PORTABLE BOLT-LAMINATED TIMBER BRIDGE – HEAVY DUTY DESIGN

EXPOSED LIFT BAR W/ SLEEVE

1 8”x10” GRK RSS SCREWS @ 3”-5” O.C. (2) ROWS

BRIDGE PANEL TOP VIEW

NOT TO SCALE

1” THREADED ROD
3”-5” C-C

1” THREADED ROD
SEE DETAIL THIS SHEET

6”x12” TIMBERS
(8) PER 4’ BRIDGE PANEL

20”

18”

12”

1 1/2” FLAT WASHER

1 1/2” HEX NUT

1” FLAT WASHER

1” THREADED ROD

1” OD STEEL SLEEVE

6”x10”

COUNTER SINK DETAIL

NOT TO SCALE

LIFT BAR SLEEVE

NOT TO SCALE

GENERAL NOTES:

1. ALL WOOD FRAMING WORK SHALL BE IN ACCORDANCE WITH STATE CODE WHICH INCORPORATES THE NATIONAL DESIGN SPECIFICATIONS OF THE NATIONAL FOREST PRODUCTS ASSOC. ALL TIMBERS SHALL BE AGENCY GRADE STAMPED OF THE SPECIES AND GRADE INDICATED HEREIN.

2. ALL TIMBER MATERIAL SHALL BE EASTERN HEMLOCK NO. 2. NO MIXTURE OF LOWER GRADES WITHIN THE SPECIES WILL BE ALLOWED. DIMENSIONS ARE FULL SAWN.

3. ALL STEEL CONNECTION MATERIAL (BOLTS, NUTS, WASHERS, SCREWS) SHALL BE HOT-DIPPED GALVANIZED OR OTHERWISE COATED FOR EXTERIOR USE.

4. NOTCHING AND HOLE DRILLING OF TIMBERS BEYOND WHAT IS SHOWN ON THIS PLAN SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

5. PORTABLE SKIDDER BRIDGE PANELS SHALL BE INSPECTED ANNUALLY BY A QUALIFIED INDIVIDUAL FOR STRUCTURAL DEFECTS, GENERAL WEAR AND TEAR, AND EVIDENCE OF DECAY. PANELS THAT ARE NOT IN GOOD OR LIKE-NEW CONDITION SHALL BE DISCONTINUED FROM USE. BRIDGE PANELS SHALL BE STORED IN A DRY LOCATION, NOT IN CONTACT WITH THE GROUND. PANEL LIFE WILL BE REDUCED WITH IMPROPER MAINTENANCE, HEAVY USE OR IF STORED IN A MANNER THAT ENCOURAGES ROTTING.

6. BEARING SILLS TO SUPPORT PORTABLE BRIDGE PANELS ARE OUTSIDE THE SCOPE OF THIS CERTIFICATION. DESIGN ASSUMES THAT BRIDGE PANELS WILL BE SUPPORTED ON SOUND LEVEL BEARING SILLS OR UNIFORM WELL-COMPACTION BEARING STRATA THAT DOES NOT IMPART UNDUE CONCENTRATED BEARING STRESSES OR DAMAGE TO THE BRIDGE PANELS.

7. THIS PLAN IS ADAPTED FROM A PLAN ORIGINALLY DESIGNED, DRAFTED AND CREATED BY THE STATE OF VERMONT AGENCY OF NATURAL RESOURCES, DEPARTMENT OF FORESTS, PARKS AND RECREATION, FOREST WATERSHED PROGRAM, LAST REVISED 12-04-09.

Heavy-Duty Bridge Design

Maximum Load Rating*

Up to a 40,000 pound Skidder under full load
Up to a 70,000 pound Forwarder (load included)
Up to a 55,000 pound Timber Harvester

*Based on a 14-foot clear span in new condition and using #2 grade Eastern Hemlock (Design meets M-20 “Standard AASHO Equivalents of Forestry Vehicles by Span”).