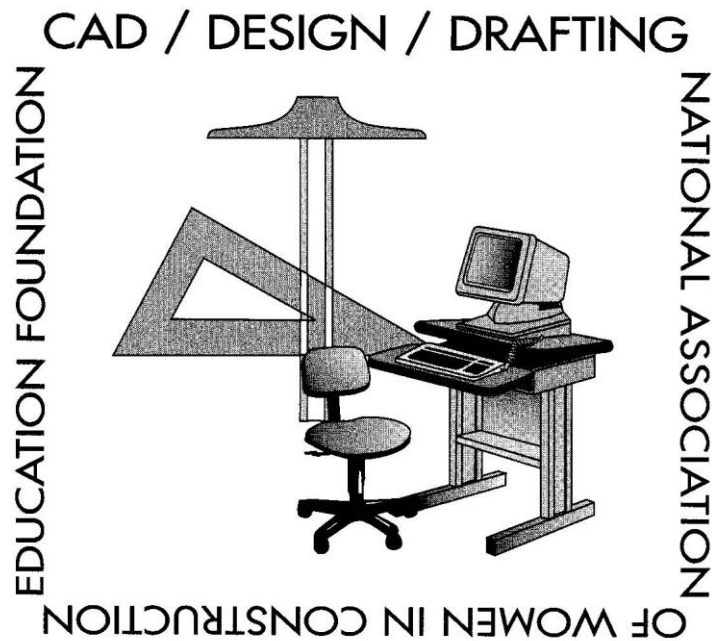


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CAD/DESIGN/DRAFTING SCHOLARSHIP AWARD COMPETITION 2011-2012

DESIGN PROBLEM

&

PROJECT REQUIREMENTS

**National Association of Women in Construction
Education Foundation**

**CAD/DESIGN/DRAFTING SCHOLARSHIP AWARD COMPETITION
HIGH SCHOOL STUDENTS**

DESIGN PROBLEM /PROJECT DESCRIPTION/DRAWING REQUIREMENTS

I. PROJECT DESCRIPTION

The project is a home for teenagers in transition and the facility will be called Teenbridge. A local family, the VanDozeman's, have envisioned this project to keep teens out of the traditional foster care system as a result of parents who are deceased or imprisoned. Teens from the ages of 15 to 19 will learn to live independently and manage their academics. The facility is located within walking distance of five colleges and universities. What is unique about this project is that we already know who will be living at Teenbridge and where it will be located.

The surrounding houses were built more than 150 years ago. Some of them have been "rehabbed" so that on the outside, they look much like they did when they were originally built. Teenbridge will be built on an empty lot in the neighborhood and must keep within strict historical and zoning requirements set forth in this historical neighborhood.

The VanDozeman's and one other family will serve as house parents at Teenbridge. They will require sleeping courts and an office area. They will live at Teenbridge in a rotating schedule.

Teenbridge needs to be design conducive to "family" dining, meal preparation and an adequate studying environment. They would like to have 4 areas designated for internet access to assist the teenagers with their academic success. The teens will be divided into 2 teams for meal preparation and household chores, but will dine together.

Special considerations must be given to the teens with special needs. One teen was born blind, one lost their hearing with a bout of meningitis and a third has severe physical handicaps as a result of a drunk driver accident that left her parentless.

The VanDozemans have requested these things in Teenbridge:

1. Laundry room with adequate space for occupants.
2. Adequate bathroom facilities; minimum of 3.
3. Adequate bedroom facilities; minimum of 6 for occupants and 1 for house parents.
4. Kitchen accessible for wheelchair user and large pantry.
 5. Must include specialty items for blind, deaf and physically challenged teens.
 6. Adequate storage for 2 cars, teen's bikes, and lawn maintenance equipment.

Other areas or rooms may be added as you think they are necessary. The total heated/cooled space cannot exceed 7000 square feet. This home is to be designed by teens for teens; what they would feel is important. Unique to this historical district is that the homes must be a minimum of 2-stories above ground level. A basement is acceptable but not mandatory and if used should not be counted as a "story". Multi-story garages/carriage houses are frequently used. Minimum finished floor to ceiling height is 9'-0". All homes must have a minimum of 120 sf of porch with overhang; decks are not allowed. A hitching post must be placed between the curb and walk. The two adjacent homes are Victorian and Frank Lloyd Wright Prairie style.

Historical guidelines may be obtained at www.heritagehillweb.org. This website also lists architectural styles allowed at www.heritagehillweb.org/tours.htm. Other useful links are also available at this website.

II. SITE DESCRIPTION

The lot is located on a corner. It is a double lot and measures 180' East to West and 110' North to South. Setback requirements are 15' from curb on West and South boundaries and 20' from North and East boundaries. Utilities hook-up and tie-in are available at any point along the West and South property line. City sidewalks are 4' W, setback 2' from the curb and run along the West and South boundaries. The main entry may face either the West or South property lines.

III. REQUIRED DRAWINGS

The required scale should be noted on each drawing. Each drawing sheet shall contain: required title block, labels, scales, North arrow and dimensions.

The following drawing sheets are the minimum to be submitted by each contestant. Each drawing sheet is to show the information described below. Optional or supplemental drawings may be submitted as follows:

Drafting only: a minimum of five (5) drawing sheets for hand-drafting; a maximum of six (6) drawing sheets

CAD only: a minimum of five (5) drawing sheets for CAD; a maximum of seven (7) total drawing sheets

Submit entries on blue line or black line (Ozalid) prints or black line photocopies. Original computer plots may be submitted on bond paper only and in black ink only in lieu of prints.

DO NOT SUBMIT hand-drafted original drawings or computer plots on vellum.

DO NOT SUBMIT color ink plots. They will be disqualified.

Drawings will not be returned to the contestant.

A. DRAWING SHEET A-1:

SITE PLAN WITH ROOF PLAN

Scale: 1" = 10'- 0"

1. Use the site plan in contest package. Note: Entrants competing in the "Hand-Drafting" Category will need to enlarge the attached site plan to a scale of 1" = 10' - 0"
2. Show the building location on the site plan with the roof plan superimposed on the building location.
3. Show parking, paving, walks, curbs, building setbacks, property lines, etc. A sidewalk must be added in front of the site.
4. Show the location of the building(s) with dimensions. Setback requirements are listed in site description.

NOTE: All entrants will need to draw the site plan; no computer disk provided.

OPTIONAL: Contestant is allowed--but not required--to show shadows of structure and/or texture of materials.

B. DRAWING SHEET A-2:

FLOOR PLAN – 1st and 2nd Floors MUST be shown
Scale: $\frac{1}{4}'' = 1'-0''$

Indicate Total Building Square Footage on the drawing.

1. Show walls, windows, doors & door swings, and openings.
2. Show closets, cabinets, plumbing fixtures and appliances.
3. Show all changes in floor elevation, stairs and stair landings.
4. Show the name of each Room or Area.
5. Show dimensions locating walls, doors, windows, and openings.
6. Show section cut marks.
7. Show a Finish Schedule indicating interior finish materials for floors, walls & ceilings (wood, vinyl tile, ceramic tile, carpet, drywall, paint, etc.)

OPTIONAL: Contestant is encouraged -- but not required -- to show the following:

- a. Shade in walls with accepted symbols to indicate wall construction material.
- b. Show furniture placement.
- c. Show flooring materials.

C. DRAWING SHEET A-3:

EXTERIOR ELEVATIONS
Scale: $\frac{1}{4}'' = 1' - 0''$

1. Show two (2) exterior elevations: Label the elevations North, South, East, West.

One must depict the front elevation and the other must depict the right or left side elevation.

Label the elevations as “front”, “back”, “left”, “right”.

2. Show walls, windows, doors, roofs and roof pitches.
3. Label all exterior finish materials (shingles, brick, stucco, siding, etc.)

D. DRAWING SHEET A-4:

Show two drawings on this sheet- a building section and a wall section.

BUILDING SECTION

Scale: $\frac{1}{4}'' = 1' - 0''$

WALL SECTION

Minimum Scale: $\frac{3}{4}'' = 1' - 0''$ (may use $1'' = 1' - 0''$ or $1\frac{1}{2}'' = 1' - 0''$)

1. Building Section
 - a. Show footings and foundation walls, exterior and interior walls, floors, windows, ceilings and roof in outline.
 - b. Show room names the section is cutting through
 - c. Label different construction materials

OPTIONAL: Show interior wall elevations

2. Typical Exterior Wall Section
 - a. Show footing, foundation wall or slab, typical exterior wall, eave, roof structure and roofing material.
 - b. Use break lines to shorten the wall section (if needed) so that the drawing fits on the 24" x 36" drawing sheet.
 - c. Show and label wall thickness, different construction materials (concrete, wood, insulation, sheathing, finishes, etc.)

E. DRAWING SHEET A-5:

ELECTRICAL PLAN

Scale: $\frac{1}{4}'' = 1'0''$

1. Show light switch locations, electrical outlets, TV and computer outlet(s), lighting fixtures, ceiling fans, etc.
2. Show any lighting on the exterior of building.
3. Show an electrical symbol legend on your drawing.

F. OPTIONAL DRAWINGS

**DRAFTING ONLY: SHEET A-6 - OPTIONAL DRAWING
CHOOSE ONE (1) DRAWING FROM THE LIST BELOW.**

**CAD ONLY: SHEET A-6 & A-7-OPTIONAL DRAWINGS
CHOOSE MAXIMUM OF TWO (2) DRAWINGS FROM BELOW:**

1. Exterior or Interior perspective sketch.
2. Roof Framing Plan.
3. Interior Elevations (kitchen, bathrooms, special use rooms, etc.)
4. Landscape Plan (this is a separate drawing from the Site Plan, showing trees, shrubs, other plantings and their names)
5. Two (2) Additional Building Elevations (other side and back of building)
6. Additional Building Sections
7. Additional Floor Plan

IV. SUBMISSION REQUIREMENTS:

- A. All submissions must comply with the requirements of the competition to be eligible for the judging. All judges' decisions are final.
- B. All submitted sheets shall be stapled at the left border.
- C. A 1" x 6" title block shall be placed in the lower right hand corner on each sheet including the following information:

**STUDENT NAME OR SCHOOL NAME SHOULD NOT APPEAR IN THE
TITLE BLOCK**

PROJECT TITLE

STUDENT
CODE NUMBER

DATE

DRAWING
SHEET
NUMBER

D. Drafting only: All lettering to be freehand and drawings to be by hand. Guidelines and straight-edges for vertical strokes may be used for lettering.

CAD only: Computer plots or prints required. Do not submit diskettes, plots on vellum or color ink plots.

E. DESIGN NARRATIVE

Submission is to include a “Design Narrative” statement on what the student feels are the positive and appropriate elements in their design and how the design meets the project description.

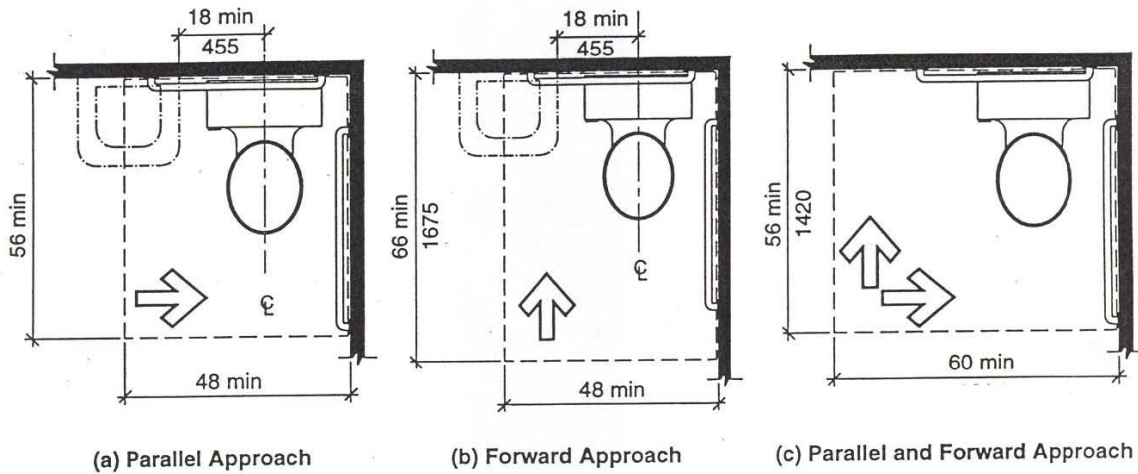
1. Narrative to be 400 or 500 words and must be typed.
2. Assigned student code number on upper right-hand corner.
3. Narrative to be stapled in the upper left-hand corner of the prints.
4. Spelling and grammar will be considered.

RESOURCE MATERIALS

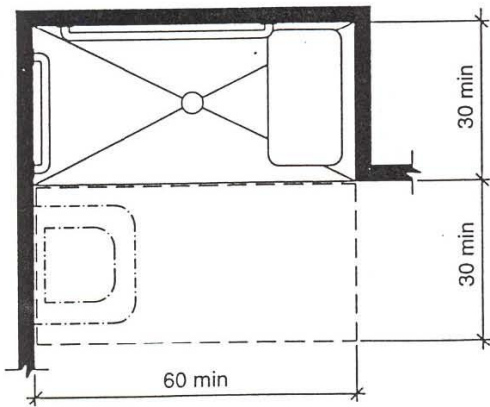
UNIVERSAL BATHROOM DESIGN

Universal design” refers to a space that can be used by both able-bodied people and people with disabilities. Sample toilet, lavatory and roll-in shower layouts below show required dimensions for “universal design” as required by the teens. Further information is available in the following publications:

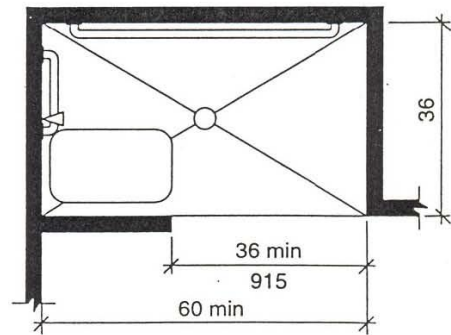
International Code Council/ANSI Standards 117.1 - 1998
 Architectural Graphic Standards, Tenth Edition, edited by John Ray Hoke, Jr.
 FAIA, John Wiley & Sons, publisher. Copyright 2000.



Water Closet Clearance in Type A Dwelling Units



Standard Roll-In-Type Shower Compartment



Alternate Roll-In-Type Shower Compartment