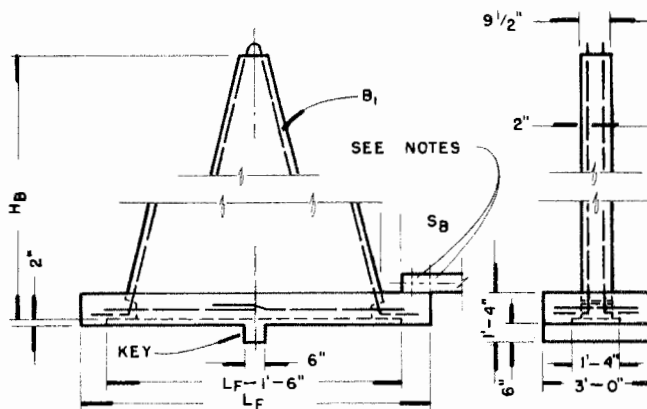
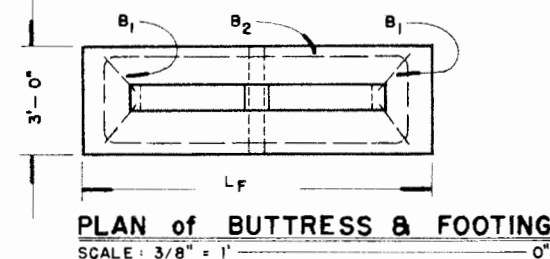


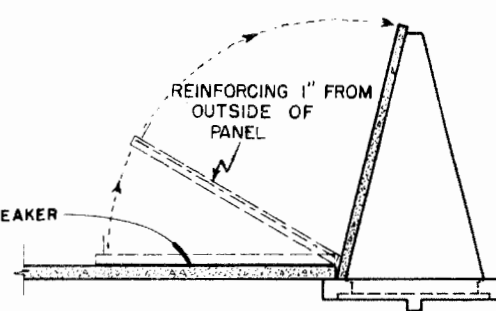


SIDE VIEW of BUTTRESS
SCALE: 3/8" = 1' 0"

END VIEW of BUTTRESS
SCALE: 3/8" = 1' 0"



PLAN of BUTTRESS & FOOTING
SCALE: 3/8" = 1' 0"



HALF SECTION of SILO
SCALE: 1/4" = 1' 0"

NOTES

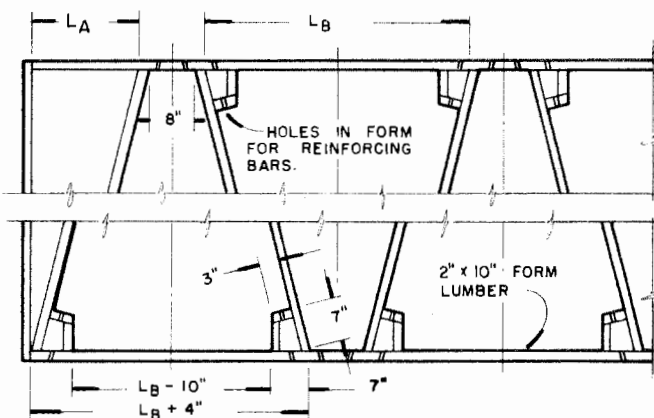
PICK-UP INSERTS SHALL BE SUPERIOR 1/2" TYPE "S", RICHMOND 3/4" TYPE LCB1 FOR 10' PANEL, FOR 12' & 14' PANELS USE 1" TYPE LCB1, OR EQUIVALENT.

USE 2x6 FORM BOARDS FOR 12 & 14 FOOT PANELS.
USE 2x4 FORM BOARDS FOR 10 FOOT PANELS.

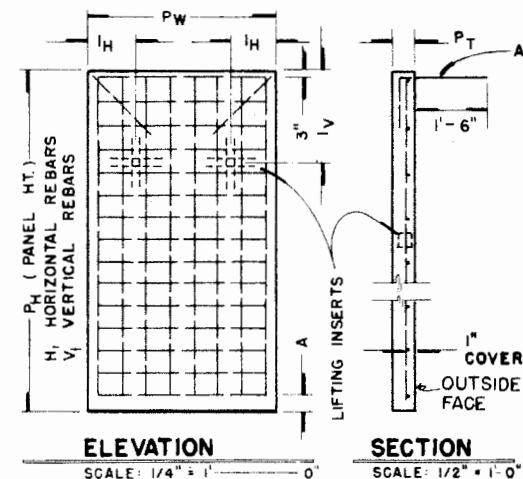
SEE SHEET NO. 2 FOR LIFTING INSERT DETAILS.

2 NO. 3 BARS REQUIRED ON BOTH SIDES OF SILO FLOOR, RUN BARS FULL LENGTH OF SILO.

MINIMUM LAP FOR ALL RE-BARS SHALL BE 10".



PLAN of BUTTRESS FORMS
SCALE: 3/4" = 1' 0"

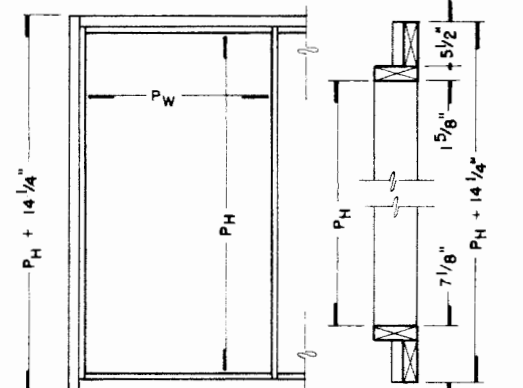


ELEVATION

SCALE: 1/4" = 1' 0"

SECTION

SCALE: 1/2" = 1' 0"



PLAN: PANEL FORM

SCALE: 1/4" = 1' 0"

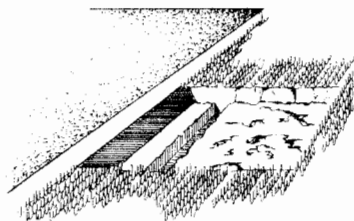
SECTION

SCALE: 1" = 1' 0"

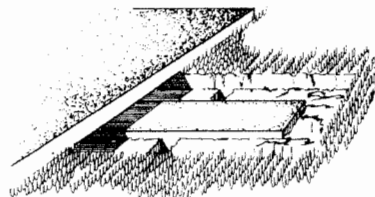
PANEL DIMENSION SCHEDULE						
PANEL HT.	PW	PT	A	1H	1V	WT.
10'-0"	7'-11"	3 5/8"	3"	1'-6"	3'-0"	3400
12'-0"	7'-11"	5 1/2"	3"	1'-6"	3'-6"	6100
14'-0"	7'-11"	5 1/2"	3"	1'-6"	4'-0"	7200

PANEL REINFORCEMENT SCHEDULE												
	10 FOOT				12 FOOT				14 FOOT			
	SHAPE	NO.	SIZE	LGTH.	SHAPE	NO.	SIZE	LGTH.	SHAPE	NO.	SIZE	LGTH.
H ₁	_____	11	4	7'-6"	_____	13	4	7'-6"	_____	15	4	7'-6"
V ₁	_____	8	4	9'-6"	_____	8	4	11'-6"	_____	8	4	13'-6"
A ₁	_____	2	4	2'-6"	_____	2	4	2'-6"	_____	2	4	2'-6"

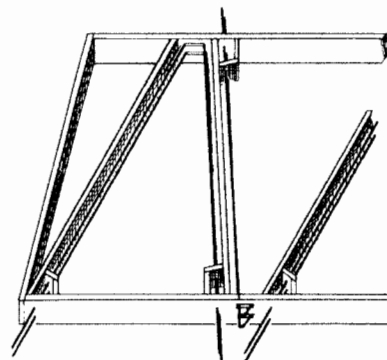
BUTTRESS & FOOTING SCHEDULE									
DIMENSIONS						REINFORCING			
H _B	L _F	L _B	L _A	S _B	WT.	B ₁	B ₂		
9'-8"	7'-8"	5'-8"	2'-6"	3 5/8"	3,700	2" 4 @ 24'-0"	2" 4 @ 10'-9"		
11'-8"	8'-8"	6'-8"	3'-0"	5 1/2"	5,200	2" 4 @ 28'-0"	2" 4 @ 11'-9"		
13'-8"	9'-8"	7'-8"	3'-6"	5 1/2"	6,900	2" 6 @ 32'-0"	2" 4 @ 12'-9"		



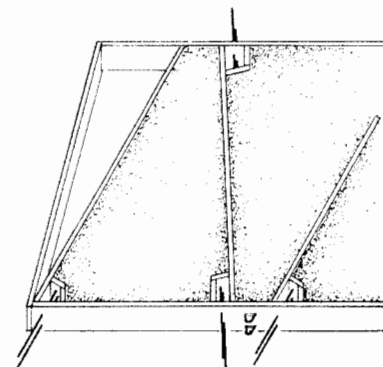
1 EXCAVATION FOR BUTTRESS BASE WITH KEY. DEPTH OF EXCAVATION IS 1'-4" BELOW TOP OF SLAB



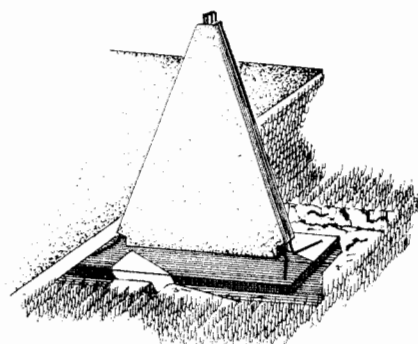
2 CONCRETE PAD 2" THICK, 1'-4" WIDE WITH KEY. DO NOT PLACE CONCRETE IN KEY TRENCH ADJACENT TO PAD.



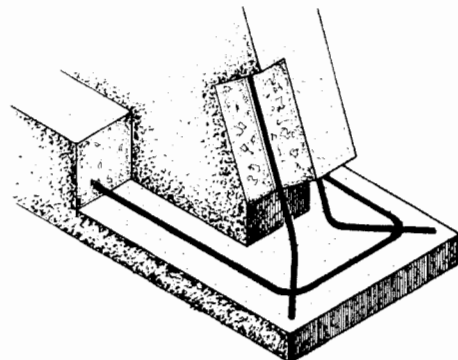
3 VIEW SHOWING REINFORCING BUTTRESS BARS B, IN PLACE.



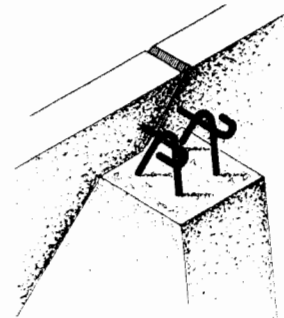
4 CONCRETE FOR BUTTRESS AFTER BEING PLACED IN FORMS



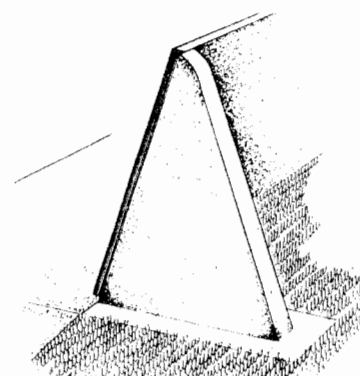
5 PLACE BUTTRESS ON 2" CONCRETE PAD. PLUMB AND ALIGN USING WOOD TEMPLATES TO POSITION BUTTRESS.



6 CUT-AWAY VIEW OF FOOTING AND BUTTRESS SHOWING POSITION OF REINFORCING BARS.



7 TOP OF BUTTRESS SHOWING PANEL TIE BACK RODS BENT AROUND BUTTRESS LOOPS.



8 END VIEW OF SILO SHOWING THE CAPPED BUTTRESS AND COMPLETED ASSEMBLY.

SPECIFICATIONS FOR T/U SILO

I. CONCRETE MIX

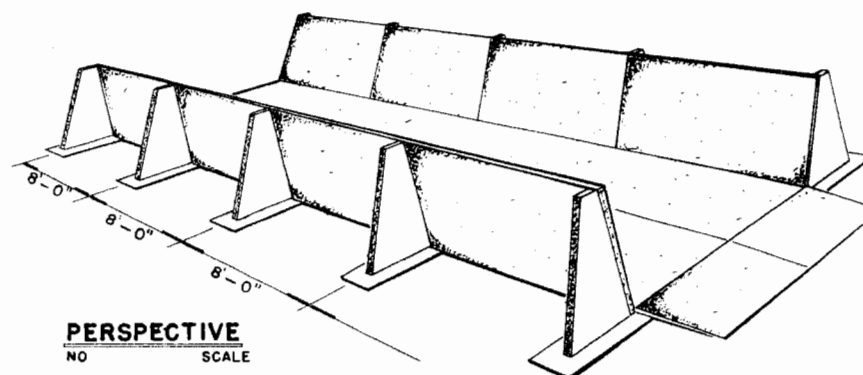
- MINIMUM CEMENT FACTOR = 7 SACKS PER CUBIC YARD OF CONCRETE
- MAXIMUM TOTAL MIXING WATER PER SACK OF CEMENT = 6 GALLONS
- USE ENTRAINED AIR

II. CURING OF CONCRETE

- CURE PANELS AND BUTTRESSES 5 TO 7 DAYS AT 50° TO 100° F. BEFORE TILTING. USE ONE OF THE FOLLOWING CURING METHODS.
 - PONDING, USE WET SAND OR WET BURLAP
 - WET SURFACE OF CONCRETE THEN COVER PANEL WITH WATERPROOF PAPER OR POLYETHYLENE SHEET.
 - SPRAY WITH CURING COMPOUND IMMEDIATELY AFTER SCREEDING. IN COLD WEATHER COVER WITH 24" OF STRAW TO PREVENT FREEZING. DO NOT TILT PANEL FOR 10 DAYS IF TEMPERATURES ARE 40° TO 50° TO INSURE INCREASED STRENGTH AND DURABILITY OF THE CONCRETE

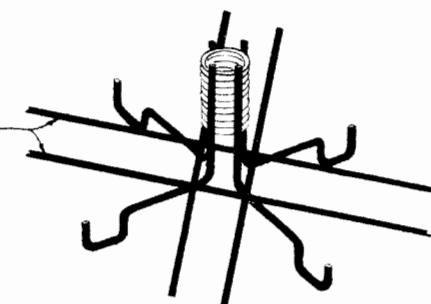
III. SILO FLOOR

- A DESIRABLE, UNIFORM SLOPE OF 1" PER 8' OF LENGTH
- CAST FLOOR IN LENGTHWISE STRIPS 10' TO 12' WIDE (NOTE REBARS ALONG EDGE OF SLAB)
- UNIFORM THICKNESS OF 5"
- THICKEN EDGE AT OUTLET TO 8"



PERSPECTIVE
NO SCALE

#4 BARS 24" LONG



PANEL LIFTING INSERT
NO SCALE

LSU
AgCenter
Research & Extension

HORIZONTAL SILO
TILT-UP CONSTRUCTION

NEBR. '68 EX. 6055 SHEET 2 OF 2

Disclaimer

This site makes available conceptual plans that can be helpful in developing building layouts and selecting equipment for various agricultural applications. These plans do not necessarily represent the most current technology or construction codes. They are not construction plans and do not replace the need for competent design assistance in developing safe, legal and well-functioning agricultural building system. The LSU Agriculture Center, the Mid-West Plan Service, the United States Department of Agriculture and none of the cooperating land-grant universities warranty these plans.