GESTATION-BREEDING (54' x 56')

8 pens each 9' x 10', 4 sows each.
8 feeding pens each 7'-4" x 8'
87 crates 22" x 84" (gates/creep trough in floor).
5" wide flush gutter under pens, slot.
two 6" wide scraper gutters under comb. slats
2" wide V-gutter under comb. slats.
36000 watts cable floor heat and two 28,000 Btu h w. air heaters.
Two 3500 cfm vert-speed heat exchangers.
5 exhaust fans @600 cfm each.

COMMERCIAL FINISHING (54' x 78')

Pigs raised from 45 to 225 lbs
12 pens each 8' x 16' - 16 pigs/pen
12 pens each 8'6" x 15' - 16 pigs/pen
Two 8" wide flush gutters under full pens, slat floors; 5" wide open flush gutter and 6" wide 8" gutter under 6" wide comb. gang slats (4" slot)
PVC solid pen walls open over alley; bars on every other pen.
Two 75,000 BTU supplemental h. w. air heaters.
6 exhaust fans 6000 cfm each and 2 vari-speed fans 3500 cfm each.
48 ceiling fresh-air inlets.
6 pens wet feeding; 8 pens 4' stainless steel trough type, roll-in-feeder along alley, two pens fed on floor, 4 pens 4' long 5-hole stainless steel self feeders on divider
6 pens manure Osborne fiberglass feeds, (filled with over-head conveyor).
1 nipple waterer/pen

RESEARCH FINISHING (54' x 42')

Pigs raised from 45 to 225 lbs.
24 pens each 6' x 12', 8 pigs/pen.
6" wide two-gutter under 5" wide comb. gang slats (1" slot)
37,500 BTU suspended h. w. air heater
2 exhaust fans 6000 cfm each and 2 vari-speed exhaust fans 3500 cfm each
28 ceiling fresh-air inlets
1 Hotsy 4" stainless steel 4-hole feeder/pen
1 nipple waterer/pen

FARROW ROOM (West 46' x 24')

6 pipe-frame farrow crates 5' x 6.3" (pigs in 6 slats ea.) on slatted wood-coated steel floor over 6" wide flush gutter
8 PVF farrow crates 5' x 7' (two per 8 wide pen) on plastic deck floor over 2.5 wide flush-gutter.
75,000 BTU hanging h. w. air heater.
One 750 cfm vert-speed heat exchanger.
One 6000 cfm exhaust fan & one 4000 cfm exhaust fan.
12 ceiling fresh-air inlets.
One heat lamp unit/crate/row

FARROW ROOM (East 46' x 24')

8 pipe-frame farrow crates 5' x 7' (sows enclosed on ends, floor and 3' wide fiberglass Y-gutter (pen) and 3' wide gutter (farrow crates fiberglass slats
8 pipe frame farrow crates 5' x 7' (s. dividers, open area) on elevated wood slatted floor over 12" wide gutter, (fiberglass slats).
900 watts electric cable floor heat
20,000 BTU hanging h. w. air heater
Exhaust fans: one 6000 cfm, one 3500 cfm, one 200 cfm and vari-speed 2400 cfm
12 ceiling fresh air inlets.
1 nipple/pen feed cup waterer/crate.

NURSERY (West 36' x 14')

Pigs weaned at 4 wks. and moved to 5 raised pens each 4'-2" x 6'-2" (6 pigs/pen (allowance 5 sq ft/pig 5 pigs/pen).
8" wide flush gutter under plastic-coated mesh floor.
12,000 BTU hanging h.w. air heater
One 750 cfm vert-speed heat exchanger.
One 4500 cfm exhaust fan
10 ceiling fresh air inlets
3" long six hole feeders and two nipple waterers/pen.

NURSERY (East 36' x 14')

6 raised pens each 4'-2" x 6'-2", 16 pigs/pen
4" wide V cone flush-gutter under raised wire mesh floor
12,000 BTU hanging h.w. air heater
Exhaust fans: one 4500 cfm, one 200 cfm, one vari-speed 2400 cfm.

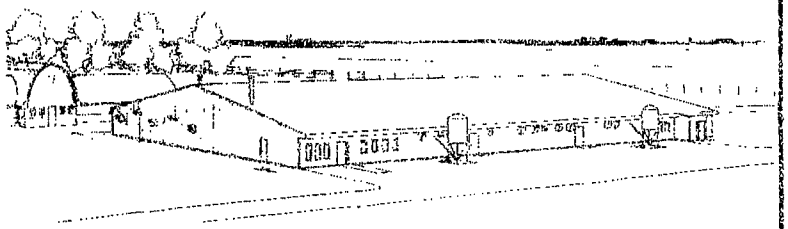
GROWER (42' x 20')

Pigs moved from nursery at 45 lbs. at about 8 wks. age.
8 pens each 79" x 16' 16 pigs/pen.
Solid PVC pens with every other divider open over wet pen
6 wide flush gutter under 4" wide comb. gang slats (¾" slot)
12,000 BTU hanging h.w. air heater.
Exhaust fans one 4500 cfm, one 2 vari. 2000 cfm, and one 1750 cfm vari speed
16 ceiling fresh air inlets
4 Penn Metalcraft wet 6 hole feeder/pen (over head auger conveyor)
2 nipple waterers per pen

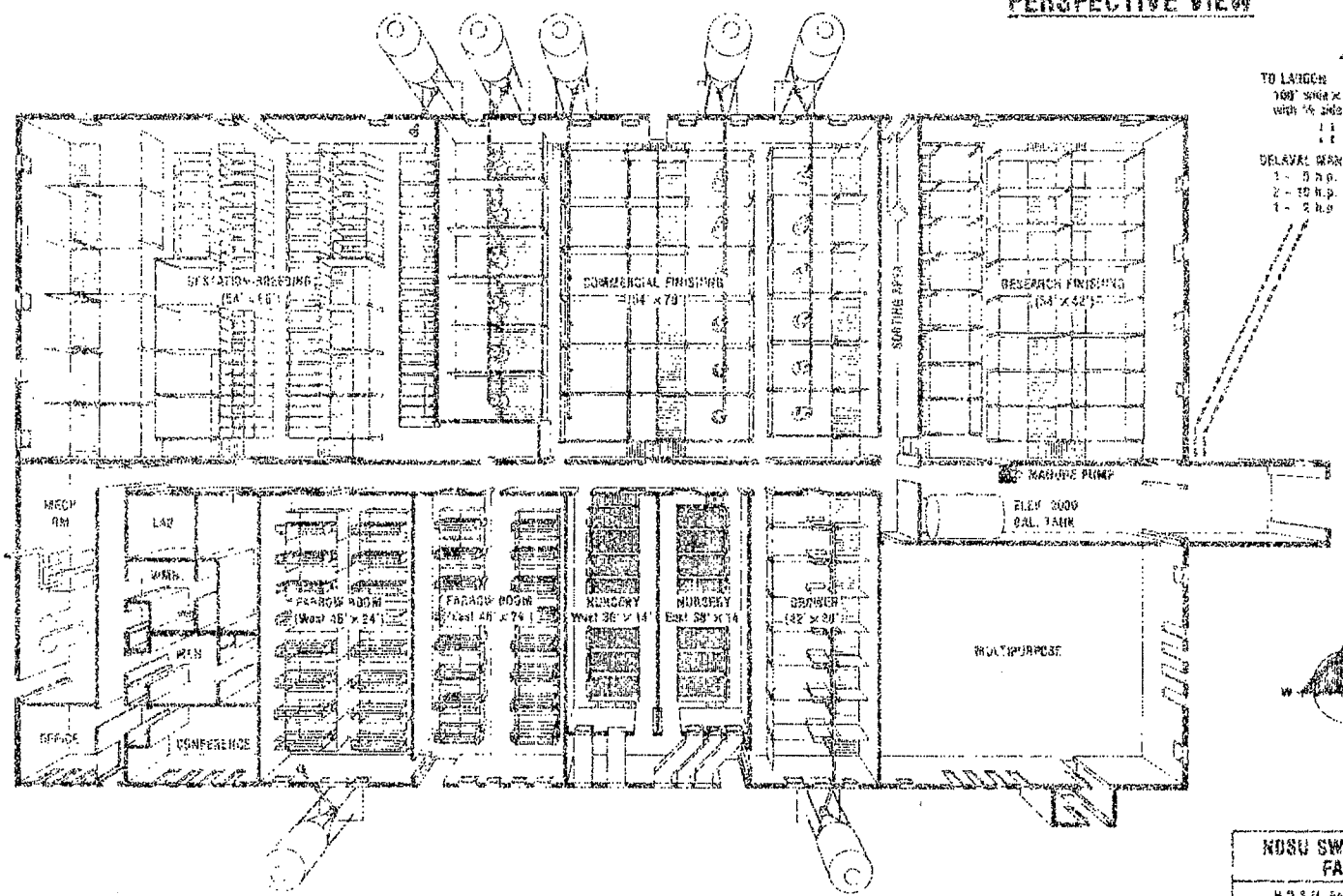
NDSU SWINE RESEARCH FACILITY

Completed in 1983, this 106' x 187' building houses 150 sows and their offspring in separated rooms under one roof. Total production varies with farrowing frequency but runs about 2,000 to 2,500 pigs per year.

Various systems for farrowing, feeding, ventilation and manure handling are included in the structure design



PERSPECTIVE VIEW



PICTORIAL PLAN VIEW

NDSU SWINE RESEARCH FACILITY		
N.D.S.U. Agric. Exp. Station Animal and Range Science Dept.		
Agric. Engineering, N.D.S.U.		
Stevens & Assoc. Architects	Drawn by R.S. Appr. by D.W.J.	1386

PLAN NO 726-1-14