

## AutoCAD Architecture Exercise

1. Open a new drawing the standard Triton D-sized Template.
2. Create the following new wall styles:
  - a. Brick veneer wall 9' high, justify left, automatic clean ups, 6" cleanup radius, standard group definition
    - i. Brick 3 5/8" thick - 2" 45 degree hatch on A-WALL-PATT layer
    - ii. Air space 3/4" thick – no hatch- turn hatch off
    - iii. Sheathing 1/2" thick - no hatch - turn hatch off
    - iv. Studs 5 1/2" thick – 2" double 45 degree hatch on A-WALL-PATT layer
    - v. Drywall 5/8" thick - no hatch - turn hatch off
  - b. 8" thick foundation wall, 7' high – conc hatch pattern on A-WALL-PATT layer, justify left, automatic clean ups, 6" cleanup radius, foundation cleanup group definition (create new)
  - c. 5" thick interior partition, 9' high, justify center, automatic clean ups, 6" cleanup radius, standard cleanup group definition
3. Create the following door styles:
  - a. Exterior single hinged, 2" x 5" frame, arched with full arched glass panel, 5" wide stiles and top rail, 10" bottom rail, 3/4" x 3/4" muntins in a pattern, 1 3/4" thick, 2" x 5" frame, stop 5/8" deep x 2" wide, on A-DOOR layer, color bylayer, glass on A-GLAZ-GLAS layer, turned off, color by layer
  - b. Interior single hinged, rectangular, on A-DOOR layer, 1 3/8" thick, 2" x 5" frame, stop 5/8" deep x 2" wide, color bylayer
  - c. Interior pair, rectangular, on A-DOOR layer, 1 3/8" thick, 2" x 5" frame, stop 5/8" deep x 2" wide, color bylayer
  - d. Interior single pocket, rectangular, with full glass panel, 5" wide stiles and top rail, 10" bottom rail, 3/4" x 3/4" muntins in a pattern, on A-DOOR layer, 1 3/8" thick, 2" x 5" frame, stop 5/8" deep x 2" wide, color bylayer, glass on A-GLAZ-GLAS layer, turned off, color by layer
  - e. Interior pair hinged, rectangular, with full glass panel, 5" wide stiles and top rail, 10" bottom rail, 3/4" x 3/4" muntins in a pattern, on A-DOOR layer, 1 3/8" thick, 2" x 5" frame, stop 5/8" deep x 2" wide,

color bylayer, glass on A-GLAZ-GLAS layer, turned off, color by layer

- f. Interior single bifold, rectangular, on A-DOOR layer, 1 3/8" thick, 0" wide frame, autoadjust to width of wall, stop 0" deep x 0" wide, color bylayer
  - g. Interior pair bifold, rectangular, on A-DOOR layer, 1 3/8" thick, 0" wide frame, autoadjust to width of wall, stop 0" deep x 0" wide, color bylayer
4. Create the following window styles:
- a. Double hung rectangular, frame 2" wide 6" deep, sash 1 1/2" x 1 1/2" with 3/4" x 3/4" muntins 3 high 2 wide top sash only, muntin clean up joints and clean up body, frame and sash on A-GLAZ layer, color bylayer, glass on A-GLAZ-GLAS layer, color by layer turned off
  - b. Single casement, frame 2" wide 6" deep, sash 1 1/2" x 1 1/2", 3/4" x 3/4" muntins 3 high 2 wide, muntin clean up joints and clean up body, frame and sash on A-GLAZ layer, color bylayer, glass on A-GLAZ-GLAS layer, color by layer turned off
  - c. Picture, rectangular, frame 2" wide 6" deep, sash 1 1/2" x 1 1/2", 3/4" x 3/4" muntins 3 high 2 wide, muntin clean up joints and clean up body, frame and sash on A-GLAZ layer, color bylayer, glass on A-GLAZ-GLAS layer, color by layer turned off
  - d. Picture, half round, frame 2" wide 6" deep, sash 1 1/2" x 1 1/2", 3/4" x 3/4" muntins 3 high 1 wide, muntin clean up joints and clean up body, sunburst pattern, 3 spokes, open style hub, 6" radius, frame and sash on A-GLAZ layer, color bylayer, glass on A-GLAZ-GLAS layer, color by layer turned off
5. Create a wood stair style:
- a. Maximum and optimum slope: riser 7 3/4" tread depth 10", do not use rule based calculator, two housed type stringers (align left and right), one saddled center stringer, default waste and total dimensions, tread thickness 3/4", riser thickness 3/4" nosing length 3/4", landing thickness 1 1/2" no landing extensions, all components on the a-stair layer, except path up and path down which are on the a-anno-note layer, all layer colors and linetypes bylayer
6. Create the following railing styles:

- a. Stair rail: 2'-8" high, no bottom rail, fixed posts, 4" extension of post from top railing, fixed posts at railing corners, no dynamic posts, baluster stair tread length override 3 per tread, all components are rectangular, fixed posts 3 1/2" x 3 1/2", balusters 1 1/8" x 1 1/8" handrail 1 1/2" x 3 1/2", no railing extensions, all components on the 0 layer (the default)
- b. Fence: guardrail 3'-0" high, height of bottom rail 4", fixed posts at railing corners, dynamic posts maximum spacing 6', balusters center to center spacing 8", all components rectangular, guardrail 3 1/2" x 3 1/2", bottom rail 1 1/2" x 3 1/2", posts 5 1/2" x 5 1/2" balusters 1 1/2" x 1 1/2", no railing extensions, all components on the 0 layer (the default)
7. Draw a rectangle 25' x 40' then convert it to walls (exterior brick veneer)
8. Draw a 10' x 12' room inside the space in one corner with an interior pair of full glass doors, 5' wide leading into it
9. Draw a 2' deep x 6' wide closet inside the room with a pair of bifold doors 4' wide
10. Draw another small room somewhere inside the plan
11. Insert an 2'-6" wide x 6'-8" high arched opening into the small room
12. Draw a 5' x 7' toilet room in another corner with a 3' wide single hinged door opening out – show a water closet and a wall hung lav inside the room
13. Place an exterior arched door on one of the 25' walls
14. Create a Palladian motif of a 3' wide x 5' high round top window flanked by a pair of rectangular picture windows of appropriate width and height in the other 25' wall.
15. Place a switchback stair to the second floor inside the space. Floor-to-floor height is 10'-0"
16. Add a second floor half of the depth of the first floor and place four double-hung windows in it of appropriate size – wall height of second floor is 9'-0"
17. Place a 8/12 slope gable roof over both the second floor and the open part of the first floor – 8" wide fascia perpendicular to floor with a 2'-0"

wide overhang all around

18. Insert a 3' wide x 2' high round top window in the center of each gable
19. In paper space arrange several viewports to show the following at  $\frac{1}{4}'' = 1'-0''$  scale:
  - a. First floor plan
  - b. Second floor plan
  - c. Roof plan
  - d. Isometric of entire building
  - e. Two elevations
  - f. One section
20. Insert .JPG file rendering of building on flat ground with shadows and materials in paper space
21. Label drawings in paper space and indicate north arrow and scale under each drawing
22. Edit sheet information to be specific for you – give a name for the building
23. Plot drawing at full size 24" x 36" in color