



**Design Drafting Competition for High School Students
2017-2018 Design Problem and Project Description
Tiny House**

PROJECT DESCRIPTION:

The United States has seen a new trend in the area of residential construction, and it is called, “Tiny Houses.” These houses can range in size, shape and form, as well as facilitate a more efficient use of space and money, and allow for a simpler life and a reduced effect on the environment.

This year’s project is to design a “Tiny House” capable of travel, while incorporating common household essentials as detailed below, and adding in specialized design features that are both important to you and unique to your house. In addition, you must also integrate green products and design elements to further minimize your home’s impact on the environment.

PROJECT REQUIREMENTS:

- Living Space Size Requirements (trailer is recommended for base)
 - Length: 12’ – 0” to 24’ – 0”
 - Width: 8’ – 6 ” maximum
 - Height: 13’ – 6” maximum
 - Note, this dimension is for living space only – deck height to be added
 - See references below for additional information on trailer dimensions/details
- Residence must include the following rooms/areas:
 - Full-sized kitchen with appropriately sized appliances
 - Minimum of one bedroom
 - Stairs/access to bedroom/upper areas (as applicable)
 - Storage/Closet
 - Full bathroom with sink, toilet and shower/tub
 - Place to eat
 - Place to lounge
 - Utilities (i.e., how do you plan to heat and/or cool your house)
- Additional areas that may be included, but are not required:
 - Additional bedroom
 - Office Area
 - Washer/Dryer
 - Deck

REQUIRED ITEMS FOR SUBMISSION:

- Design Narrative/Concept
 - Describe your design, including but not limited to: geographical considerations, special design features, any elements of your design that have more than one function/convert, green innovation, etc
 - 400 or 500 words – typed and submitted on 8 ½” x 11” papers
 - Should be stapled in the upper left-hand corner of the prints
 - Spelling and grammar will be considered
- Design Drawing General Requirements (must be shown on each drawing)
 - Title Block matching what is shown on next page
 - Scale ¾” = 1’ – 0”, unless otherwise noted
- Design Drawing Specific Requirements:
 - Sheet A-1 Roof Plan/Plan View
 - Show layout of roof/pitch, deck (as applicable), etc
 - Show hitch assembly with dimensions
 - Sheet A-2 Floor Plan
 - Indicated total building square footage
 - Show walls, windows, doors with door swings, and all other openings
 - Show closets, cabinets, plumbing fixtures and appliances
 - Show all changes in floor elevations, stairs, ladders, etc
 - Provide layout for all floors
 - Indicate the name of each room or area
 - Show dimensions, locating walls, doors, windows and openings
 - Show section cut marks
 - Show/identify furniture
 - Sheet A-3 Electrical Plan
 - Show switches, electrical outlets, cable/internet cable outlets, lighting locations, fans, etc. for interior and exterior of residence
 - Show an electrical symbol legend on your drawing
 - Sheet A-4 Exterior Elevations
 - Two (2) exterior elevations are required. One must depict the entrance elevation
 - Show windows, doors, roof, roof pitches, and all other exterior features
 - Note all building materials
 - Note drawing labels as “front”, “back”, “left”, “right”
 - Sheet A-5 Building Section
 - Show foundation framing, walls, insulation, floors, roofing, etc
 - Show interior elevations in building section
 - Draw a typical wall section, Scale 1” = 1’ – 0”
 - Sheet A-6 & A-7 – Optional Drawings #1 & 2
 - Can include, but is not limited to any of the following options: Interior Elevations, Millwork Elevations, Additional Building Sections, Door & Window Schedules and Details, Proposed Construction Schedule, Proposed Cost Breakdown with Total Budget, etc

Title Block - SAMPLE:

 NEF NAWIC Education Foundation DESIGN DRAFTING 1800 Pembroke Drive, Suite 300; Orlando, FL 32810	
PROJECT: (as noted on Design Problem)	
DATE: (year of Design Problem)	
CODE NUMBER: (as assigned by Sponsor Chair)	
PLAN NAME: (as noted in "Required Drawing Sheets" Section)	
PLAN #: (see below)	SCALE: (see below)
(PLAN & SCALE per "Required Drawing Sheets" Section)	

REFERENCES:

- <https://www.tumbleweedhouses.com/diy/tumbleweed-tiny-house-trailers/>
- <https://www.tinyhomebuilders.com/tiny-house-trailers>
- <https://www.tinyhomebuilders.com/tiny-houses>
- <http://www.letsogogreen.com/how-composting-toilets-work.html>
- <http://letsogogreen.com/composting-toilet-specs.html>
- <http://tinyhousecommunity.com/build.htm#size>
- <https://www.tumbleweedhouses.com/uncategorized/heating-your-tiny-house/>