

Report Date: 23 Apr 2014

**Summary Report for Individual Task
052-12W-1143
Construct Wooden Stairs
Status: Approved**

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

Condition: Given a mission to construct wooden stairs for an existing structure with a stairwell opening or platform, a complete bill of materials to include narrow wooden stock (2x4 or 1x2 material is acceptable) for use as a story pole, general specifications to include stairway width, number of stringers, handrail design and undetermined stringer length, ladder, saw horses, circular saw, framing square, carpenters tool kit, safety glasses, hard hat, hearing protection, work gloves, and safety boots. This task should not be trained in MOPP 4.

Standard: Construct wooden stairs IAW 3-34.47 Carpentry specifications, without injury to personnel or damage to equipment and materials, to include splitting of wood components during assembly.

Special Condition: Soldiers are not typically provided plans for simple stairs since site conditions will dictate the stringer length and number of steps. If plans are provided, the details and specifications in the plans will be followed.

Safety Level: Low

MOPP: Never

Task Statements

Cue: Carpentry and Masonry Specialist receives a mission to construct wooden stairs.

DANGER
Soldiers conducting this task must ensure all safety precautions are taken into consideration. Restrict access to stairwell openings to prevent possible falls during construction.

WARNING
None

CAUTION
None

Remarks: None

Notes: None

Performance Steps

1. Review specifications for:
 - a. Stairway width.
 - b. Number of stringers.
 - c. Handrail height and design.
 - d. Required clearance.
2. Verify BOM.
 - a. Verify all required material for stair components are available.
 - b. Ensure all components are free from splits, knots, and severe warping.
3. Determine the riser height.
 - a. Place a narrow piece of straight stock (story pole) between the lower floor to upper floor level and mark the distance (total rise).
 - b. Set dividers at 7 inches and step off this distance on the story pole.
 - c. Adjust the divider span until the distance measured in inches divides evenly into the length of the story pole. This represents the rise of each step.
 - d. Count the number of evenly stepped off spaces or dividers on the story pole. This will be the total number of risers on the stairs. For example a total rise of 30" will have a 7 1/2" divider span and 4 risers.

Note: This step may be performed without the story pole by using simple division. Example: Measure the total rise in inches and divide by 7". Any fractional amount will be distributed among the risers. Total rise $30"/7 = 4$ full 7" risers and 2" remaining. Evenly divided results in 4 risers at 7 1/2".

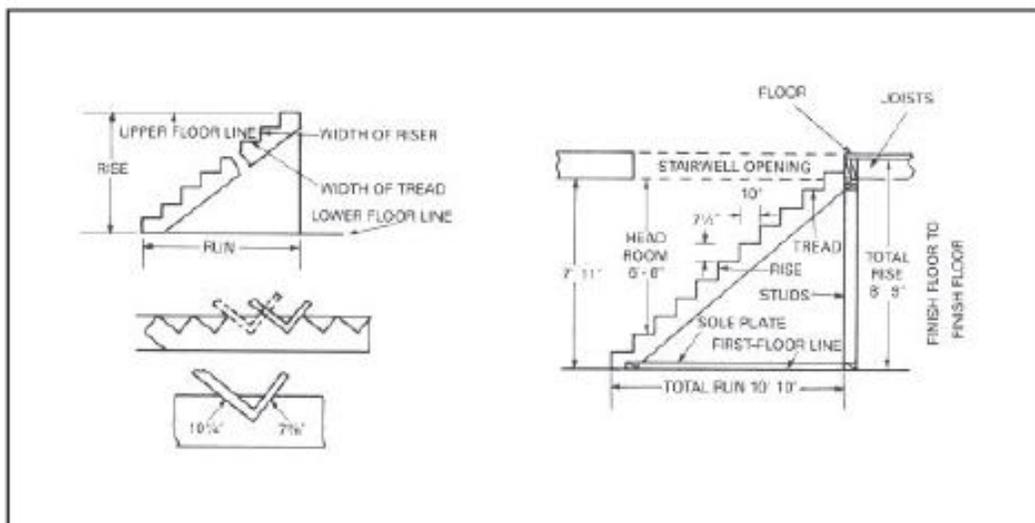


Figure 052-12W-1143-1
Step Construction

4. Determine the length of the run.

Note: Occasionally stairs will require kick plates and nailing blocks. These additional components will be covered in either specifications or plans (when provided).

d. Cut out additional stair components(when required).

8. Assemble stairs to specifications.

a. Install stringers.

b. Install treads.

c. Install handrails and additional components (when required).

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Instruct soldiers conducting this task, safety, proper framing techniques and the use of the correct size lumber for components are essential to successfully meeting performance steps. If the soldier fails meet the standard for any step, Leaders will ensure the soldier knows how to do it correctly.

Evaluation Preparation: Provide the soldier with all required items listed in the conditions.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Reviewed general specifications.			
a. Stairway width.			
b. Number of stringers.			
c. Handrail design.			
d. Overhead clearance.			
2. Verified BOM.			
a. Verified all required material was available.			
b. Ensured components were free from splits, knots, and severe warping.			
3. Determined riser height.			
a. Measured the distance between lower floor and upper floor.			
b. Stepped off dividers at increment of 7 inches.			
c. Adjusted the divider span until the measured distances were spaced evenly along the story pole.			
d. Counted the number of evenly spaced dividers along the story pole.			
4. Determined the length of run.			
a. Verified the tread width.			
b. Multiplied the tread width by number of risers.			
5. Determined acceptable dimensions for risers and treads.			
a. Verified the sum of riser height and tread width.			
b. Verified the product of riser height and tread width.			
6. Laid out stringers.			
a. Confirmed the required length for the stringer.			
b. Laid off the unit rise and unit run of each riser and tread on the stringer stock.			
7. Cut out stair components.			
a. Cut treads.			
b. Cut stringers.			
c. Cut handrails and additional components (when required).			
8. Assembled stairs to specification.			
a. Installed stringers.			
b. Installed treads.			
c. Installed handrails, kicklates, and nailing boards (when required).			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	TM 3-34.47	Carpentry	No	No

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

Safety: In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.

Prerequisite Individual Tasks :

Task Number	Title	Proponent	Status
052-12W-1206	Maintain Carpentry/Masonry Tools	052 - Engineer (Individual)	Analysis

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
052-236-1147	Perform Maintenance on Carpentry/Masonry Tools	052 - Engineer (Individual)	Approved
052-236-1141	Construct a Floor System	052 - Engineer (Individual)	Approved
052-236-1183	Prepare a Materials Take-Off List	052 - Engineer (Individual)	Approved
052-236-1202	Interpret Construction Drawings and Prints	052 - Engineer (Individual)	Approved
052-236-1184	Identify Building Materials	052 - Engineer (Individual)	Approved

Supported Individual Tasks :

Task Number	Title	Proponent	Status
052-236-1184	Identify Building Materials	052 - Engineer (Individual)	Approved
052-236-1202	Interpret Construction Drawings and Prints	052 - Engineer (Individual)	Approved
052-236-1173	Fabricate Joints and Splices	052 - Engineer (Individual)	Approved
052-236-1141	Construct a Floor System	052 - Engineer (Individual)	Approved

Supported Collective Tasks : None**ICTL Data :**

ICTL Title	Personnel Type	MOS Data
12W10, Carpentry Masonry Specialist, Skill Level 1	Enlisted	MOS: 12W, Skill Level: SL1