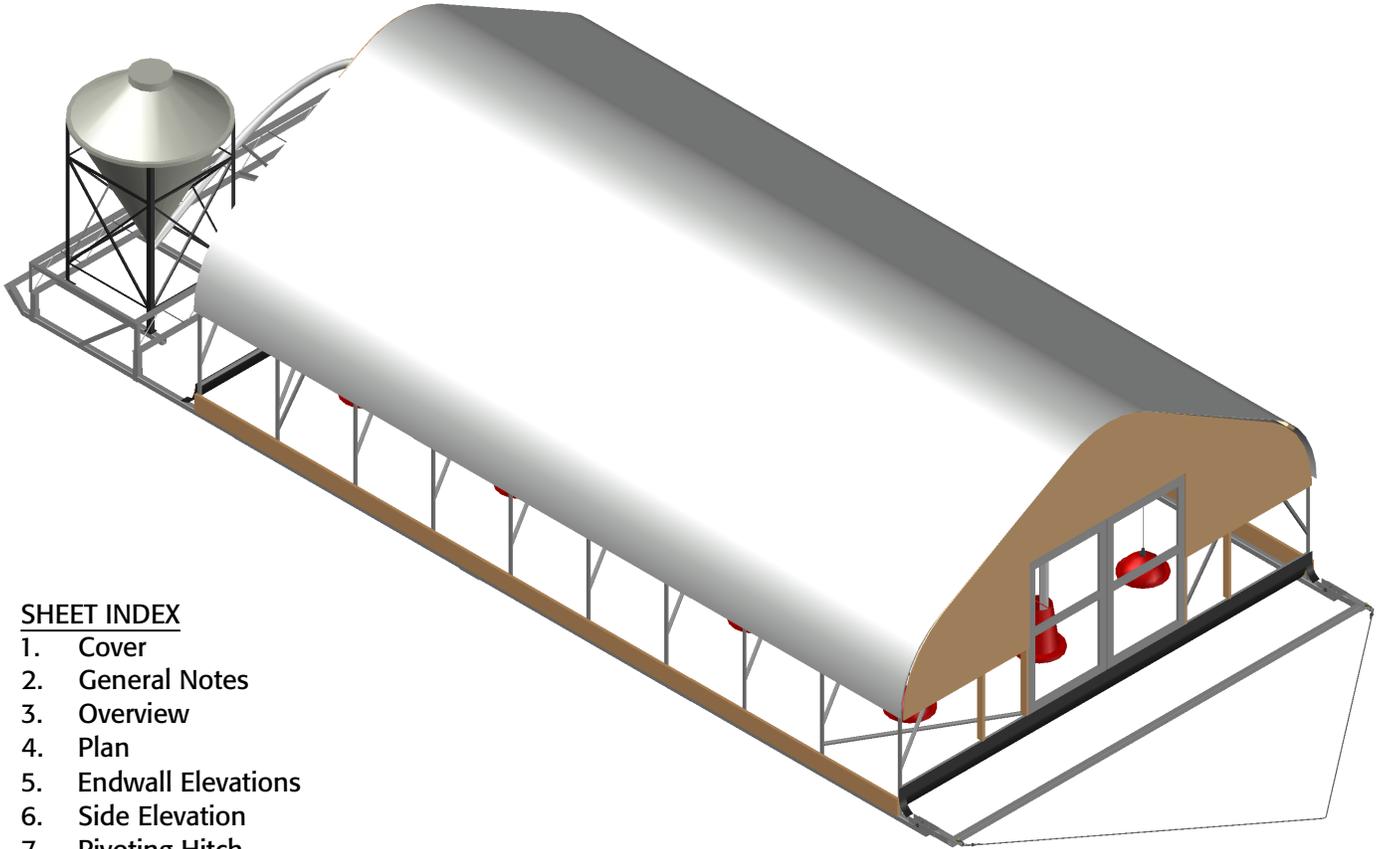


MOBILE PASTURE COOP

WITH AUTOMATED FEEDING



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1. Cover
2. General Notes
3. Overview
4. Plan
5. Endwall Elevations
6. Side Elevation
7. Pivoting Hitch
8. Splice and Trailing End
9. Feed Bin Supports (1/2)
10. Feed Bin Supports (2/2)
11. Greenhouse Bow Connection
12. Greenhouse Frame Details
13. Rubber Endwall Sweeps
14. Feed System

As designed, constructed, and used at:

MAYDAY FARM

LEEDS, MAINE

mayday@maydayfarm.com

**Mobile Pasture Coop
with Automated Feeding**

Cover

This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under subaward number FNE22-012.



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General Notes

1. THE END USER OF THESE PLANS ASSUMES ALL RESPONSIBILITY AND LIABILITY REGARDING THEIR USE.
2. THE MOBILE PASTURE COOP DEPICTED HEREIN WAS DESIGNED BY FARMERS TO MEET PERFORMANCE CRITERIA IN THE CONDITIONS SPECIFIC TO MAYDAY FARM. SUCH CONDITIONS INCLUDE BUT ARE NOT LIMITED TO THOSE DUE TO FARMING METHODS, CLIMATE, TOPOGRAPHY, VEGETATION, AND PREDATION. IT IS THE RESPONSIBILITY OF THE END USER TO ADAPT THIS DESIGN AS NEEDED TO SUIT THE CONDITIONS AND CRITERIA SPECIFIC TO THEIR USAGE.
3. THIS MOBILE PASTURE COOP IS INTENDED FOR USE AS A SEASONAL, MOBILE ENCLOSURE FOR POULTRY, AND AS SUCH IT IS NOT INTENDED TO SATISFY BUILDING CODE REQUIREMENTS OF ANY JURISDICTION. THESE PLANS HAVE NOT BEEN SUBJECTED TO ENGINEERING REVIEW FOR CONFORMANCE TO ANY DESIGN STANDARDS.
4. THIS DESIGN MAKES USE OF SALVAGED MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL BAR JOISTS AND ALUMINUM COMMERCIAL DOORS. IT IS THE RESPONSIBILITY OF THE END USER TO MAKE APPROPRIATE MATERIAL SUBSTITUTIONS AS NECESSARY IF THESE MATERIALS ARE NOT AVAILABLE.
5. THIS DESIGN MAKES USE OF PROPRIETARY ASSEMBLIES, INCLUDING BUT NOT LIMITED TO A GREENHOUSE FRAME AND A 1.5-TON FEED BIN. THE END USER MAY FIND IT NECESSARY TO MODIFY THIS DESIGN IN ORDER TO ACCOMMODATE DIFFERENT PROPRIETARY ASSEMBLIES.

**Mobile Pasture Coop
with Automated Feeding**

General Notes

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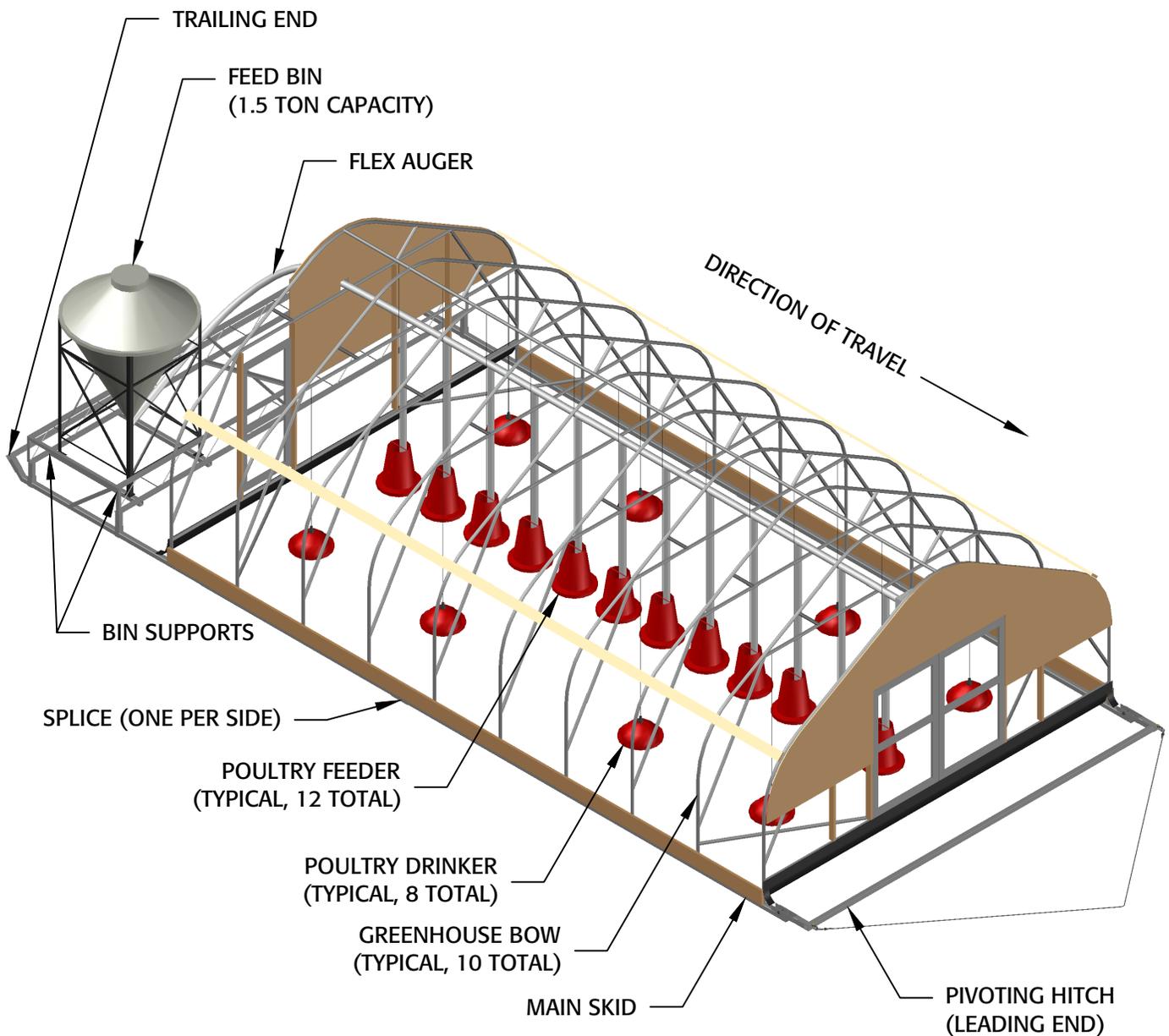


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Overview

Notes:

- All openings are screened with 1" galvanized steel poultry netting (not shown)
- The bottom is open to the ground
- Water piping and hoses for the poultry drinkers are not shown
- Wiring from the auger motor to a portable generator is not shown
- Additional minor parts and fasteners are not shown

Mobile Pasture Coop with Automated Feeding

Overview

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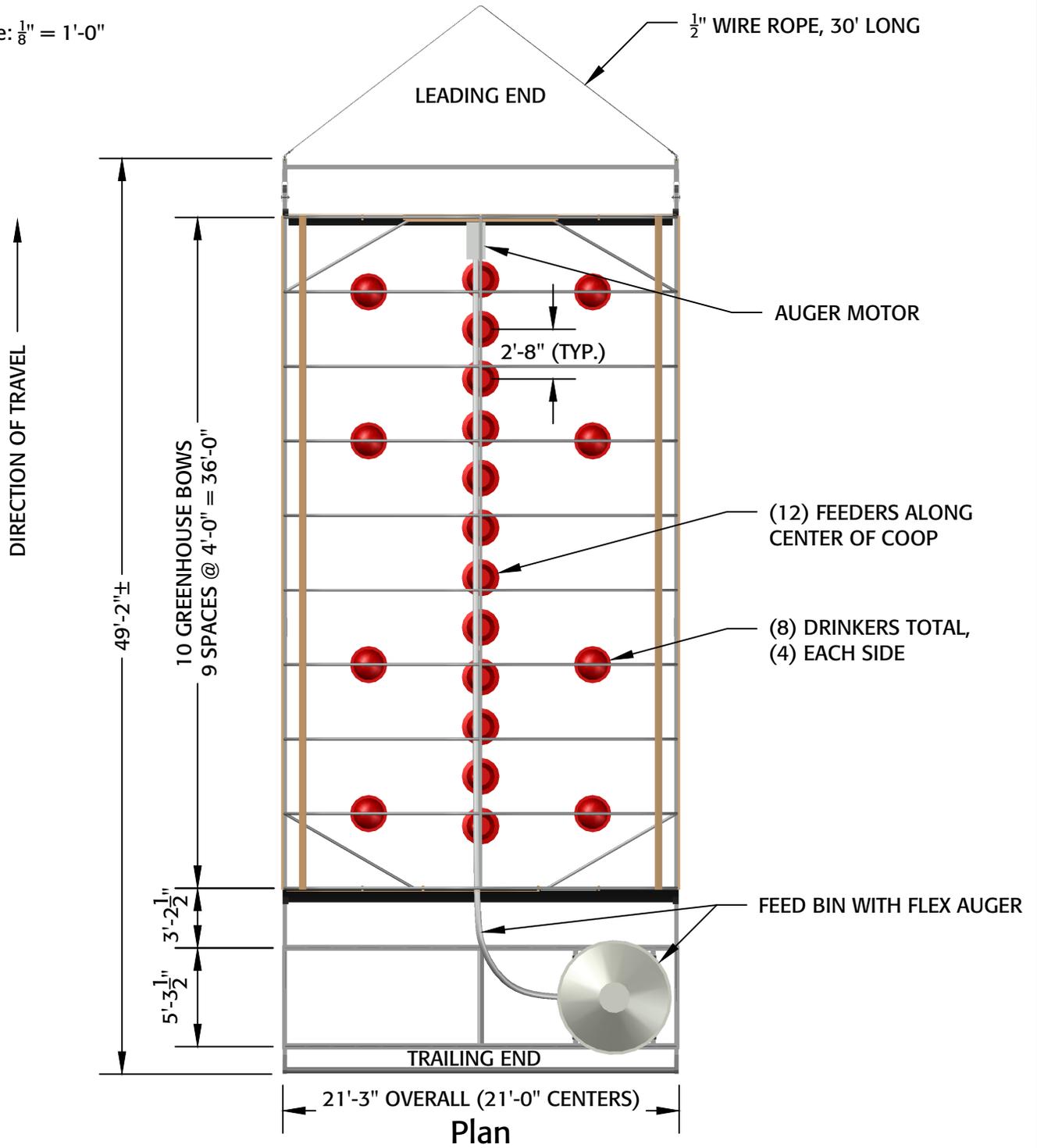
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Scale: $\frac{1}{8}'' = 1'-0''$



Plan

Notes:

- Free space beside the feed bin may be used to mount a portable generator.
- The quantity of generators needed per group of poultry houses depends on the capacity of the generators and quantity of feed augers to be run simultaneously. A local electrician can be consulted to help size a generator or group of generators for the end user's needs.

**Mobile Pasture Coop
with Automated Feeding**

Plan

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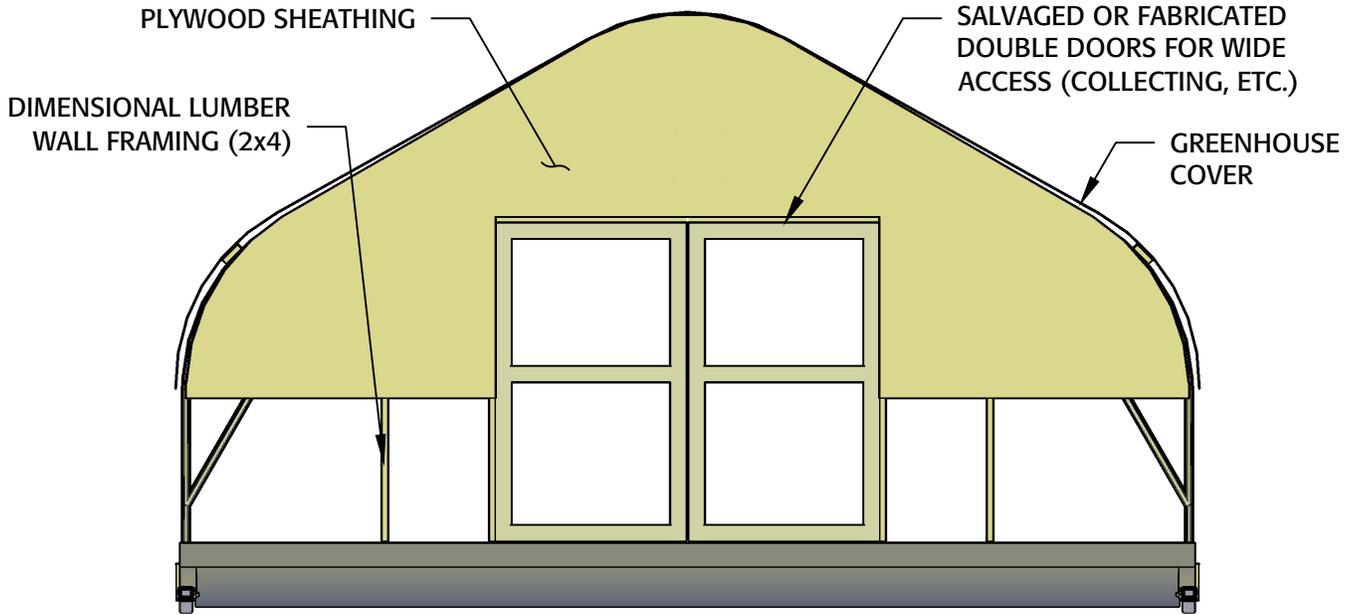


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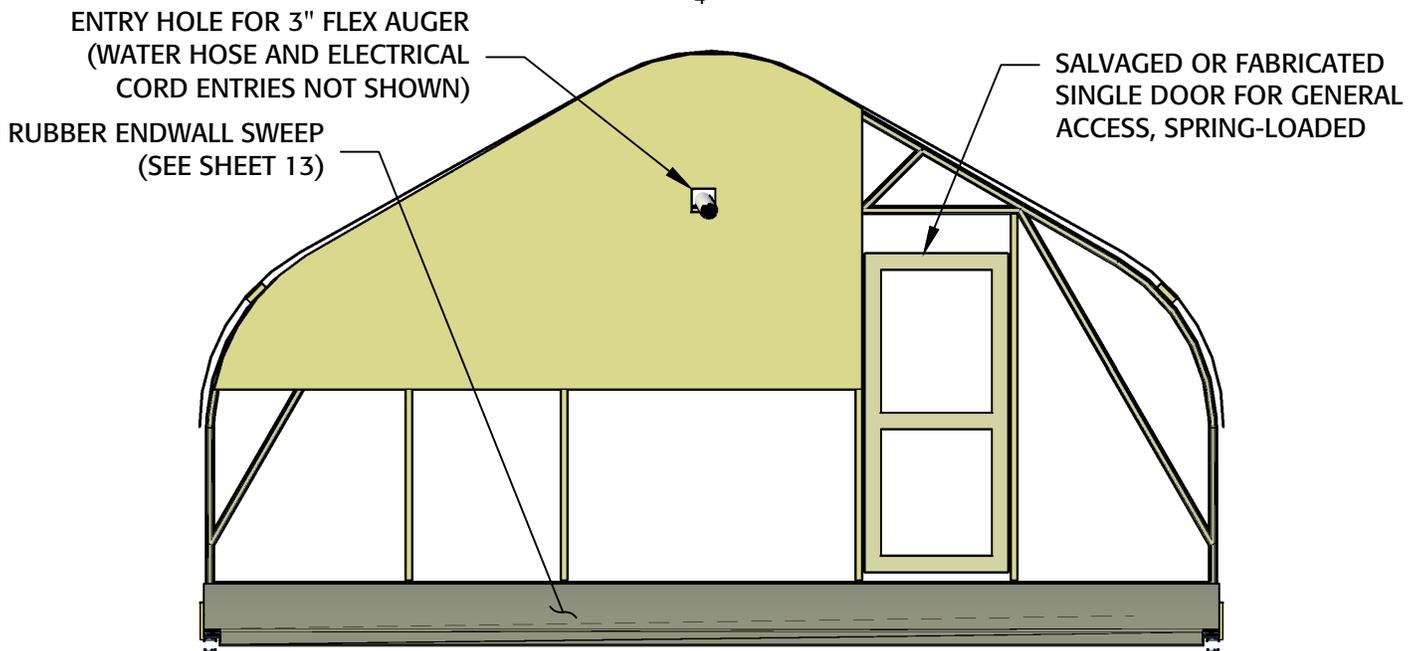
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Elevation - Leading Endwall

Scale: $\frac{1}{4}'' = 1'-0''$



Elevation - Trailing Endwall

Scale: $\frac{1}{4}'' = 1'-0''$

Notes:

- Open areas of end walls are screened with 1" galvanized steel poultry netting (not shown)
- The end walls may be constructed with more or less extensive cladding to suit local climactic conditions.

**Mobile Pasture Coop
with Automated Feeding**

Endwall Elevations

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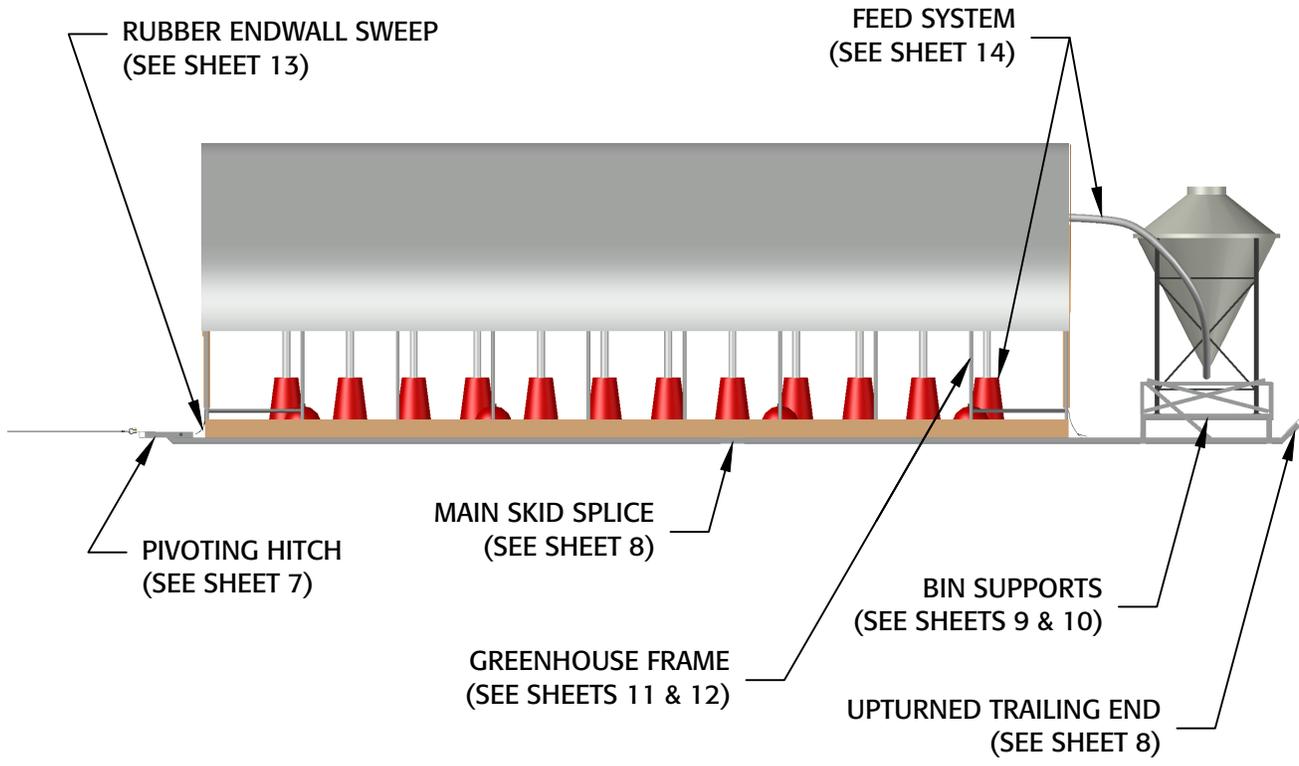


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Elevation - Side
 Scale: $\frac{1}{8}'' = 1'-0''$

Notes:

- Side walls are screened with 1" galvanized steel poultry netting (not shown)
- Roll-up greenhouse sides (not shown) may be used to regulate ventilation through the sides of the coop.

**Mobile Pasture Coop
 with Automated Feeding**

Side Elevation

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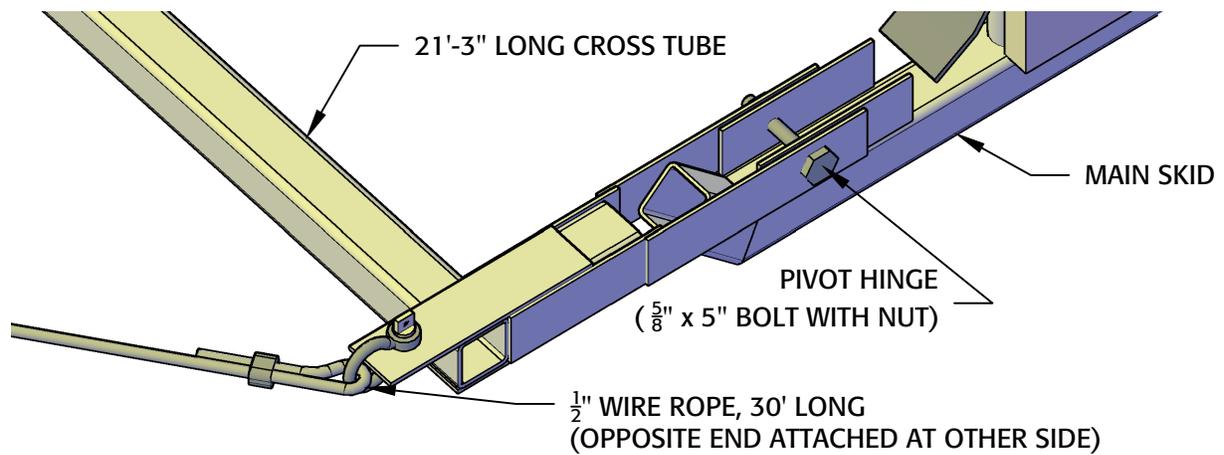


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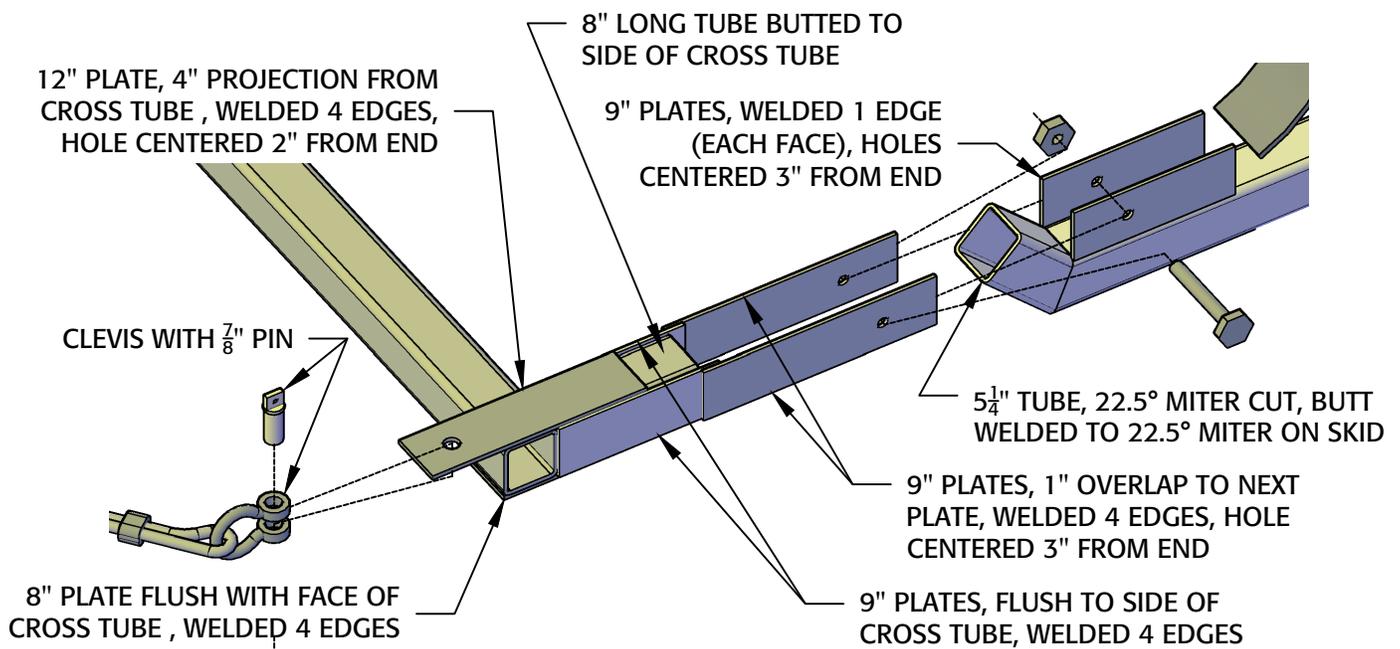
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Assembled View

One side shown, the same assembly is mirrored on the other side.



Exploded View

Pivoting Hitch Assembly

Notes:

- All tubing shown is 3"x3", $\frac{3}{16}$ " wall. All plate shown is 3" wide, $\frac{3}{16}$ " thick.
- Holes shall be drilled $\frac{1}{32}$ " oversize.
- The pivoting hitch provides protection against torque being applied to the endwall while towing.
- The pivoting action allows the hitch to raise during towing, and fall down the the ground when idle, allowing ease of access inside the house for collecting, servicing, etc.
- Wire rope and clevis are sized as shown for this poultry house and grain bin. Adjust sizes accordingly for different house sizes and grain bin capacities.

Mobile Pasture Coop
with Automated Feeding

Pivoting Hitch

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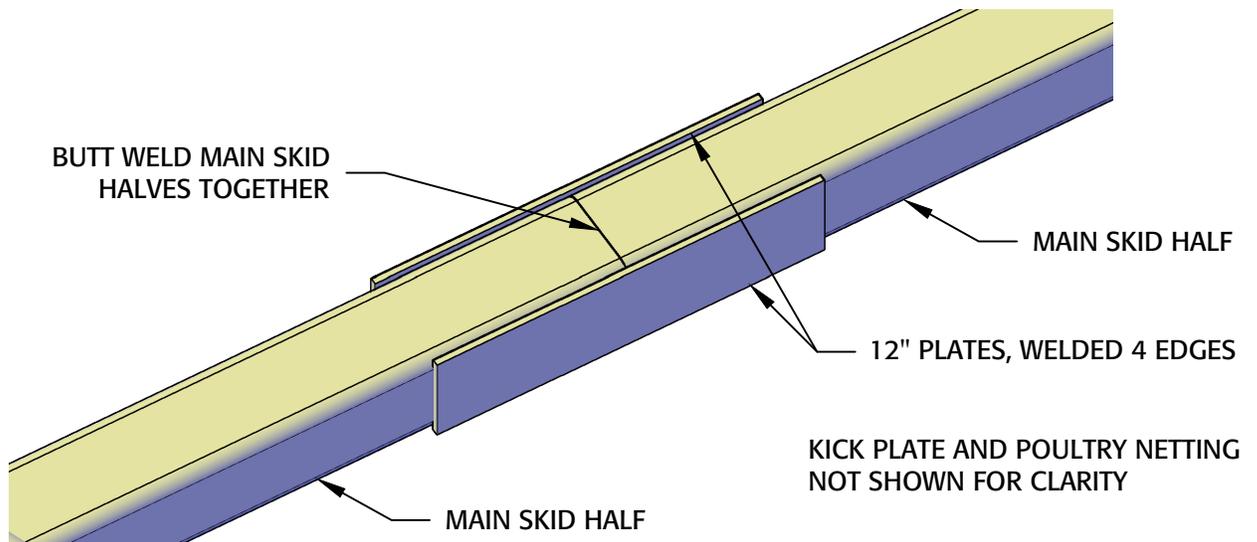


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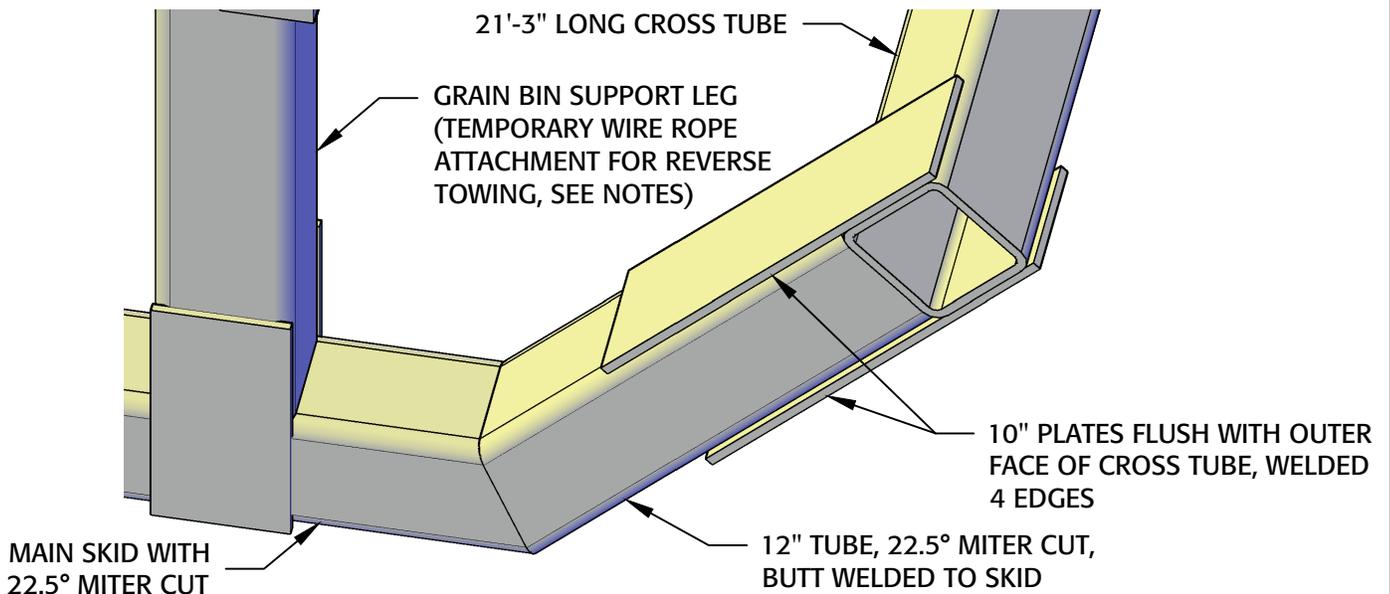
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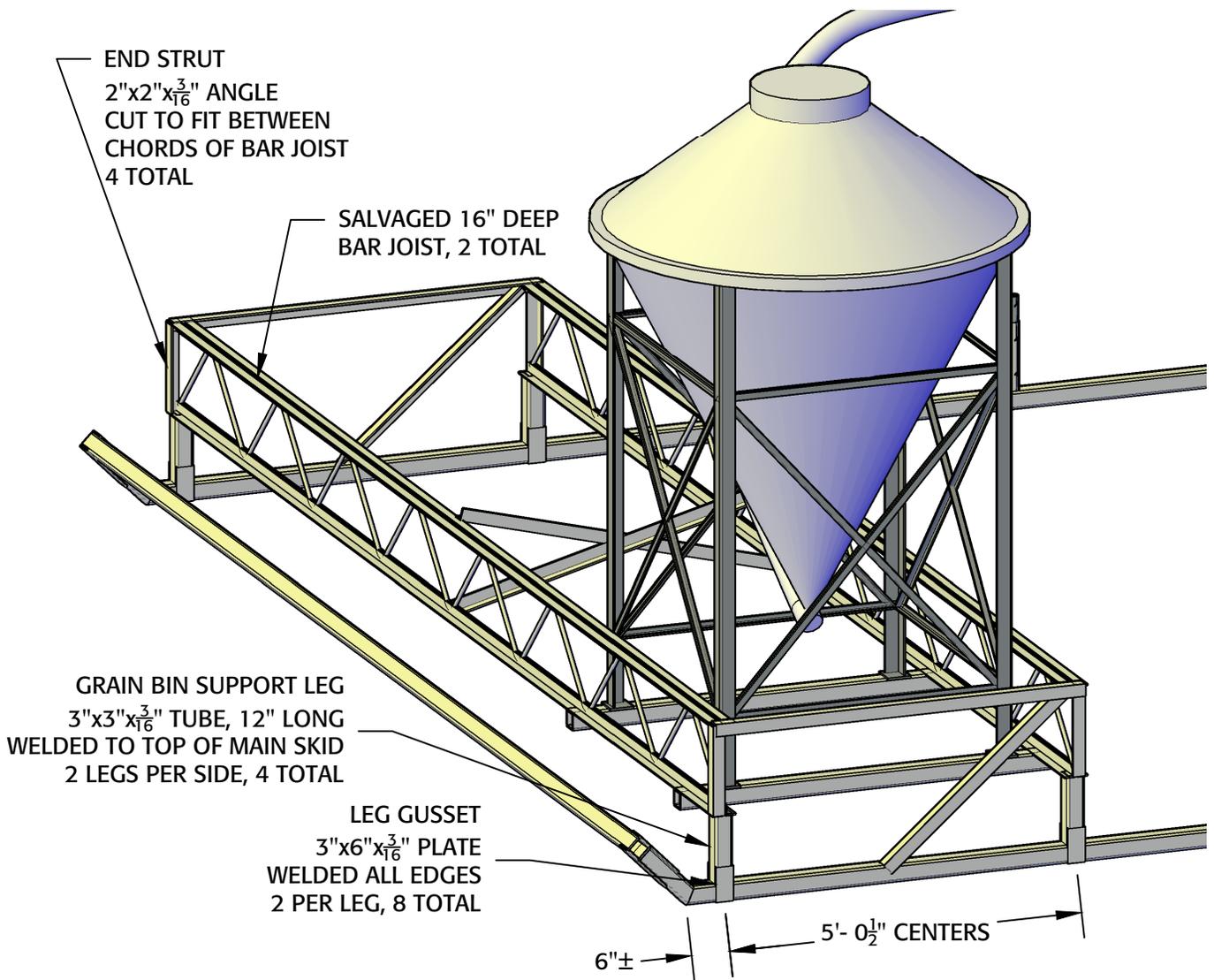
Main Skid Splice



Uprturned Trailing End

Notes:

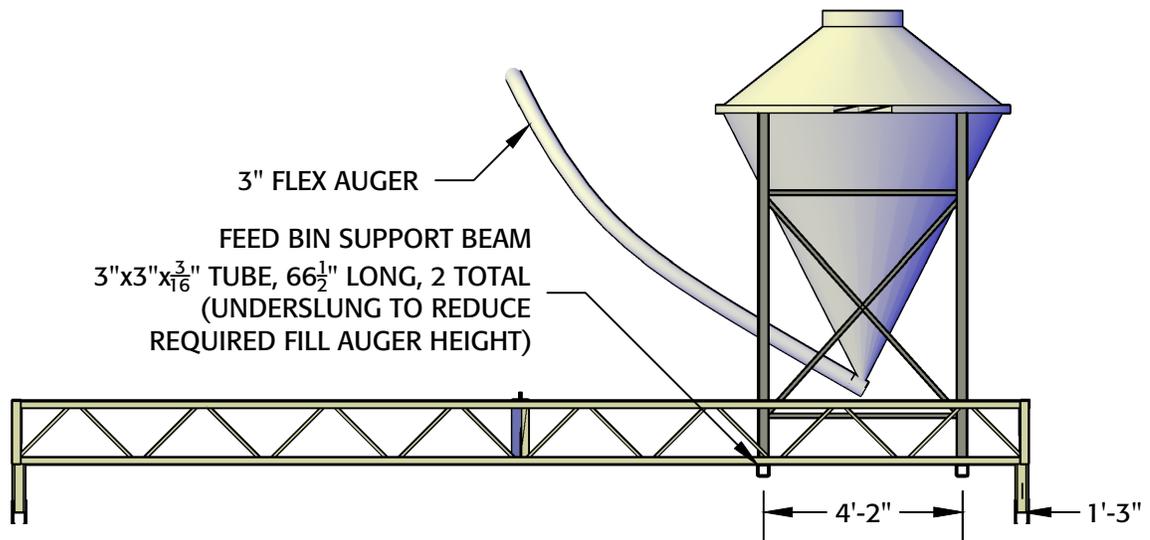
- All tubing shown is 3"x3", $\frac{3}{16}$ " wall. All plate shown is 3" wide, $\frac{3}{16}$ " thick.
- The main skid splice allows a 48-foot main skid to be constructed from two 24-foot tubes.
- The uprtuned trailing end of the skid provides additional bracing (via its crosstube), and allows the house to be towed backwards for special occasions, such as repositioning houses for new batches.
- If towed from the normally trailing end, remove the wire rope and clevis from the pivoting hitch and wrap the cable around the base of the grain bin support legs nearest this uprtuned end.
- It is not recommended to tow from this end while the grain bin in use, as the additional weight of the grain will cause this skid to dig into the ground during towing.



Feed Bin Supports - General View

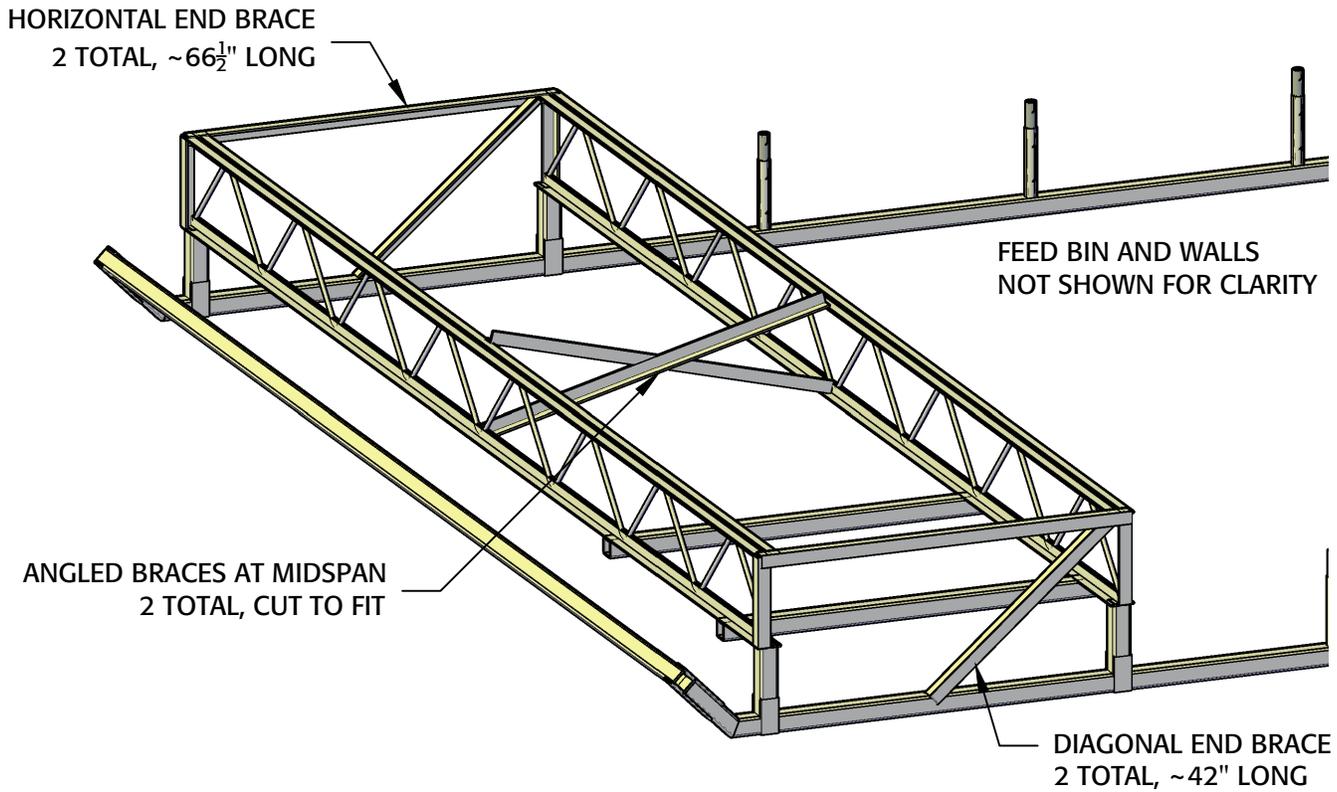
Notes:

- Grain bin legs are welded in this example, but can be bolted to the frame. Appropriately sized bolts and drilled holes would be required. See bin manufacturer's installation instructions.
- Different sized grain bins may be used, but ensure that the size is matched to the available tractor size, land type, and the max fill height capacity of the portable auger used to fill the bin. Support trusses or beams must be sized appropriately for different bin sizes.
- It is recommended to place the grain bin at one side (as shown) rather than at the center. This allows extra distance for the flex auger to reach ceiling height before entering the house. This in turn allows more drop-tube feeding space within the poultry house.



Feed Bin Supports - Elevation

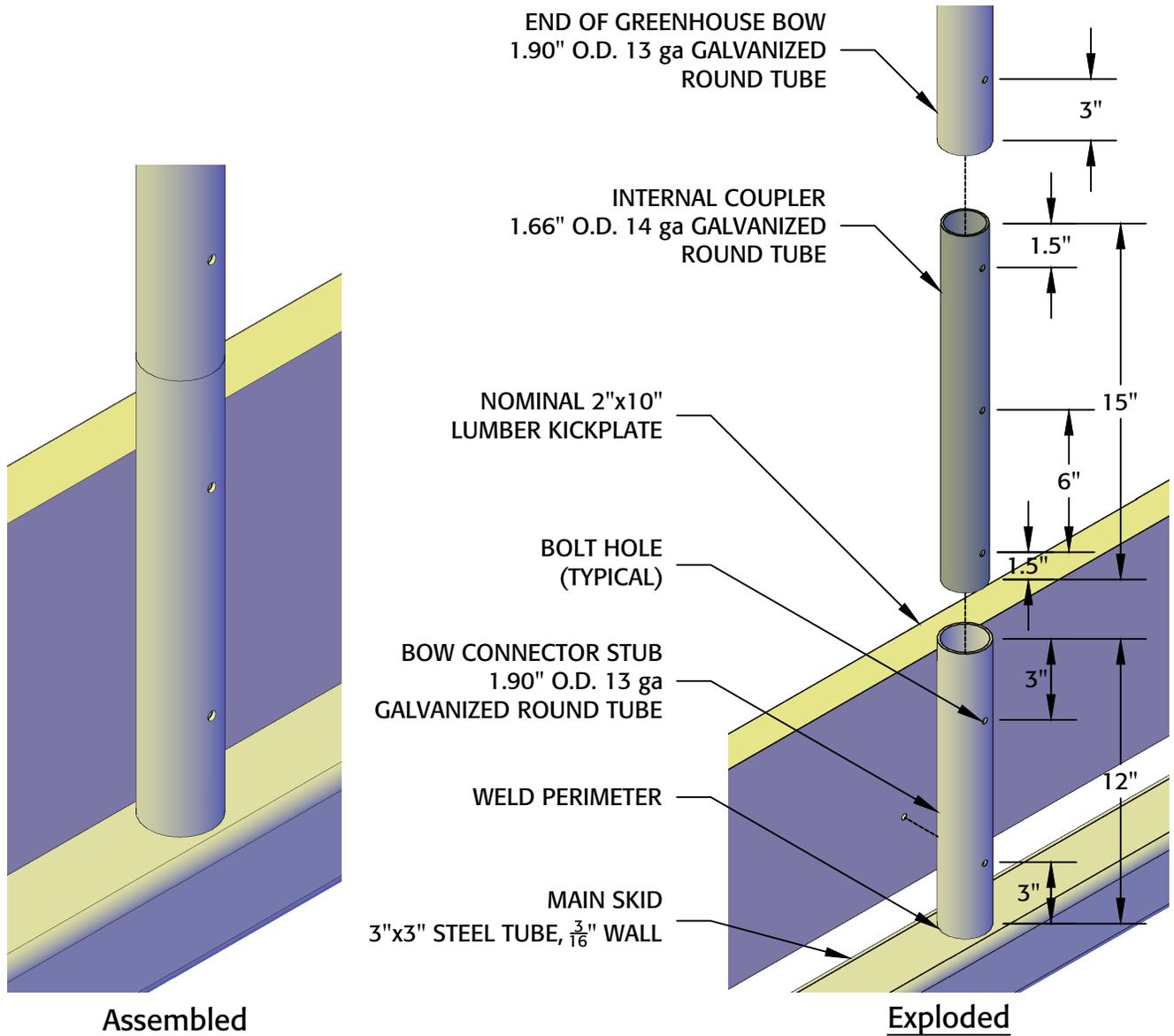
Scale: $\frac{1}{4}$ " = 1'-0"



Feed Bin Supports - Bracing

Notes:

- See notes on previous sheet.
- All bracing shown is 2"x2"x $\frac{3}{16}$ " angle.



Greenhouse Bow Connection

Notes:

- Fasteners not shown
- Fasteners shall be $\frac{1}{4}$ " bolts. Holes shall be drilled $\frac{1}{32}$ " oversize.
- Tube and fastener sizes and bolt hole locations may be need to be adjusted to connect with different greenhouse bow systems.

**Mobile Pasture Coop
with Automated Feeding**

Greenhouse Bow Connection

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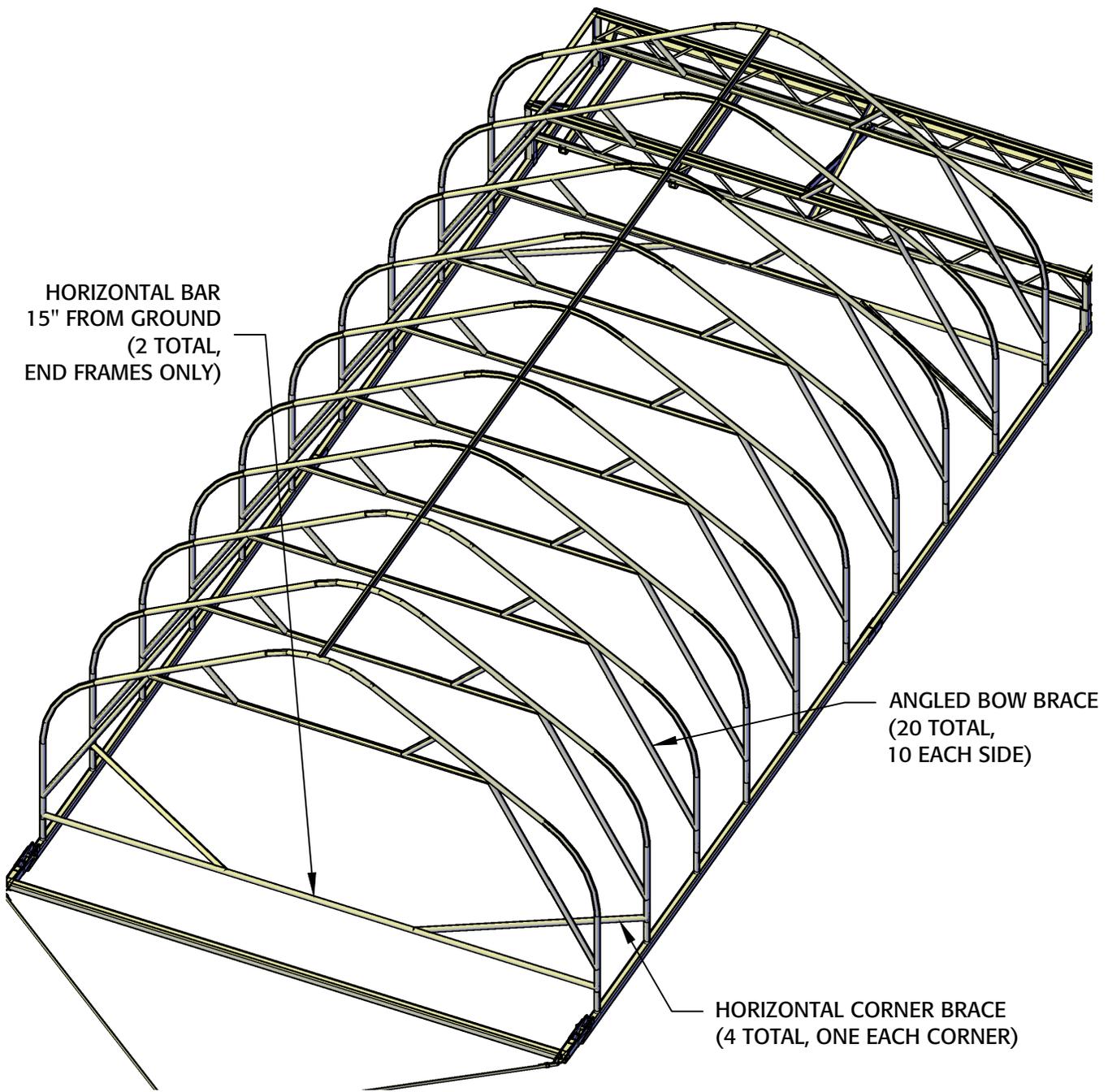


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Greenhouse Frame Braces

Notes:

- (4) horizontal corner braces help keep the poultry house square while making sharp turns
- (20) angled bow braces (10 each side) connect the bottom of the bow to the edge of the ceiling truss. These prevent the house from buckling or bowing outward during movement, while allowing the floor to be completely open, which makes servicing the poultry house easy and ergonomic.

**Mobile Pasture Coop
with Automated Feeding**

Greenhouse Frame Details

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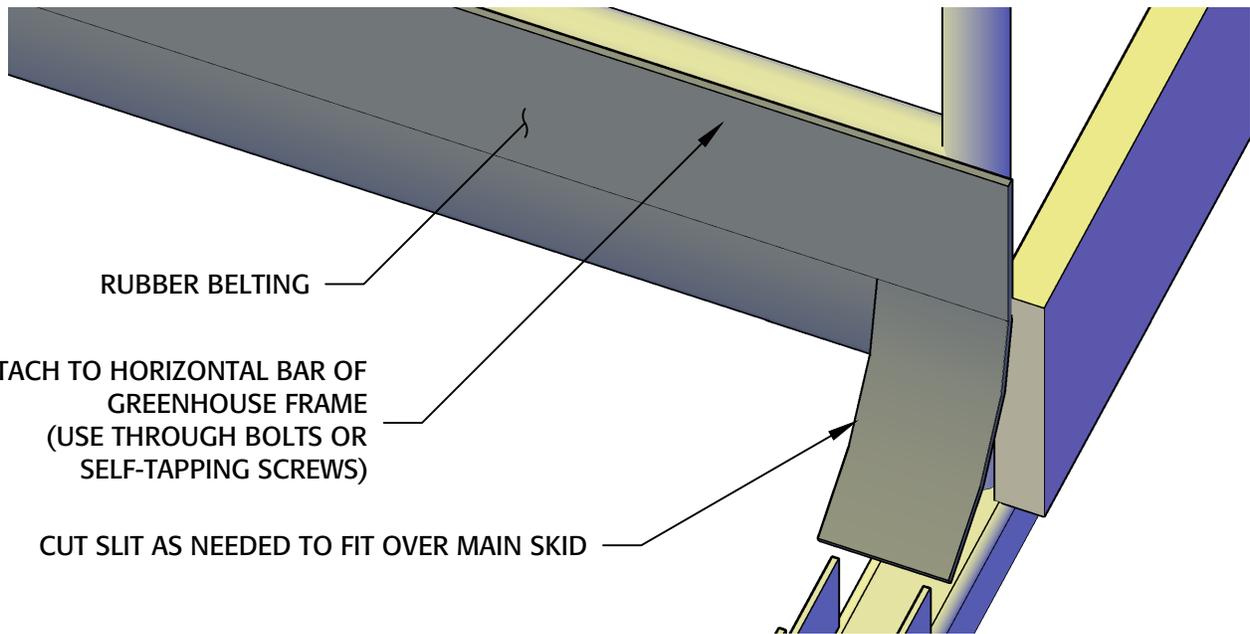


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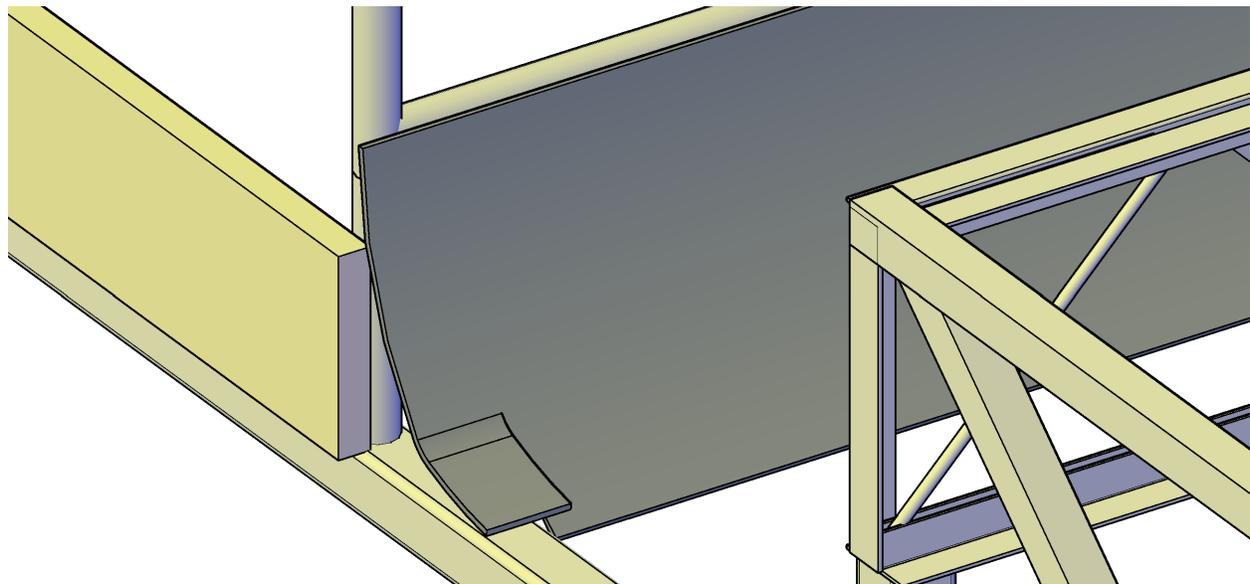
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Leading End



Trailing End

Rubber Endwall Sweeps

Notes:

- Salvaged rubber belting is ideal for endwall sweeps. It follows ground contours while moving, and is gentle on any birds that don't move forward when moving the house forward.
- Any belting thickness from $\frac{1}{8}$ " to $\frac{1}{4}$ " will work. Belting widths of 15" to 18" will work for the house as shown.

Mobile Pasture Coop
with Automated Feeding

Rubber Endwall Sweeps

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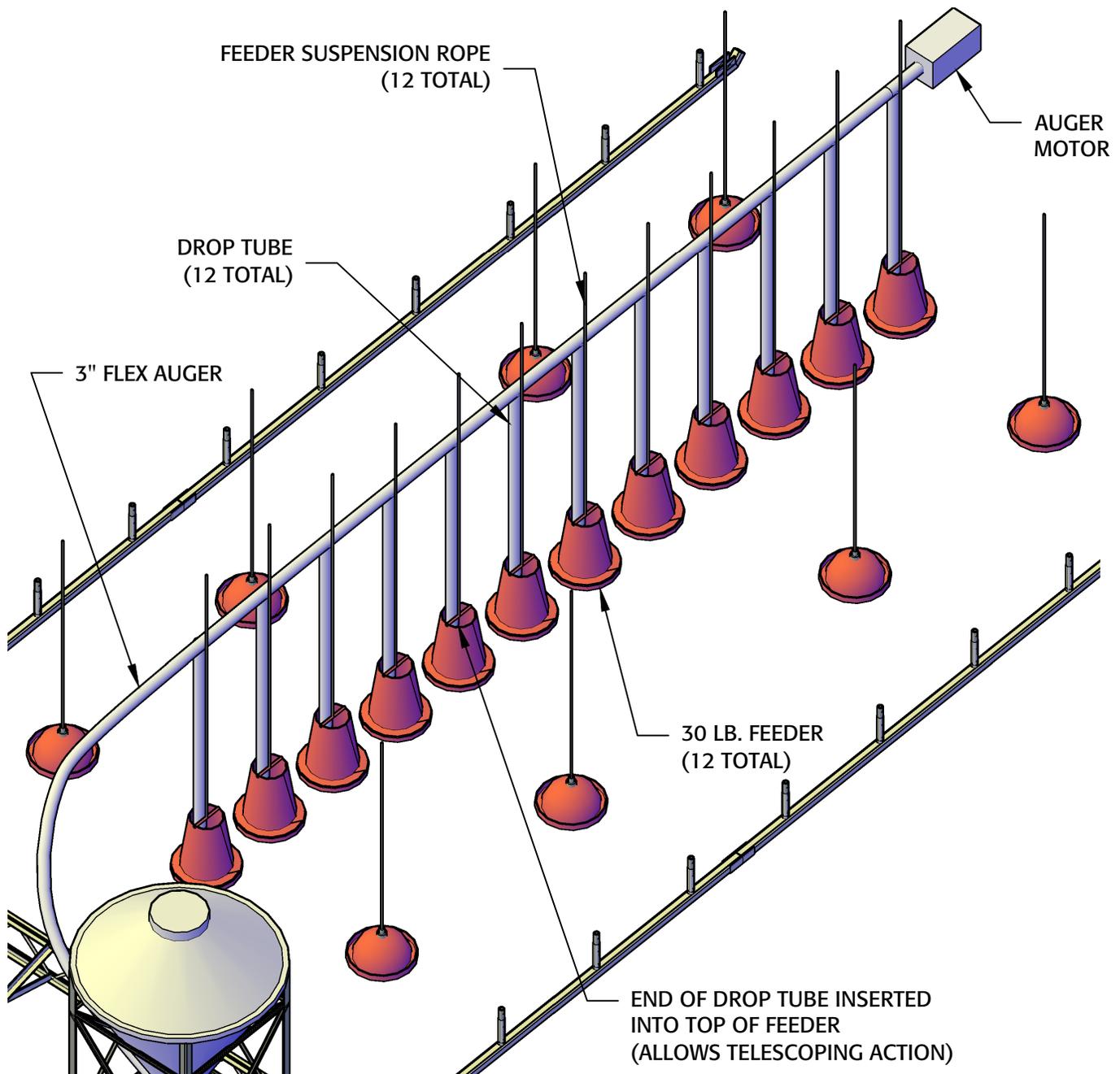


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Feed System

Notes:

- A 3" dia. flex auger supplies feed to 12 drop tubes running down to 12, 30-lb capacity Kuhl chicken feeders.
- Feeders are individually suspended from the greenhouse frame, allowing individual height adjustment if the poultry house is on uneven ground.
- Drop tubes are not rigidly attached to feeders -- the feeder telescopes over the drop tube as shown.
- The drop tubes hold an additional 10 to 15 pounds of grain, which gravity-feeds into the feeders throughout the day without the need to run the generator again.

**Mobile Pasture Coop
with Automated Feeding**

Feed System

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