



# A GUIDE TO SETTING UP YOUR NWSA PRACTICAL TEST SITE

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# Test Site Set-up Webinar Overview

- How to apply to be a Test Site?
- What are the site set-up duties for the Test Site Coordinator and Practical Examiner?
- Test Site Criteria
  - ▣ Facility Requirements
  - ▣ Tower Specifications
  - ▣ Tools and Materials
- Set-up Instruction Outlines
  - ▣ TTT-1 Site Set-up
  - ▣ TTT-2 Site Setup



# NWSA Test Site Introduction

- ❑ Test sites are an important part of the NWSA program.
- ❑ Proper facility specifications and site set up standards ensure **reliable** and **accurate** exams.
- ❑ Test sites must be set up in accordance with all site criteria prior to commencing practical exams.
- ❑ Use the Site Set-up Instructions and Site Reports to ensure proper equipment and set up.
- ❑ READ the Practical Test Site Coordinator Handbook (PTSCH)



# Practical Test Coordinator Handbook

## SITE REPORT (CONT'D)

### PRACTICAL EXAMINATION—TELECOMMUNICATIONS TOWER TECHNICIAN I

Test Site #: \_\_\_\_\_  
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#### Tools

- 5/16 in. - 1/2 in. nut driver set
- 5/16 in. - 7/8 in. (6-point) socket set 3/8 in. drive
- 10 in. adjustable spud wrench
- 5/16 in. - 7/8 in. ratcheting box end wrench set
- 8 in. - 10 in. adjustable wrench (aka "Crescent wrench")
- 7-16 din torque wrench (1-1/4 in.)
- Straight jaw tongue & groove adjustable pliers - 10 in. (aka "Channel Locks")
- 7 in. curve jaw locking pliers (aka "Vice Grips")
- 5/16 in. x 6 in. flathead screwdriver
- #2 Phillips screwdriver
- Digital level with spare batteries (minimum 7 in. length)
- 12 ft. tape measure

#### Materials

- Four 1/2 in. snap-ins
- Four 1/2 in. butterfly hangers
- Four universal (3/8 in.) hole angle adaptors
- Four universal (3/4 in.) hole angle adaptors
- Four wide stand offs (3/4 in.) hole
- 3-run stand offs (3/4 in.) hole
- Four 3/8 in. hole inserts for 3/4 in. hole
- Four round member adapter hose clamps (sized per structure)
- 3/8 in. stainless steel hardware (with washers) for butterflies
- 6 in. all thread kit
- Four 7/8 in. snap-ins
- Four 7/8 in. butterfly hangers

#### Candidate Hoisting Materials

- Hoist bucket with minimum 50# WLL
- Two 3 ft. - 4 ft. length synthetic slings (minimum 2100# WLL in choker configuration)

#### WEATHER PROOFING TASK MATERIALS

- Weather proofing "skeleton"—see design criteria in Practical Test Site Coordinator Handbook
- Weather proofing kit (per candidate)
  - 2 in. rolls of tape
  - 3/4 in. rolls of tape
  - Butyl tape
- 5-1/4 in. electrician scissors (or comparable)

#### TYING KNOTS TASKS MATERIALS

- Minimum 8 ft. length of 3/8 in. - 1/2 in. rope

#### SAFETY

- First Aid Kit (OSHA/ANSI standard)
- Portable 8 ft. ladder or other similar device (e.g., aerial work platform)
- Document the rescue plan. This will need to be communicated to each candidate.

Rescue Plan (attach if a separate document):



## Practical Exam Test Site Setup Instructions

### TELECOMMUNICATIONS TOWER TECHNICIAN I

It is the Test Site Coordinator's responsibility to lay out the Practical Test Site. It is extremely important that all test equipment and materials meet the exact specifications established on the Site Report. Failure to do so could result in the test administration being declared invalid.

Before the Practical Examiner can begin testing, he/she will verify the site is laid out correctly using the Site Report for the appropriate practical exam (TTT-1 or TTT-2). Both Site Reports can be found in this handbook. Test Site Coordinators must use this form to verify that they have provided all the correct equipment and materials necessary for administering the practical exam.

The Practical Test Site Coordinator is responsible for properly setting up the TTT-1 practical test site. The Test Site Coordinator may rely on the Practical Examiner to properly set up the exam, if they so choose. Ultimately, the Practical Examiner will be responsible for completing and signing the Site Report prior to testing occurring.

The Site Report should be referenced when laying out the test site as the details are contained within the document.

#### OVERALL SITE REVIEW

1. Ensure the location where testing is going to occur is free from environmental and hazardous conditions.
2. Determine where the candidate waiting area will be. Ensure waiting candidates are not able to view active testing.

#### INSPECT AND SET-UP TOWER

3. Inspect the test tower. Verify all dimensions as specified on site report. Ensure that it is secured properly and suitable for climbing.
4. Select which tower leg will be used for mounting the antenna. Mark the mounting centerline at 8 ft. and label as "208 ft." Identify which face candidates will climb.
5. Install hardline simulation on tower. Ensure that the 6 ft. jumper will reach the end of connection prior to final placement and that there is horizontal and vertical displacement.
6. Decide what you will consider to be the appropriate anchorage points for the Personal Fall Arrest System (PFAS) and positioning.

#### INSPECT RIGGING MATERIALS

7. Inspect all rigging materials used and ensure compliance with the ANSI/ASSE A10.48 standards.

#### INSPECT AND SET UP ANTENNA, MOUNT, PIPE, AND JUMPER.

8. Set-up the antenna by ensuring it meets specifications as detailed on site report, marking the centerline on the antenna (tape all the way around), and labeling with CL of 208 ft., down-tilt of 2-degrees.
9. Inspect antenna mount ensuring that all necessary components and hardware are present and in good working condition. Ensure everything is disassembled and presented in an organized fashion.
10. Inspect antenna pipe ensuring it is the proper diameter and length, and has the appropriate rigging hole as specified on site report.
11. Inspect 1/2 in. coax jumper and install tape at 18 in. from each end.

#### RIG AND SET UP TOWER

12. On the tower leg marked for the antenna, at a minimum height of 15 ft., rig the Self-Retracting Device (SRD) properly to the tower. A certified anchor point can be used in lieu of a sling.
13. Below the SRD, at a minimum height of 15', rig the 2-part hoisting system properly. Ensure it is well above the mounting location and that it will not interfere with the SRD when candidate climbs. Again, consider which tower face the candidate will be required to climb. Feed through enough rope for the loop to reach the ground. Install the second block with a shackle which will attach to the load.
14. Set a ground anchor point for hoisting at the tower base or no more than 30 ft. from the tower base.
15. At the ground anchor point, place the appropriate Progress Capture System while lifting the antenna into position.
16. Alternatively, a capstan hoist may be used to perform all lifts using a single part line with a minimum 15 ft. anchor point for the top block. Capstan must be rated for all lifts. Inspection and operation is the responsibility of the Practical Examiner prior to and during the exam. Ensure that the proper extension cord is used. Check the GFCE and foot pedal are in proper working order prior to the exam. The use of a trolley block will be permitted if necessary. As a



# How to become a Test Site

- Please refer to the NWSA Webinar “Hosting Your Own NWSA Practical Examinations” for greater detail.
- 1. Download the NWSA Practical Test Site Coordinator Handbook (PTSCH).
- 2. Determine who will be the designated Test Site Coordinator
- 3. Email the completed Test Site Application, and Test Site Coordinator Agreement from the handbook to [pe@nws-a.org](mailto:pe@nws-a.org)
- 4. Source and build test site kit
- 5. Set-up your test site



# Test Site Set-up Responsibilities

- Test Site Coordinator (TSC)
  - Test Site Application
  - Providing test site facilities, tower, materials, and tools in accordance with Test Site Criteria (PTSCH)
  - Setting up Test Site in accordance with Instructions and Site Report (PTSCH)
  - Coordinating with candidates regarding testing requirements, equipment questions, and scheduling.



# Test Site Set-up Responsibilities

- Practical Examiner (PE)
  - Order scoresheets at least 2 weeks prior
  - Submit online “Intent to Test Form” at least 2 days prior
    - The more advanced notice, the better!
  - Bring all required PE materials to test site
    - Verbatim Instructions
    - Laminated Instructions sheets for TTT-1 and/or TTT-2
    - Examiner PPE and tools
  - Verify proper site and set-up and complete Site Report



# Test Site Facility Criteria

- Requirements for both TTT-1 and TTT-2 Test Sites
  - ▣ Candidate Waiting Area
    - Outside of exam area, applications, handbook, manuals.
  - ▣ Overall Testing Area
    - Free from hazards, distractions, and spectators
  - ▣ Tower Requirements
    - Representative of a common tower type, suitable anchorages, etc.
    - Set up properly for each exam type administered
  - ▣ Proper Materials and Tools as specified on the Site Report(s) for exam being administered.

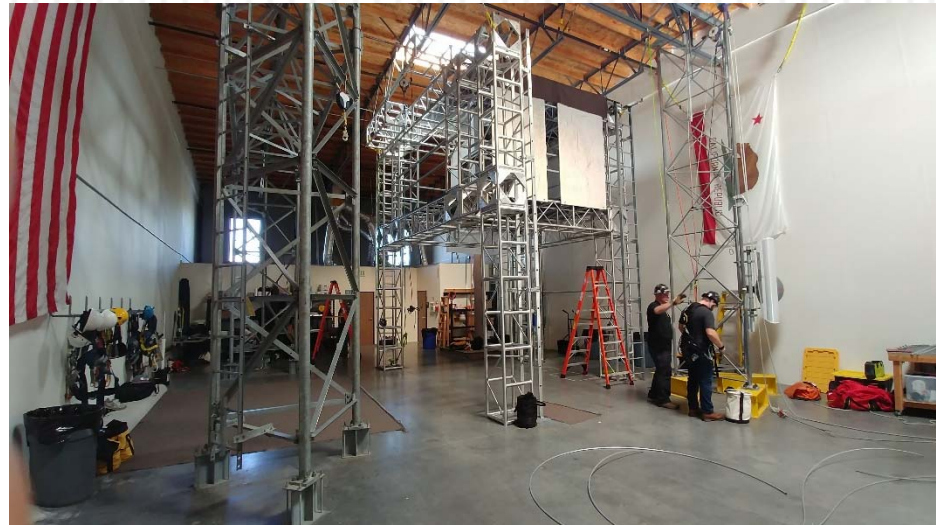




# TTT-1 and TTT-2 Tower Specs

## TTT-1 & 2 Test Tower Specs

- ❑ Indoor or Outdoor
- ❑ Min. 15' height
- ❑ Min. 18" face width
- ❑ 1" - 5" leg size
- ❑ Round or angle leg
- ❑ Straight or tapered
- ❑ 3 or 4 leg lattice structure type (no poles)
- ❑ Must be secured to ground and suitable for climbing
- ❑ Should provide adequate anchorage points and climbing facilities





# Common Indoor Tower Types Used

- 20' tall, 3' face, 2" round leg straight guy tower section (or similar)
  - Readily available on the used market, easy to install, less space, good anchorage options
- 15-20' tall, 18" face, 1.25" round leg "Rohn 45"
  - Inexpensive and easy to install, but limited anchorage
- 15-20' tall, 48-90" face, self-support section
  - Often 3-5" round or angle leg, with angle bracing
  - Often times needs pegs on legs and additional anchors
  - Tends to be the trickiest for candidates to climb properly



# TTT-1 Tower, Materials, and Tools

- ❑ Refer to Site Report for exact quantities and types.
- ❑ Follow detailed Site Set-up Instructions in the handbook
- ❑ Tower Set-up
  - ❑ Self-retracting device (SRD) with a maximum 36" arresting distance
  - ❑ 2-part hoisting system with progress capture (or capstan)
  - ❑ Simulated feed line, 7-16 DIN female connector
  - ❑ 208' centerline tape mark
- ❑ Task Materials and Tools
  - ❑ 42-60" antenna w/ down-tilt bracket (see PTSCH for spec)
  - ❑ TTT-1 Antenna Mount from Perfect 10 Wireless
  - ❑ 6' 1/2" coax jumper with 7-16 DIN male connectors



# TTT-1 Workstation Set-up

- Table One
  - ▣ Antenna Mount Instructions
  - ▣ Antenna Mount Parts
  - ▣ Antenna and Pipe
- Table Two
  - ▣ Exact tools as specified on Site Report (no more, no less)
    - Wrenches, nut drivers, screwdrivers, tape measure, etc.
  - ▣ Jumper Support Materials (in specified types and quantities)
    - Standoffs, hose clamps, snap-ins, butterflies, etc.
  - ▣ Hoist Bucket
- Weatherproofing Station (Skeleton, materials, tools)





# TTT-2 Tower, Materials, and Tools

- Tower Set-up (refer to Set-up Instructions)
  - SRD with a maximum 36" arresting distance
  - Top block and hoist rope properly rigged
  - Guy pull-off lug at 10' on appropriate tower leg
  - Guy ground anchor 10-15' out from tower leg
  - Simulated Load (Hoist bucket with 50#)
  - Ground mounted or truck mounted AB Chance swivel capstan, with rope bar and rope lock installed
  - Guy wire strands laid out neatly near exam



# TTT-2 Workstation Set-up

- Table One
  - Rigging Task Materials
    - Slings, shackles, block
  - Capstan Equipment
    - Extension cords
    - pedal, portable GFCI
  - Guy Wire components
    - Turnbuckles, dead-ends, thimbles, shackles, etc...
  - Tools
  - Instructions, drawings, and user manuals





# Test Site Set-up Summary

- ❑ Complete Test Site Registration well in advance
- ❑ Make sure your facility and tower meet specs
- ❑ Source/build site kits and workstations well in advance of exam dates
- ❑ Follow Site Set-Up Instructions in the PTSCH
- ❑ Always verify proper set-up prior to exams using the Site Report
- ❑ Direct site set-up questions to [clint.cook@nws-a.org](mailto:clint.cook@nws-a.org) or [pe@nws-a.org](mailto:pe@nws-a.org).



# TSC Resources

- ❑ Test Site Coordinator Handbook
  - ❑ [www.nws-a.org/handbooks-forms](http://www.nws-a.org/handbooks-forms)
- ❑ Candidate Handbook
  - ❑ [www.nws-a.org/handbooks-forms](http://www.nws-a.org/handbooks-forms)
- ❑ Weatherproofing Skeleton Drawing (in TSCH Handbook)
- ❑ Site Reports (in TSCH Handbook)
- ❑ PE-For-Hire Listing
  - ❑ <http://www.nws-a.org/contact-a-practical-examiner-for-hire/>





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# Upcoming NWSA Webinars

- Become an NWSA Practical Examiner
  - Presented by: Clint Cook
  - Wednesday, August 1 at 11:00am ET
  
- Future webinars being developed
- Have a topic you'd like to hear about? Let us know!
  - Go to: <http://www.nws-a.org/webinars/>



# Questions

Please submit questions to

[pe@nws-a.org](mailto:pe@nws-a.org)