

MWPS-72361

Free Stall Dairy Barn

80 Cows Resting Only.

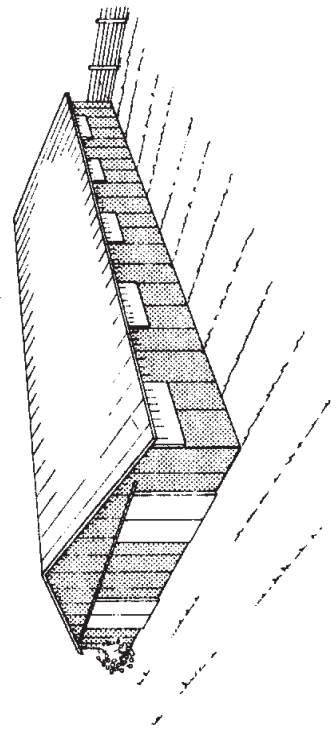
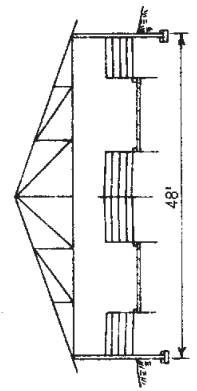
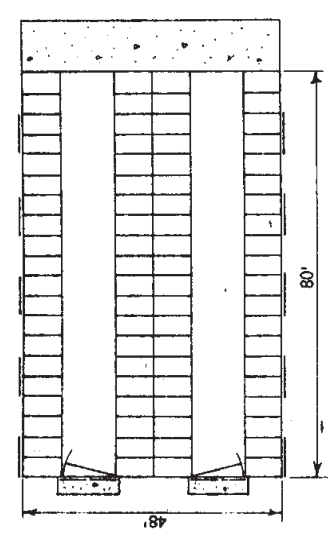
CAUTION!

Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for utilities, waste management, roads or other access. **Furthermore, any deviation from the given specifications may result in structural failure, property damage, and personal injury including loss of life.**

WARRANTY DISCLAIMER

This plan provides conceptual information only. **Neither midwest plan service nor any of the cooperating land-grant universities, or their respective agents or employees, have made, and do not hereby make, any representation, warranty or covenant with respect to the specifications in this plan.** Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for utilities, waste management, roads or other access.

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Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating
Free-Stall Dairy Barn 80 Cows Resting Only
Title Page
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Before you build this barn consult with and get the approval of the health authorities having control of the sale of your milk.

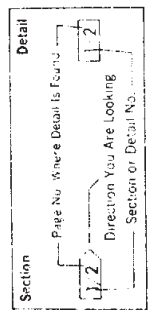


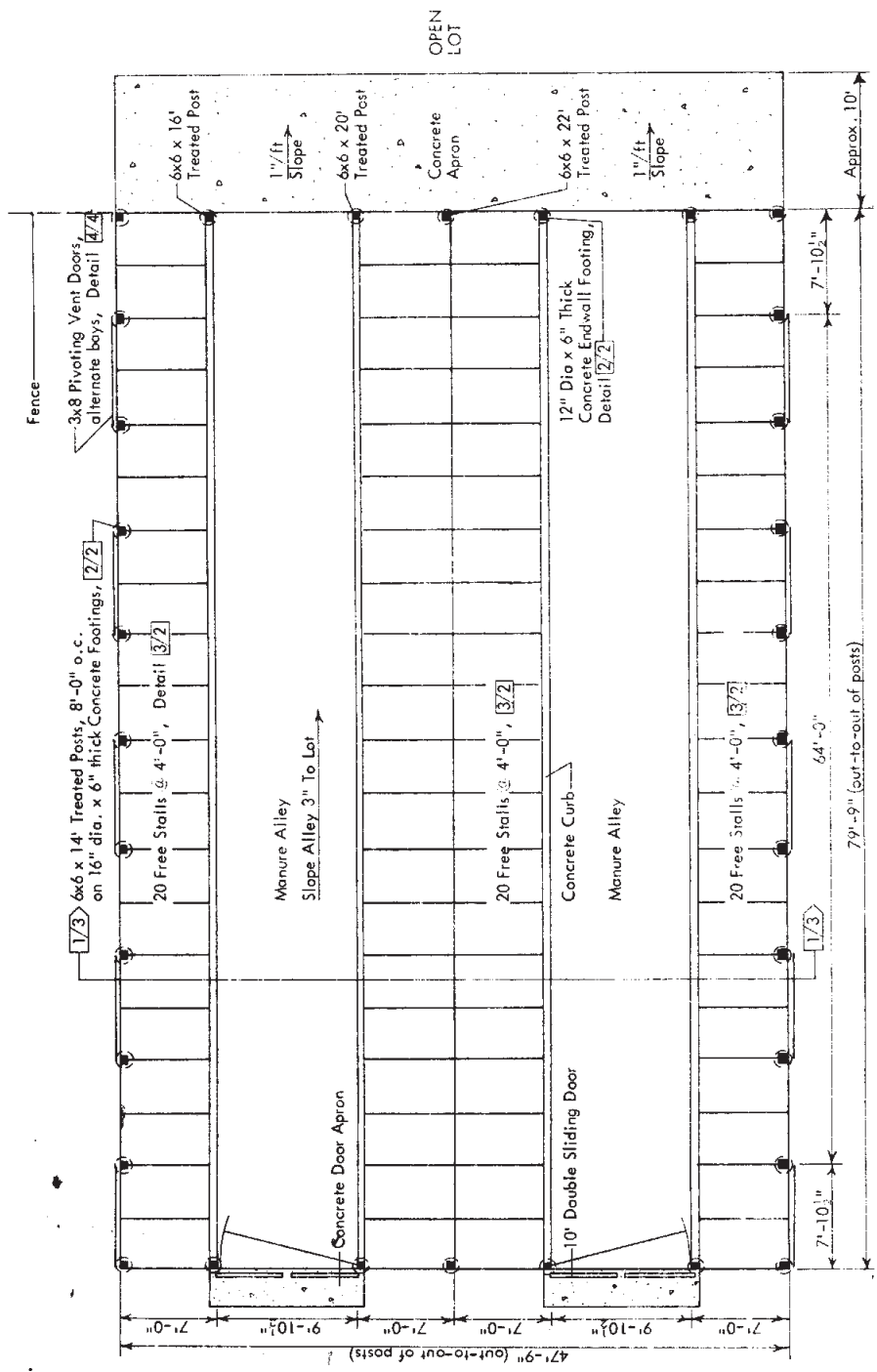
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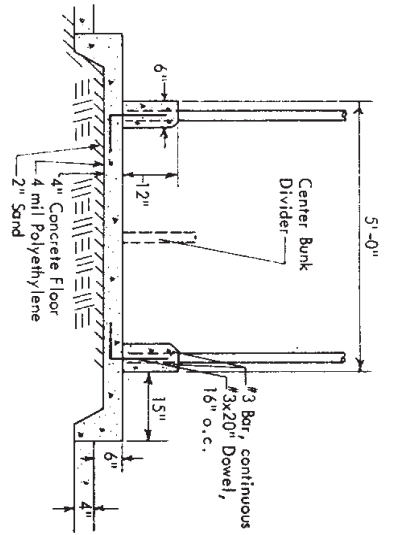
FREE-STALL DAIRY BARN - 80 Cows
 Resting Only

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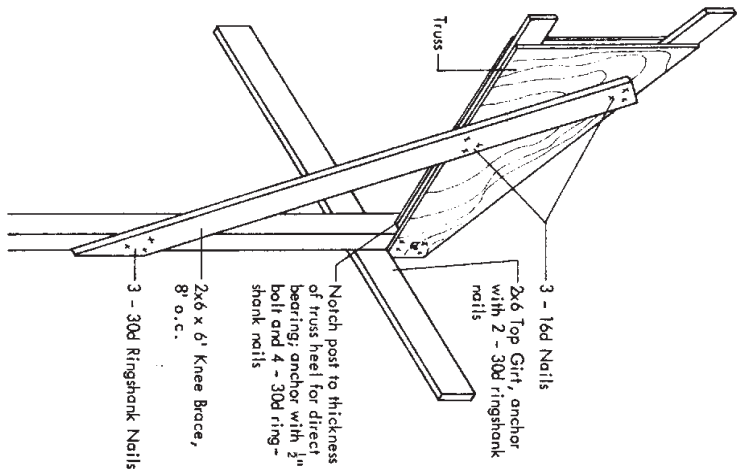
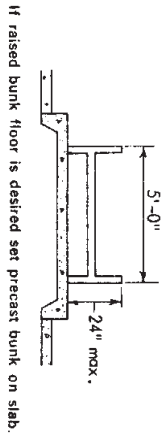


FLOOR PLAN 1/1

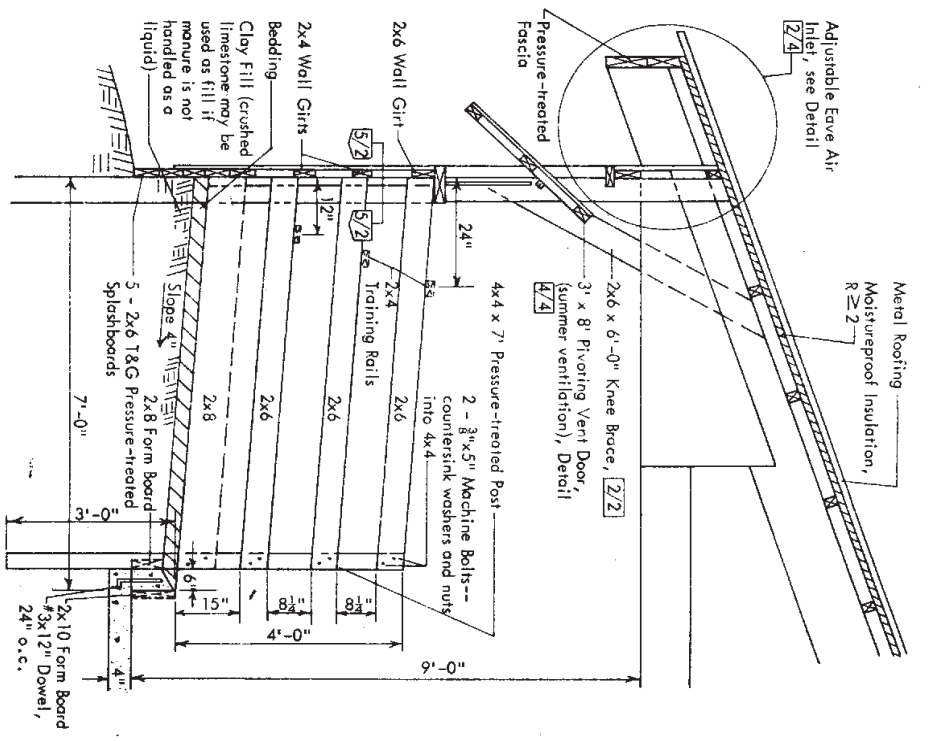
Provide separate milking, feeding and youngstock facilities.



FEEDBUNK CROSS-SECTION 1/2
Install center bunk divider if herd is divided and fed different rations.

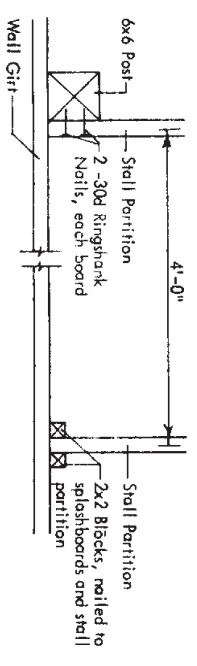


KNEE BRACE DETAIL 2/2

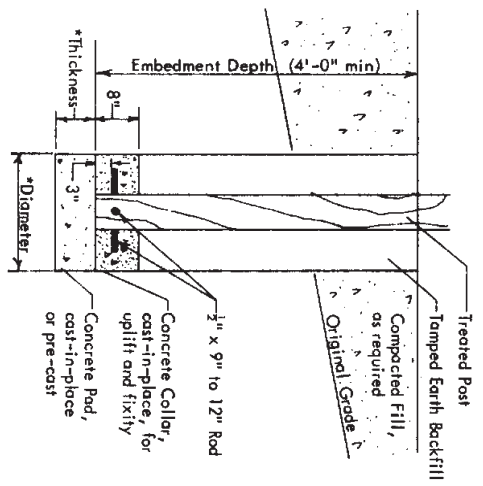


FREE STALL DETAIL 4/2

If cows have access to outside of building, use wood siding (treated plywood or splashboards) on bottom 4 feet of wall.



WALL CONNECTION 5/2

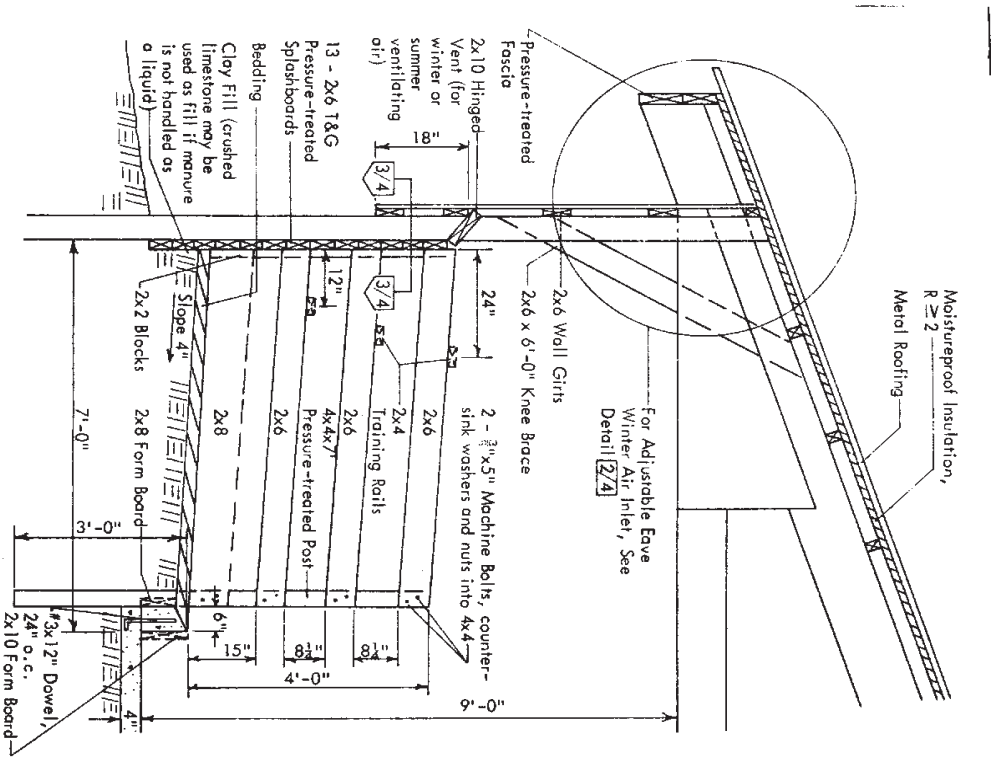


POST FOOTING DETAIL 3/2

*Footing Size
12" Dia x 6" Thick @
Endwall Posts
16" Dia x 6" Thick @
Sidewall Posts
Extend embedment depth as required to place footing on undisturbed soil. For large diameter footings, use smaller diameter auger and flare the bottom of the hole with Lineman's spoon.

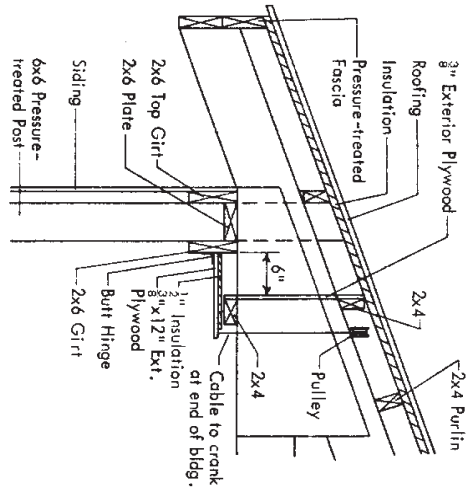
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DAIRY BARN - 62 FREE STALLS
Mechanical Waste Scraper

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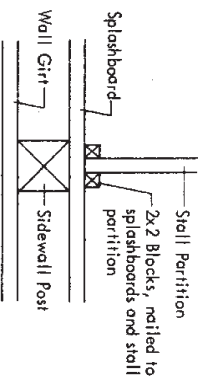
ALTERNATE FREE STALL DETAIL 1/4

Install 2x4 training rails if cows turn around in stalls or deposit manure at back of stall—3 rails will force the cow to move back as it gets up so its shoulders can't get caught under the top rails. Install 2x8 bottom stall partition board if cows move fill and bedding from stall to stall causing deep holes in stalls.

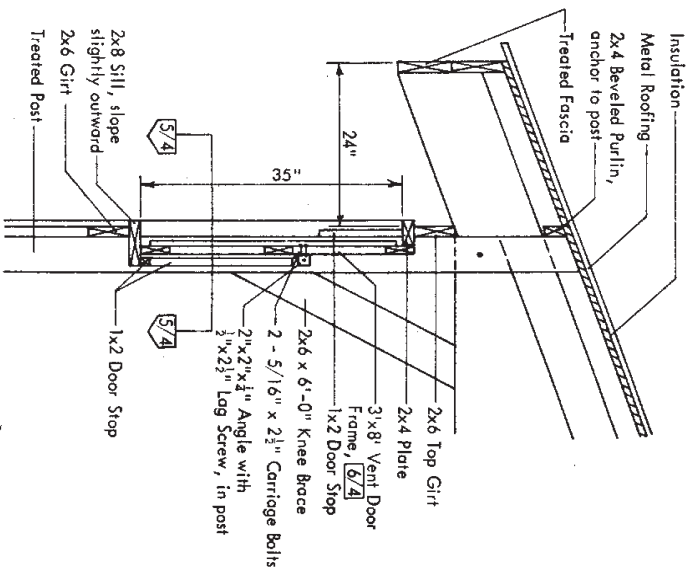


ADJUSTABLE EAVE WINTER AIR INLET 2/4

To be used in combination with pivoting vent doors or 2x10 hinged vent doors for summer air inlets.

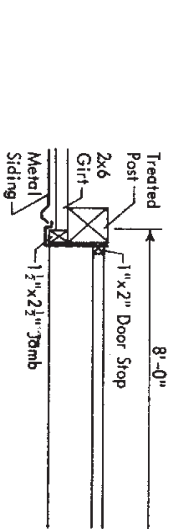


WALL CONNECTION 3/4

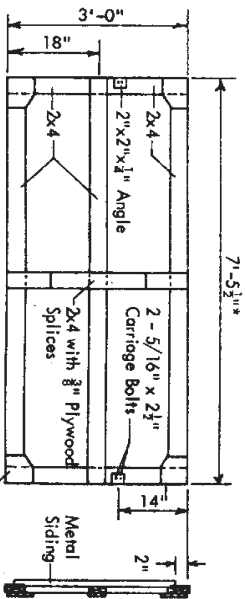


VENT DOOR SECTION 4/4

Hold vent door open with a light metal chain from the vent door frame to an eye hook in the sill.



JAMB SECTION 5/4



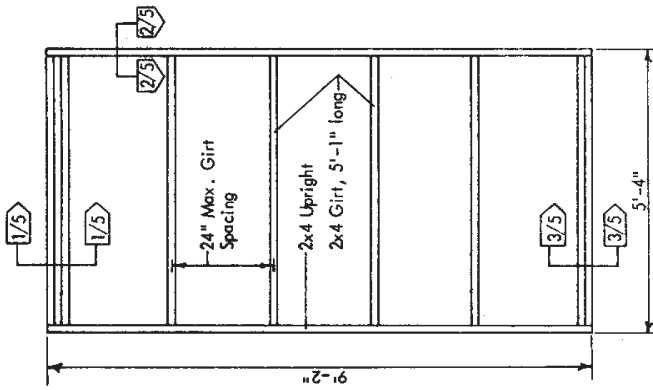
3' x 8' VENT DOOR FRAME 6/4

Alter this dimension for other than 6" wide building posts or other than 8' o.c.

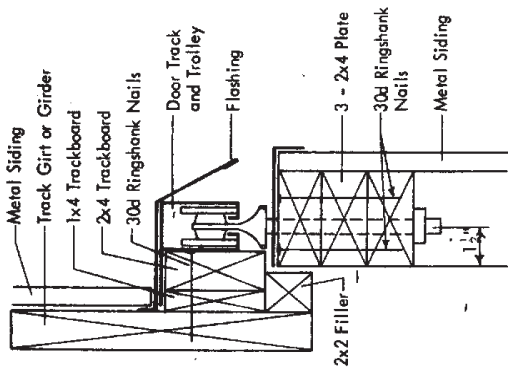
Alternate Lumber Specifications, Spacing and Sizes.
 2x4 Purlins (Construction Grade Hem-Fir) Max Spacing
 Snow Zone 1: 28' o.c.
 Snow Zone 2: 24' o.c.
 Snow Zone 3: 18' o.c.
 2x6 Girts (No. 2 Hem-Fir) Max Spacing: 20' o.c.

Posts (Round vs Sawn)
 6x6 = ASK or AS&E Class 7, 4.8" Top Diameter Trusses (No. 1 Hem-Fir)
 See Truss Page

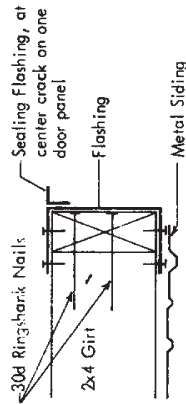
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DAIRY BARN - 62 FREE STALLS Mechanical Waste Scripper
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DOUBLE SLIDING DOOR 4/5
2x4 Framing

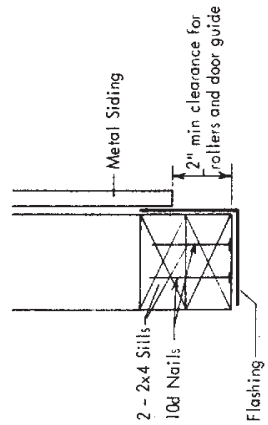


DOOR TRACK ASSEMBLY 1/5

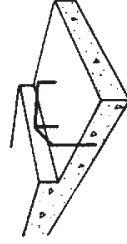


UPRIGHT SECTION 2/5

Extend flashing around uprights and nail to girts and uprights.

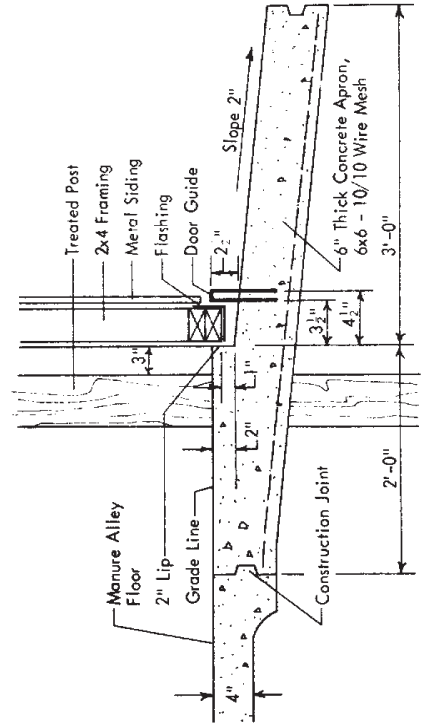


SILL SECTION 3/5



"U"-Shaped Door Guide

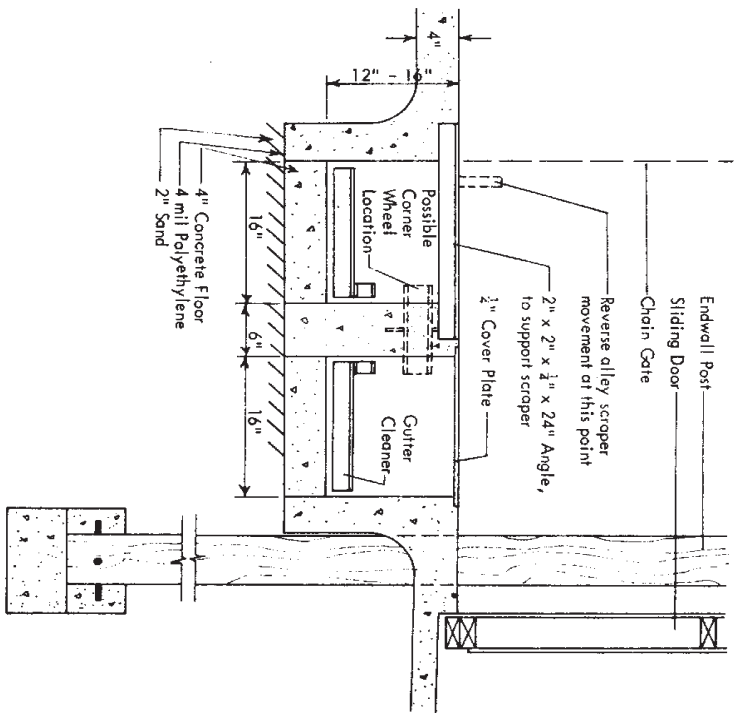
Locate $\frac{1}{2}$ " dia x 20" $\frac{1}{2}$ "-shaped door guide at center of door opening. Break at center to force closing door against apron lip. Taper from $4\frac{1}{2}$ " end to $3\frac{1}{2}$ " center clearance.



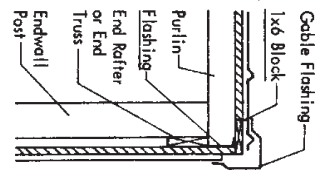
SLIDING DOOR APRON 5/5

Set adjustable roller guides in the concrete apron at door jamb. Use door stops as required.

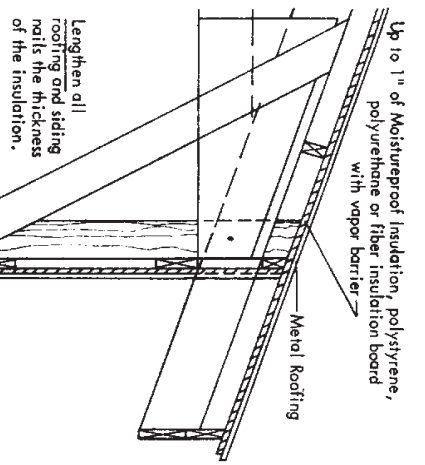
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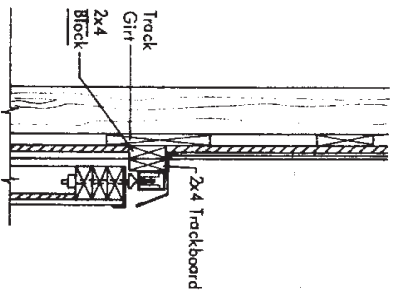
GUTTER CLEANER CROSS-SECTION 1/6
IMPORTANT: Use a flexible gate and reverse alley scraper movement at near edge of gutter to prevent possible cow injury.



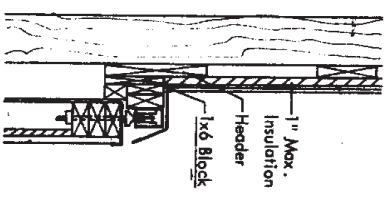
TYPICAL GABLE END SECTION 2/6



TYPICAL WALL SECTION 4/6



ENDWALL SECTION 3/6
 With Sliding Door



ENDWALL HEADER SECTION 5/6

INSULATION DETAILS
 Underlines show materials that change when insulation is added.

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