Low Cost Parlors Options and Considerations

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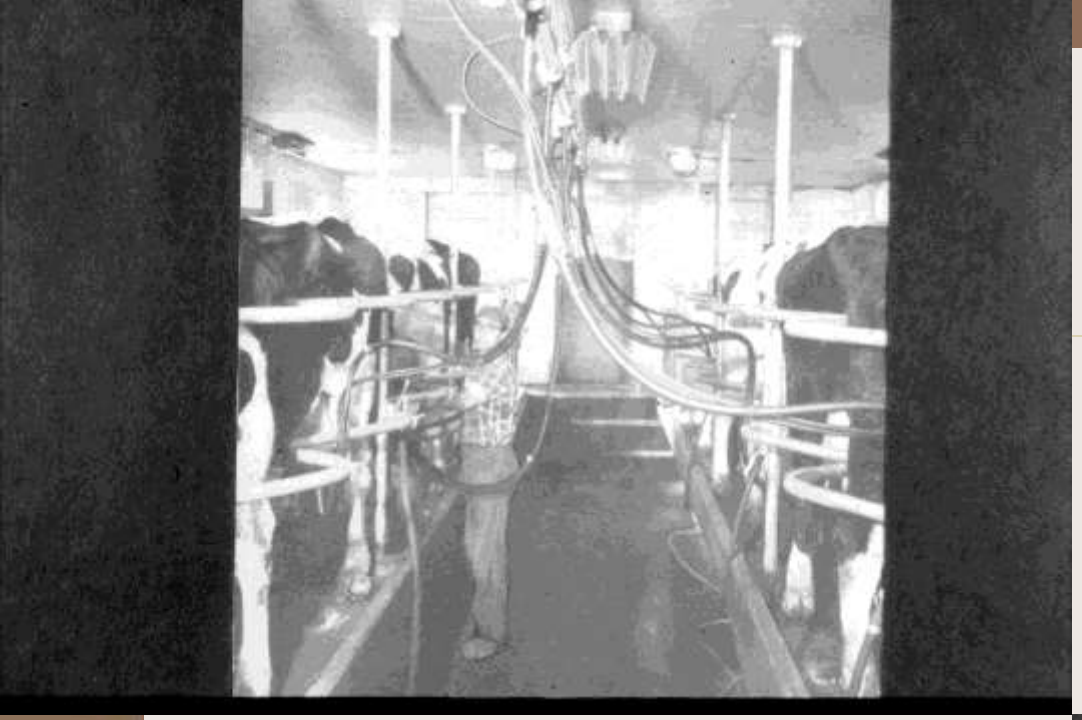


Historic Perspective

1955 Swing Parlors


How do you
remodel this……


or this…….


…into this

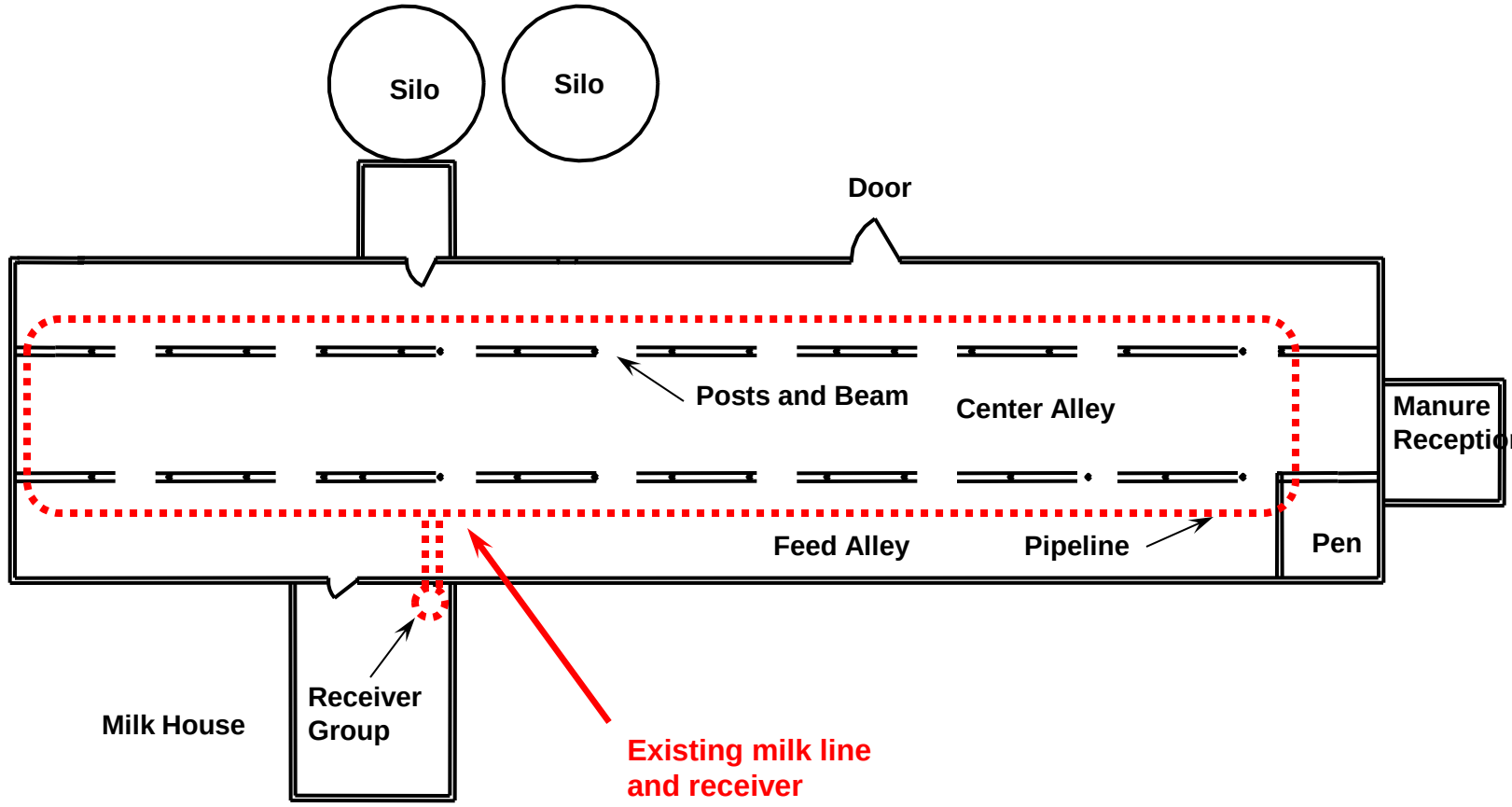

or this…….


You need a plan
You have to think outside the freestall!
8. 3. 2000

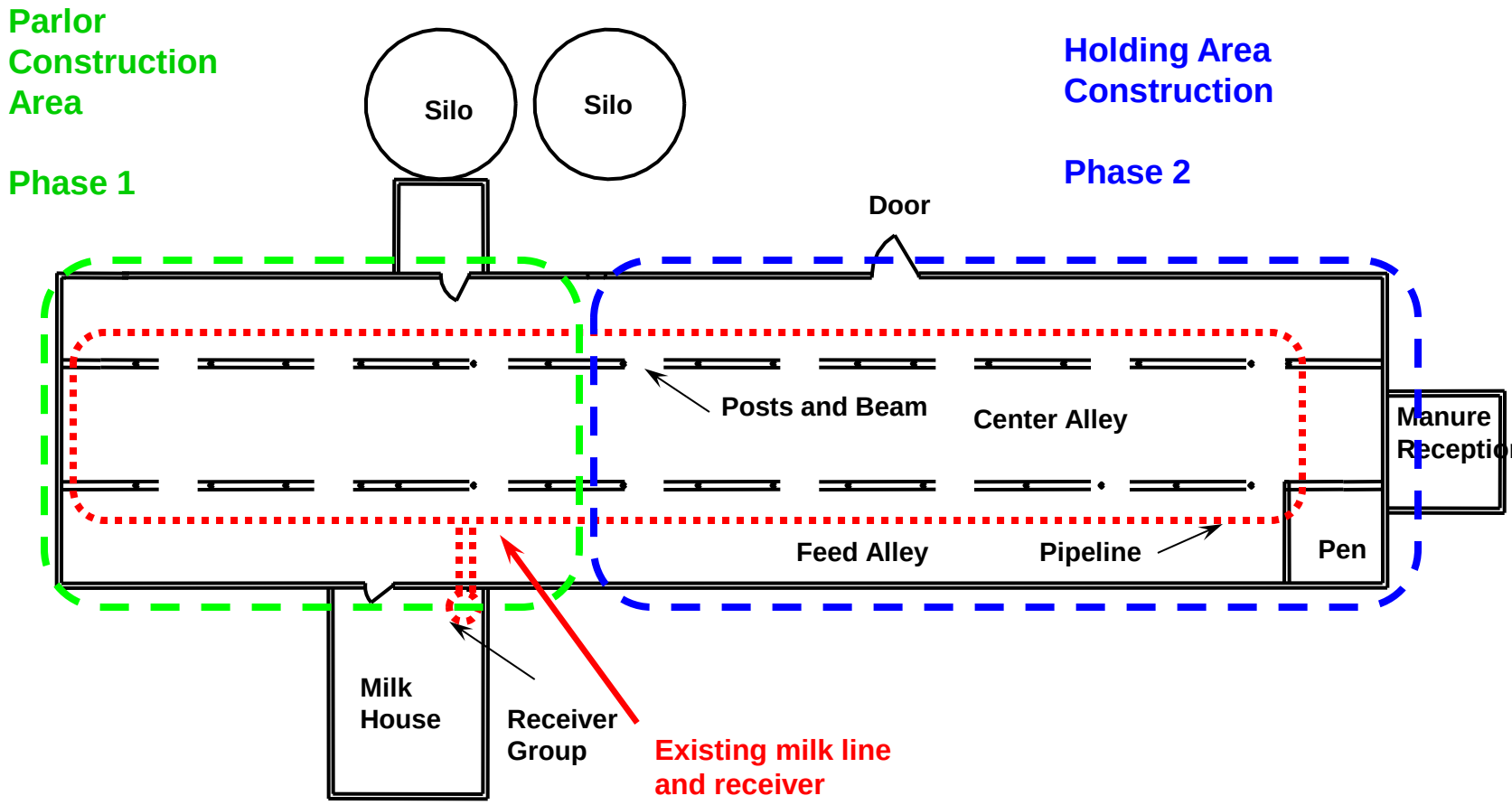
This might be a project for an owner/producer as a general contractor

- But the producer needs some help:
  - Educate themselves on what can/has been done
  - Find a dealer willing to redesign the milking system
  - Find a building, concrete, plumbing, and electrical contractor willing to remodel a barn
  - Find an engineer willing to do some design work

Existing Stall Barn
Plan View



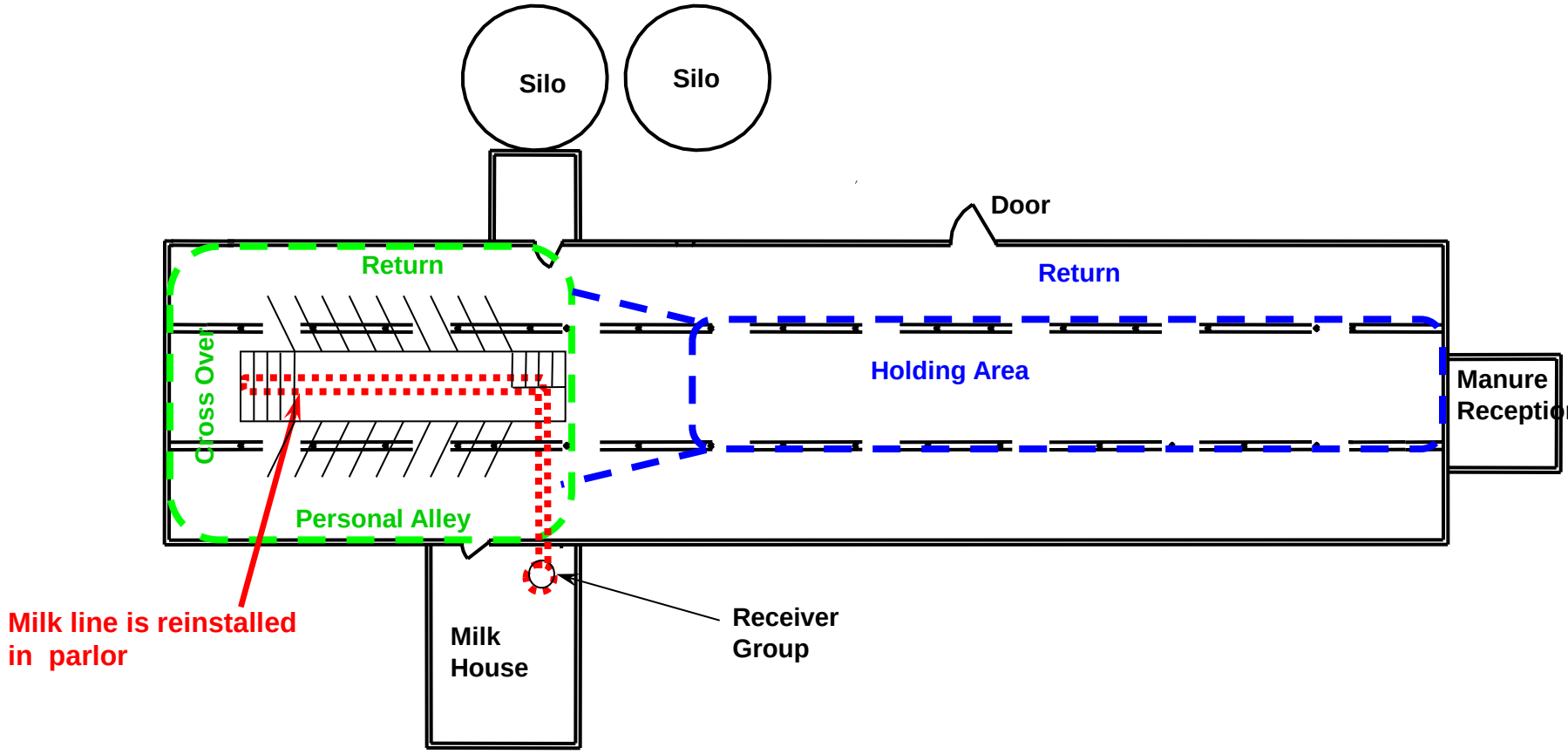
Space Plan in Existing Stall Barn



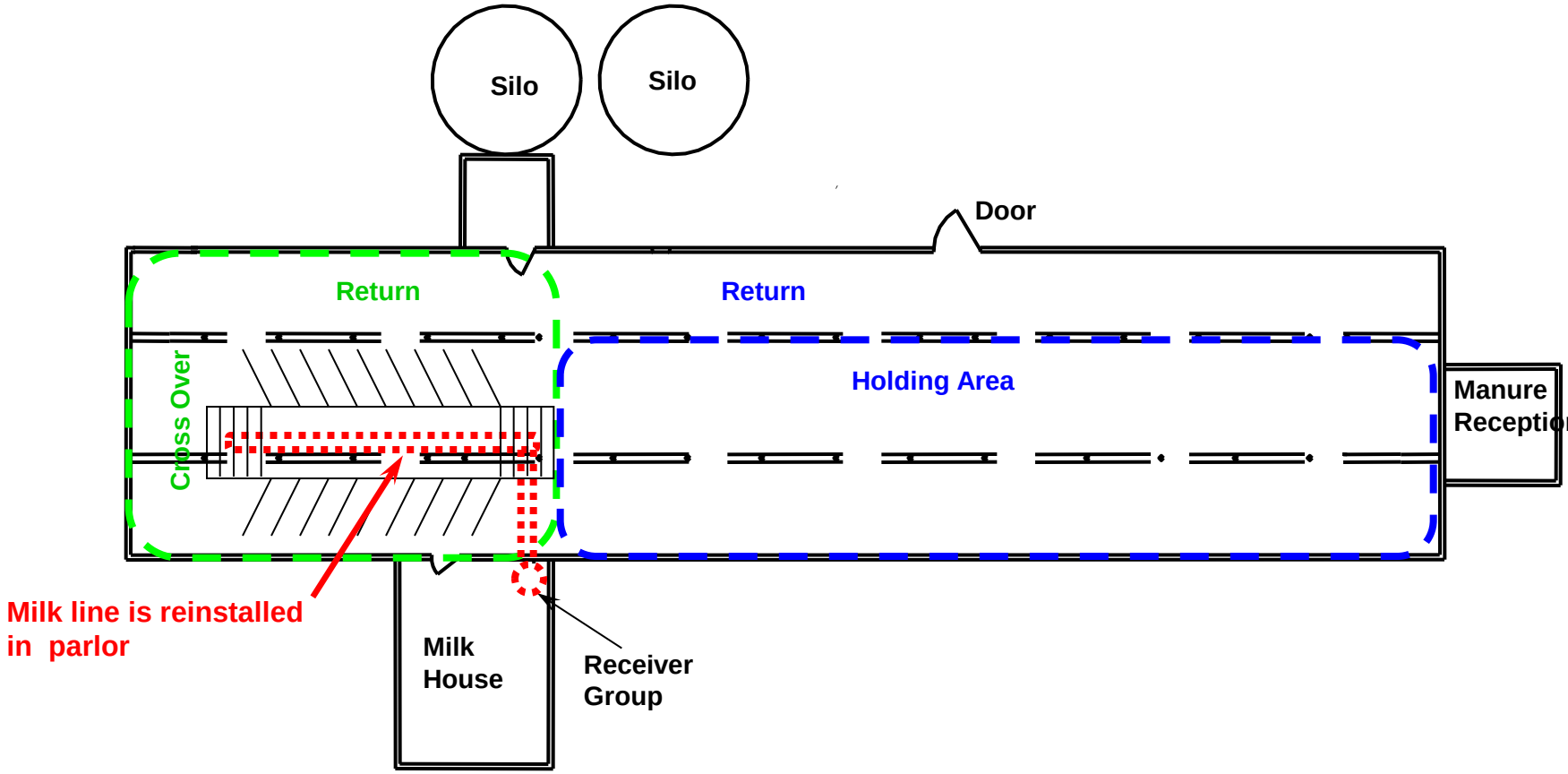
Plan View
Existing Tie Stall Arrangement

Parlor in Barn

Centered Parlor Layout
Plan View

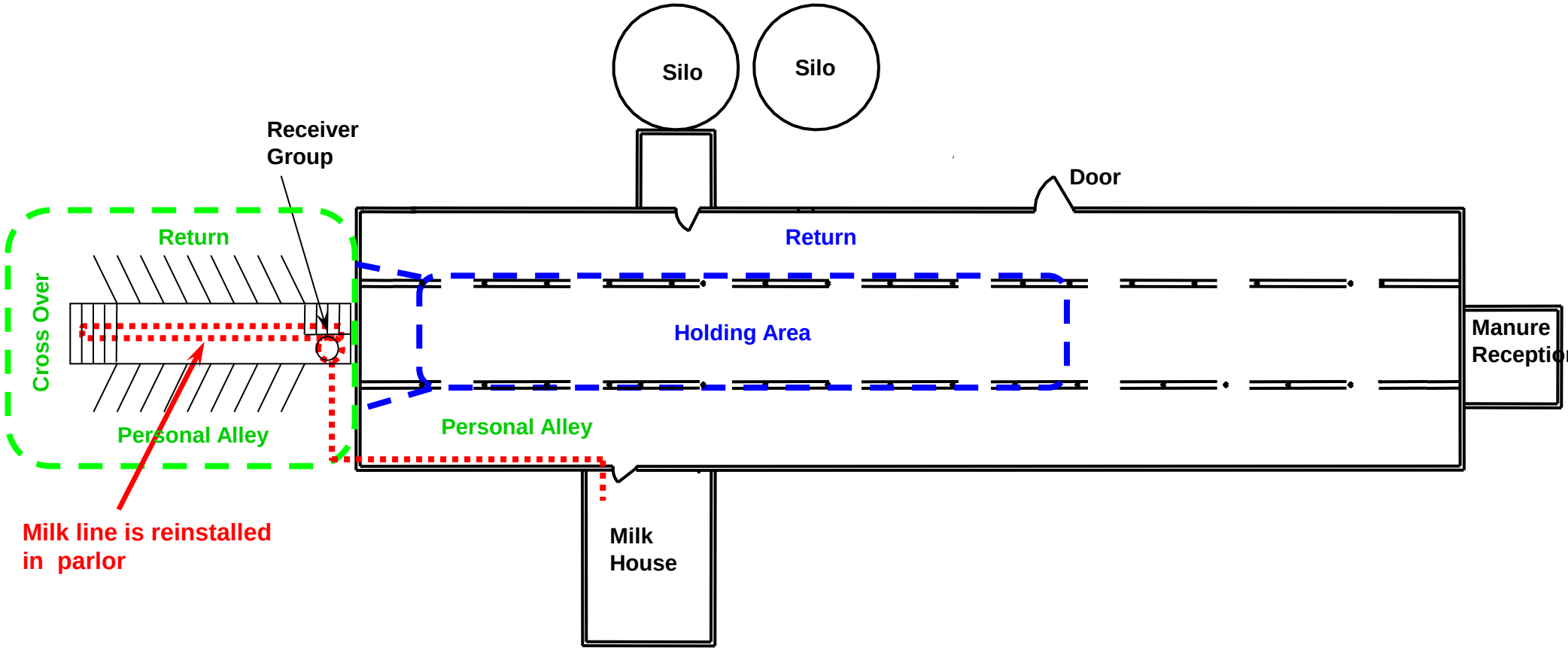


Offset Parlor Layout
Plan View

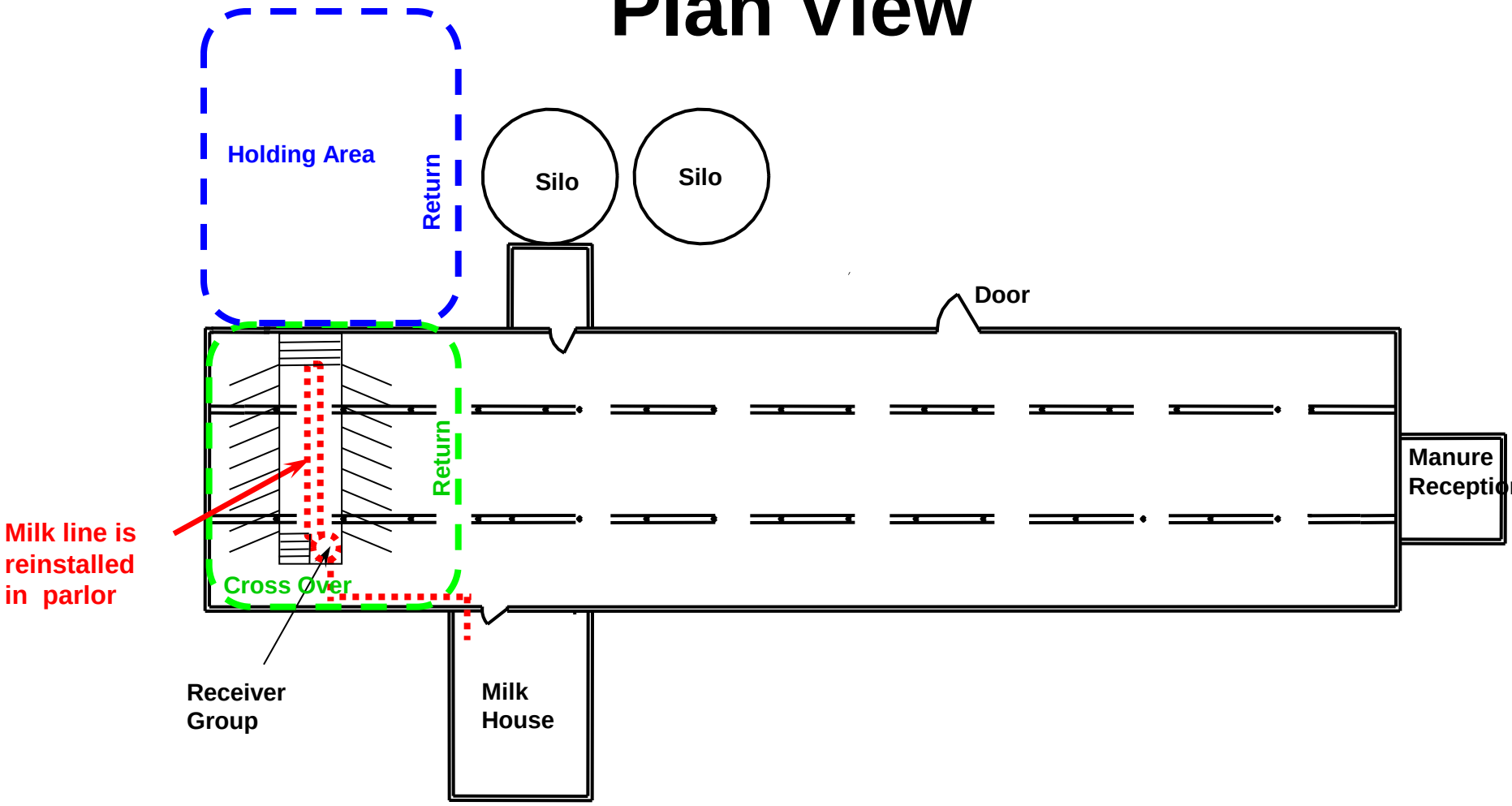



New Parlor on end of Barn

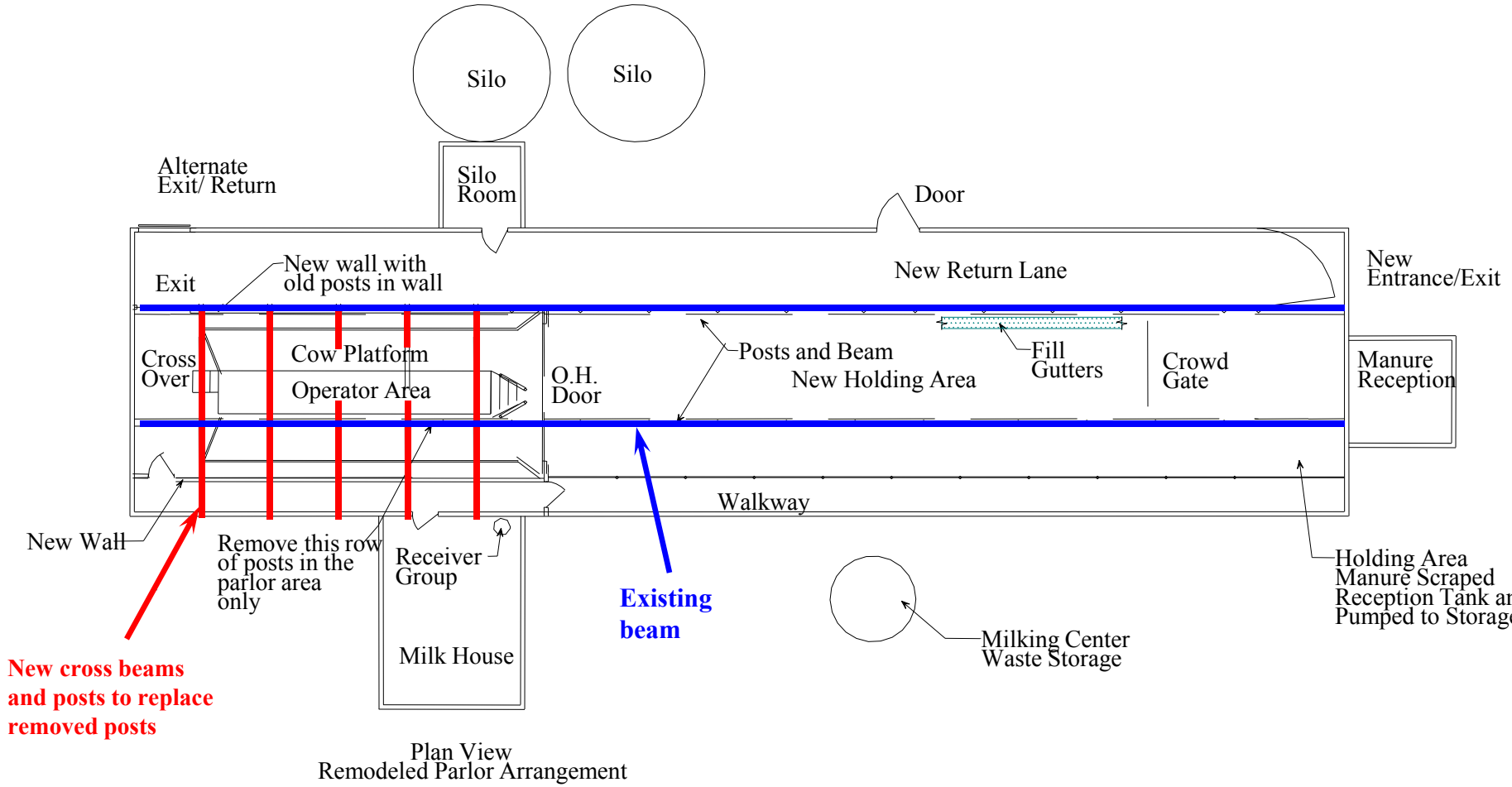
New Parlor on end of Barn
Plan View



Cross Ways Parlor Layout
Plan View



Structural Changes

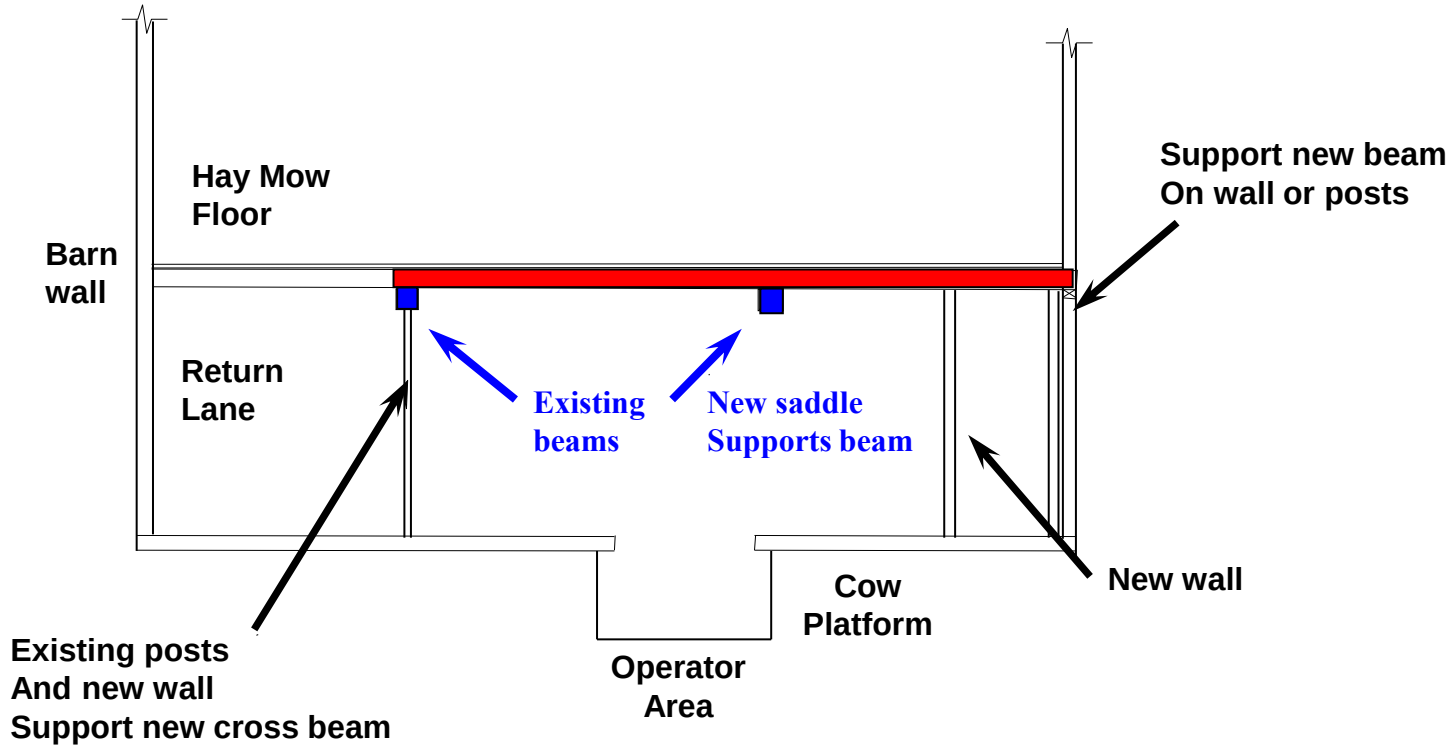


Plan View
Remodeled Parlor Arrangement

Structural Changes

(1 of 3)

New cross beam placed above existing beams

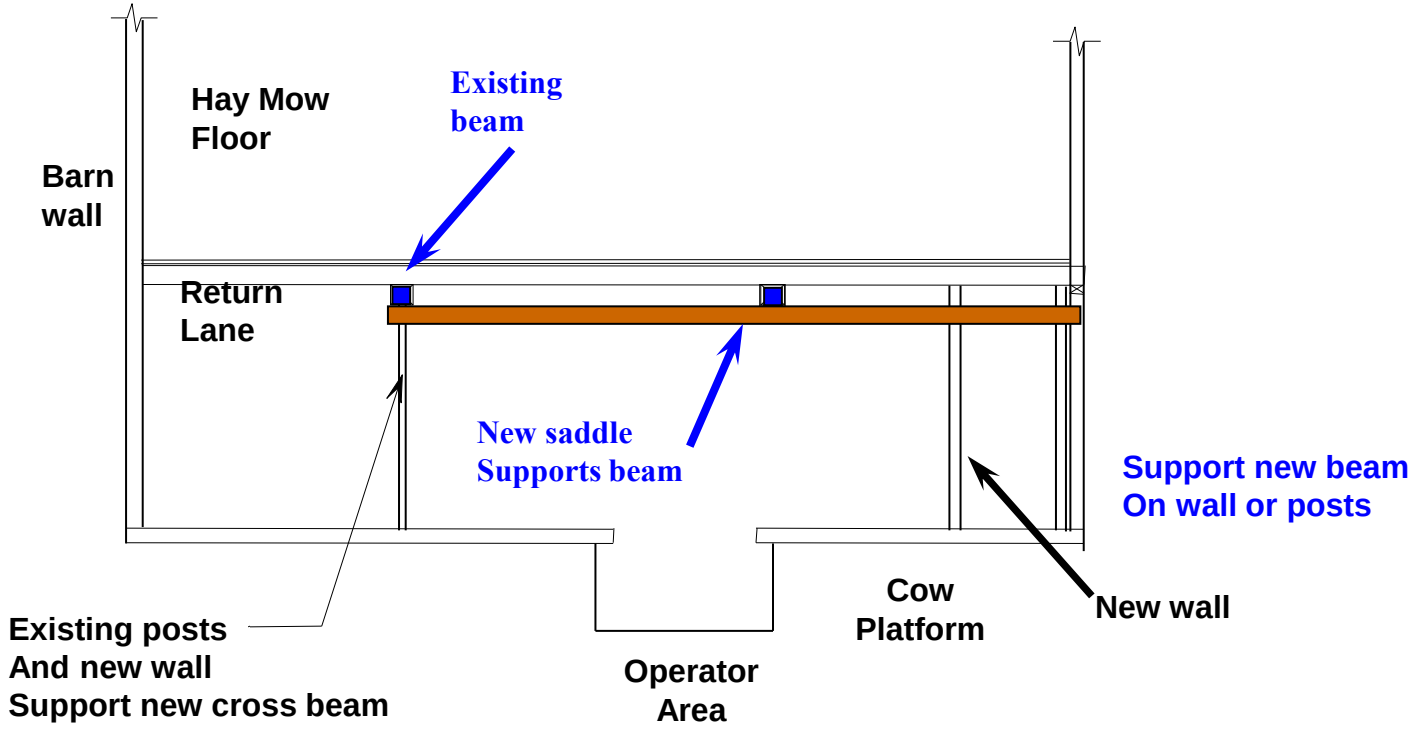


Cross Section View
Remodeled Parlor Arrangement

Structural Changes

(2 of 3)

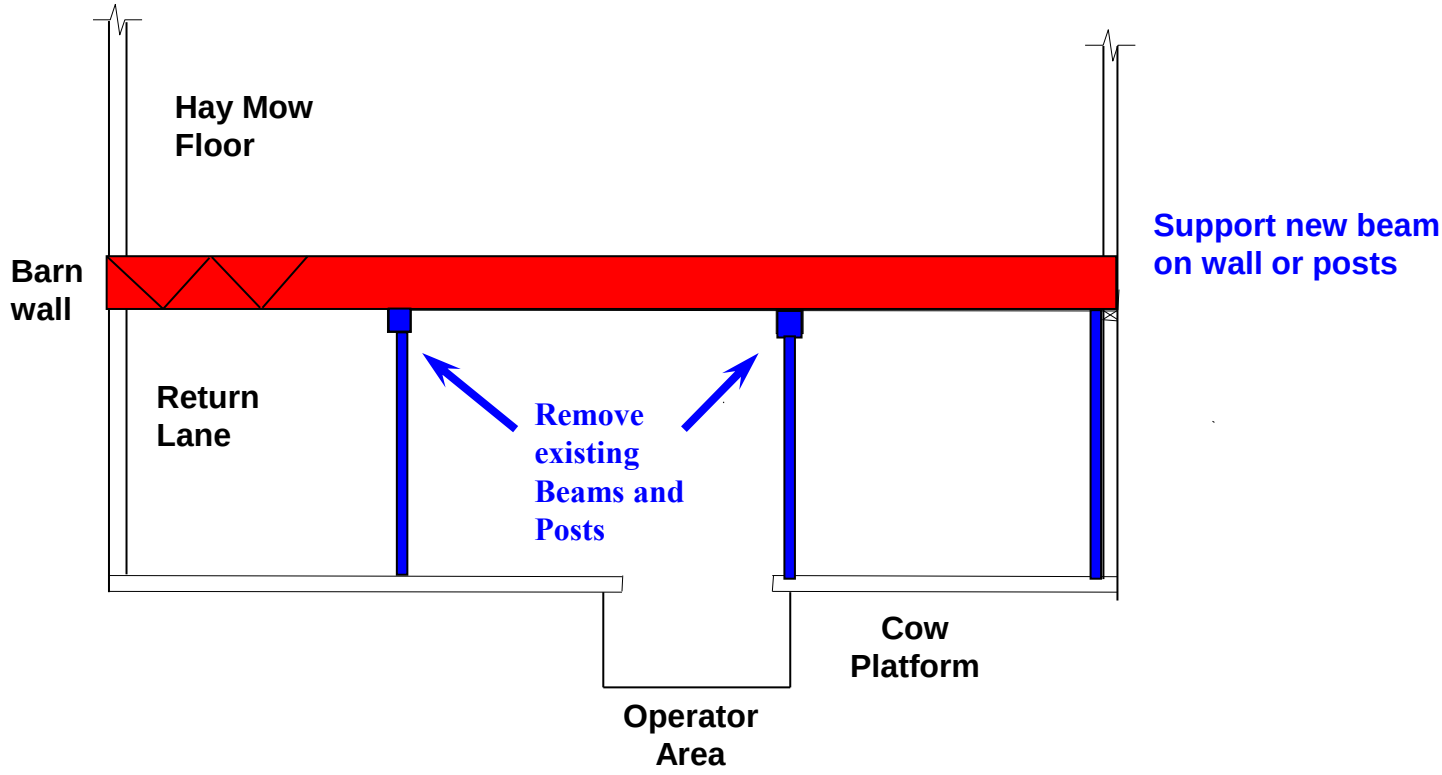
New cross beam placed below existing beams



Cross Section View
Remodeled Parlor Arrangement

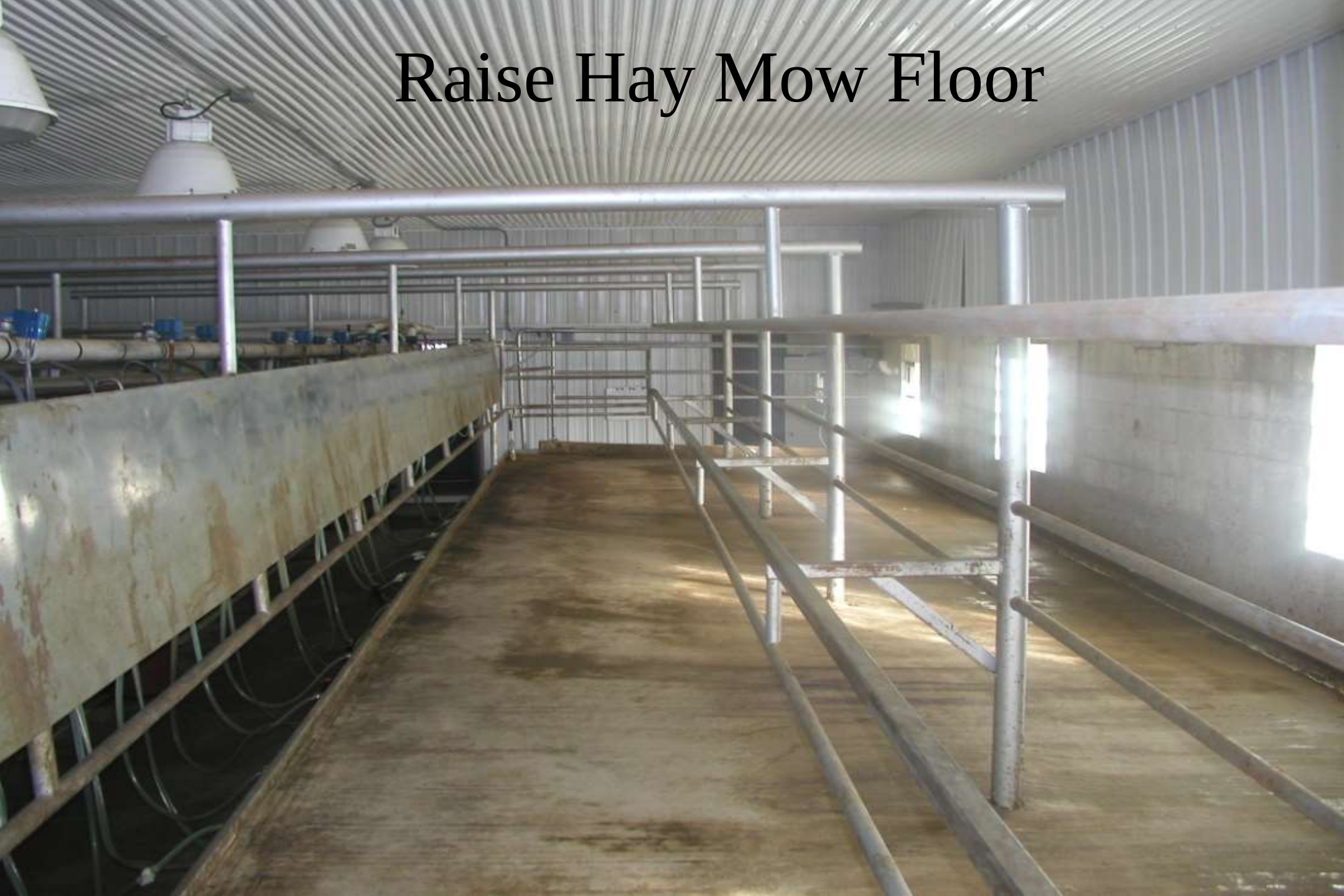
Structural Changes
(3 of 3)

Remove or Raise Mow Floor and Reframe



Cross Section View
Remodeled Parlor Arrangement

Raise Hay Mow Floor

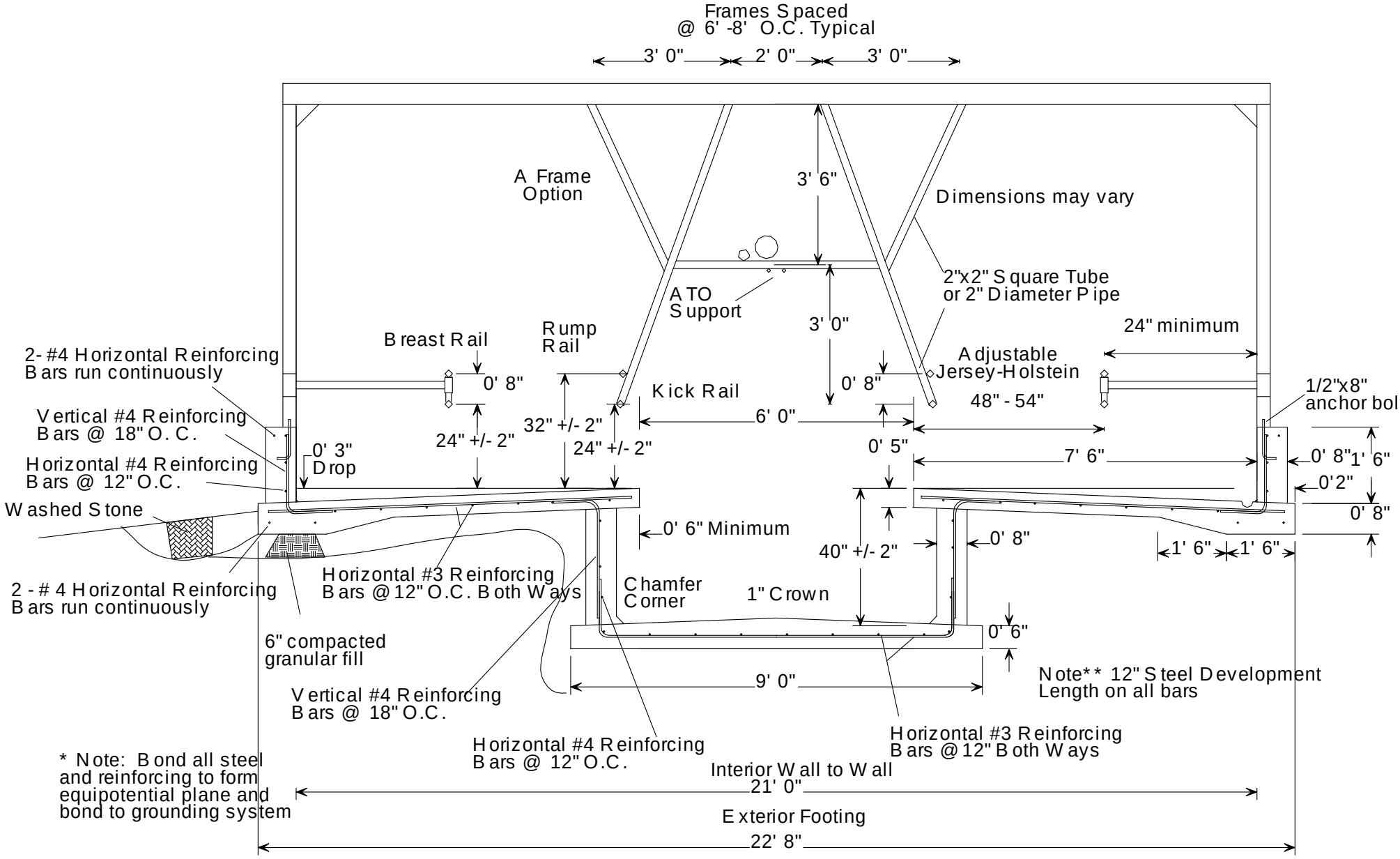


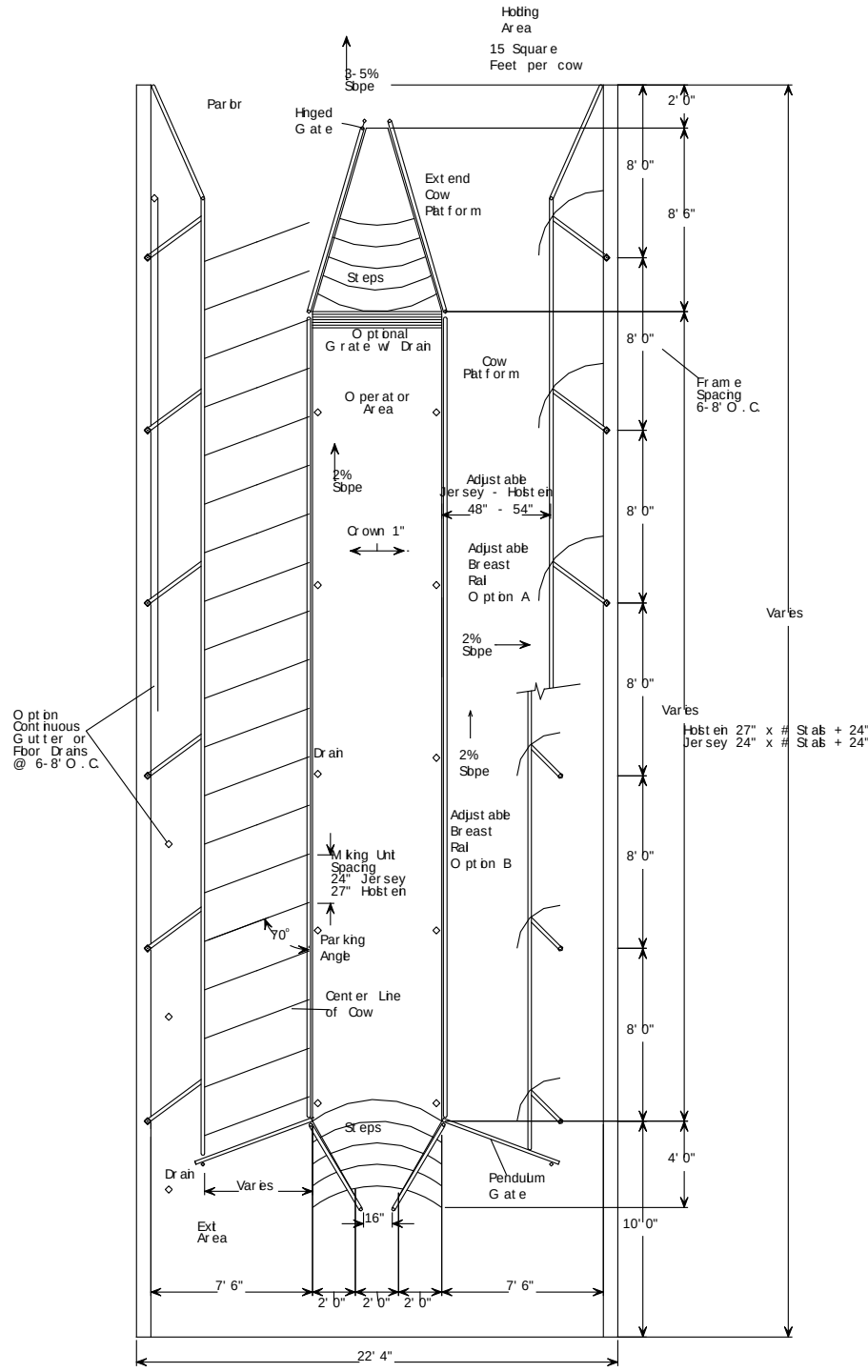

Raise Hay Mow Floor

Raise Hay Mow Floor

Milking Stall Choices

- Home Built Parabone
- Local Dealer Built Parabone
- Economical Manufacturers Parabone
- Used Parlor Stall
- Front exit
- Side (Rapid) Exit


Frames Spaced
@ 6' -8' O.C. Typical
3' 0"
2' 0"
3' 0"
A Frame
Option
3' 6"
Dimensions may vary
2"x2" Square Tube
or 2" Diameter Pipe
ATO
Support
3' 0"
24" minimum
Breast Rail
Rump
Rail
2- #4 Horizontal Reinforcing
Bars run continuously
0' 8"
0' 8"
Adjustable
Jersey-Holstein
48" - 54"
1/2"x8"
anchor bolt
Kick Rail
6' 0"
Vertical #4 Reinforcing
Bars @ 18" O. C.
24" +/- 2"
32" +/- 2"
24" +/- 2"
0' 5"
7' 6"
0' 8"
1' 6"
0' 3"
Drop
Horizontal #4 Reinforcing
Bars @ 12" O.C.
0'2"
Washed Stone
0' 8"
0' 6" Minimum
40" +/- 2"
0' 8"
1' 6"
1' 6"
Horizontal #3 Reinforcing
Bars @12" O.C. Both Ways
2 - # 4 Horizontal Reinforcing
Bars run continuously
Chamfer
Corner
1" Crown
0' 6"
6" compacted
granular fill
9' 0"
Note** 12" Steel Development
Length on all bars
Vertical #4 Reinforcing
Bars @ 18" O.C.
Horizontal #4 Reinforcing
Bars @ 12" O.C.
Horizontal #3 Reinforcing
Bars @12" Both Ways
* Note: Bond all steel
and reinforcing to form
equipotential plane and
bond to grounding system
Interior Wall to Wall
21' 0"
Exterior Footing
22' 8"


Holding
Area
15 Square
Feet per cow
3-5%
Slope
Parlor
Hinged
Gate
2' 0"
8' 0"
8' 6"
Extend
Cow
Platform
Steps
Optional
Grate w/ Drain
Cow
Platform
8' 0"
Frame
Spacing
6-8' O.C.
Operator
Area
2%
Slope
Adjustable
Jersey - Holstein
48" - 54"
8' 0"
Crown 1"
Adjustable
Breast
Rail
Option A
Varies
2%
Slope
8' 0"
Varies
Holstein 27" x # Stalls + 24"
Jersey 24" x # Stalls + 24"
Option
Continuous
Gutter or
Floor Drains
@ 6-8' O.C.
Drain
2%
Slope
Adjustable
Breast
Rail
Option B
Milking Unit
Spacing
24" Jersey
27" Holstein
8' 0"
70°
Parking
Angle
Center Line
of Cow
8' 0"
Steps
4' 0"
Drain
Varies
Pendulum
Gate
16"
10' 0"
Exit
Area
7' 6"
2' 0"
2' 0"
2' 0"
7' 6"
22' 4"


Front Exit
Home Built
Parabone Stall


Dealer Built
Parabone Stall


Manufactured
Parabone “S”
Rail Stall


Manufactured
Front Exit
Parabone
Stall


Used
Rapid Side Exit
Herringbone
Stall


New
Rapid Side Exit
Parallel Stall


New
Side Exit Stall


Swing Exit
Gate


Chop Exit
Gates

Chop Exit Gates

Swing Entry Gates


Holding Area


Holding Area


Crowd Gate
(Homemade)


Crowd Gate
(Homemade)


Crowd Gate
(Economical)


Crowd Gate
Swing gate


Crowd gates
(Economical)

Milking System Design Choices

- Milk Line Location
  - High Line Swing Equipment
  - Low Line Double Equipment
- Receiver group Location
  - In milk house
  - In parlor
- Milking Unit Storage and Cleaning
  - In milk house
  - In parlor
- Automatic Takeoffs
  - Reuse Tie Stall Barn ATO
  - Rope ATO
  - Arm ATO


High
Milk Line


Low
Milk Line

High Line
Receiver Group
in Milk House

High Line Receiver Group in Milk House


Low Line
Receiver Group
in Parlor


High Line
Receiver Group
in Parlor


No Clean in Place


No Clean in Place


Clean In Place


Clean in place


Clean in
Place


No Automatic
Takeoff


No Automatic
Takeoff


No Automatic
Takeoff


Automatic
Takeoff
Slider


Automatic
Takeoff
Slider


Automatic
Takeoff Swing


Automatic
Takeoff Swing


Automatic
Takeoff
Swing
12/28/2000


Drainage


Drainage


Drainage

Plastic Liner


Tile Liner

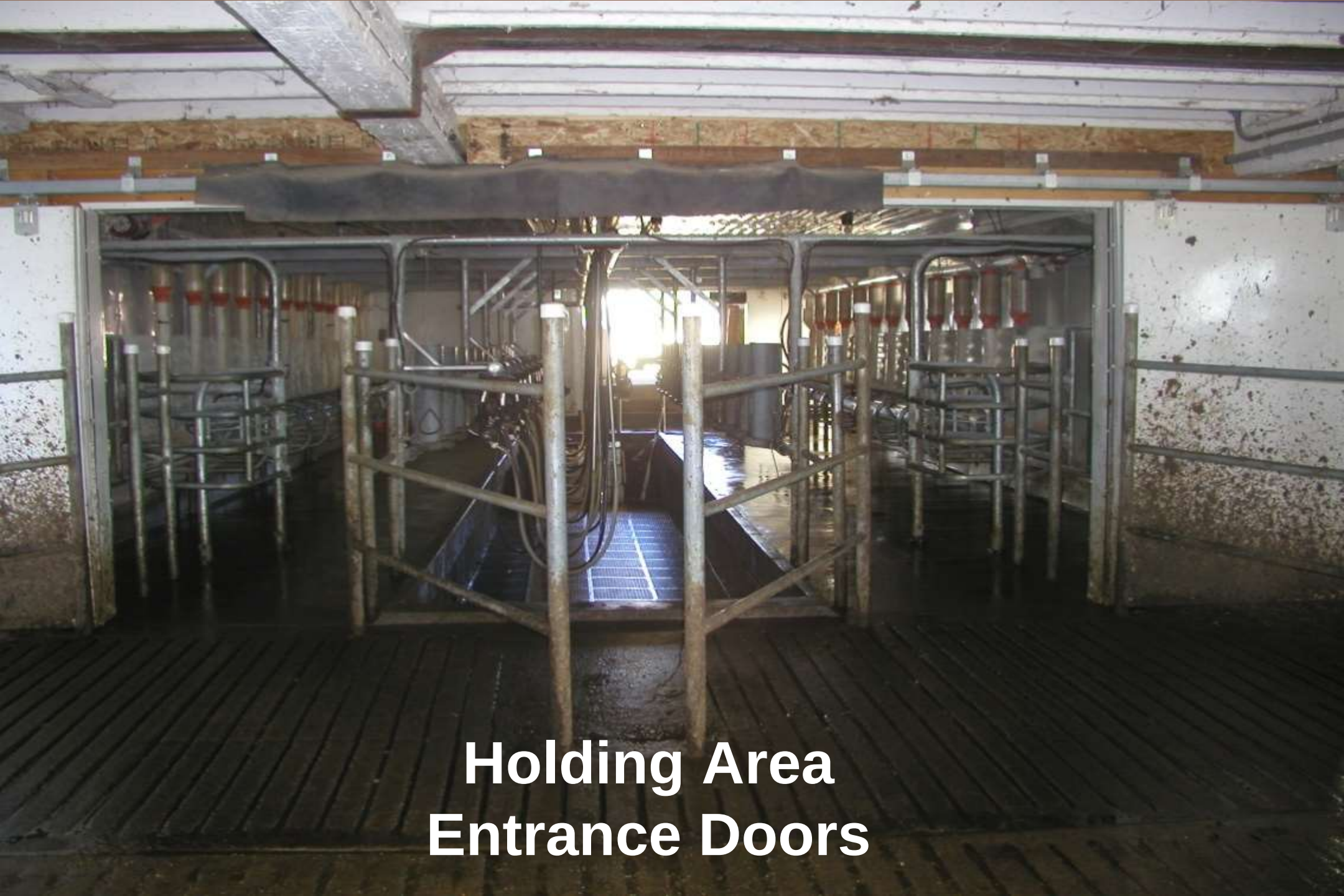

Stainless and
Plastic Liner


Holding Area Entrance
Curtain

Holding Area Entrance Curtain


Holding Area Entrance
Curtain


Holding Area
Entrance Doors


Holding Area
Entrance Doors


Lighting

Lighting


Lighting


Lighting


Cattle Handling
Palpation Chute


Cattle Handling
Stanchion


Cattle Handling
Management Rail

Parlor Waste


Parlor Waste


Parlor Waste


Milk House
Minimal Changes


Milk House
MUELLER
MATIC
ELECTROMAIC
AIR INJECTOR
Minimal Changes


Goodbye!