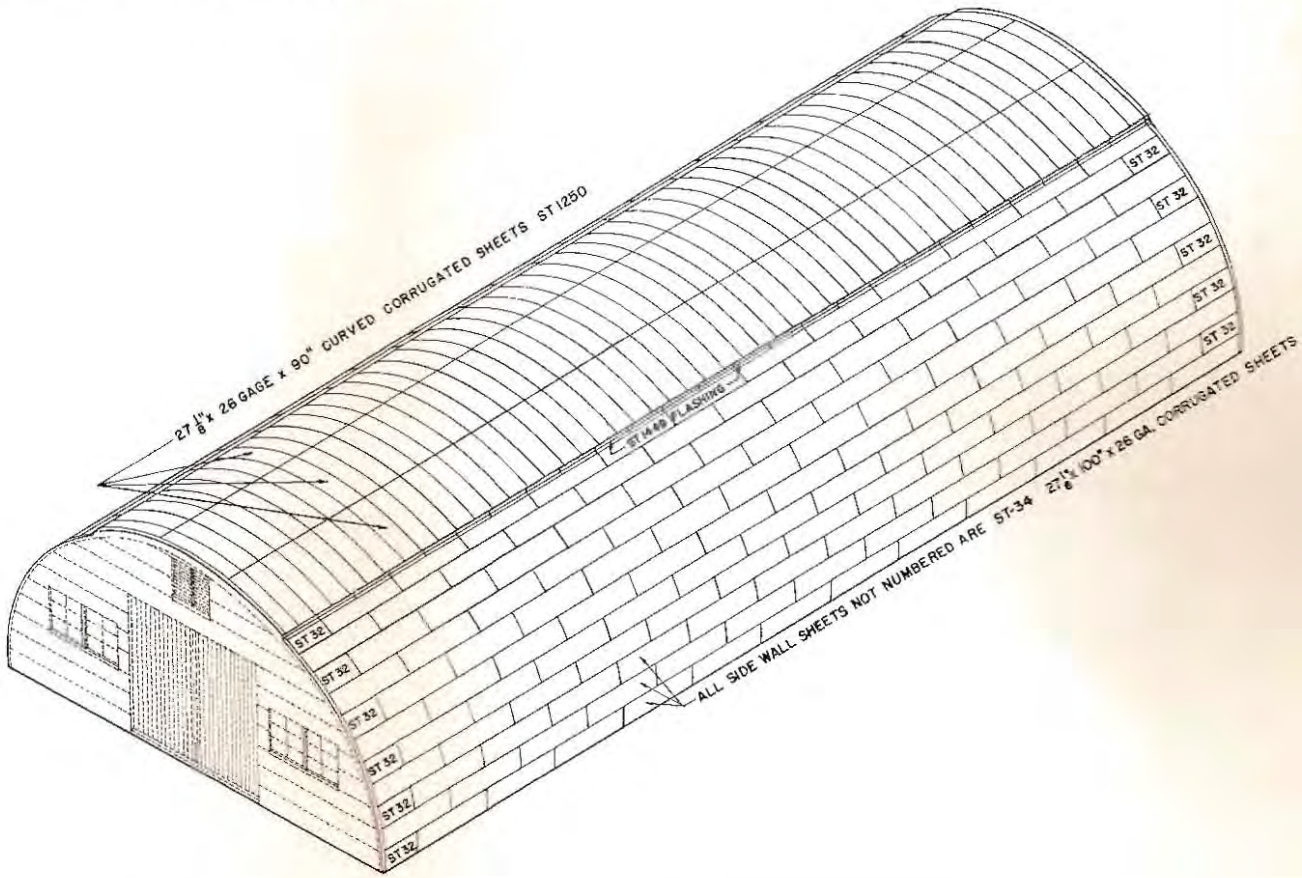
(h) Square entire bulkhead assembly before raising. Hold square by means of boards crossed diagonally nailed to studs on each side of door opening. Leave this bracing in place until framing is raised and secured.

(i) Raise bulkhead frame evenly and slowly to vertical position. Fasten studs in bottom channels (ST-1586) with four screws. Erect stud (ST-1486) to rib and channels.

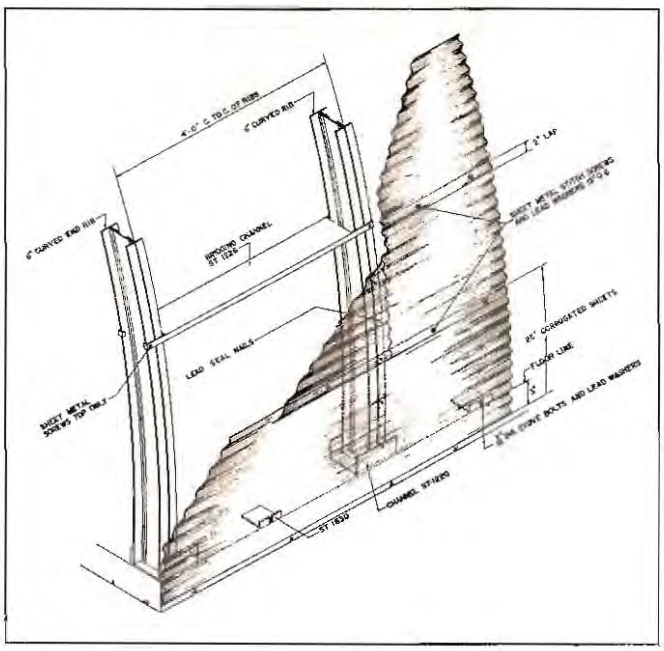
(j) Adjust rafter clips until projecting parts of clips are snug against underside of the ribs. Then nail each clip to stud and the rib with 6d nails.

(k) Connect clip angles (ST-117) to splice bolts of third rib. Then bolt braces (ST-763) to clip angles at the rib splice and at wind girt. Tighten bolts. Remove temporary wooden bracing from bulkhead only.

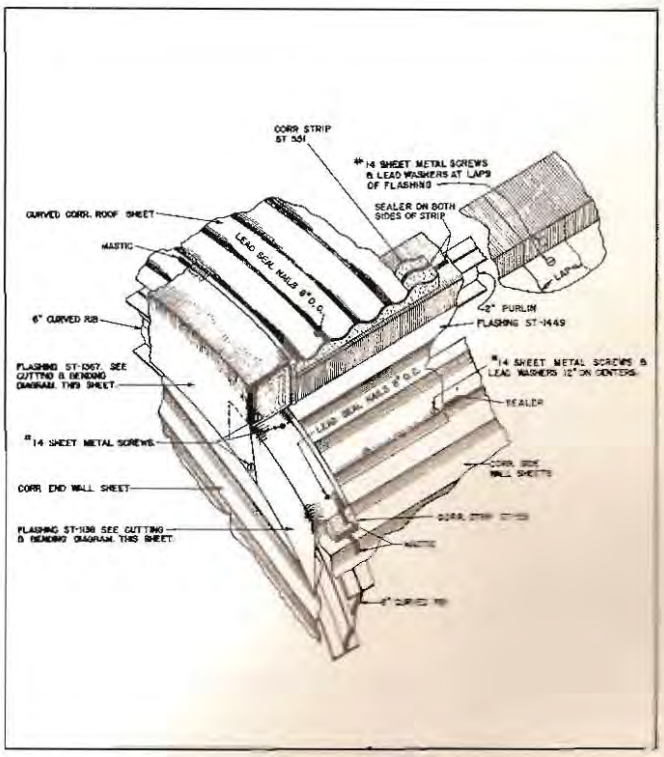
SIDE AND ROOF COVERING



LAYOUT OF CORRUGATED ROOFING SHEETS



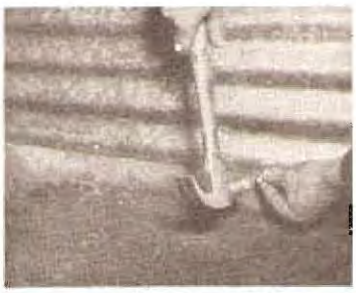
DETAIL ON BOTTOM ROW OF SHEETS



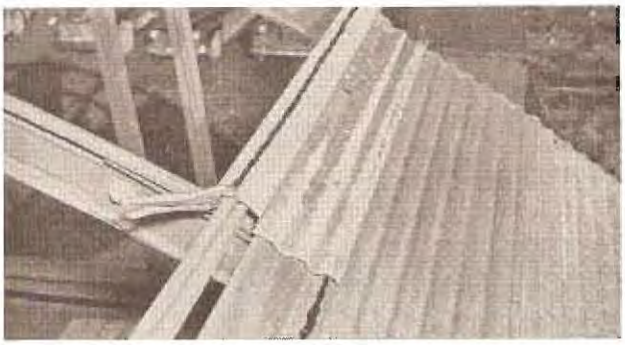
DETAIL OF FLASHING AT CURVED AND HORIZONTAL ROOF SHEETS AT ENDWALL

MARKING GUIDE LINE ON FOUNDATION FOR APPLYING SHEETS

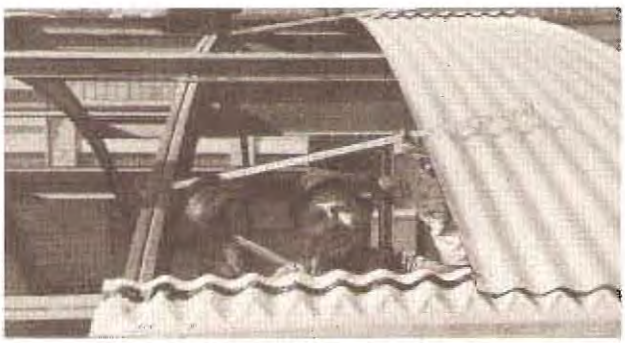
FIRST ROW OF SHEETS ON SIDE WALL



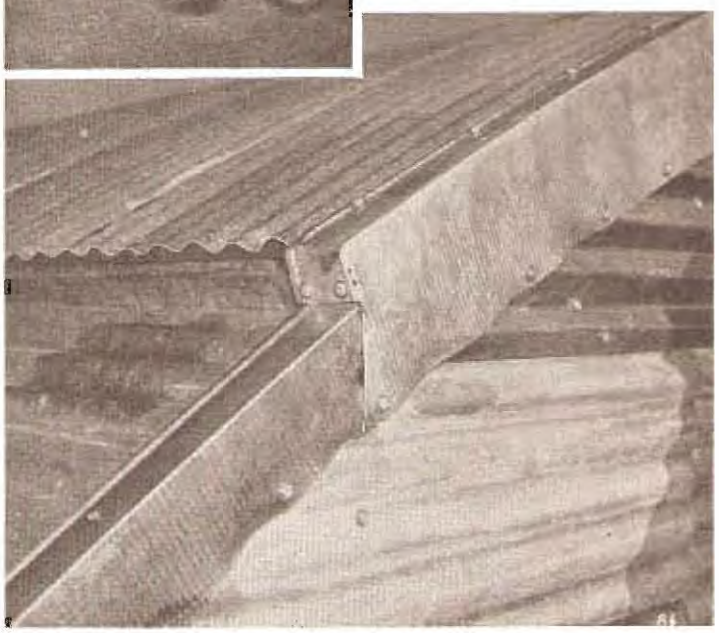
(LEFT) ATTACHING SHEET TO CONCRETE WALL



FLASHING STARTED AT ONE END



CURVED SHEETS STARTED



FLASHING DETAIL AT BULKHEAD

STEP 4 Each side of the building is covered with 11 rows of 26″ wide flat corrugated sheets. ST-32 and ST-34 sheets are used for these rows according to layout in sketch on opposite page. These sheets are fastened to ribs with lead seal nails 8″ o.c.

Seal all vertical and horizontal laps of sheets with a ¼″ dia. bead of mastic.

All laps of corrugated sheets between purlins and ribs are stitched with sheet metal screws and lead washers 12″ o.c. Procedure:

(a) Start at bottom with corrugated sheets 3″ below top of concrete. Side sheet vertical laps are 2″, side sheet horizontal laps are 4″.

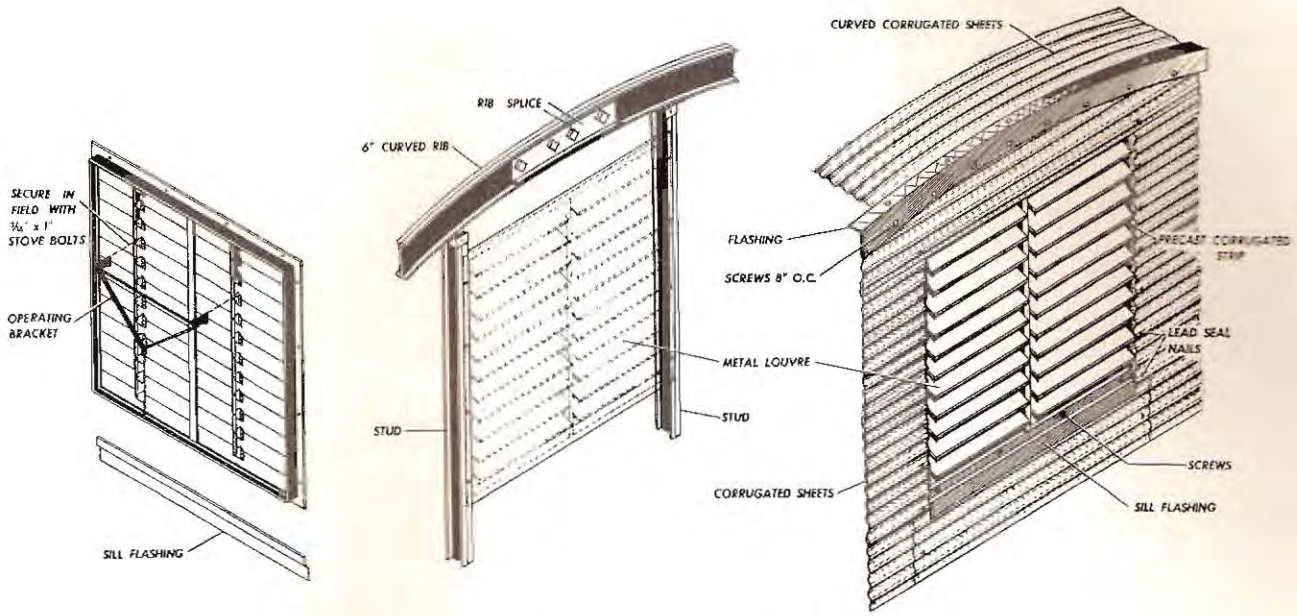
(b) Fasten bottom sheets to clip angles (ST-1630) with 3/16″ stove bolts, using lead washers.

(c) When 11 rows are installed on each side, flashing (ST-1449) is nailed to lower purlin and screwed to top edge of sidewall corrugated sheets. (See photos.)

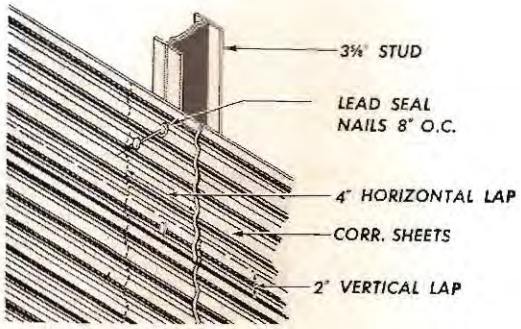
(d) Corrugated rubber strips are placed on top of flashing (ST-1449) and then three curved sheets (ST-1250) are secured to purlins with lead seal nails 8″ o.c. Side laps of these curved sheets are 3⅛″.

(e) Remove wooden temporary bracing.

BULKHEAD COVERING, DOORS AND WINDOWS

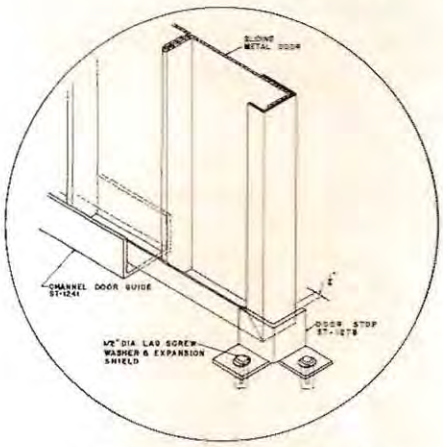


DETAILS OF LOUVER

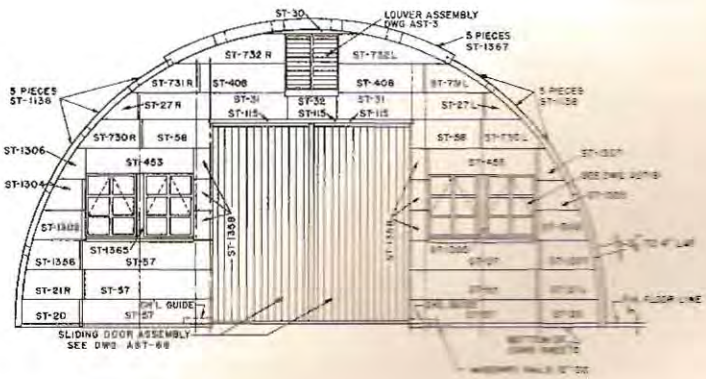


DETAIL SHOWING BULKHEAD CORRUGATED SHEET LAP

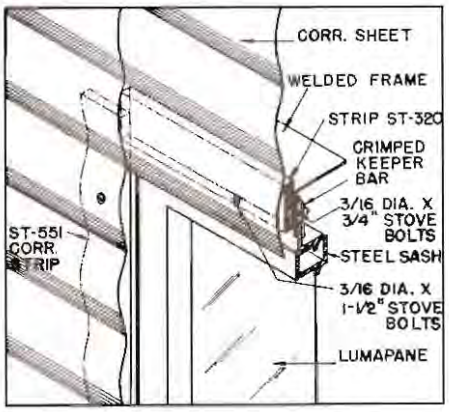
ATTACHING BULKHEAD SHEETS TO RIBS



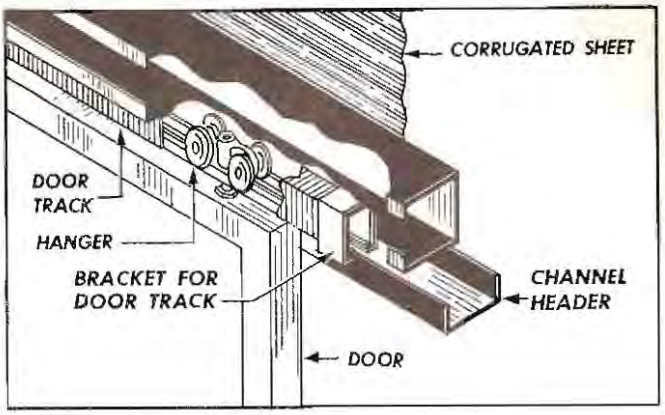
DOOR STOP AND GUIDE



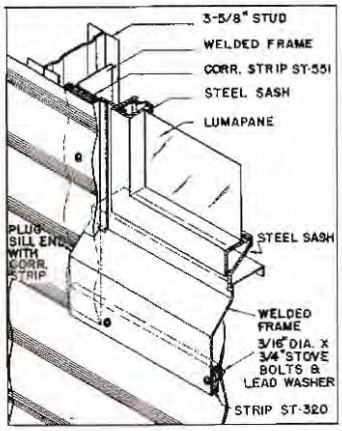
ELEVATION OF BULKHEAD WITH DOOR



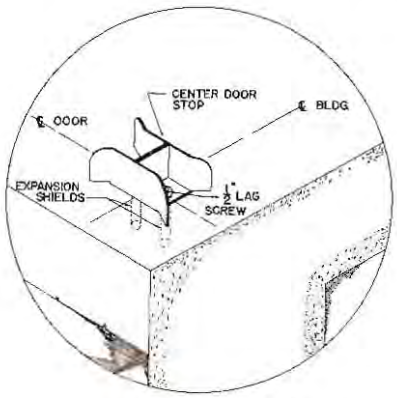
DETAIL AT WINDOW HEAD



DOOR TRACK AND HANGER



BOTTOM CORNER OF WINDOW



CENTER DOOR STOP

STEP 5 Apply bulkhead corrugated sheets. Install windows, doors and louvers. Procedure:

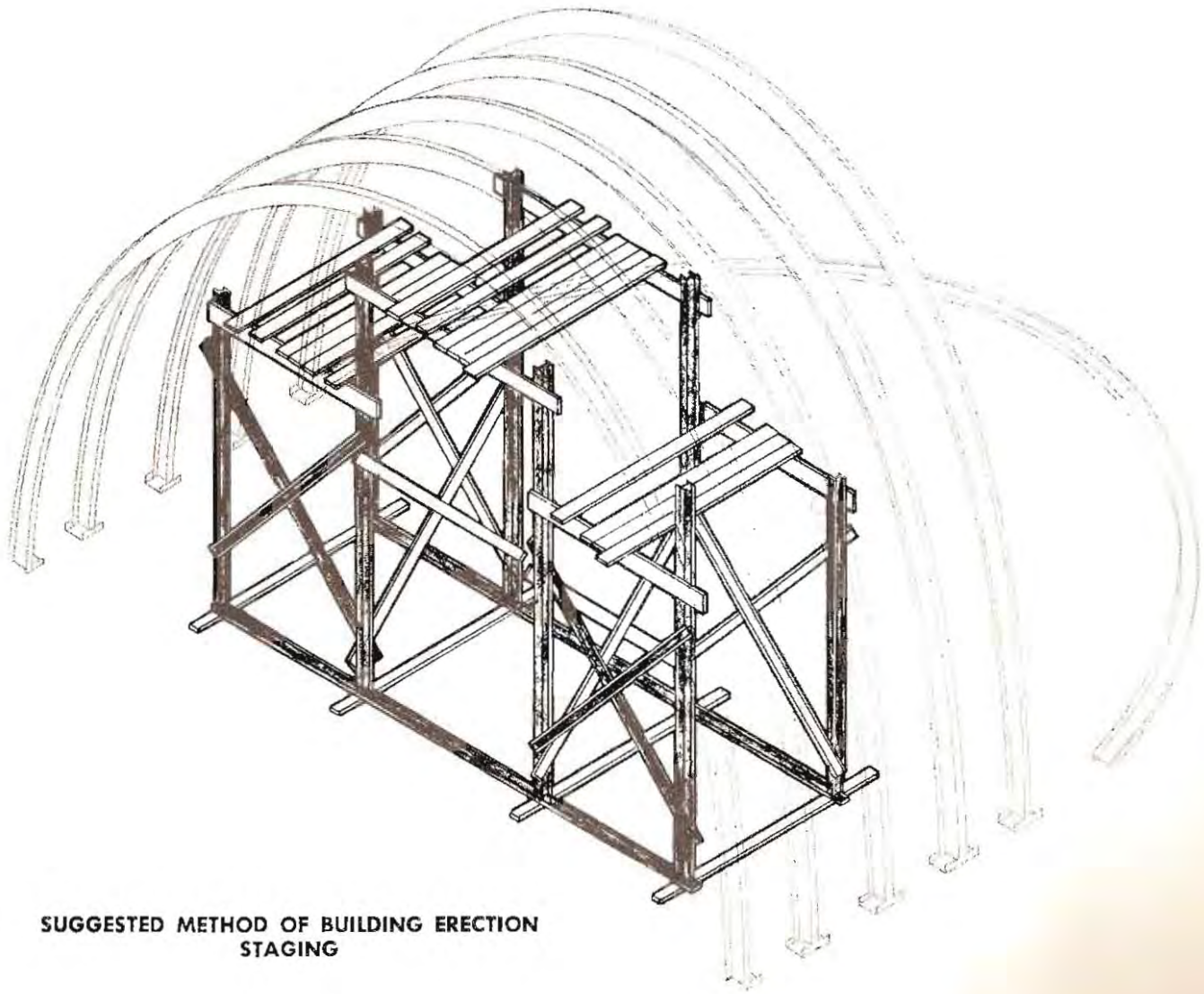
(a) Covering. The corrugated steel sheets on bulkhead are applied along with the installation of windows and louvers. Start with corrugated sheets 3″ below bottom of channels, and apply corrugated sheets, corrugated and flat asphalt or rubber strips, and flashing around openings according to layout on sketches above. Nail corrugated sheets to studs with lead seal nails 8″ o.c. Apply a ¼″ bead of mastic on all horizontal and vertical laps. Stitch all laps between studs with sheet metal screws and lead washers 12″o.c.

(b) Windows. After three rows of corrugated sheets have been applied, attach welded steel window frames to studs by means of two brackets (ST-413) at each jamb. Brackets are bolted to window frames and nailed to studs. Install window sash by means of keeper bars (ST-317), four to each jamb and two to each head. Secure keeper bars to sash with stove bolts. Corrugated and flat asphalt or rubber strips are applied to jambs, heads and sills, and flashing (ST-1365) applied to mullions. Corrugated sheets and flashing are fastened to window frames by stove bolts with lead washers.

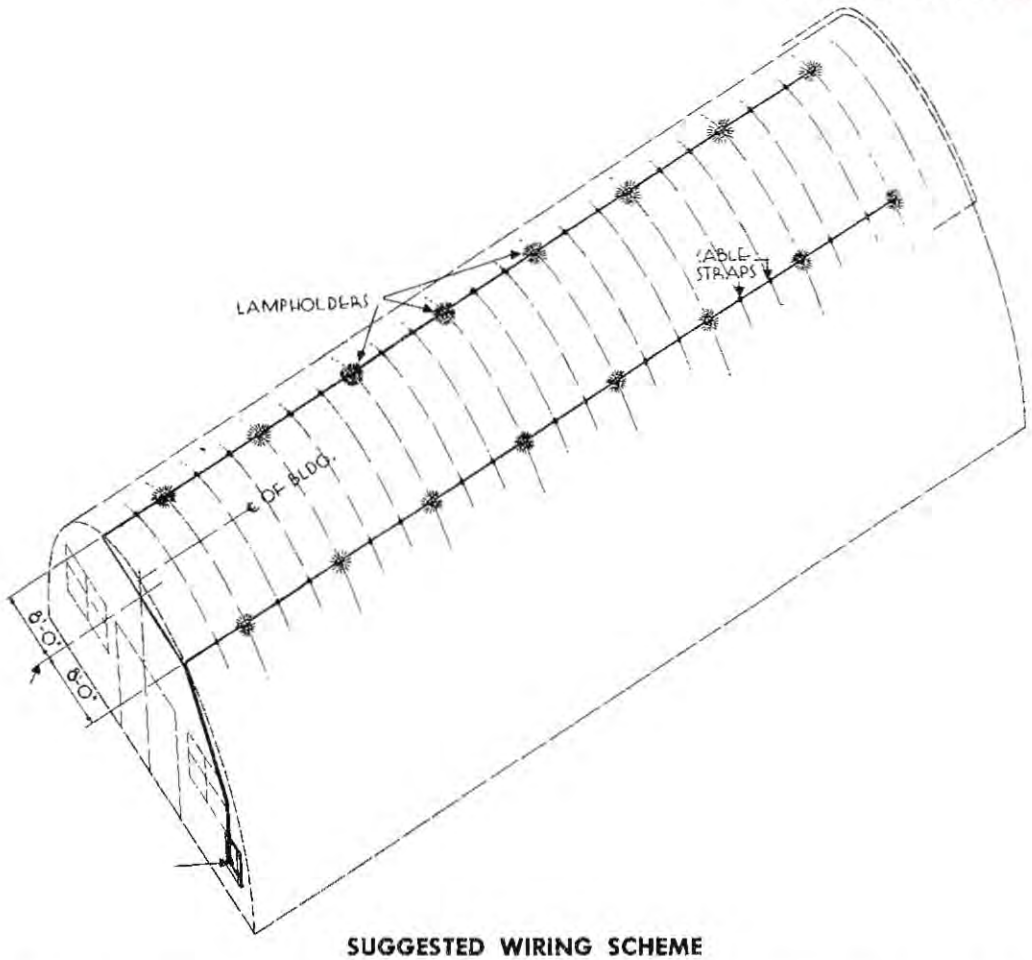
(c) Louvers. Attach flashing to sill of louver with screws and place complete assembly between studs (ST-107) and over top edge of sheet over door. Fasten louver to studs with screws. Apply corrugated asphalt or rubber strips to jambs and fasten corrugated sheets around opening. Nail wood pieces to studs around louver inside building as shown on drawing AST-135. Staple on 2 x 2 hardware cloth.

(d) Curved Flashing. After entire bulkhead has been sheeted and all roof sheets placed, the curved flashings (ST-1138 and ST-1367) are applied around arc. (See sketch, photos and drawing AST-76.)

(e) Doors. Bolt the brackets that support the door track to the bottom flange of wind girt. Slide track into place and hang two leaves of door by means of two trolleys for each door leaf. Locate center floor stop (see sketch) and secure to concrete with ½″ lag screws and expansion shields. Locate channel guides (ST-1241) at door jamb and door stop for open position. Fasten guides and stop to concrete with ½″ lag screws and expansion shields.



SUGGESTED METHOD OF BUILDING ERECTION
STAGING



SUGGESTED WIRING SCHEME

STEP 6

The electrical system consists of two lighting circuits extending lengthwise of the building, one on each side of the centerline, terminating in a switch box at the service end of the building. Non-metallic sheathed cable and lamp sockets, which are secured to the bottoms of the ribs, comprise each circuit.

Each building is furnished with equipment for 18 sockets. A basic wiring scheme, suggested in the above sketch, requires 16 of these. This scheme provides for two additional sockets to be placed at optional special locations, or for spare equipment. Installation procedure:

1. Build a mounting board for the fuse box and switches at the service end of the building out of lumber from opened crates. Make the board sufficiently large to accommodate future switches and power switches as they are required. Nail mounting board across two bulkhead studs.

2. Remove the cover from the switch box and screw the box to the mounting board.

3. At eight feet on each side of the centerline of the building stretch a chalk line across the bottoms of the ribs for the length of the building parallel to its longitudinal axis. These will serve as guide lines for mounting the junction boxes to the ribs of the building.

4. Nail junction boxes to every third rib where each guide line crosses the ribs. (See sketch.) Punch out junction box holes through which cables will pass. Feed sheathed cables through boxes, securing cables with straps nailed to the ribs.

Slip wires attached to sockets through porcelain rosettes. Splice socket leads to cable wires, and cover bare wires with rubber tape and friction tape. Screw rosettes to junction boxes.

(Drop cords or extension cords may be assembled from flexible rubber-covered wires and attachment plug hardware furnished.)

5. At the bulkhead take the remaining cable of the circuit on the side of the building opposite the switch-box across the bulkhead over the louver until it meets the remaining cable of the circuit. Take the pair of cables diagonally across the inside face of the bulkhead to the top of the windows over the switchbox then vertically into the switch box, securing the cables to the studs with cable clamps.

6. Connect the cables into the switch box.

JOB 50-2601
August 15, 1950

PACKING LIST AND CRATE SCHEDULE FOR STRAN-STEEL QUONSET Q40 x 100' BUILDING

BUDOCKS-YDSO-K-4-51
Item #2
N160s-2875

NOTE: This PACKING LIST AND CRATE SCHEDULE is applicable to all crates and is attached and inserted in all crates. The particular crate to which a particular Schedule is attached is indicated by an arrow.

Crate No.	No. of Pieces	Crate Contents	Item Mark	Crate Size			Cubic Feet	Weight			Remarks
				Length	Width	Depth		Net	Crate	Gross	
	1	Set Erection Drawings		4'9¼"	1'8¼"	2'1¼"	16.94	684#	106#	790#	
	68	½" "U" Bolt w/Nuts	ST-500								
	52	Channel 6¼" x 1¾" x 6" lg.	ST-1220								
	6150	#14 x ⅝" S.M. Screws	ST-510								
	4380	Lead Washers .25 I.D.	ST-527								
	230	8d Common Nails									
	3850	Lead Seal Nails	ST-525								
	245	¾" x 1½" M. Bolts w/Nuts									
	245	2" O.D. x 13/16" I.D. Washers									
	274	1⅜" O.D. x 9/16" I.D. Washers									
	20	Rafter Clips	ST-2								
	8	Brace Clip Angles	ST-444								
1801	4	Brace Angles	ST-362								
	4	Angles	ST-117								
	4	Splice Plates	ST-743								
	4	Channel Clips	ST-17								
	16	Channels 3¾" x 1⅝" x 0'6"	ST-1586								
	230	Lead Washers .16 I.D.	ST-526								
	230	Foundry Nails 4" lg.									
	84	½" x 1" M. Bolts w/Nuts									
	106	3/16" x 1" R.H. Stove Bolts w/Nuts									
	314	Lead Washers .18 I.D.	ST-528								
	32	Channel Clips	ST-413								
	80	Keeper Bars	ST-317								
	128	3/16" x ¾" R.H. Stove Bolts w/Nuts									
	112	3/16" x 1½" R.H. Stove Bolts w/Nuts									
	8	Brackets	ST-286								
	2	Center Brackets	ST-287								
	8	Trucks	ST-297								
	2	Center Stops	ST-1536								
	4	Door Stops	ST-1278								
	20	½" x 3½" Lag Screws									
	20	Expansion Shields for ½" Lag Screws	ST-503								
	8	Cam Handles	ST-543								
	8	Bolts w/Nuts	ST-542								
	4	End Brackets	ST-288								
	4	Bracket Assemblies	ST-293								
	155	Cad. Plated Masonry Nails 1½" Lg.	ST-502								
	225	6d Common Nails, Galv.									
	1	4" Wide Paint Brush									
	62	Angles, 0'3¾" Lg.	ST-1630								
ERECTION INSTRUCTIONS IN THIS CRATE		1. ELECTRICAL CARTON, CONTENTS AS FOLLOWS: 280 Lin. Ft.—Wire and Cable: Electric, building, non-metallic sheathed, 600-volt service, #14 2/c solid. 150 Lin. Ft.—Wire and Cable: Electric, building, cord, flexible, type S, rubber or synthetic insulation, with rubber or synthetic jacket, #16 2/c stranded. 18—Sockets: Lamp, medium base, keyless, weatherproof, 600-watt, 600-volt, with 6-inch #14 leads and shade holder groove. 18—Reflectors: Dome, for weather-proof socket, 12-inch. 1—Switch, safety, single throw: plug-type fuse, 2-pole 125/250-volt, 30 ampere. 10—Fuses: plug type, 125-volt, 30 ampere. 144—Screws: sheet metal, P-E, #8 x ¾ inch, type "A"—BH. 144—Screws: metal, #6 x 1 inch, BH, Type "A". 18—Boxes: junction and rosette. 100—Straps: non-metallic sheathed cable, one hole, for #10, 2/c, #12, 2/c, #14, 2/c, lead coated. 2—Rolls tape: friction, ¾ inch. 1—Roll tape: rubber, ¾ inch. 2—Taps: cube with prongs, 3 way with parallel slots, 15 ampere, 125 volt. 4—Caps: cord grip, 2-wire, parallel blade, 10/15 amp., 250/125-volt. 2—Body: attachment plug, screw base, for parallel blades.									
1702	50	28 Ga. x 4'4" Corr. Flashing	ST-1449	4'8"	1'3½"	0'4½"	2.26	178#	17#	195#	
1703	35	2" x 18 Ga. Purlins 19'11⅞"	ST-590	20'4"	0'11"	0'10½"	16.31	815#	50#	865#	
1704	20 27	6" x 14 Ga. 21'5½" Ribs Rib Splice Plates	ST-1230 ST-1505	21'9½"	0'6½"	2'1"	24.59*	1624#	26#	1650#	
1705	20 27	6" x 14 Ga. 21'5½" Ribs Rib Splice Plates	ST-1230 ST-1505	21'9½"	0'6½"	2'1"	24.59*	1624#	26#	1650#	
1706	19 25	6" x 14 Ga. 21'5½" Ribs Rib Splice Plates	ST-1230 ST-1505	21'9½"	0'6½"	1'11⅞"	23.49*	1540#	30#	1570#	
1707	19 25	6" x 14 Ga. 21'5½" Ribs Rib Splice Plates	ST-1230 ST-1505	21'9½"	0'6½"	1'11⅞"	23.49*	1540#	30#	1570#	
1708	75	27⅛" x 90" x 26 Ga. Corr. Galv. Sheets (Curved) Curved to 20'6" Rad. Inside	ST-1250	7'9½"	2'7¼"	0'5¼"	8.88*	1250#	65#	1315#	
1709	75	27⅛" x 90" x 26 Ga. Corr. Galv. Sheets (Curved) Curved to 20'6" Rad. Inside	ST-1250	7'9½"	2'7¼"	0'5¼"	8.88*	1250#	65#	1315#	

Crate No.	No. of Pieces	Crate Contents	Item Mark	Crate Size			Cubic Feet	Weight			Remarks
				Length	Width	Depth		Net	Crate	Gross	
1710	90	26″ x 100″ x 26 Ga. Corr. Galv. Sheets	ST-34	8′8¼″	2′5¾″	0′5¾″	10.32	1577#	80#	1657#	
1711	90	26″ x 100″ x 26 Ga. Corr. Galv. Sheets	ST-34	8′8¼″	2′5¾″	0′5¾″	10.32	1577#	80#	1657#	
1712	84 22	26″ x 100″ x 26 Ga. Corr. Galv. Sheets 26″ x 52″ x 26 Ga. Corr. Galv. Sheets	ST-34 ST-32	8′8¼″	2′5¾″	0′5¾″	10.32	1652#	80#	1732#	
		BULKHEAD SHEETS									
1713	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 4 2 4 12 4 12 4 4	26″ x 57″ x 26 Ga. Galv. Corr. Sheet 26″ x 57″ x 26 Ga. Galv. Corr. Sheet 26″ x 52¾″ x 26 Ga. Galv. Corr. Sheet 26″ x 52¾″ x 26 Ga. Galv. Corr. Sheet 26″ x 47½″ x 26 Ga. Galv. Corr. Sheet 26″ x 47½″ x 26 Ga. Galv. Corr. Sheet 26″ x 39″ x 26 Ga. Galv. Corr. Sheet 26″ x 39″ x 26 Ga. Galv. Corr. Sheet 26″ x 27½″ x 26 Ga. Galv. Corr. Sheet 26″ x 27½″ x 26 Ga. Galv. Corr. Sheet 26″ x 60″ x 26 Ga. Galv. Corr. Sheet 26″ x 60″ x 26 Ga. Galv. Corr. Sheet 26″ x 43″ x 26 Ga. Galv. Corr. Sheet 26″ x 43″ x 26 Ga. Galv. Corr. Sheet 26″ x 65½″ x 26 Ga. Galv. Corr. Sheet 26″ x 65½″ x 26 Ga. Galv. Corr. Sheet 26″ x 102″ x 26 Ga. Galv. Corr. Sheet 26″ x 102″ x 26 Ga. Galv. Corr. Sheet 10⅜″ x 132″ x 26 Ga. Galv. Corr. Sheet 26″ x 124″ x 26 Ga. Galv. Corr. Sheet 26″ x 52″ x 26 Ga. Galv. Corr. Sheet 26″ x 56″ x 26 Ga. Galv. Corr. Sheet 26″ x 112″ x 26 Ga. Galv. Corr. Sheet 26″ x 64″ x 26 Ga. Galv. Corr. Sheet 26″ x 16¼″ x 26 Ga. Galv. Corr. Sheet 26″ x 76″ x 26 Ga. Galv. Corr. Sheet 20⅜″ x 100″ x 26 Ga. Galv. Corr. Sheet	ST-21R ST-21L ST-1356 ST-1357 ST-1302 ST-1303 ST-1304 ST-1305 ST-1306 ST-1307 ST-730R ST-730L ST-27R ST-27L ST-731R ST-731L ST-732R ST-732L ST-30 ST-31 ST-32 ST-20 ST-57 ST-58 ST-1358 ST-408 ST-453	11′4¼″	2′5¾″	0′4¼″	9.95	818#	67#	885#	
1614	2 2	Door Leaves Door Leaves	ST-1271 ST-1272	13′11½″	7′5¼″	0′9⅞″	85.43	1113#	147#	1260#	
1815	4 4 4 4 4 2 4 4 4 4 4	Studs 3⅝″ x 16 Ga. x 11′10″ Studs 3⅝″ x 16 Ga. x 15′10¾″ Studs 3⅝″ x 16 Ga. x 18′3″ Studs 3⅝″ x 16 Ga. x 6′4¼″ Brace Angles 3″ x 3″ x 14 Ga. x 8′2¼″ Channels 3¾″ x 16 Ga. x 13′11½″ Channels 3¾″ x 16 Ga. x 2′0″ Wind Girts, 14′6¼″ Lg. Door Tracks, 7′0″ Lg. Door Tracks, 6′6″ Lg. Jamb Assemblies, 18′8″ Lg.	ST-1486 ST-1487 ST-1488 ST-107 ST-763 ST-54 ST-1241 ST-440 ST-1262 ST-1263 ST-1491	18′11½″	1′2″	1′2¾″	27.19	1195#	80#	1275#	
1716	8 8	Window Sash (Glazed) Window Frames	ST-547 ST-1360	5′1″	4′2¾″	1′11¾″	42.55	550#	240#	790#	
1717	6 20 10 4	6″ x 1″ x 26 Ga. Flashing 60″ Lg. 26 Ga. x 4′8″ Flashing 26 Ga. x 5′0″ Flashing 6½″ x 20 Ga. Flashing 56 1/16″ Lg.	ST-115 ST-1138 ST-1367 ST-1365	5′4¾″	1′0½″	0′9¼″	4.22	140#	45#	185#	
1718	1 5 1 182 32	5 Gal. Can Sealer 5 Gal. Can Mastic 5 Gal. Can Paint 2½″ Corr. Strip 2″ Wide 2′4″ Lg. Strip 1½″ Wide x 2′3″ Lg.	 ST-551 ST-320	3′6″	2′6″	2′2″	18.96	525#	100#	625#	
1819	2 2 28 10 4 4 4 2 2 2 24 20 72	Metal Adjustable Louvers Complete with Frame 24 Ga. Sill Flashing 3/16″ x 1″ Stove Bolts with Nut and Washer 3/16″ x ½″ Stove Bolts with Nut and Washer 3/16″ x 1½″ R.H. Stove Bolts with Lock Washers and Nuts 2″ x 2″ x 4′2″ Wooden Members 2″ x 2″ x 3′8¾″ Wooden Members 2″ x 2″ x 3′9½″ Wooden Members 1″ x 3″ x 3′9½″ Wooden Members Pieces 4′2″ x 4′0″—2 x 2 Hardware Cloth 4″ Foundry Nails, Galvanized 8d—Common Nails ½″ Blind Staples	For Louver Screens	4′4½″	4′2″	0′10⅜″	15.76	170#	123#	293#	
1820	175	Channel Bridging	ST-1226	4′8¼″	2′9½″	1′9¼″	23.17	787#	88#	875#	

Crates Reqd. to Make 1—40′ x 100′
Quonset Q40 Building

20 Crates

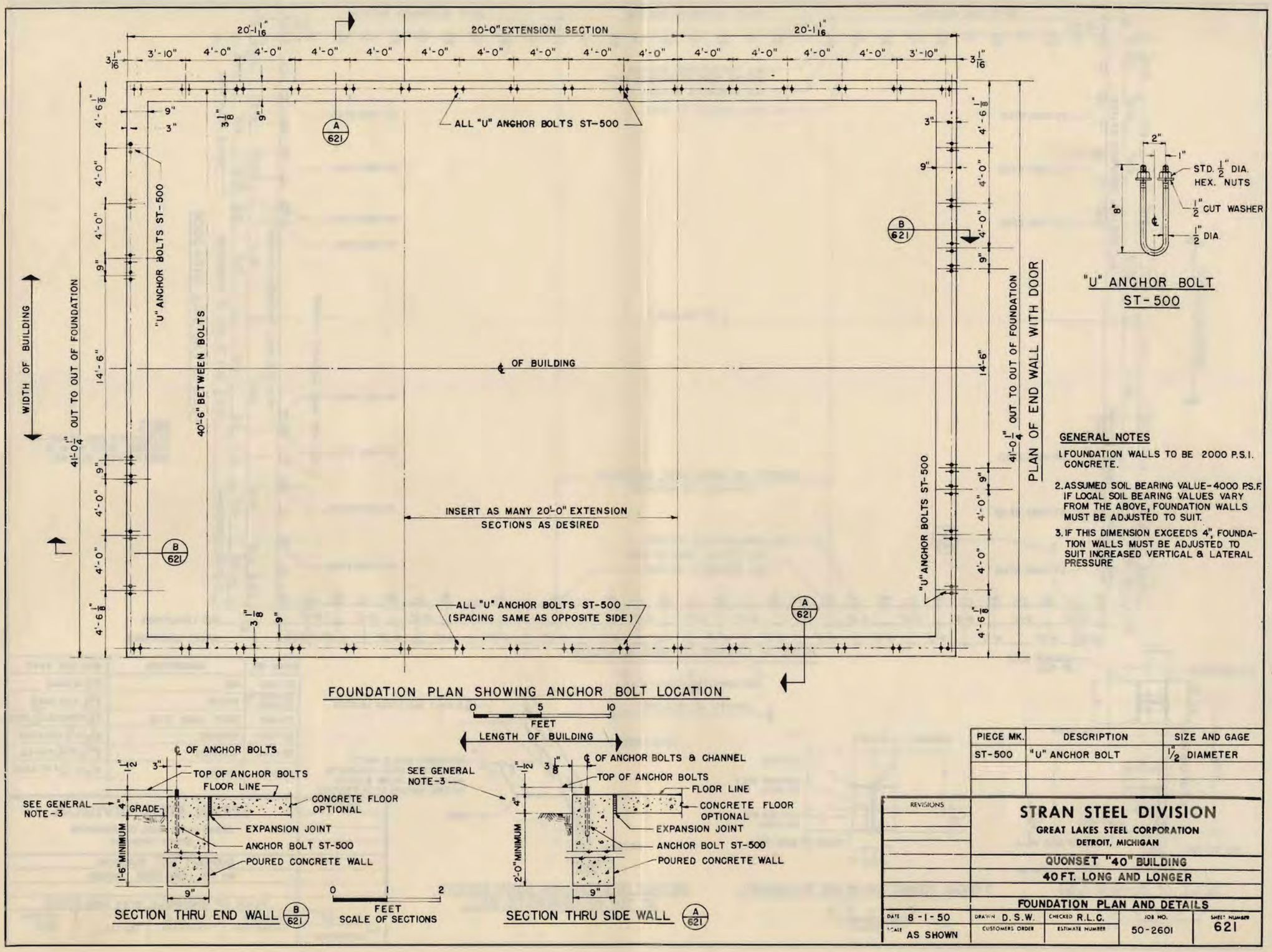
Total Cu. Ft. 407.62
Gross Weight 22154
Net Weight 20609

NOTE: Cube of packages shown with an asterisk (*) are computed on a net basis. These packages contain the curved ribs and curved sheets. For the purpose of storing and shipping, these packages can be nested and the number of packages to be nested will determine the cubic space required for storing and shipping. Computed on the basis of nesting the curved ribs and curved sheets for ten (10) buildings, the total cube of one (1) building would be increased by 23.88 cubic feet.

U. S. NAVY QUONSET 40 BUILDING

AUGUST, 1950
DESIGN

MA 8632



FOUNDATION PLAN SHOWING ANCHOR BOLT LOCATION

0 5 10
FEET
LENGTH OF BUILDING

SECTION THRU END WALL B 621

0 1 2
FEET
SCALE OF SECTIONS

SECTION THRU SIDE WALL A 621

"U" ANCHOR BOLT
ST-500

GENERAL NOTES

1. FOUNDATION WALLS TO BE 2000 P.S.I. CONCRETE.
2. ASSUMED SOIL BEARING VALUE-4000 PS.F. IF LOCAL SOIL BEARING VALUES VARY FROM THE ABOVE, FOUNDATION WALLS MUST BE ADJUSTED TO SUIT.
3. IF THIS DIMENSION EXCEEDS 4", FOUNDATION WALLS MUST BE ADJUSTED TO SUIT INCREASED VERTICAL & LATERAL PRESSURE

PIECE MK.	DESCRIPTION	SIZE AND GAGE
ST-500	"U" ANCHOR BOLT	1/2" DIAMETER

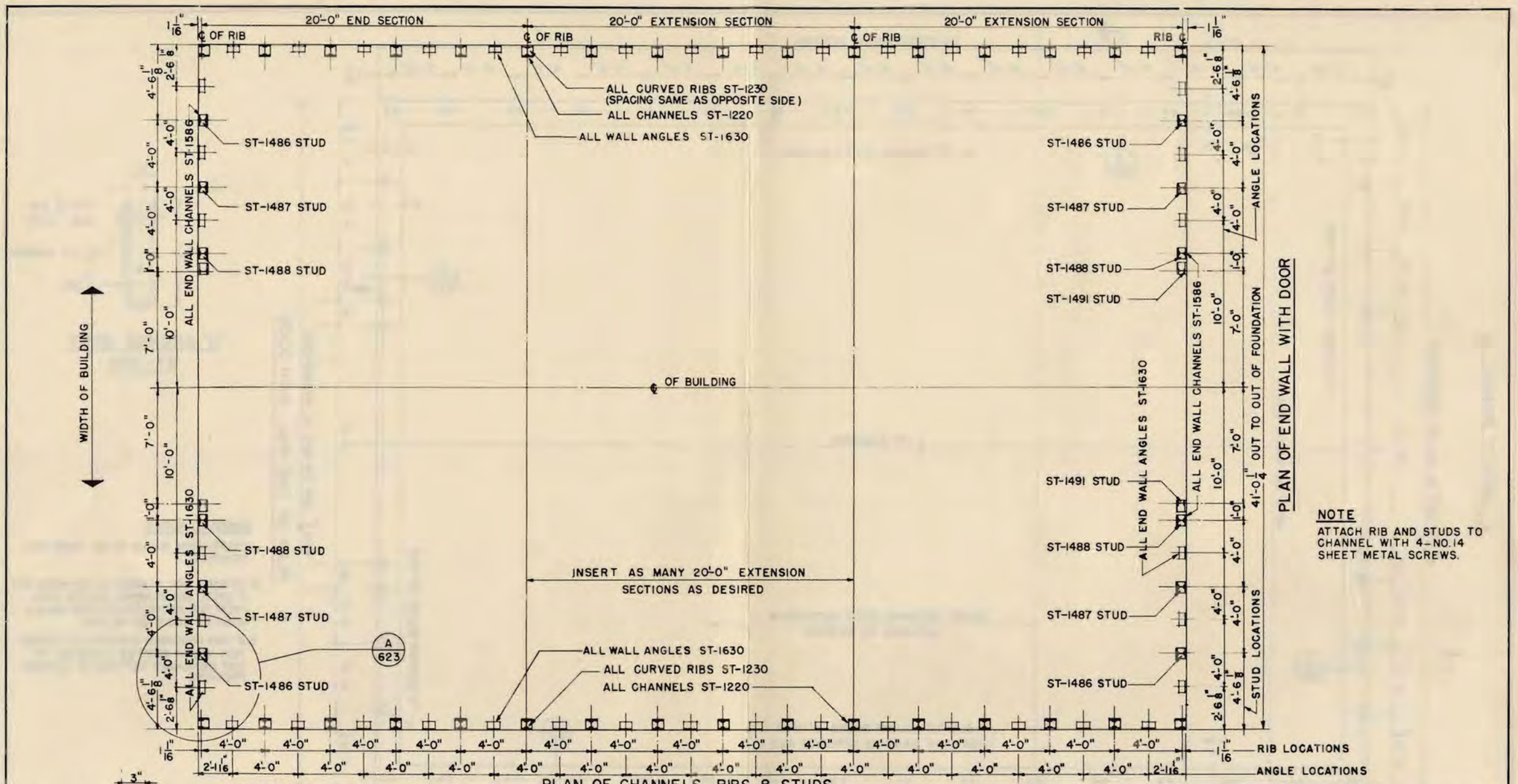
REVISIONS

STRAN STEEL DIVISION
GREAT LAKES STEEL CORPORATION
DETROIT, MICHIGAN

QUONSET "40" BUILDING
40 FT. LONG AND LONGER

FOUNDATION PLAN AND DETAILS

DATE	DRAWN	CHECKED	JOB NO.	SHEET NUMBER
8-1-50	D.S.W.	R.L.C.	50-2601	621
SCALE: AS SHOWN	CUSTOMERS ORDER	ESTIMATE NUMBER		

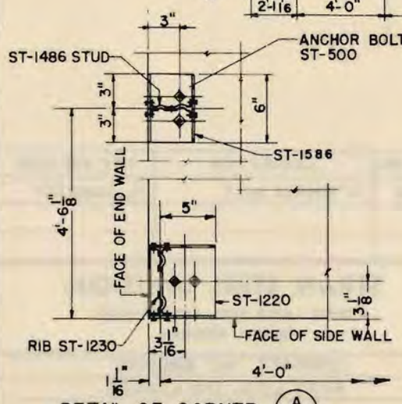


PLAN OF END WALL WITH DOOR

NOTE
ATTACH RIB AND STUDS TO CHANNEL WITH 4-NO.14 SHEET METAL SCREWS.

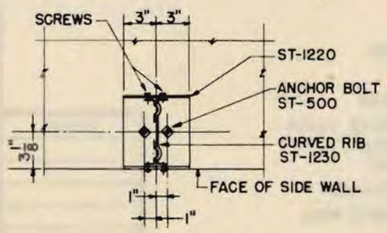
PLAN OF CHANNELS, RIBS & STUDS

0 5 10 FEET
LENGTH OF BUILDING



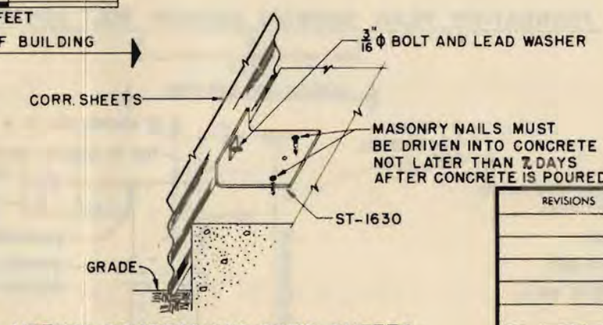
DETAIL OF CORNER (A 623)

0 3 6 9 12 INCHES



TYPICAL CONNECTION OF RIB TO CHANNEL

0 3 6 9 12 INCHES



METHOD OF ATTACHING CORR. SHEETS AT TOP OF CONCRETE WALL

PIECE MK.	DESCRIPTION	SIZE AND GAGE
ST-1230	RIB	6" X 14 GAGE
ST-1486 TO ST-1490	STUDS	3 5/8" X 16 GAGE
ST-1491	DOOR JAMB STUD	3 5/8" X 16 GA. & 3 13/16" X 16 GA.
ST-1220	CHANNEL	6 1/4" X 1 3/4" X 16 GAGE
ST-1586	CHANNEL	3 13/16" X 1 5/8" X 16 GA.
ST-1630	ANGLE	4 1/2" X 1 1/2" X 18 GAGE

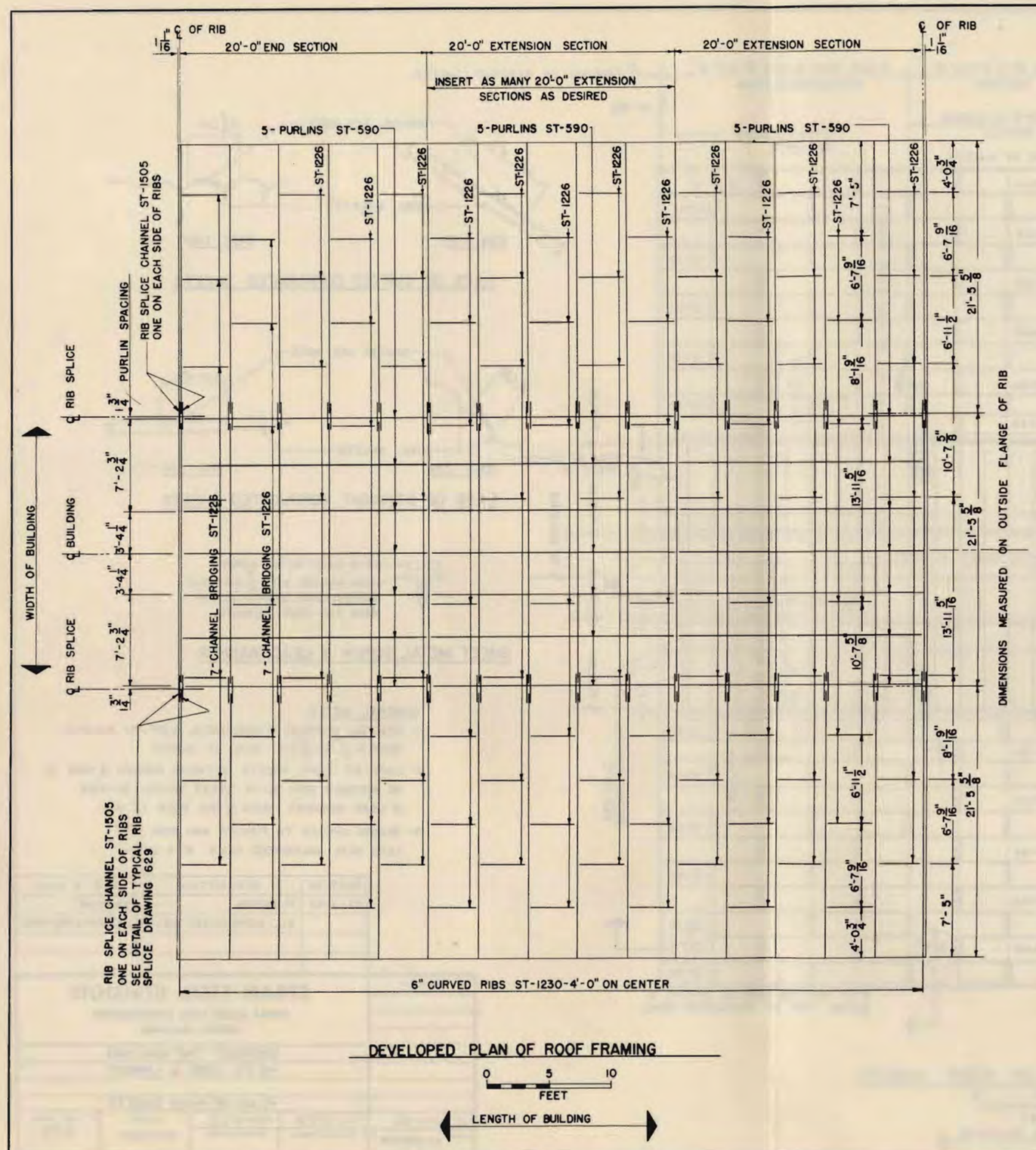
REVISIONS

STRAN STEEL DIVISION
GREAT LAKES STEEL CORPORATION
DETROIT, MICHIGAN

QUONSET "40" BUILDING
40 FT. LONG AND LONGER

PLAN OF CHANNELS, RIBS AND STUDS

DATE	DRAWN	CHECKED	JOB NO.	SHEET NUMBER
8-1-50	H.E.B	R.L.C.	50-2601	623
SCALE AS SHOWN	CUSTOMERS ORDER	ESTIMATE NUMBER		



DEVELOPED PLAN OF ROOF FRAMING

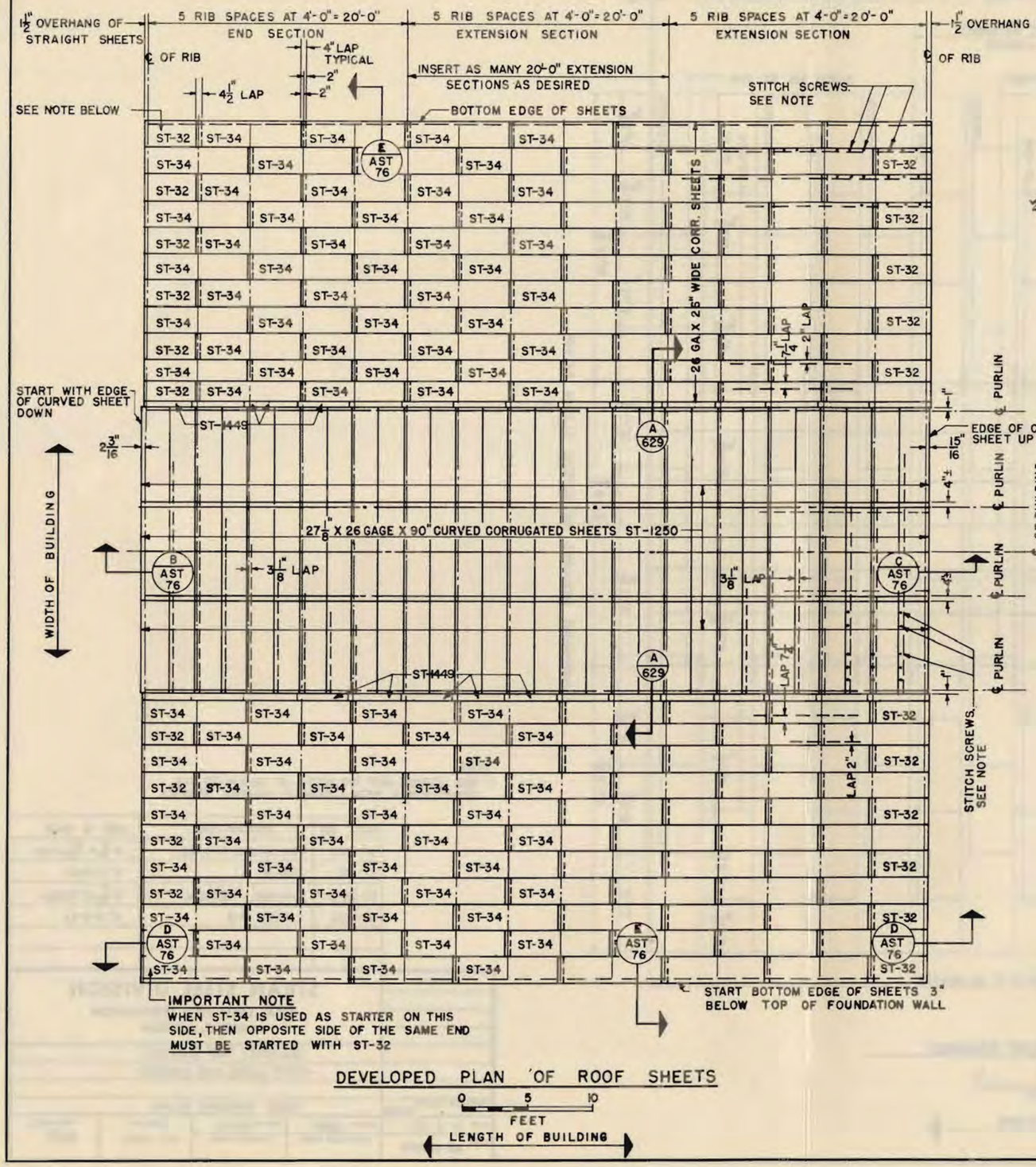
0 5 10
FEET

LENGTH OF BUILDING

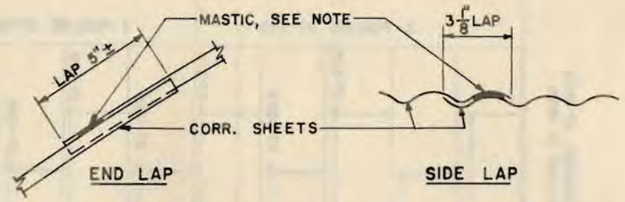
NOTE
1.- SEE DRAWING 629 FOR DETAIL OF PURLIN TO RIB CONNECTION & INSTALLATION OF CHANNEL BRIDGING.

PIECE MK	DESCRIPTION	SIZE & GAGE
ST-1505	RIB SPLICE CHANNEL	4 7/8" X 5/8" X 11GA
ST-590	PURLIN	2" X 18 GA
ST-1226	CHANNEL BRIDGING	6 1/8" X 1" X 18 GA
ST-1230	CURVED RIB	6" X 14 GA

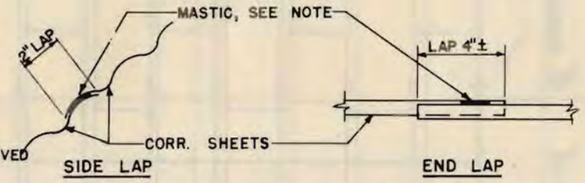
REVISIONS	STRAN STEEL DIVISION GREAT LAKES STEEL CORPORATION DETROIT, MICHIGAN			
	QUONSET "40" BUILDING 40'FT LONG AND LONGER			
① PURLINS ADDED 8-15-50	ROOF FRAMING PLAN			
DATE 8-1-50	DRAWN J.H.M.	CHECKED V.A.R.	JOB NO. 50-2601	SHEET NUMBER 627
SCALE AS SHOWN	CUSTOMERS ORDER	ESTIMATE NUMBER		



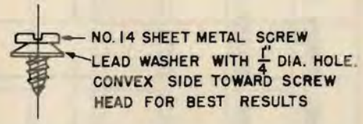
DEVELOPED PLAN OF ROOF SHEETS



LAPS OF CURVED CORRUGATED SHEETS



LAPS OF STRAIGHT CORRUGATED SHEETS



SHEET METAL SCREW & LEAD WASHER

GENERAL NOTES

1- SEAL ALL VERTICAL & HORIZONTAL LAPS OF SHEETS WITH A 1/4" TO 5/16" DIA. BEAD OF MASTIC.

2- LAPS OF CORR. SHEETS BETWEEN PURLINS & RIBS TO BE STITCHED WITH NO. 14 SHEET METAL SCREWS & LEAD WASHERS WITH 1/4" DIA. HOLE 12" O. C.

3- SECURE SHEETS TO PURLINS AND RIBS WITH LEAD SEAL GALVANIZED NAILS 8" O. C.

PIECE MK	DESCRIPTION	SIZE & GAGE
ST-1449	FLASHING	28 GAGE
	ALL CORRUGATED SHEETS	26 GAGE X 2½" CORR.

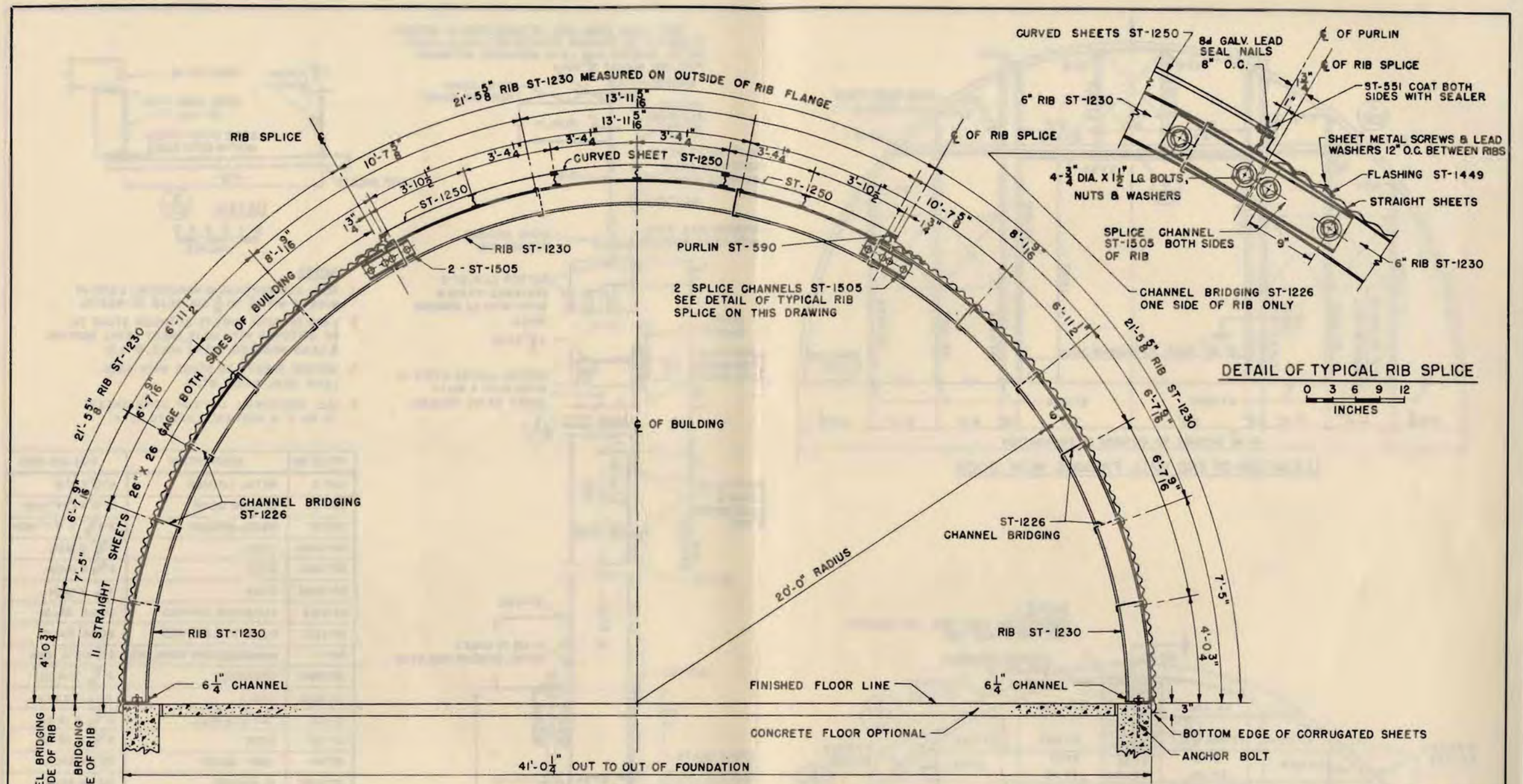
REVISIONS

STRAN STEEL DIVISION
GREAT LAKES STEEL CORPORATION
DETROIT, MICHIGAN

QUONSET "40" BUILDING
40 FT. LONG & LONGER

PLAN OF ROOF SHEETS

DATE	DRAWN	CHECKED	JOB NO.	SHEET NUMBER
8-1-50	H.E.B	R.L.C.	50-2601	628
SCALE: AS SHOWN	CUSTOMERS ORDER	ESTIMATE NUMBER		

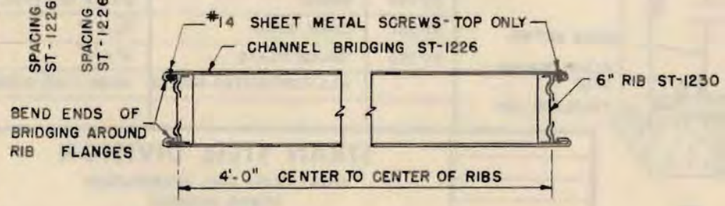


TYPICAL CROSS SECTION

0 5 FEET

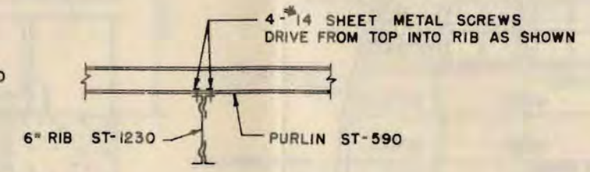
DETAIL OF TYPICAL RIB SPLICE

0 3 6 9 12 INCHES



INSTALLATION OF TYPICAL CHANNEL BRIDGING

0 3 6 9 12 INCHES



DETAIL OF PURLIN TO RIB CONNECTION

0 3 6 9 12 INCHES

PIECE MK.	DESCRIPTION	SIZE & GAGE
ST-590	PURLIN	2" X 18 GA.
ST-1230	CURVED RIB	6" X 14 GA.
	CHANNEL	6 1/4" X 1 3/4" X 16 GA.
ST-1226	CHANNEL BRIDGING	6 1/8" X 1" X 18 GA.
ST-1505	RIB SPLICE CHANNEL	4 7/8" X 5/8" X 11 GA.
ST-1449	FLASHING	28 GA. GALV.
ST-551	CORRUGATED STRIP	

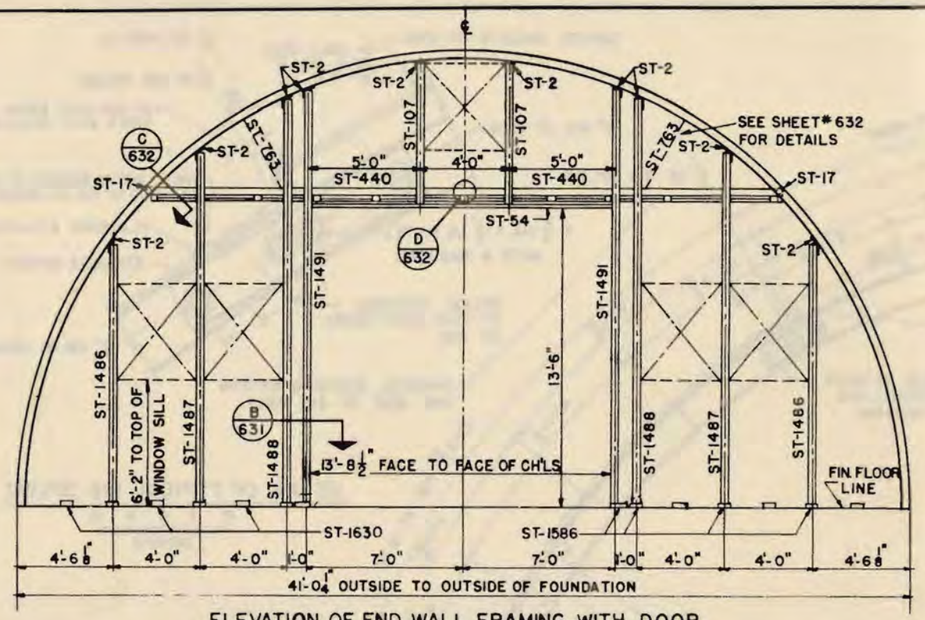
REVISIONS
① PURLIN ADDED 8-15-50

STRAN STEEL DIVISION
GREAT LAKES STEEL CORPORATION
DETROIT, MICHIGAN

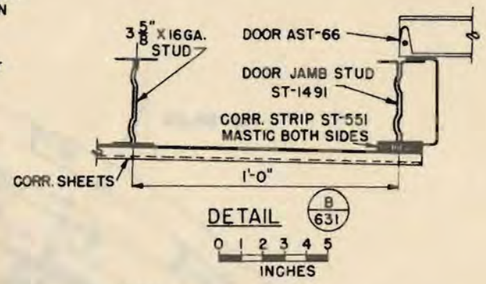
QUONSET "40" BUILDING
40 FT. LONG AND LONGER

CROSS SECTION AND DETAILS

DATE	DRAWN	CHECKED	JOB NO.	SHEET NUMBER
8-1-50	R.T.L.	V.A.R.	50-2601	629
SCALE AS SHOWN	CUSTOMERS ORDER	ESTIMATE NUMBER		

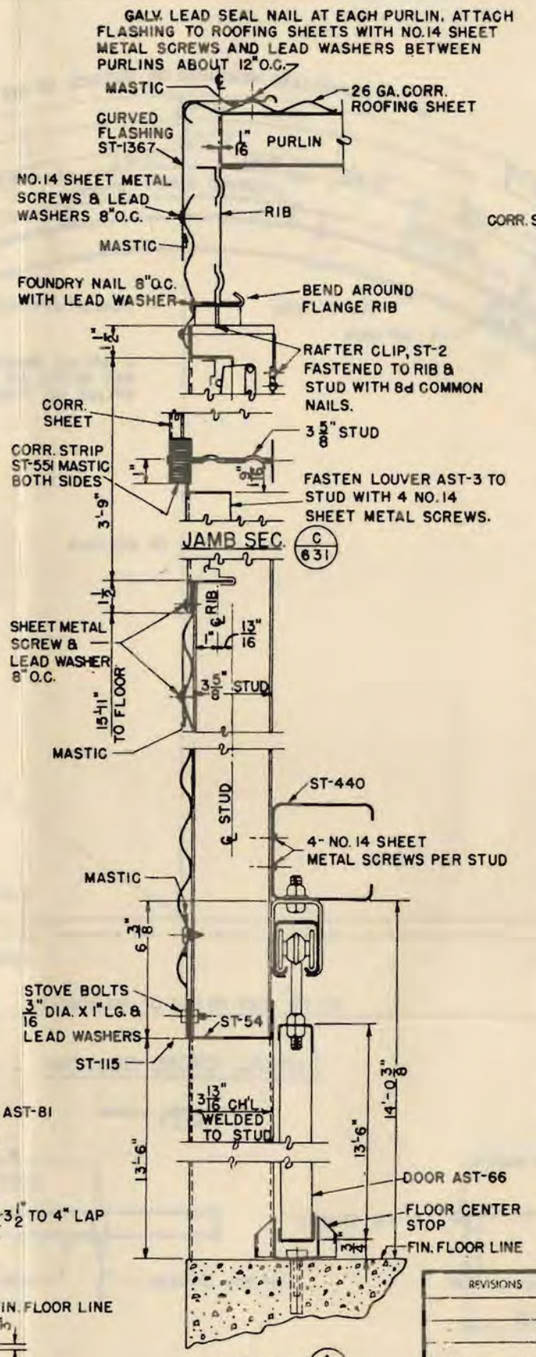


ELEVATION OF END WALL FRAMING WITH DOOR



DETAIL (B / 631)

0 1 2 3 4 5 INCHES



SECTION (A / 631)

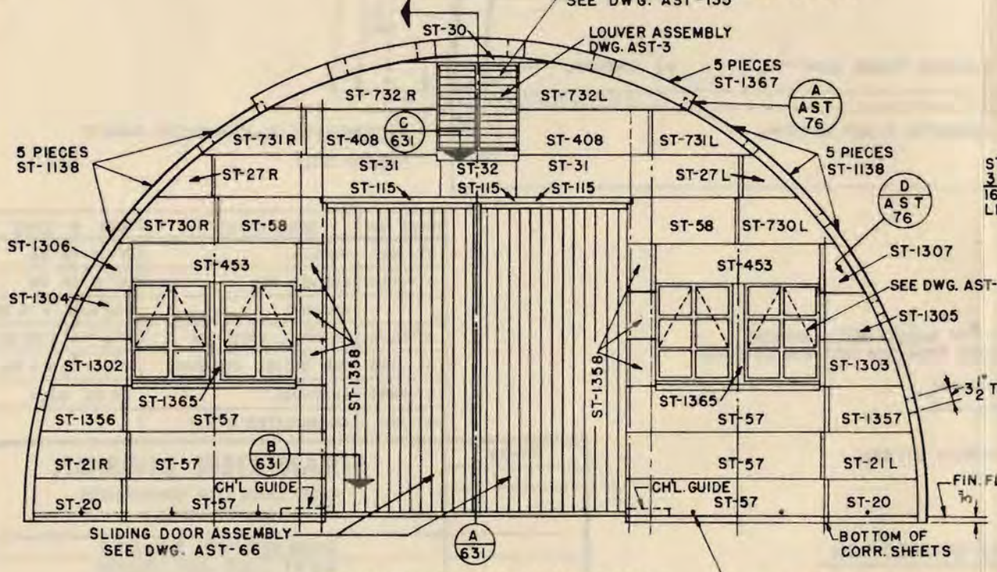
0 1 2 3 4 5 10 INCHES

NOTES

1. SEAL ALL VERTICAL & HORIZONTAL LAPS OF SHEETS WITH ¼" TO 15/16" DIA. BEAD OF MASTIC.
2. LAPS OF CORR. SHEETS BETWEEN STUDS TO BE STITCHED WITH NO. 14 SHEET METAL SCREWS & LEAD WASHERS, WITH ¼" HOLE, 12" O.C.
3. SECURE SHEETS TO STUDS WITH GALV. LEAD SEAL NAILS, 8" O.C.
4. ALL HORIZONTAL LAPS OF CORR. SHEETS TO BE 2" & VERTICAL LAPS TO BE 4".

PIECE MK.	DESCRIPTION	SIZE AND GAGE
AST-3	METAL LOUVER	4'-0" X 4'-0"
AST-66	SLIDING DOOR	14'-0" X 13'-6" HIGH
AST-81	METAL WINDOW	3'-4⅞" X 4'-1" HIGH
ST-1486	STUD	3⅝" X 16GA.
ST-1487	STUD	3⅝" X 16GA.
ST-1488	STUD	3⅝" X 16GA.
ST-1138	FLASHING, CURVED	26 GA. GALV.
ST-1367	FLASHING, CURVED	26 GA. GALV.
ST-17	RIB & WIND GIRT CONN. CH'L	6¼" X 3" X 13 GA.
ST-1586	CHANNEL	3 13/16" X 16 GA.
ST-1630	ANGLE	4½" X 1½" X 18 GA.
ST-54	TOP CHANNEL	3 13/16" X 16 GA.
ST-107	STUD	3⅝" X 16 GA.
ST-115	BENT SHEET	26 GA. GALV.
ST-1365	FLASHING	20 GA. GALV.
ST-2	RAFTER CLIP	16 GA.
ST-440	END WALL GIRT	4¼" X 4⅝" X 7⅛" X 13 GA.
ST-1491	DOOR JAMB STUD	3⅝" X 16GA. & 3 13/16" X 16GA.
ST-763	BRACE	3" X 3" X ¾" X 14 GA.
ST-551	CORR. STRIP	¾" X 2"
ST-743	SPLICE PLATE	4" X ¼"
	ALL CORRUGATED SHEETS	26 GA. X 2½" CORR.

NOTE:
SCREEN ON FAR SIDE OF LOUVER SEE DW'G. AST-135



ELEVATION OF END WALL WITH DOOR

FASTEN SHEETS TO ANGLE WITH 3/16" DIA. STOVE BOLTS & LEAD WASHERS

0 5 10 FEET

SCALE FOR ELEVATIONS

REVISIONS

8-1-50

AS SHOWN

STRAN STEEL DIVISION

GREAT LAKES STEEL CORPORATION

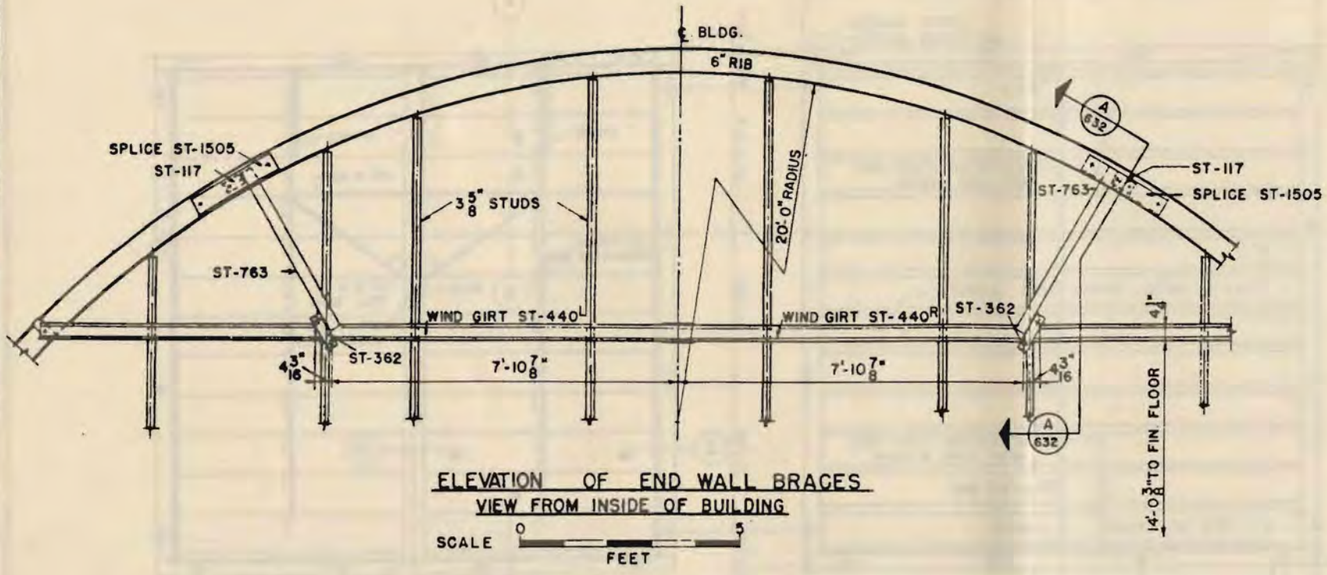
DETROIT, MICHIGAN

QUONSET "40" BUILDING

40 FT. LONG AND LONGER

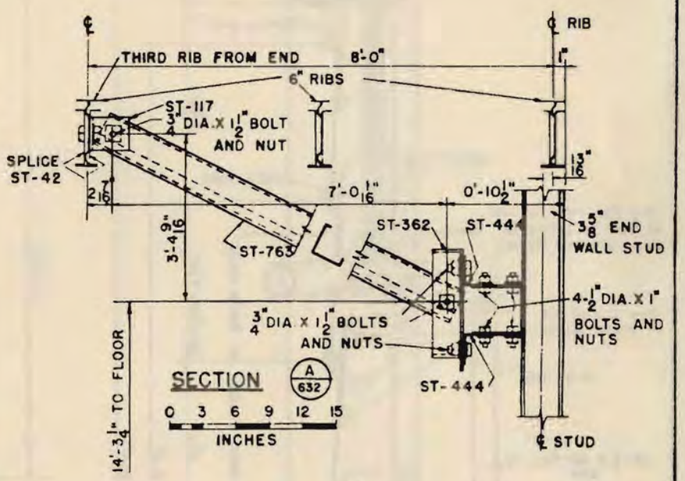
END WALL FRAMING WITH DOOR

DRAWN H.E.B.	CHECKED R.L.C.	JOB NO. 50-2601	SHEET NUMBER 631
SUPERSEDES ORDER	ESTIMATE NUMBER		

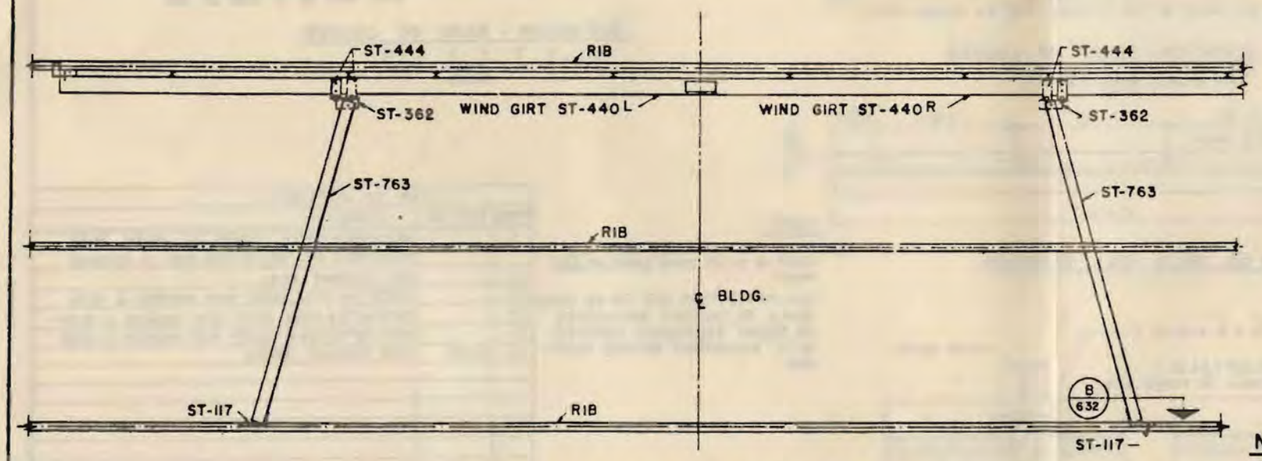


ELEVATION OF END WALL BRACES
VIEW FROM INSIDE OF BUILDING

SCALE 0 5 FEET

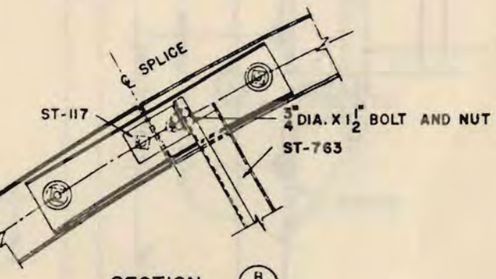


SECTION



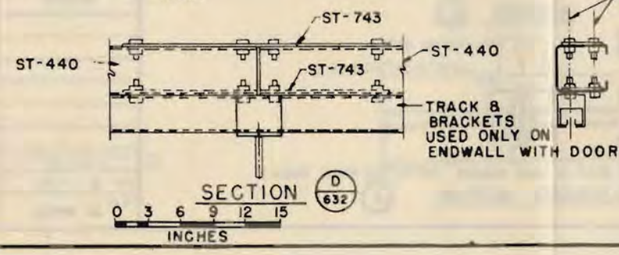
ROOF PLAN OF END WALL BRACES
(WITH PURLINS REMOVED)

SCALE 0 5 FEET



SECTION

SCALE



1/2" DIA. X 1" BOLTS NUTS & WASHERS

SECTION

SECTION

NOTE:
ST-440 MAY BE SUBSTITUTED FOR EITHER ST-440R OR ST-440L OR BOTH.

PIECE MARK	DESCRIPTION	SIZE AND GAGE
ST-117	BRACE ANGLE	5 1/2" X 3 1/2" X 8 GA. L
ST-362	BRACE ANGLE	2 1/4" X 2 3/4" X 8 GA. L
ST-444	BRACE CLIP	5 1/4" X 2 3/4" X 8 GA. L
ST-763	BRACE	3" X 3" X 3/4" X 14 GA.

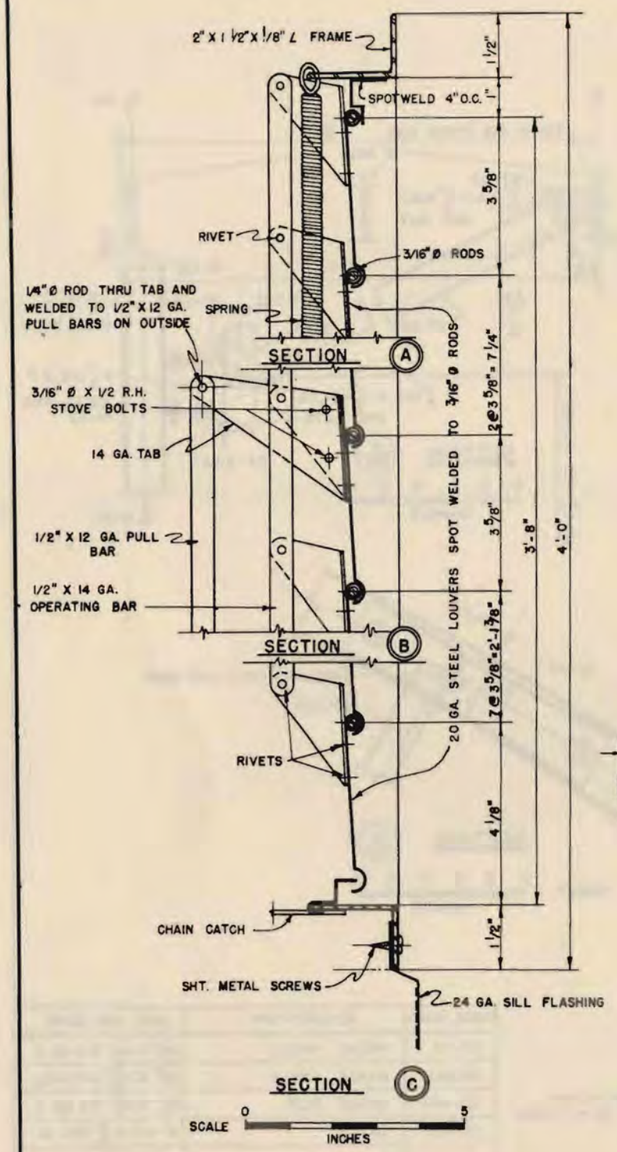
REVISIONS

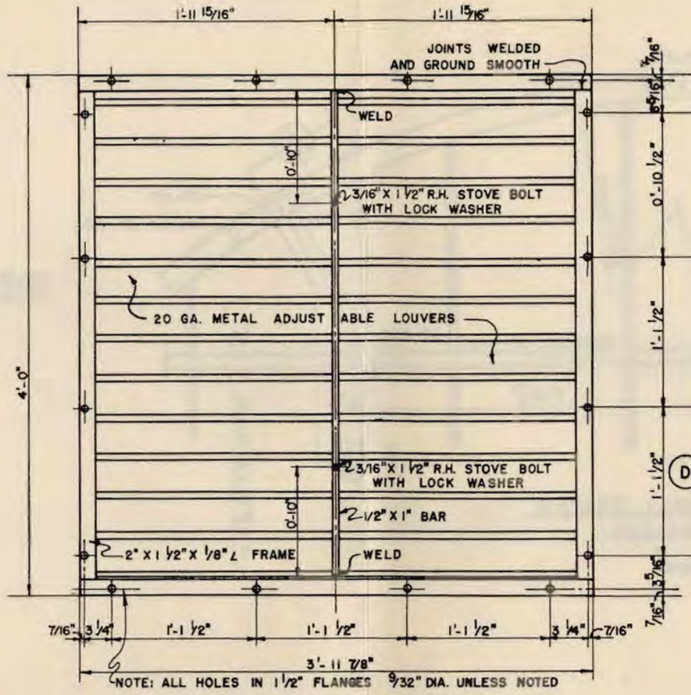
STRAN STEEL DIVISION
GREAT LAKES STEEL CORPORATION
DETROIT, MICHIGAN

QUONSET 40 BUILDING
40 FT. LONG AND LONGER

END WALL WIND BRACES

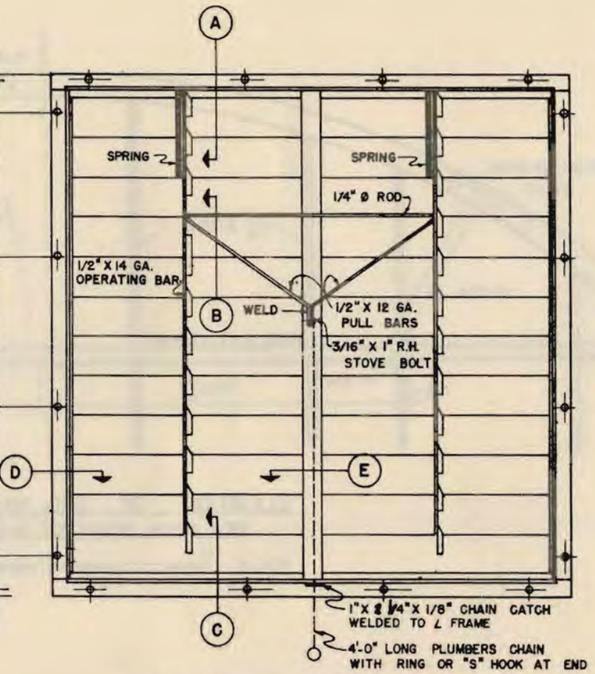
DATE	DRAWN	CHECKED	JOB NO.	SHEET NUMBER
8-1-50	O.H.L.	L.K.	50-2601	632
SCALE AS NOTED	CUSTOMER'S ORDER	ESTIMATE NUMBER		





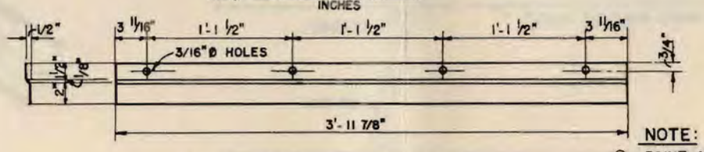
ELEVATION - FRONT OF LOUVER

SCALE 0 3 6 9 12 15
INCHES



ELEVATION - BACK OF LOUVER

SCALE 0 3 6 9 12 15
INCHES

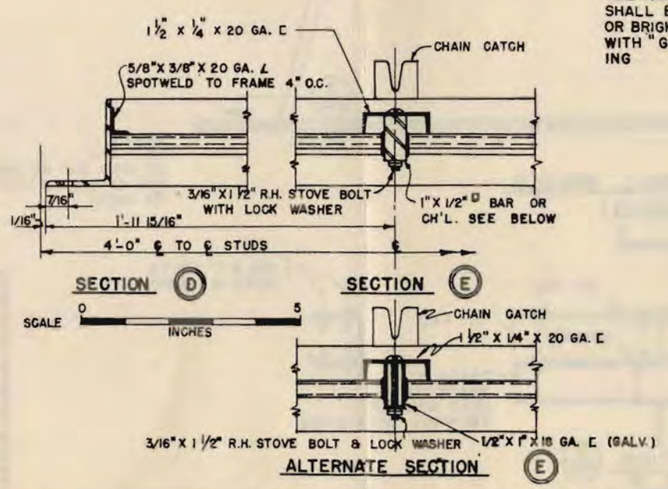


24 GA. GALV. SILL FLASHING

NOTE:

① PAINT ALL SURFACES WITH ONE COAT OF OLIVE DRAB CAMOUFLAGE PAINT

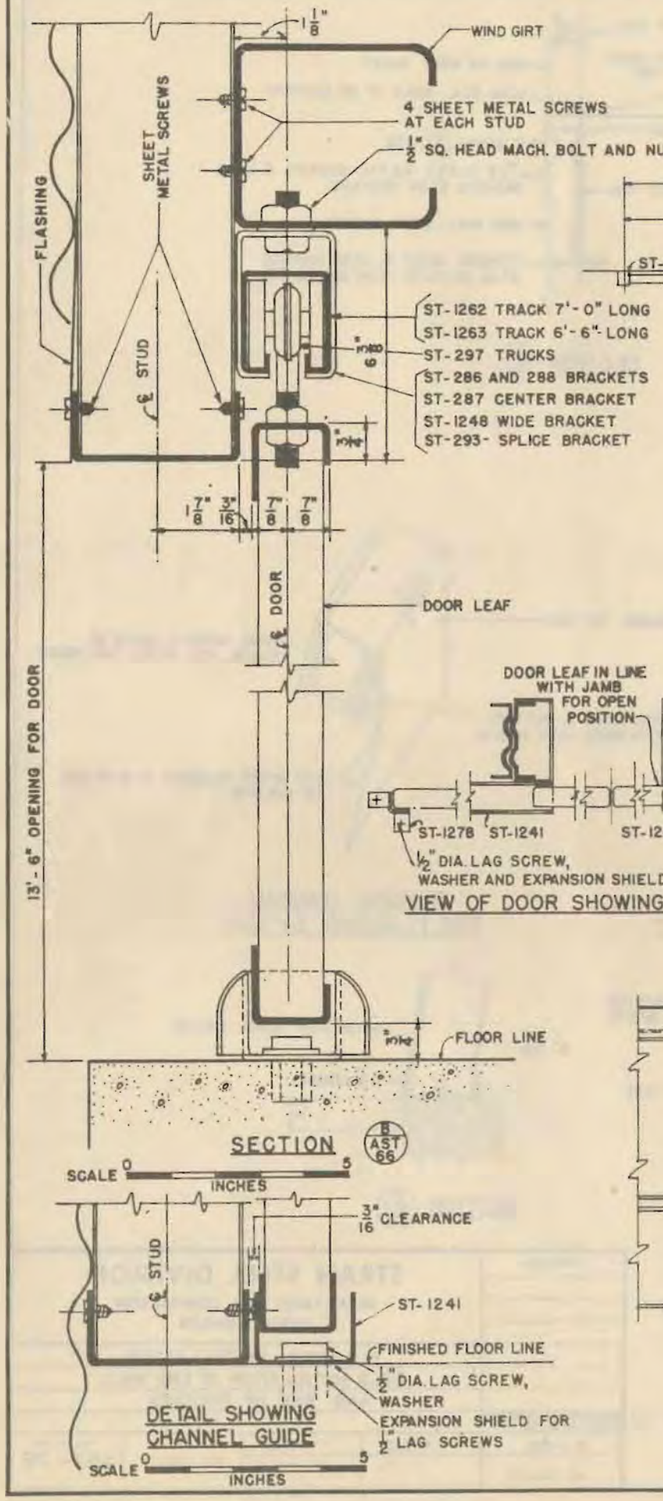
ALL PARTS THAT ARE TO BE GALV. SHALL BE DULCOTE GALVANIZED OR BRIGHT GALVANIZED TREATED WITH "GALVAPREP" BEFORE PAINTING

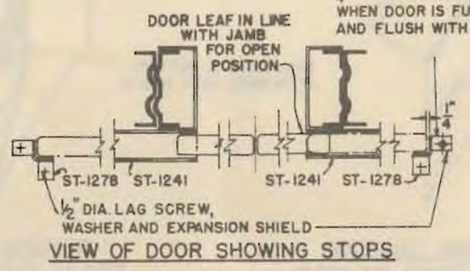


LIST OF MATERIALS		
№ REQ.	PART NO.	DESCRIPTION
1		ADJUSTABLE STEEL LOUVER IN FRAME WITH
		DETACHABLE PULL BAR & CHAIN ASSY. AS DETAILED
1		SILL FLASHING 24 GA.
14		3/16" X 1" R.H. STOVE BOLTS WITH WASHERS & NUTS
5		3/16" X 1/2" R.H. STOVE BOLTS WITH WASHERS & NUTS
2		3/16" X 1 1/2" R.H. STOVE BOLTS WITH WASHERS & NUTS
4	ST-551	CORR. ASPHALT STRIPS

REVISIONS	STRAN STEEL DIVISION GREAT LAKES STEEL CORPORATION DETROIT, MICHIGAN			
	LOUVER ASSEMBLY 4'-0" X 4'-0" STEEL LOUVER			
① PAINT NOTE REVISED 8-22-50				
DATE 8-1-50	DRAWN O.H.L.	CHECKED L. K.	JOB NO. 50-2601	SHEET NUMBER AST-3
SCALE AS NOTED	CUSTOMERS ORDER	ESTIMATE NUMBER		

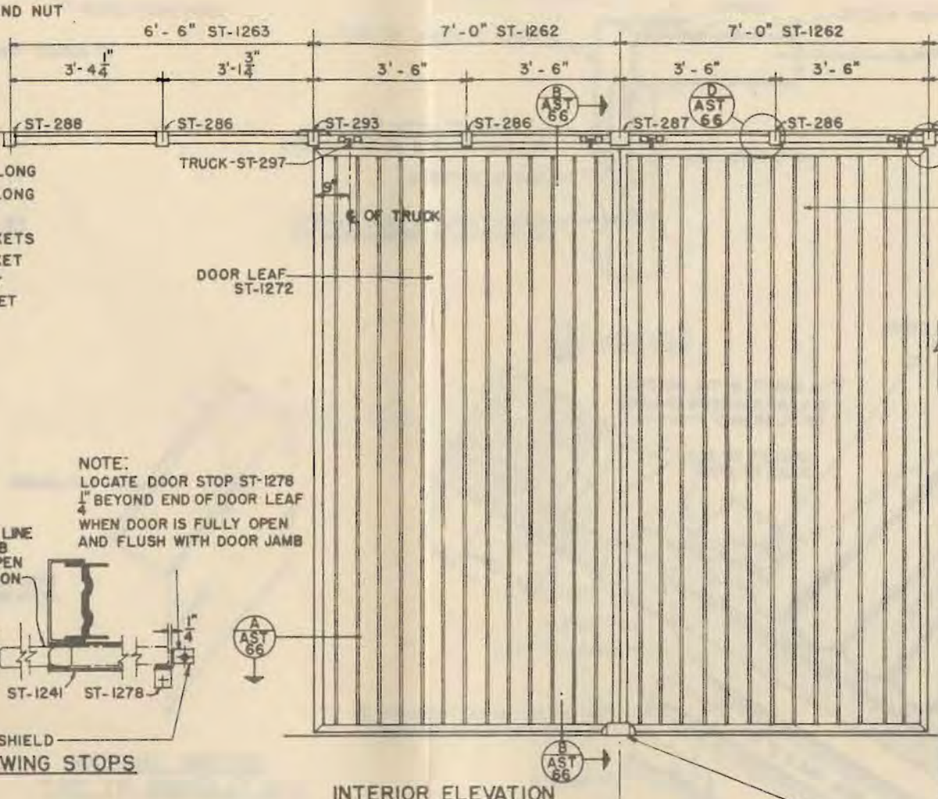
NOTE:
PAINT ALL SURFACES OF THE DOOR WITH OLIVE DRAB CAMOUFLAGE PAINT.



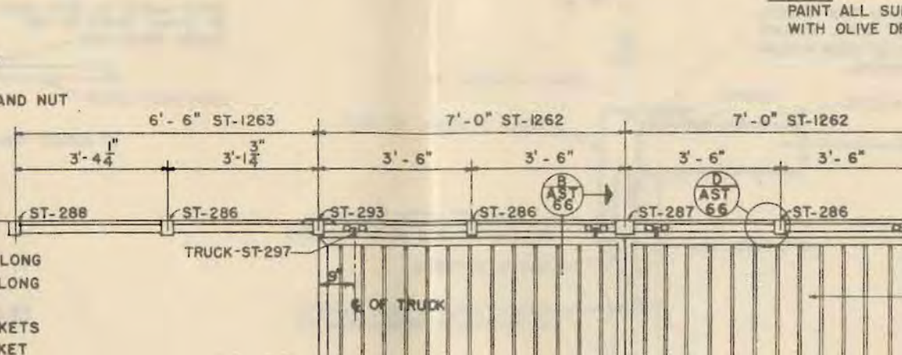


NOTE:
LOCATE DOOR STOP ST-1278 1/4" BEYOND END OF DOOR LEAF WHEN DOOR IS FULLY OPEN AND FLUSH WITH DOOR JAMB

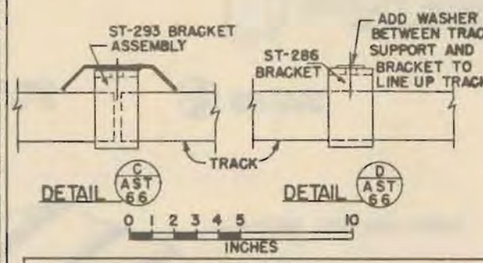
VIEW OF DOOR SHOWING STOPS



INTERIOR ELEVATION
SCALE 0 5
FEET



SECTION
A AST 66
SCALE 0 5
INCHES



BILL OF MATERIAL

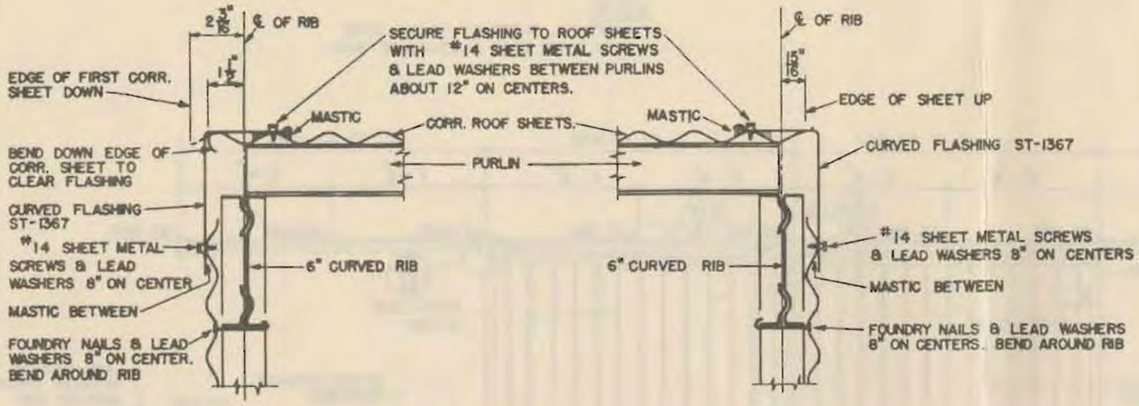
NO. REQD	PIECE MARK	DESCRIPTION
1	ST-1271	DOOR LEAF WITH ASTRAGAL
1	ST-1272	DOOR LEAF
2	ST-1262	7'-0" TRACK
2	ST-1263	6'-6" TRACK
4	ST-286	BRACKET
1	ST-287	CENTER BRACKET
2	ST-288	END BRACKET
2	ST-293	TRACK SPLICE BRACKET ASSEMBLY
4	ST-297	TRUCKS
1	ST-1536	CENTER FLOOR STOP
2	ST-1241	CHANNEL GUIDE
2	ST-1278	DOOR STOP
10		1/2" DIA. LAG SCREWS
10		EXP. SHIELD FOR 1/2" LAG SCREWS
12		1/2" DIA. X 1" LG. SQ. HD. MACH. BOLT AND NUT
30		WASHERS FOR 1/2" DIA. BOLT

REVISIONS
REV. 8-11-50

STRAN STEEL DIVISION
GREAT LAKES STEEL CORPORATION
DETROIT, MICHIGAN

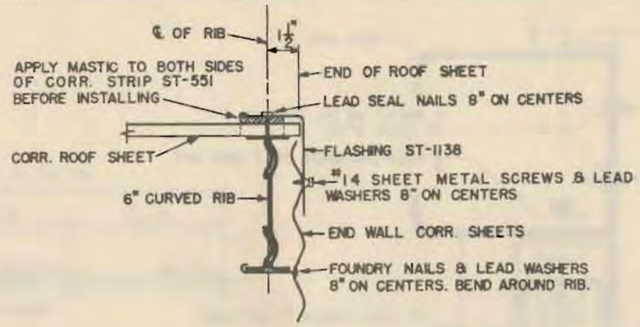
DOOR ASSEMBLY
14'-0" X 13'-6" SLIDING STEEL DOOR FOR Q-40

DATE	DRAWN	CHECKED	JOB NO.	SHEET NUMBER
8-1-50	O. H. L.	L.K.	50-2601	AST-66
SCALE AS NOTED	CUSTOMERS ORDER	ESTIMATE NUMBER		

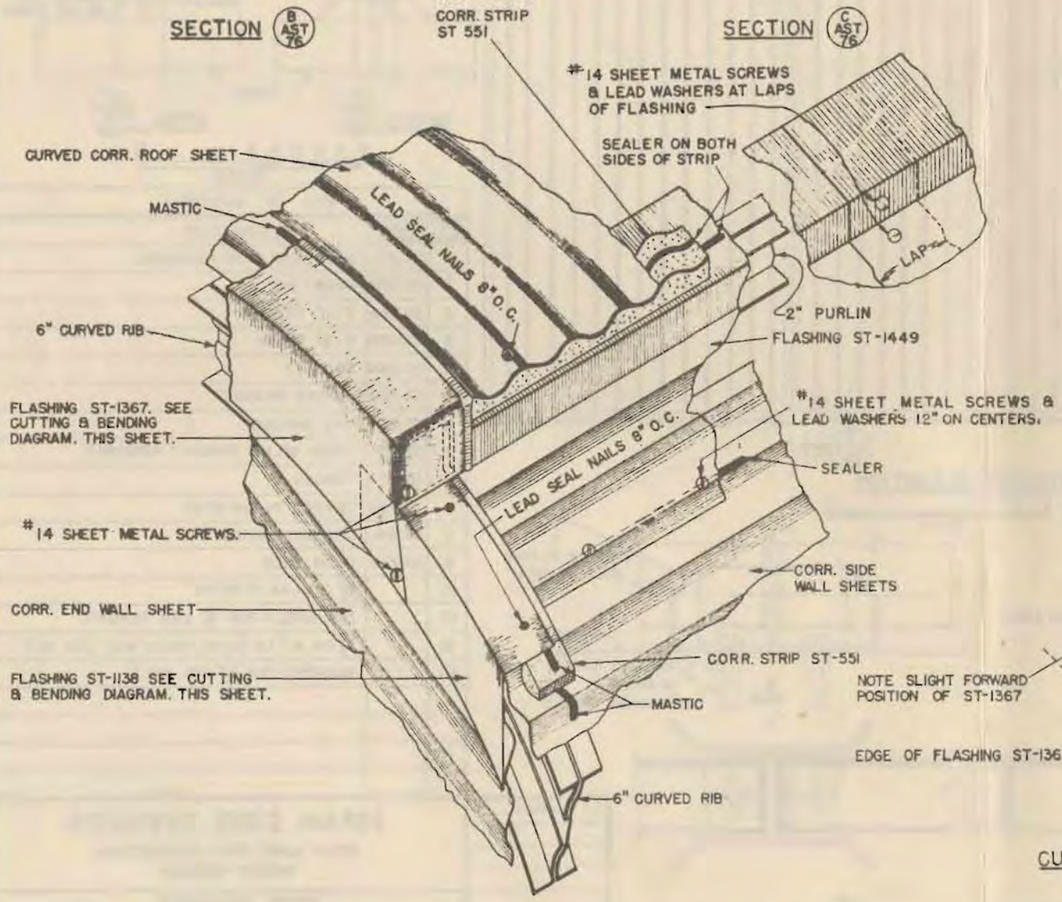


SECTION (B AST 76)

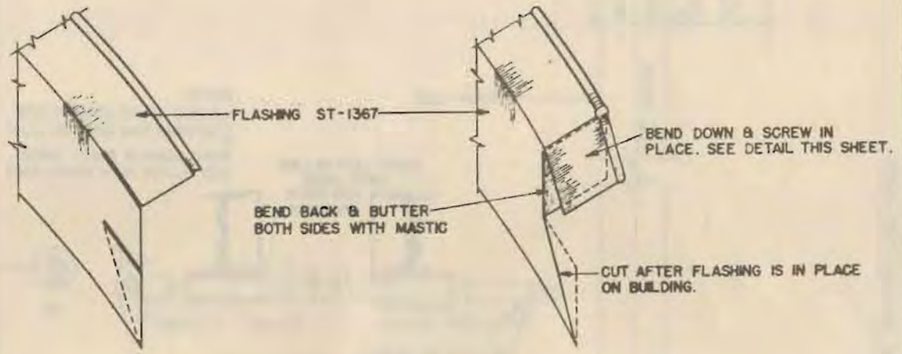
SECTION (C AST 76)



SECTION (D AST 76)

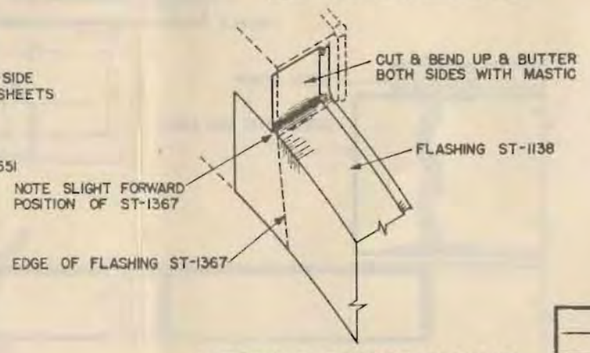


DETAIL OF FLASHING AT CURVED & HORIZONTAL ROOF SHEETS AT END WALL (A AST 76)

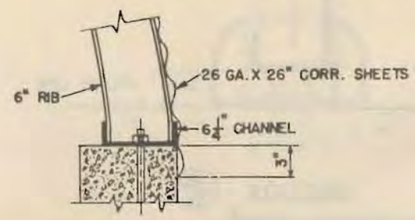


CUTTING DIAGRAM FOR FLASHING ST-1367

BENDING DIAGRAM FOR FLASHING ST-1367



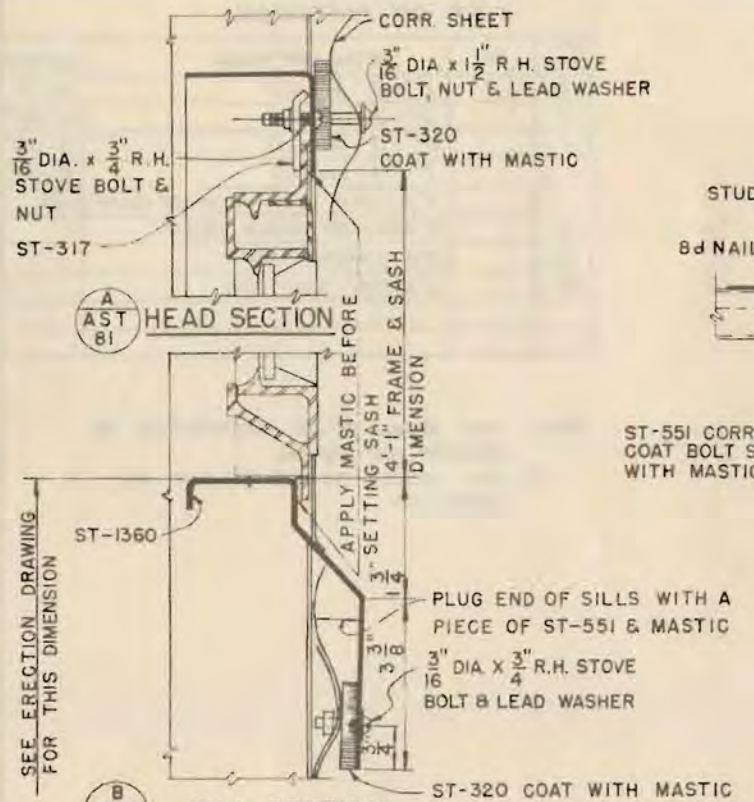
CUTTING & BENDING DIAGRAM FOR FLASHING ST-1138



SECTION (E AST 76)

0 1 2 3 4 5 6 12 (1)
INCHES

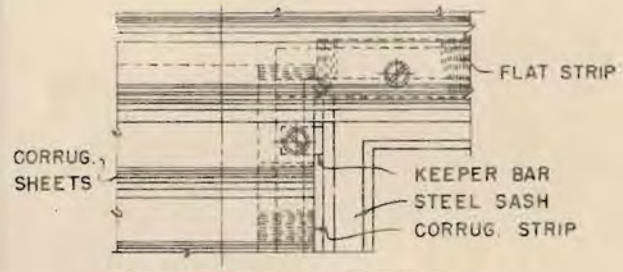
REVISIONS	STRAN STEEL DIVISION GREAT LAKES STEEL CORPORATION DETROIT, MICHIGAN			
	FLASHING INSTALLATION FIELD INSTALLATION AT END WALL AND SIDE OF BUILDING			
MASONRY NAIL REMOVED SEC "E" 8-18-50				
8-1-50	H. E. B.	H.R.M.	50-2601	AST-76
AS SHOWN				



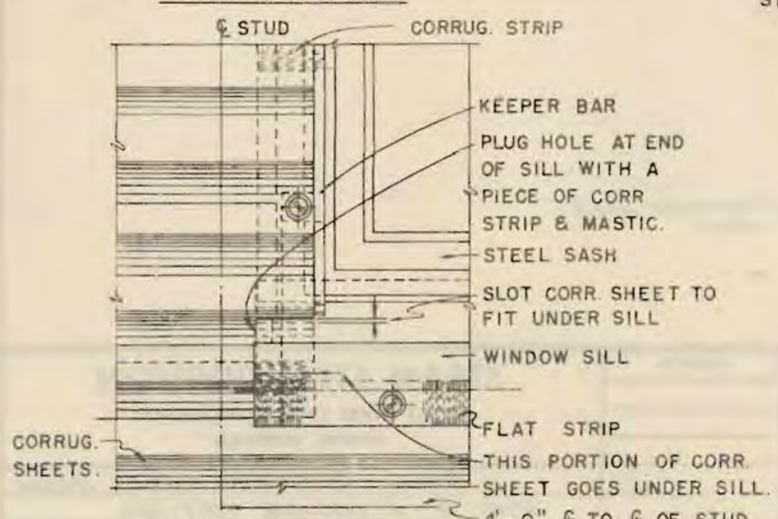
(A / AST 81) HEAD SECTION

(B / AST 81) SILL SECTION

0 1 2 3 INCHES

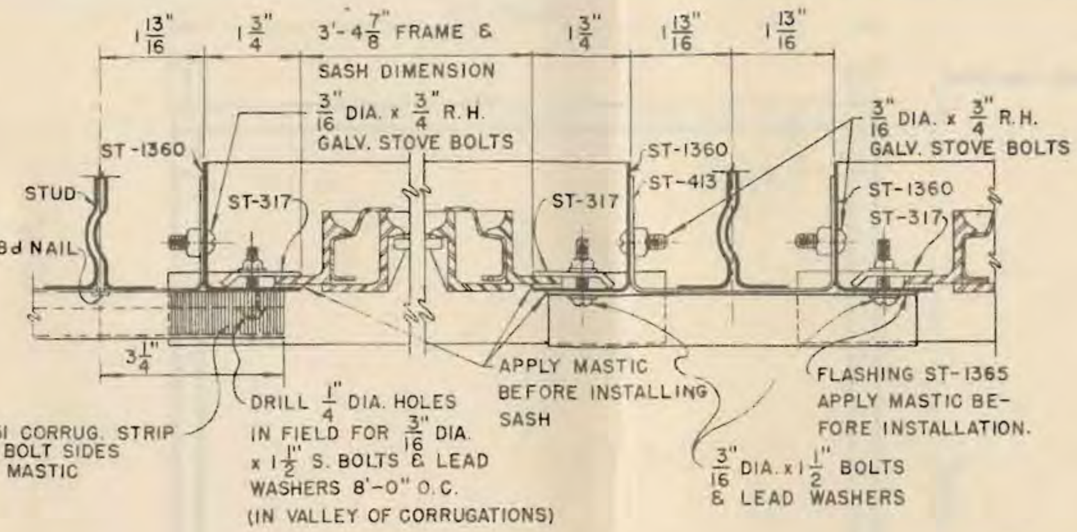


ELEVATION DETAIL OF CORNER AT HEAD



ELEVATION DETAIL OF CORNER AT SILL

0 1 2 3 4 8 INCHES

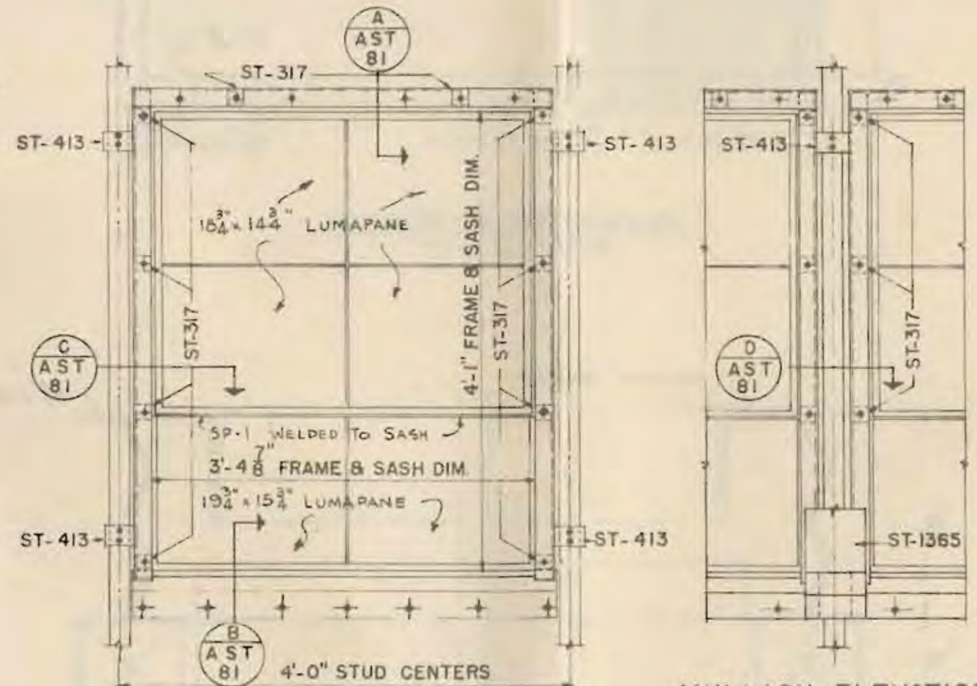


JAMB SECTION (C / AST 81)

0 1 2 3 INCHES

MULLION SECTION (D / AST 81)

0 1 2 3 INCHES



EXTERIOR ELEVATION OF SINGLE WINDOW

0 1 2 FEET

MULLION ELEVATION BETWEEN WINDOWS IN SEQUENCE

0 1 2 FEET

INSTALLATION INSTRUCTIONS

1. BOLT THE CHANNEL CLIPS ST-413 TO THE ANGLE JAMBS OF THE STEEL WINDOW FRAME USING TWO CLIPS AT EACH JAMB. SEE ELEVATIONS FOR POSITION OF CLIPS.
2. PLACE WINDOW FRAME IN POSITION BETWEEN THE STUDS WITH TOP OF WINDOW SILL AT DIMENSION SHOWN ON ERECTION DRAW'G AND NAIL THE CLIPS INTO NAILING GROOVE OF THE STUDS.
3. APPLY MASTIC TO INSIDE OF WINDOW FRAME AND A PORTION OF SASH FOR A CONTINUOUS LAP WIDTH OF ONE HALF INCH SO AS TO SEAL THE JOINT BETWEEN SASH AND FRAME.
4. INSTALL STEEL SASH FROM INSIDE OF BUILDING BY BOLTING THE TWO KEEPER BARS ST-317 TO THE WINDOW FRAME TO SECURE THE SASH IN THE PROPER POSITION. (TWO KEEPER BARS ST-317 AT HEAD.)
5. INSERT THE FLAT STRIPS ST-320 OVER CORRUGATED METAL SHEETS UNDER SILL, CAULK WITH MASTIC AT EACH END OF SILL. INSERT SEVEN BOLTS THRU WINDOW SILL AND CORRUGATED SHEETS.
6. AT JAMBS (EXCEPT MULLIONS) DRILL $\frac{1}{4}$" DIA. HOLES THRU CORR. SHEET, CORRUGATED STRIP AND FRAME FOR $\frac{3}{16}$" DIA. X $1\frac{1}{2}$" STOVE BOLT & LEAD WASHER 8" O.C. (IN VALLEY OF CORR. SHEETS). ATTACH 4 KEEPER BARS ST-317 TO 4 OF THESE BOLTS OF EACH JAMB.
7. IF WINDOWS OCCUR IN ADJOINING 4'-0" SPACES BETWEEN STUDS THEN A METAL FLASHING SHEET ST-1365 IS TO BE BOLTED TO THE ANGLE MEMBERS OF WINDOW FRAME AS WELL AS AT SILL MEMBER. SEE MULLION DETAIL.
8. APPLY CORRUGATED METAL SHEETS OVER FLAT STRIP ST-320 AT HEAD OF WINDOW & BOLT TO HEAD MEMBERS OF WINDOW FRAME. APPLY MASTIC TO FACE OF FLAT STRIP TOUCHING FRAMES BEFORE INSTALLING.

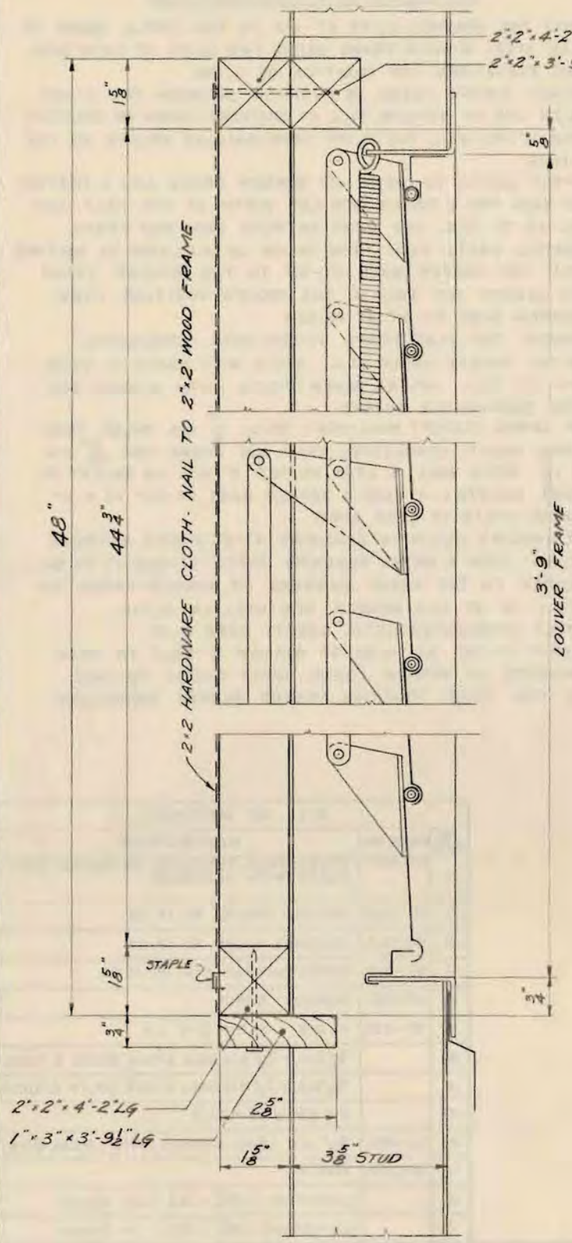
NOTES:

PAINT ALL OUTER SURFACES OF FRAME AND SASH WITH OLIVE DRAB CAMOUFLAGE PAINT.
WINDOWS TO BE GLAZED WITH LUMAPANE OR EQUAL CLEAR TRANSPARENT PLASTIC WITH SCREEN MESH, SET IN THE SASH WITH SEALER.

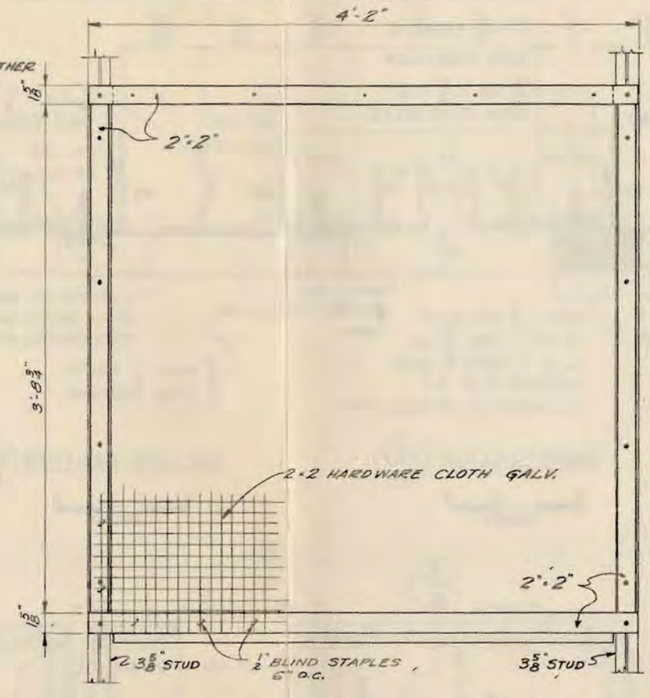
THIS DRAWING FOR JOB #50-2601 ONLY

BILL OF MATERIAL		
NO. REQ	PIECE MK.	DESCRIPTION
1	ST-547	STEEL SASH, FENESTRA OR EQUAL COMPLETE WITH HARDWARE
1	ST-1360	WELDED FRAME, NO. 14 GA.
4	ST-413	CHANNEL CLIPS, NO. 14 GA.
10	ST-317	CRIMP KEEPER BAR, NO. 12 GA.
4	ST-551	CORRUG. STRIP,
4	ST-320	PLAIN STRIP 2'-3" LG.
16		3/16" DIA. x 3/4" R.H. GALV. STOVE BOLTS & NUTS
14		3/16" DIA. x 1 1/2" R.H. GALV. STOVE BOLTS & NUTS
10		8d COMMON NAILS
26	ST-528	5/8" DIA. LEAD WASHER WITH .18 DIA. HOLE
1/4	GALLON	MASTIC
4		LUMAPANE (18 3/4" x 14 3/4") OR EQUAL
2		LUMAPANE (19 3/4" x 15 3/4") OR EQUAL

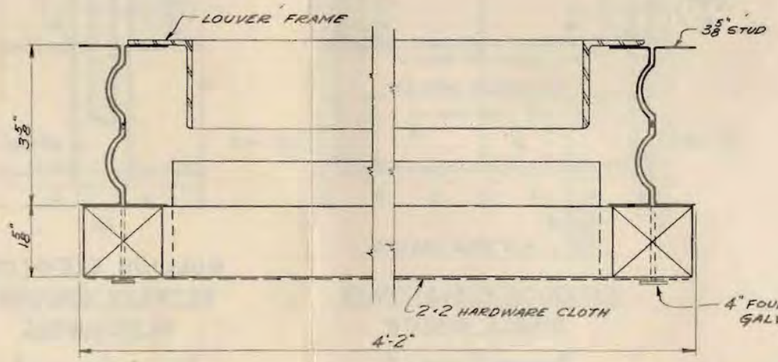
REVISIONS	STRAN STEEL DIVISION GREAT LAKES STEEL CORPORATION DETROIT, MICHIGAN			
① [illegible] WERE 18 3/4 x 14 3/4 [illegible]	WINDOW ASSEMBLY 3'-5" X 4"-1" STEEL WINDOW IN STRAIGHT WALLS.			
DATE 10-1-48	DRAWN R.T.L.	CHECKED L.K.	JOB NO. 50-2601	SHEET NUMBER AST-81
SCALE AS SHOWN	CUSTOMERS ORDER	ESTIMATE NUMBER		



VERTICAL SECTION
HALF SIZE



ELEVATION OF SCREEN
SCALE: ½" = 1'-0"



HORIZONTAL SECTION
HALF SIZE

LIST OF MATERIAL

NO. REQ'D	MK	DESCRIPTION	LENGTH
2		2"×2" WOOD	4'-2"
2		2"×2" WOOD	3'-8¾"
1		2"×2" WOOD	3'-9½"
1		1"×3" WOOD	3'-9½"
1		4'-2"×4'-0" 2×2 HARDWARE CLOTH, GALV.	
12		4" FOUNDRY NAILS GALV.	
10		8d COMMON NAIL	
36		½" BLIND STAPLES	

NOTE - ALL WOOD TO BE PROTECTED BY REZITE OR EQUAL
(1) ALL WOOD TO BE #2 FIR OR HEMLOCK

REVISIONS	STRAN STEEL DIVISION GREAT LAKES STEEL CORPORATION DETROIT, MICHIGAN			
	BIRD SCREEN - KNOCK DOWN			
	FOR 4'×4' LOUVER AST-121			
(1) NOTE ADDED 8-22-50				
DATE 8-8-50	DRAWN D.J.K.	CHECKED W.O.	JOB NO.	SHEET NUMBER AST-135
SCALE AS NOTED	CUSTOMERS ORDER	ESTIMATE NUMBER		