

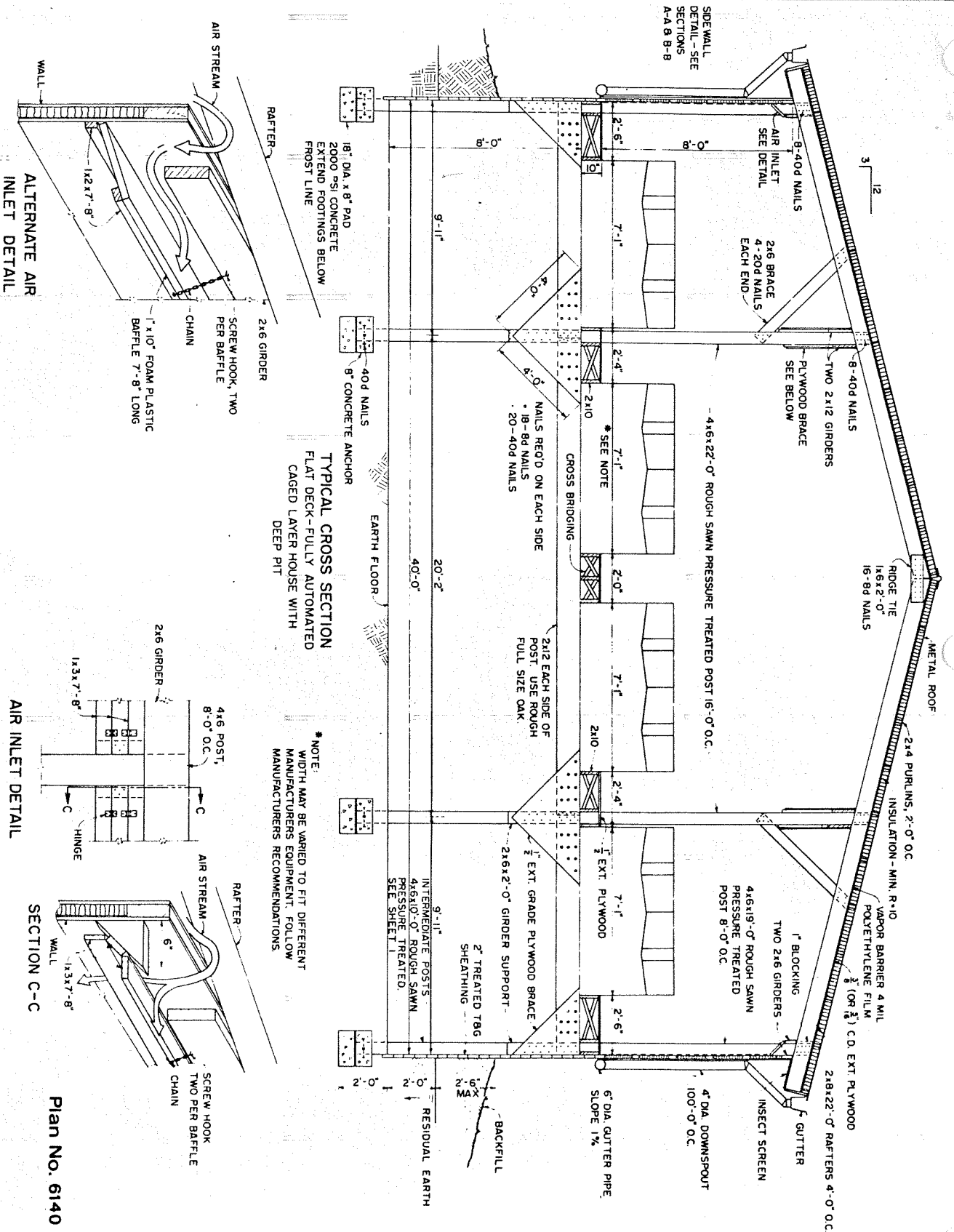
NOTE:  
 CONSULT LOCAL AND STATE ZONING,  
 HEALTH AND POLLUTION AUTHORITIES  
 BEFORE STARTING CONSTRUCTION

BASED ON: VPI PLAN F-1,50

COOPERATIVE EXTENSION WORK IN  
 AGRICULTURE AND HOME ECONOMICS

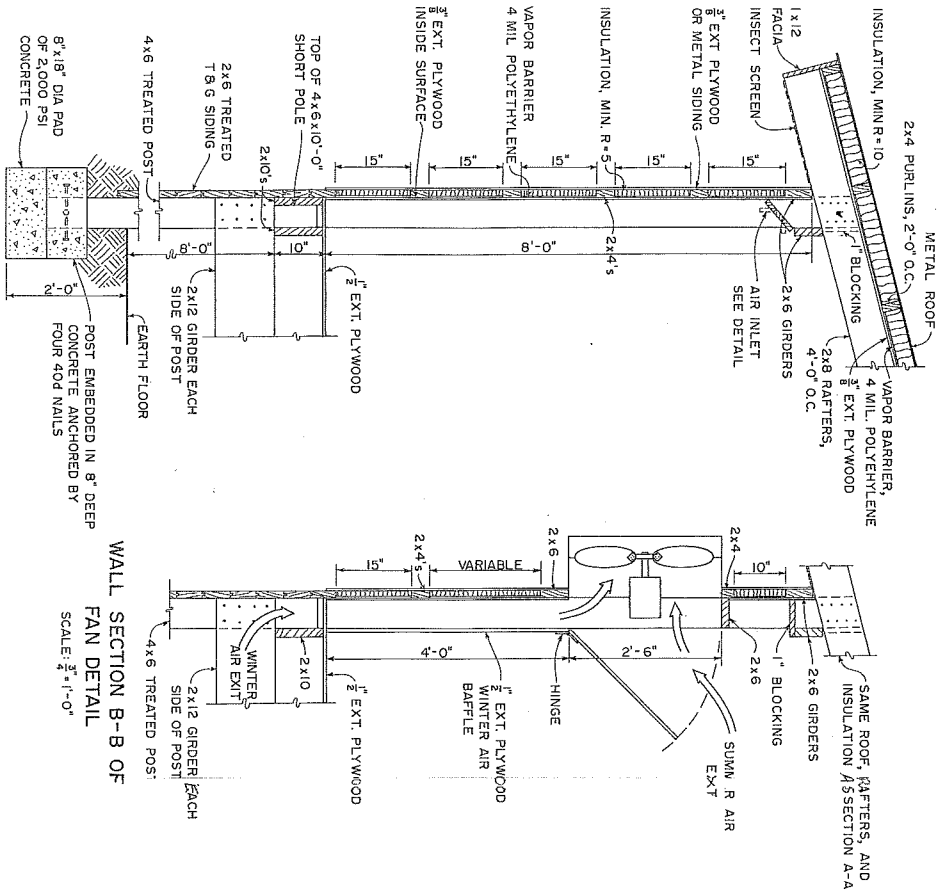
STATE OF NORTH DAKOTA  
 NORTH DAKOTA STATE UNIVERSITY  
 DEPARTMENT OF AGRICULTURE AND RURAL SERVICE  
 UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

VA. 72	EX. 6140	SHEET 1 OF 3
POULTRY HOUSE CAGED LAYERS-DEEP PIT		



AGRICULTURAL RESEARCH SERVICE

6140 (3-64)



WALL SECTION A-A

SCALE: 3/8" = 1'-0"

WALL SECTION B-B OF FAN DETAIL

SCALE: 3/8" = 1'-0"

\* EXCLUDES EGG ROOM AND SUPPLY STORAGE + END AISLE  
 \*\* BASED ON FLAT DECK OR STAIR STEP CAGES WITH TWO BIRDS PER 8" X 16" CAGE

CAGE ROW LENGTH	** NO. OF LAYERS	WINTER VENTILATION FAN SELECTION (4.5 CFM/BIRD)	
		CFM AT 1/8" SP TOTAL CAPACITY	CFM AT 1/8" SP APPROX. CAR EACH FAN BANK 48" O.C.
40' x 86'	4,600	20,700	10,350
40' x 144'	6,900	31,000	"
40' x 192'	9,200	41,300	"
40' x 240'	11,500	51,800	"
40' x 288'	13,800	62,000	"
40' x 336'	16,100	72,800	"
40' x 384'	18,400	83,000	"
40' x 432'	20,700	93,500	"
40' x 480'	23,000	103,500	"
SUMMER VENTILATION FAN SELECTION (9 CFM/BIRD)			
40' x 96'	4,600	27,500	13,900
40' x 144'	6,900	41,400	"
40' x 192'	9,200	55,100	"
40' x 240'	11,500	69,000	"
40' x 288'	13,800	82,800	"
40' x 336'	16,100	96,400	"
40' x 384'	18,400	110,000	"
40' x 432'	20,700	123,500	"
40' x 480'	23,000	138,000	"

**INSULATION**  
 THE INSULATION IS INSTALLED IN THE SIDEWALLS BETWEEN THE GIRTS AND IN THE CEILING BETWEEN THE PURLINS. A 4-MIL POLYETHYLENE FILM VAPOR BARRIER IS INSTALLED ON THE WARM SIDE OF THE INSULATION. THE MINIMUM INSULATION VALUES RECOMMENDED FOR VA. ARE: R=10 IN THE CEILING AND R=5 IN THE SIDEWALLS.

**VENTILATION**  
 WINTER: FOR LIGHT BREEDS, 4.5 CU. FT. OF AIR PER MINUTE PER BIRD AT 1/8" STATIC PRESSURE IS SUGGESTED. THE TABLE ON THIS SHEET SHOWS THE SIZE AND NUMBER OF FANS REQUIRED FOR DIFFERENT LENGTH HOUSES.  
 SUMMER: FOR LIGHT BREEDS, 6.0 CU. FT. OF AIR PER MINUTE PER BIRD AT 1/8" STATIC PRESSURE IS SUGGESTED. THE TABLE ON THIS SHEET LISTS THE SIZES AND NUMBERS OF FANS REQUIRED FOR DIFFERENT LENGTH HOUSES.

ALL FANS ARE LOCATED ON THE NORTH OR WEST SIDE OF THE BUILDING. ABOUT EVERY THIRD FAN SHOULD BE INSTALLED AS SHOWN IN SECTION B-B. THESE FANS ARE TO BE EQUIPPED WITH THERMOSTATS AND RECYCLING TIMERS. THE REMAINING FANS SHOULD BE EQUIPPED WITH THERMOSTATS ONLY AND SHOULD NOT RUN UNTIL ALL FANS WITH THE DUCTS ARE IN OPERATION. FOR WARM WEATHER OPERATION, THE DUCT IN SECTION B-B SHOULD BE OPENED UP TO ALLOW THE FAN TO OPERATE WITH GREATER EFFICIENCY.

**AIR INLET**  
 A PERIMETER TYPE AIR INLET SHOWN IN SECTION A-A IS RECOMMENDED. THE INLET SHOULD BE BLOCKED OUT, HOWEVER, FOR 10'-0" ON EACH SIDE OF THE FANS AS SHOWN IN SECTION B-B.

PROVIDE 25 SQ. IN. OF INLET AREA FOR EACH 100 C.F.M. EXHAUSTED BY THE FANS.