

PLANS AND INSTRUCTIONS FOR CONSTRUCTING HANDICAP ACCESS RAMPS

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HANDICAP ACCESS RAMP

GENERAL GUIDELINES

- 1 These plans define a standardized, modular approach to the construction of handicap access ramps.
- 2 The slope of a ramp cannot exceed 1" of elevation for every 12" of run (1:12 slope). One foot of ramp is required for every inch that a doorway is above the grade.
- 3 Exception: The maximum slope of 1:8 may be used for a 3" total change in elevation for existing sites if space limitations prohibit the use of a 1:12 slope or less.
- 4 Exception: The maximum slope of 1:10 may be used for a 6" total change in elevation for existing sites if space limitations prohibit the use of a 1:12 slope or less .
- 5 Ramp length must not exceed 30' without a 4' minimum level section.
- 6 Ramp, turnaround and platform cross slope may not exceed 1:50.
- 7 Ramps must be at least 36" wide between the hand rails, 46" is recommended.
- 8 There must be a platform at the top of a ramp that is a minimum of 5' square. An existing porch may satisfy this requirement.
- 9 If a ramp is U shape, there must be a turnaround platform at least 5' wide.
- 10 Decking must be coated with an anti-slip paint or material, (Spray or roll-on truck bed coating is useful for this requirement).
- 11 Deck boards must be oriented as shown on the drawing to prevent formation of puddles due to natural warping of the deck boards as they dry and age.
- 12 There must be a post at least every 6 feet.
- 13 Posts may sit on 5 ½" square plates on grade, or be buried or sit on concrete footings.
- 14 The top railing must be between 32" and 34" above the deck surface.
- 15 The top railing must be easy to grip or an additional hand rail provided.
- 16 The bottom of the bottom railing must not be more than 4" above the deck surface.
- 17 Railings must extend the full length of the ramp unless the total rise of the ramp is not more than 6".
- 18 All nails, bolts and washers must be hot dipped galvanized. Pressure treatment chemicals will cause standard nails to weaken within 6 months. Galvanized is not the same as hot dipped galvanized.
- 19 Screws must be ceramic coated deck screws. Square drive is preferred.
- 20 Metal brackets must be Simpson Strongtie Z-Max rated.
- 21 Flashing to the house must be rubber or copper, not aluminum.
- 22 Six inch deck boards should be fastened with three nails or screws per stringer.
- 23 Six inch headers should be fastened with three nails per stringer.
- 24 Ramp modules should be screwed to the posts using 3 ½" screws in addition to the lag bolts used to hold the cross members.
- 25 Posts should be buried at least 2 feet in the ground if they do not sit on top of the ground.
- 26 The first and last deck boards on modules should be installed after the ramp assembly is completed to provide access during installation. These boards are screwed, not nailed.
- 27 **Warning!** Wear a dust mask when cutting pressure treated lumber.
- 28 **Warning!** Wear gloves when handling pressure treated lumber.
- 29 **Warning!** Wash hands before eating after handling pressure treated lumber.
- 30 **Disclaimer:** While it is believed that these guidelines and plans meet standard building codes, the installer should check the provisions of local codes.
- 31 **Important!** Many localities require building permits for the construction of handicap access ramps.
- 32 **Notice!** Digging post holes in front yards may cause damage to underground facilities such as electric, gas, water and sewer service. Contact the Underground protective service in your location to have these utilities located before digging. Allow several days for a response.

HANDICAP ACCESS RAMP

TOOL LIST

A suggested list of tools which would be useful when constructing and installing ramps:

Job Site Measurement and Planning

12' tape measure
50' tape measure
Laser leveling system
8 ½ x 11 graph paper
Straight edge for drawing

Ramp Module Construction

12' tape measure
Framing square
Rapid square
Hand saw
Circular saw
2 – 50' extension cords
4 - Saw horses
Hammer
Variable speed drill (battery or cord powered)
Phillips and square drive bits

Ramp System Installation

Level
Framing square
12' tape measure
50' tape measure
Hand saw
Circular saw
2 – 50' extension cords
Hammer(s)
Variable speed drill (battery or cord powered)
Phillips and square drive bits
3/8" drill bit
Ratchet wrench and socket for 3/8" lag bolts
Long handled spade
Post hole digger
Digging bar (best would be with chisel on one end and tamper on the other)
Pick
Shovel
Paint roller

Personal Safety

Dust mask (use when cutting pressure treated lumber)
Gloves (use when handling pressure treated lumber)
Sturdy shoes or work boots
Ground fault current interrupt module (to protect against electrical shock)

HANDICAP ACCESS RAMP

MATERIALS LIST

Owner _____

Address _____

Ramp Modules Quan: _____

- _____ 2 x 6 x 8' (for framing)
- _____ 2 x 6 x 12' (for framing)
- _____ 5/4 x 6 x 12' (for decking)

Rails

- _____ 5/4 x 6 x 10' (for turnarounds)
- _____ 5/4 x 6 x 10' (for platforms)
- _____ 5/4 x 6 x 14' (for ramps)

Turnaround Modules Quan: _____

- _____ 2 x 6 x 10' (for framing)
- _____ 5/4 x 6 x 10' (for decking)

Hardware

- __ Lb 3 1/2" HD Galv Common Nails
- __ Lb 2 1/2" HD Galv Deck Nails
- __ Lb 2 1/2" Ceram Coated Deck Screws
- __ Lb 3 1/2" Ceram. Coated Deck Screws
- _____ 3 1/2" x 3/8" Galv Lag Bolts
- _____ 3" x 3/8" Galv Lag Bolts
- _____ 3/8 Galv Washers

Platform Modules Quan: _____

- _____ 2 x 6 x 10' (for framing)
- _____ 5/4 x 6 x 10' (for decking)

Supports

- _____ 4 x 4 x 8' (for posts)
- _____ 4 x 4 x 10' (for posts)
- _____ 4 x 4 x 12' (for posts)
- _____ 2 x 6 x _____' (for plates)

Miscellaneous

- __ Qt Non-Skid Paint (for deck)

Cross Members

- _____ 2 x 6 x 10' (for ramps and turnarounds)
- _____ 2 x 6 s 12' (for platforms)

Notes:

- 1 All lumber must be pressure treated.
- 2 All hardware must be hot dip galvanized or ceramic coated to prevent corrosion.
- 3 Non-Skid paint is required for ramp walking surfaces.
- 4 Square drive screws are preferred.
- 5 Materials for a ramp total approximately \$40 per inch of rise.

Planner: _____ Date: _____

HANDICAP ACCESS RAMP

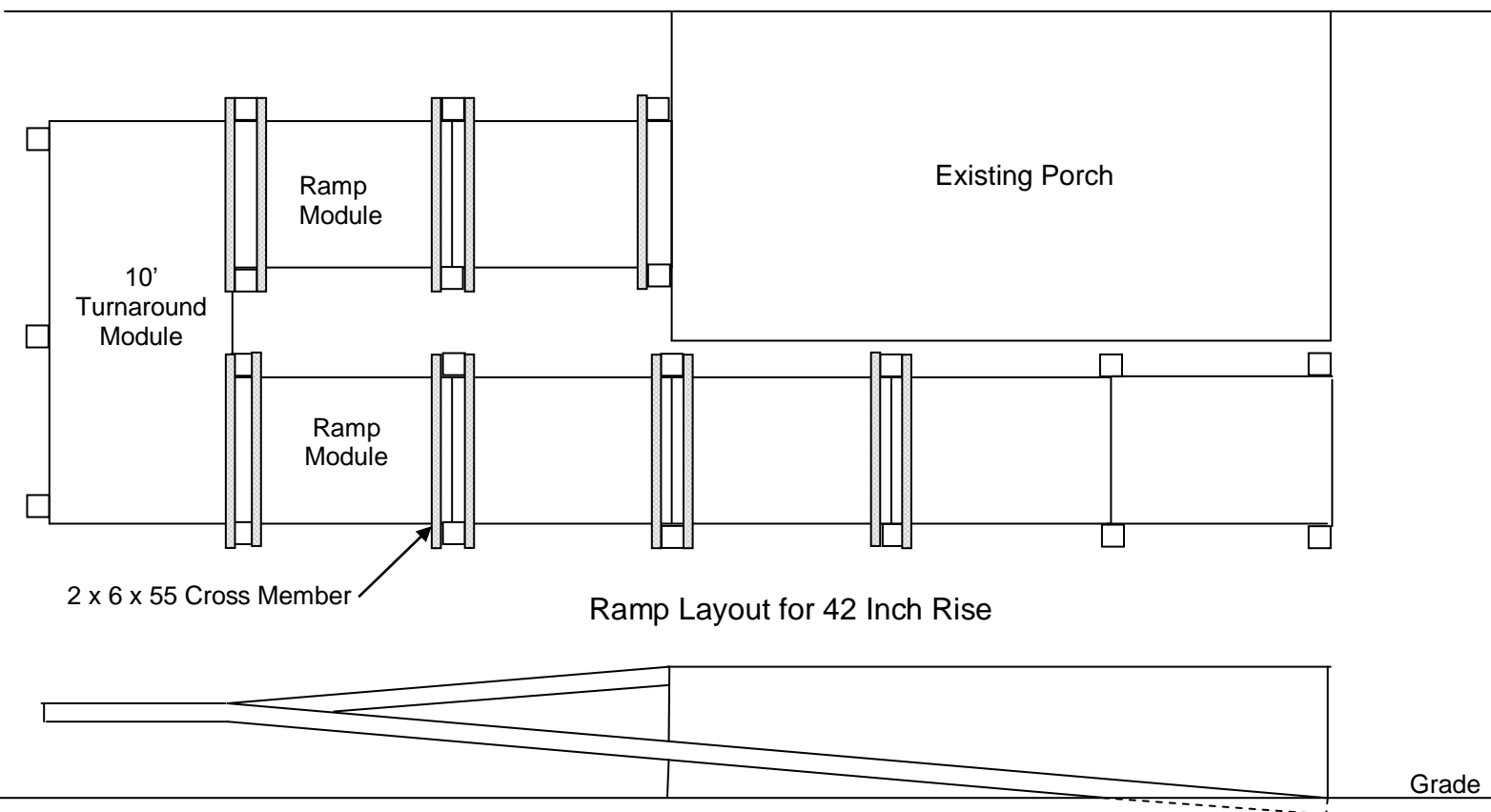
TYPICAL LAYOUT, WITH OFFSETT

MATERIAL LIST

<u>Item</u>	<u>Quantity Required</u>	<u>Item</u>	<u>Quantity Required</u>
3" x 3/8" Galv Lag Bolt	2 per Ramp Module	3" Galv Lab Bolt	2 per Turnaround Module
3 1/2" x 3/8" Galv Lag Bolt	2 per Cross Member	4 x 4 Post	As Indicated on Drawing, Length as Required
5/4 x 6 x 12' Railing	3 per Ramp Module	2 x 6 x 55 Cross Member	As Indicated on Drawing
3/8 Galv Washers	1 per Lag Bolt	2 x 6 x 5 1/2 Plate	One per post which is not buried

Notes:

- 1 Allow first four posts to be buried 1' to 2'. The balance of the posts may rest on the surface of the ground on plates.
- 2 The turnaround module is bolted directly to the three outer posts
- 3 **Warning !** Wear a dust mask when cutting pressure treated lumber.
- 4 **Warning !** Wear gloves when handling pressure treated lumber.



HANDICAP ACCESS RAMP

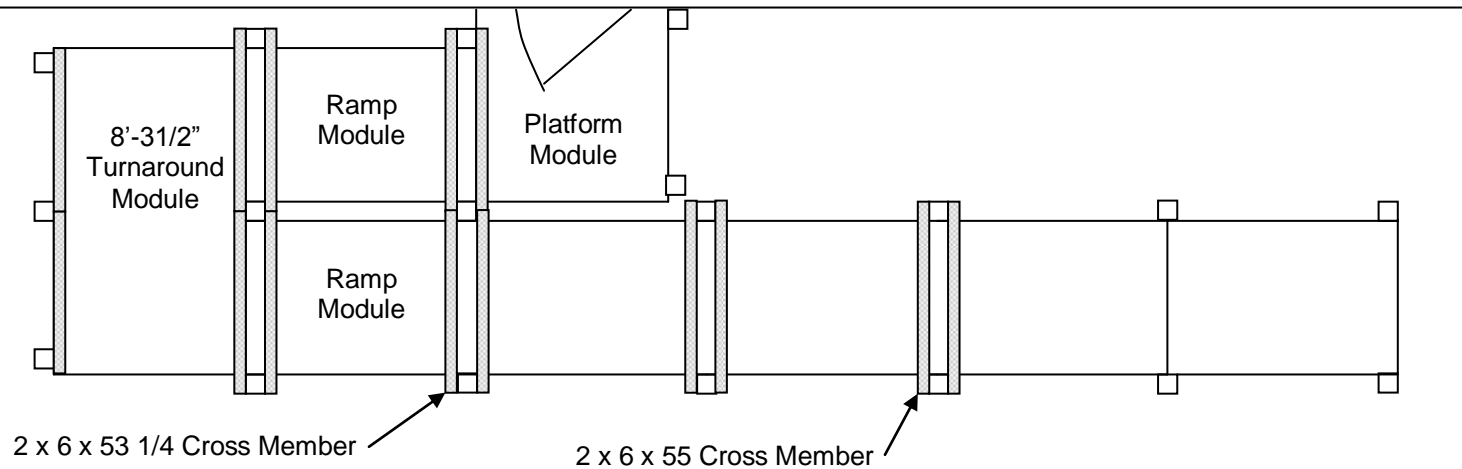
TYPICAL LAYOUT, NO OFFSET

MATERIAL LIST

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5/4 x 6 x 12' Railing	3 per Ramp Module	2 x 6 x 55 Cross Member	As Indicated on Drawing
3/8 Galv Washers	1 per Lag Bolt	2 x 6 x 5 1/2 Plate	One per post which is not buried
		2 x 6 x 53 1/4 Cross Member	As indicated on Drawing

Notes:

- 1 Allow first four posts to be buried 1' to 2'. The balance of the posts may rest on the surface of the ground on plates.
- 2 The turnaround module is bolted directly to the three outer posts
- 3 **Warning !** Wear a dust mask when cutting pressure treated lumber.
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PLATFORM MODULE

Starter and 90 degree turn for both 48" and 40" wide ramps

MATERIAL LIST

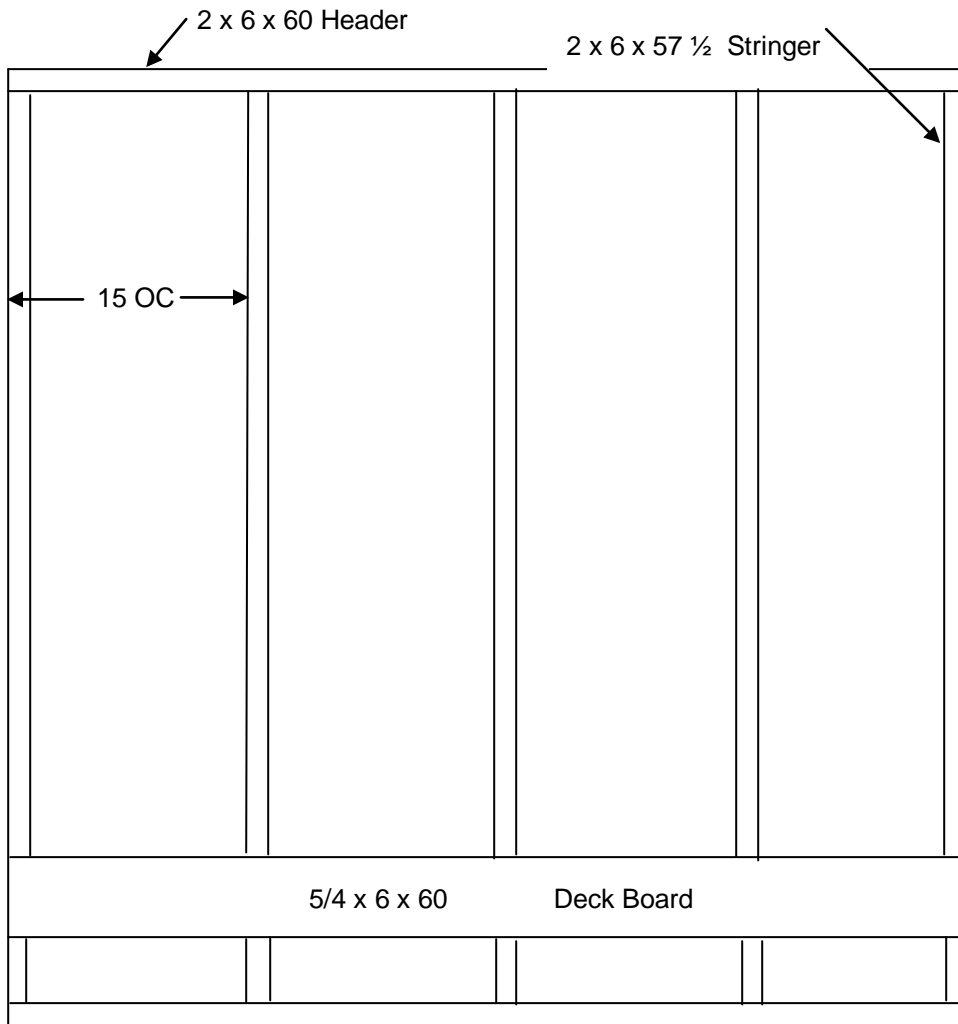
4 – 2 X 6 X 10'
 6 – 5/4 X 6 X 10'
 ¼ lb – 2 ½" Ceramic Coated Screws
 1 lb – 2 ½" Galvanized Nails
 ½ lb - Galvanized Common Nails

CUTTING LIST

2 – 2 X 6 X 60 Header
 5 – 2 X 6 X 57 ½ Stringer
 11 – 5/4 X 6 X 60 Deck Board

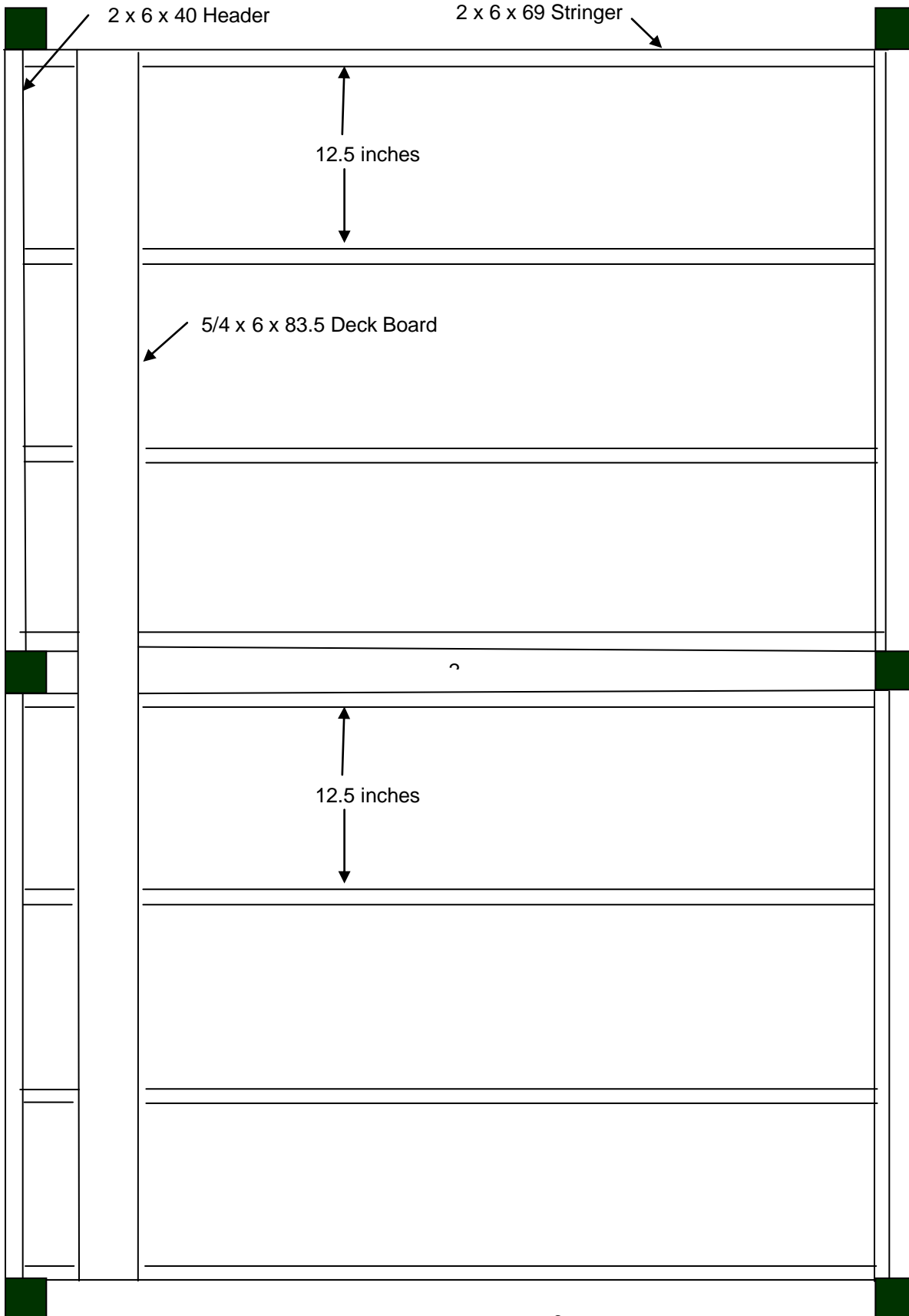
Notes:

- 1 First and last deck boards are screwed to the frame. All other deck boards are nailed.
- 2 All dimension are in inches unless otherwise noted.
- 3 There will be one extra stringer.
- 4 There will be one extra deck board.
- 5 **Warning!** Wear a dust mask when cutting pressure treated lumber.
- 6 **Warning!** Wear gloves when handling pressure treated lumber.



Turn around Platform for 40 inch wide modules

Take 2 **undecked** ramp modules and place next to each other with 4 x 4 posts between the modules. Then deck entire surface with 5/4 x 6 x 83.5 inch deck boards. Use 8' long boards cut down to 83.5 inches (need approx. 13 boards).



HANDICAP ACCESS RAMP

40 inch wide RAMP MODULE

MATERIAL LIST

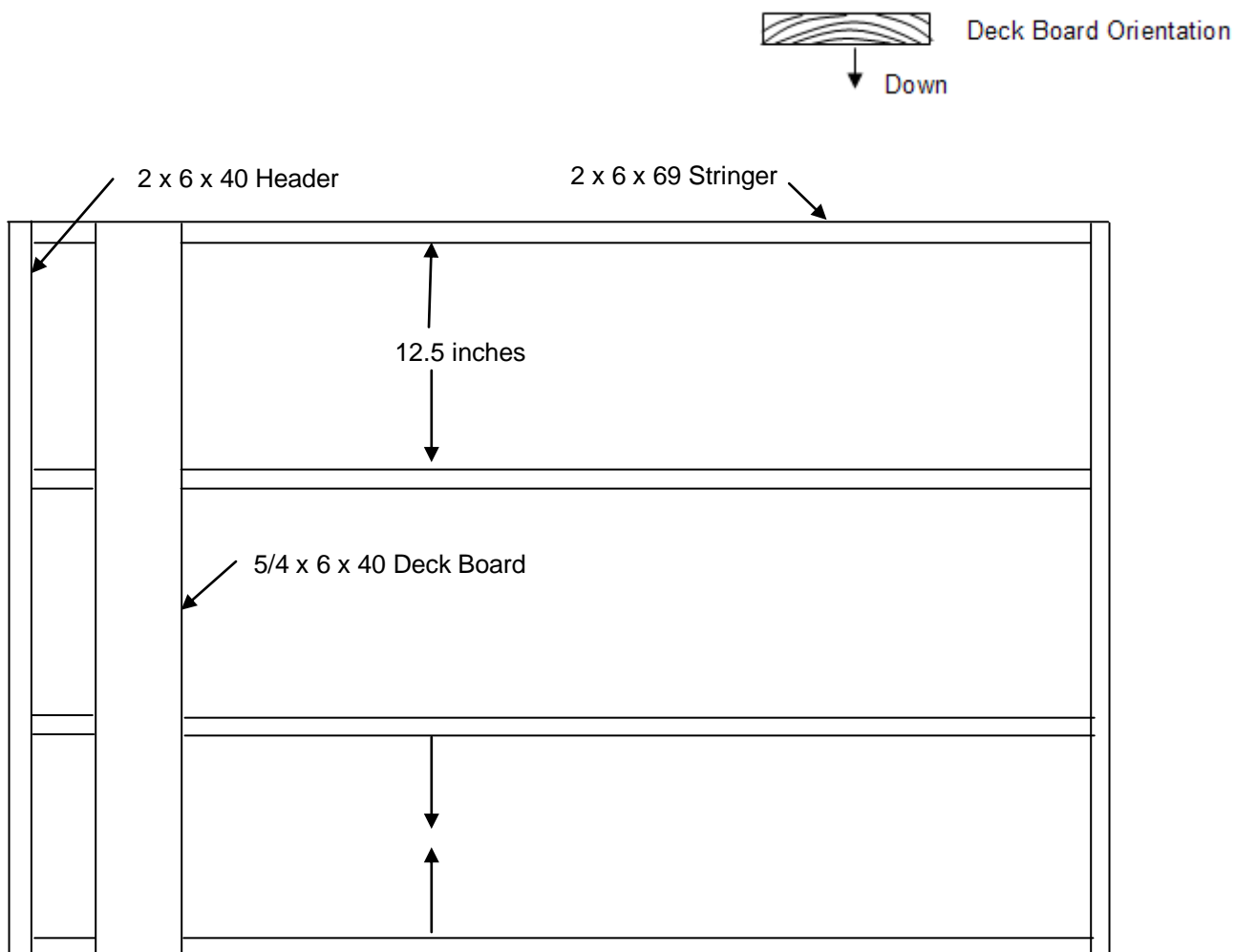
3 – 2 X 6 X 12'
 1 – 2 x 6 x 8'
 5 – 5/4 X 6 X 10'
 ¼ lb – 2 ½" Ceramic Coated Screws
 1 lb – 2 ½" Galvanized Nails
 ½ lb - Galvanized Common Nails

CUTTING LIST

2 – 2 X 6 X 40 Header
 4 – 2 X 6 X 69 Stringer
 13 – 5/4 X 6 X 40 Deck Board

Notes:

- 1 First and last deck boards are screwed to the frame. All other deck boards are nailed.
- 2 All dimension are in inches unless otherwise noted.
- 3 There will be two extra deck boards.
- 4 Where ramp sections meet a horizontal platform, the stringers should be cut at an angle. A good angle is achieved by cutting ½" shorter on either top or bottom as is appropriate.
- 4 **Warning!** Wear dust mask when cutting pressure treated lumber.
- 5 **Warning!** Wear gloves when handling pressure treated lumber.





LIABILITY RELEASE AND COVENANT NOT TO SUE

I, _____, (hereinafter referred to as participant) am the owner of the premises bearing municipal address _____

I do hereby acknowledge that I am a voluntary participant in a program co-sponsored by United Methodist Volunteers in Mission, a division of the General Board of Global Ministries of the United Methodist Church and Access to Independence. The name of the program is **Road to Freedom**.

I further acknowledge that I am the recipient of goods and services from said sponsors without cost to me.

In consideration of the receipt of said goods and services and the improvements made to my premises described hereinabove, I do hereby release, acquit, forever discharge and agree not to sue the United Methodist Volunteers in Mission, a division of the General Board of Global Ministries of the United Methodist Church, any related agency, conference, district, local church, member or other volunteer participant in this program, any co-sponsor of this program or any of their agents, servants or employees from any and all liability for damages of any nature, including personal injuries and property damages, expenses, delay or irregularity related to or in any way arising out of my participation in the programs or arising out of the goods and services provided by said program.

I agree that should the ramp become no longer necessary or I sell the property, that the ramp becomes the property of the United Methodist Volunteers In Mission program and can be removed at their expense.

I further acknowledge that this liability release and covenant not to sue covers all rights and actions of every kind, nature and description, which I have ever had, have now or, but for this document, my have in the future.

. This document shall be binding on me, my heirs, representatives and assigns.

Participant's signature _____ Date: _____

Witness _____ Date: _____

NOTARIAL ACKNOWLEDGEMENT

State of _____

Parish or County of _____

Before me the undersigned Notary Public personally came and appeared _____, known to me to be the same person described in and who signed the foregoing instrument who acknowledged to me the same to be the free act and deed of said person.

_____ Notary Public

