

## **TWRA Catoosa WMA Prefabricated Building**

### **Specifications**

#### **ITB 32801 - 12832**

This solicitation is for Tennessee Wildlife Resources (TWRA) for three (3) prefabricated buildings with vaults to be used as unisex, ADA compliant bathrooms on the Catoosa WMA. Preferred models of buildings are Gunnison or Aspen Vault (or of equal quality). The three (3) buildings shall be erected at TWRA's Catoosa WMA in Cumberland and Morgan counties.

#### **A. General Information**

1. Pricing shall include dirt work, delivery, off-loading, and set-up.
2. The Contractor shall have a current Tennessee Contractor's license.
3. All payments shall be made directly to the Contractor. The Contractor shall be responsible for any payments that need to be made to sub-contractors.

#### **B. Earth Work**

1. TWRA will have the site cleared of any obstructions.
2. Contractor shall perform excavation, backfill, and cleanup.
3. The Contractor shall perform the earthwork to receive the vault, set the restroom on the vault, perform all backfilling, and dressing of the area after the restroom is installed.
4. TWRA will prepare a parking area and sidewalk.

#### **C. Minimum Building Specifications**

1. Concrete General
  - a. The concrete mix design shall be designed to ACI211 to produce concrete of good workability.
  - b. Concrete shall contain of a minimum of 675 pound of cementitious material per yard. Cement shall be a low alkali type I/II or III conforming to ASTM C-150.
  - c. Coarse aggregates used in concrete mix design shall conform to ASTM C33 with the designated size of coarse aggregate #67.
  - d. Maximum water/cement ratio shall not exceed 0.45.
  - e. Air-entraining admixtures shall conform to ASTM C260. Water reducing admixtures shall conform to ASTM C494, Type A.
  - f. If self-compacting concrete (SCC) is used, it shall conform to ASTM C1611.
2. Concrete Reinforcement
  - a. All reinforcing steel shall conform to ASTM A615.
  - b. All welded wire fabric shall conform to ASTM A185.
  - c. Steel reinforcement shall be centered in the cross-sectional area of walls and shall have at least one (1) inch of cover on the under surface of the floor and roof.
  - d. Full lengths of reinforcing steel shall be used when possible. When splices are necessary on long runs, splices shall alternate from opposite sides of the components for adjacent steel bars.

- i. Lap bars under #4 a minimum of twelve (12) inch bar diameters.
    - ii. Lap bars larger than #4 a minimum of twenty-four (24) inch bar diameters.
  - e. Reinforcing bars shall be bent cold. No bars partially embedded in concrete shall be field bent unless approved by TWRA.
  - f. Diagonal reinforcement shall be placed around all openings.
- 3. Caulking, Grout, Adhesives, and Sealers
  - a. Caulking service temperatures shall be from -40 degrees Fahrenheit to +194 degrees Fahrenheit.
  - b. Interior and exterior joints shall be caulked with a paintable poly urethane sealant.
  - c. Grout shall be non-shrink type and shall be painted to match the color of the surrounding concrete as nearly as possible.
  - d. Cement base coating is formulated with a very fine aggregate system and shall be a built-in-in bonding agent.
- 4. Paint
  - a. All paints and materials shall conform to all federal specifications or be similar to "top-of -the-line-components."
  - b. Paints shall be lead free.
  - c. Inside concrete surfaces
    - i. Interior floors shall be gray Rust-Oleum High Performance 5300 system 2 paint, water-based epoxy or of equal quality.
    - ii. Interior walls and ceiling shall be white Rodda Master Painter, white base 54 3101 5, Interior semi -gloss or of equal quality.
  - d. Metal surfaces both inside and out shall be Rodda Industrial Protective Coatings, Professional Maintenance, neutral Base 75 8104 I. all-purpose gloss equipment enamel or of equal quality.
  - e. Exterior concrete surfaces
    - i. Exterior slab shall be clear sealed
    - ii. Exterior walls shall be Rodda AC-Exterior Series, Neutral Base 51 1104 5, 911 Velvet Flat Latex or of equal quality.
  - f. Simulated shake roof shall be boiled linseed oil thinned to 10% with paint thinner.

#### D. Vault

1. 1,000-gallon polyethylene-lined concrete vault shall be sealed but shall be able to be serviced.
  - a. Polyethylene vault liners shall be made of linear low-density polyethylene (LLDPE) or Roto molded 8460 polyethylene or of equal quality.
  - b. Minimum thickness 0.100
  - c. Molded dovetail embeds to attach the lines to concrete walls of the vault.
  - d. Welded two (2) channels to attach the liner to the bottom of the vault.
2. Plate for vault cleanout cover shall be 1/4-inch-thick diamond plate steel. Lid shall be configured so that it can be locked with a padlock. Lid shall be designed to resist surface runoff penetration into the vault. A neoprene gasket shall be provided around the entire perimeter of the lid to provide an

airtight seal.

3. A twelve (12) inch diameter round pipe made of High-Density Polyethylene (HDPE) shall be installed to vent the vault and the pipe shall be raised a minimum of three (3) feet above the highest point of the roof. The pipe shall be straight up from the vault.
4. Vault shall incorporate Sweet Smelling Technology (SST) as outlined by Briar Cook of the US Forest Service.
5. Vault shall have a minimum 4-inch wall, 4½ inch roof, and 5-inch floor thickness.
6. Vault depth shall be no deeper than 4½ to 5 feet.

E. Restroom Building - Shall include:

1. See Appendix for drawing with measurements.
2. ADA compliant, including 18-gauge grab bars made of 304 stainless-steel with 1 ½ inch clearance. Shall be able to withstand 300-pound top loading.
3. Single vault roof with simulated cedar shake shingles
4. Roof shall withstand a minimum of 250-pounds per square foot snow load.
5. Building shall withstand the effects of a minimum of 120 miles per hour (three-second gust) wind
6. Siding
  - a. Upper - board and batt in Nuss brown. Final color shall be approved by TWRA before painting
  - b. Bottom – mountain blend flagstone
7. Vent stack with vent screen
8. Unisex with unisex signage
9. Interior “No Trash” signage
10. Toilet riser shall be 18 inches high, white cross-linked polyethylene, with heavy duty seat and lid
11. Stainless steel toilet paper holder to hold at least two (3) rolls of toilet paper and shall be able to withstand 300-pound top loading.
12. Wastepaper basket
13. Solar light and fan kit
14. Owl guard
15. Rain vent cap
16. Timed lock system

F. Delivery

1. Completion date shall be by January 30, 2024.
2. Heath Casteel shall be contacted three (3) business days before delivery so that arrangements can be made.
3. Deliveries shall be made between 8:00 AM and 4:30 PM Monday through Friday, excluding State recognized holidays.
4. Shipping shall be FOB Destination to the following three locations.
  - a. 675 Wildlife Lane, Crossville, TN 38571

GPS: 36.077145, -84.958588

b. Otter Creek Road, Crossville, TN 38571

GPS: 36.032437, -84.927212

c. Noah Hamby Road, Oakdale Tn 37879

GPS: 36.023325, -84.694888

G. Warranties

1. Minimum of one (1) year standard manufacturer's warranty on components and installation.

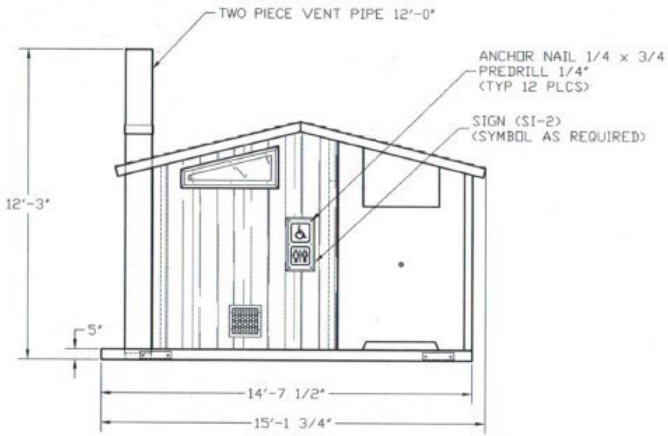
H. Site Visit

1. Site Visits will be available during the following dates and times. Vendor shall reach out to Heath Casteel at least 24 hours before intended visit to coordinate the visit.
2. Scheduled site visits:
  - a. June 12 and 14, 2023 from 9 AM-11 AM (CST)
  - b. June 13,15, and 16, 2023 from 9 AM-1 PM (CST)

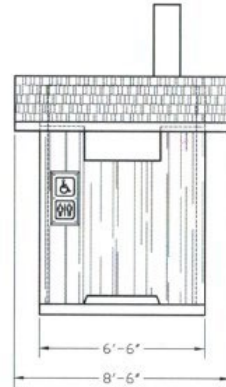
I. Points of Contact

1. Nickki Davis at [Nickki.Davis@tn.gov](mailto:Nickki.Davis@tn.gov) or 615-781-6603
2. Heath Casteel at [Heath.Casteel@tn.gov](mailto:Heath.Casteel@tn.gov) or 931-252-4693

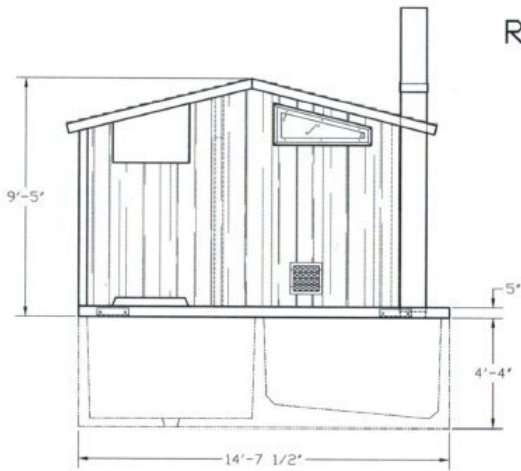
# Appendix



FRONT ELEVATION

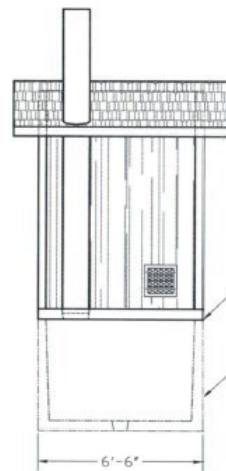


RIGHT SIDE ELEVATION

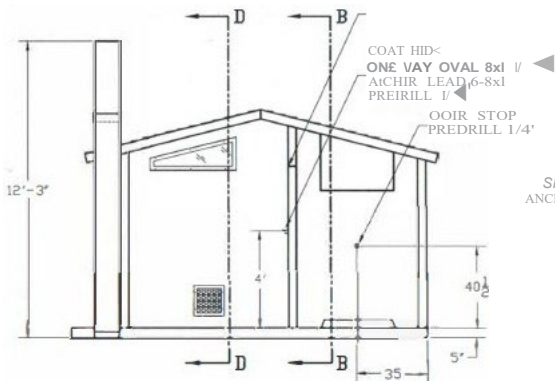


REAR ELEVATION

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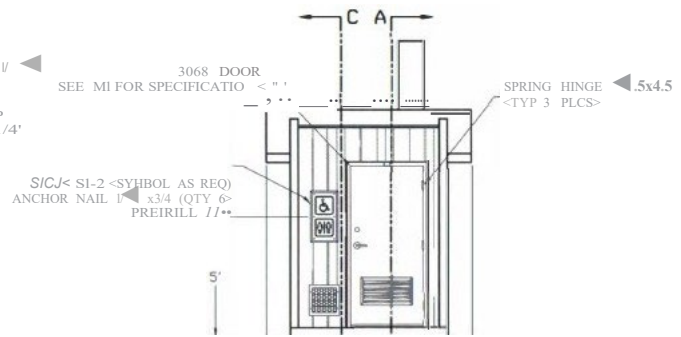


LEFT SIDE ELEVATION

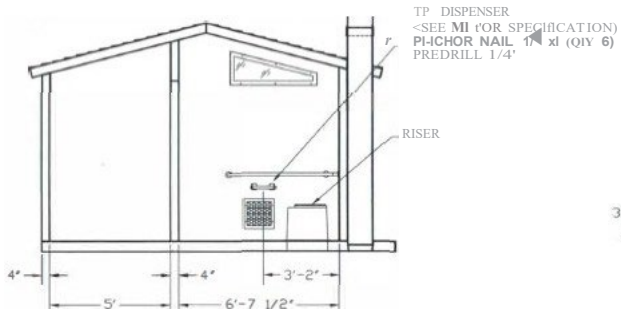


SECTION A - A

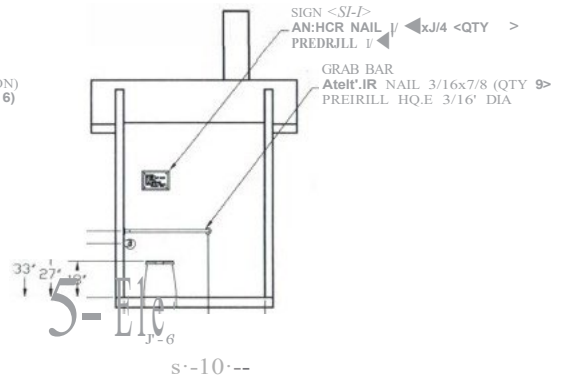
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SECTION 8 - 8



SECTION C - C



SECTION D - D

