

TREATED TIMBER SALT STORAGE BUILDING

BUILDING STYLE:

Building shall be rectangular with walls cabled to each other to withstand lateral load of internal material pile without the aid of external wall bracing. The building shall have a shed roof.

NOMINAL BUILDING DIMENSIONS:

XX' Length
YY' Width
ZZ' Vertical Height (entrance wall)
Z2' Vertical Height (back wall)

CAPACITY:

The building shall hold XXX tons salt sand/salt based on 12' pile height, excluding area near entrance that is unsuitable for covered material storage due to natural angle of repose. Pile calculations should be based on material weight of 80 pcf for salt 110 pcf for sand/salt. Written calculations and pile diagrams must be provided if requested by the Owner.

DESIGN REQUIREMENTS:

The building shall be designed to meet the requirements of the purpose intended and all applicable Town, County and State Codes.

Wall of the building must be designed to withstand a lateral pressure from material stored to a maximum height of 12'. Design to be based on material weights as specified in CAPACITY, with an internal friction angle of 32 degrees.

Building roof shall be watertight.

ENTRANCES:

One (1) (WW' width x ZZ' height) Vehicular Entrance with sliding wooden door on metal guides shall be provided at one end of the building.

STRUCTURAL FRAME:

Shall consist of vertical rectangular wood posts set 4' apart center to center and set a minimum of 6' 0" below finished grade. Posts shall be long enough to provide internal clearance height specified in NOMINAL BUILDING DIMENSIONS. Posts may be rough lumber.

Galvanized tension cables (minimum diameter of 3/4") shall be provided between posts to transfer lateral loads. Cables shall be positioned 6" below finished grade.

Knee bracing of roof trusses, and diagonal wall bracing shall be provided for structural stability as required by the supplier's design engineer. No bracing will be allowed on the interior or exterior that extends away from the wall and conflicts with the Owner's equipment movements.

SIDING:

Sides and gable end without door shall have horizontal treated timber planks (minimum 12" nom. in width) nailed on the inside of wall posts. Plank thickness and stress grade shall be adequately sized to withstand lateral material pressure and shall be a minimum thickness of 3" nom. in single application for the first 8 courses of plank. The remaining planks to be a minimum thickness of 2" nom. Design calculations must include analysis of wall plank thickness and stress grade.

Wall planks shall be rough lumber; however, the sides shall be SIE (surfaced on one edge to 11-5/8") to fit tight against adjacent planks.

ROOF:

Shed roof shall be comprised of timber rafters spanning between side walls and connected to each post. Rafters shall be sufficiently attached to side wall posts so as to transfer lateral load. Roof shall be pitched from entrance down to back wall of building.

Plywood sheathing to have minimum span rating of 16/32.

Asphalt felt to be minimum of 30 pounds per square.

Asphalt/Fiberglass rolled roofing. Color shall be earth tone, or approved equal.

MATERIALS:

General:

All materials shall be unused.

All items shall be inspected visually, at the erection site, for conformance with these specifications and the final design as approved by the Owner. If deemed necessary by the Owner, onsite samples will be taken by the Owner and submitted to a testing laboratory selected by the Owner and tested to verify compliance with the specifications and final design.

Timber:

All structural timber products furnished for the building shall be in conformity with the National Design Specifications for Wood Construction, 1991 Edition as published by the National Forest Products Association. This includes all source documents including all lumber grading rules. Suppliers must provide inspection certificates for posts, wall plank and main structural elements certifying compliance with the stress grade required as indicated by the design calculations and as indicated on the plans. All certifications shall be furnished to owner prior to delivery of the material.

Plywood:

Each panel of construction plywood shall be identified with the grade - trademark of the American Plywood Association, and shall meet the requirements of Product Standard "PS-1" for Construction and Industrial Plywood. Plywood roof sheathing shall be C-D interior with exterior glue.

Copper Naphthenate Pressure Treatment:

Preservative and Preservative Treatment shall be in accordance with the American Wood Preservers' Association (AWPA) Standards.

All timber below the roof trusses shall be pressure treated with Copper Naphthenate in AWPA P9 Type A Hydrocarbon Solvent.

Unless otherwise directed by the Owner the material shall be graded prior to treatment. Material shall be accepted after treatment on the basis of its condition prior to treatment, on the basis of inspection of the treatment procedure substantiated by plant records, on the condition of the material after treatment and on absorption, penetration and visual inspection.

So far as practicable all adazing, boring, chamfering, framing, gaining, mortising, surfacing and general framing, etc., shall be done prior to treatment. If cut after treatment, coat cut surfaces according to AWPA M4.

All Douglas Fir or other species that are difficult to penetrate shall be incised prior to treatment.

Hardware:

All hardware and cables shall be hot dip galvanized.