

First Annual Indian Nations Division Layout Design Challenge

At the Layout Design & Operations Weekend, March 18-20, 2011

Our First Challenge

As part of the second Layout Design and Operations Weekend activities, we are sponsoring our first Layout Design Challenge. This is an opportunity to use your imagination and create a design for a specified space and set of “givens and druthers”. The goal is to see how many different and creative designs can be created given a set of basic criteria and a blank canvas. So dust off your track planning templates or fire up your favorite rail planning software and get creative.

To enter, all you need to do is review the “givens and druthers” plus the room drawings and elevations below, they illustrating design parameters and constraints. Complete an entry in the way outlined below, and submit it to the challenge coordinator. Before the meet, a panel will review all entries, and the five best entries will have five to ten minutes to orally present their design during the Layout Design and Operations Weekend meeting on Saturday, March 19th. Elements of the information packages may be used by the organizers to create a PowerPoint presentation for the meeting. There will also be copies of the plans made available for viewing and discussion in our layout design discussion area during breaks. There are no winners or losers; the development and exchange of ideas and alternatives is the goal.

Challenge Design

This year we will be focusing on an urban switching-oriented railroad. The maximum size will be 12' x 17' corresponding to an unfinished bonus room. There are “givens and druthers” which spell out restrictions and indicate the owner’s preferences. At this point, any scale is acceptable.

Scenarios that meet the owner’s interests include but are not limited to: steel mill switching roads, industrial switching scenarios, urban switching with or without rail-marine input. The emphasis will be on mostly way freight or urban switching, and yard operations.

At least three or four operators should be kept busy, for a minimum 2 hour session. Linear walk-around designs that facilitate hand-thrown switches and hand uncoupling of cars are suggested.

Although this design challenge may or may not correspond to your interests, we encourage everybody to take a stab at creating a design for this challenge, even if it is out of your comfort zone. Have fun, be creative. Think outside of the box.

Preparing Your Entry

Each information package should consist of a brief description of the concept and track plan characteristics, a hand-drawn or computer rendered to-scale track plan on a single page, an elevation if multiple decks are used; and one or two additional text pages describing the concept,

design and operating scheme. Designs may be rendered in color or black and white, but be sure that any renderings will reproduce in black and white for possible use as handouts. Track plans do not need to be publication-quality or ready-to-build, but they should be clear and complete enough to allow the panel and the attendees to understand your concept. Electronic information packages such as PowerPoint presentations are strongly preferred, but hard copy is permissible.

The following should be included in the package:

- Geographic location
- Era
- Scale
- Minimum and typical curve radius
- Minimum and typical turnout standards
- Maximum grade (if any)
- Elevations (if multiple level or decks)
- Car capacity of yard, interchange and staging tracks
- Motive power and rolling stock assumptions
- Operator positions / duties
- A basic outline of a 'typical' operating session

Please return the completed packages to arrive no later than February 28, 2011 to Charles Tapper, 3180 S. Hemlock Court, Broken Arrow OK, 74012 or via e-mail at chastap@cox.net.

Inspiration / References/ Ideas...Just a Few to Get Started

Steel Mill Railroads. Use Google Earth or Google Maps to view satellite images of steel mill complexes to get inspiration for steel mill modeling. Here are a few modelers doing steel:

- <http://www.tacoma-trains.com/bobspage.htm>
- <http://www.daveayers.com/Modeling/Steel.htm>
- <http://www.zahkunst.net/mainpage.htm>

Rail Marine Terminals of New York (Look at BEDT, Bush Terminal, Jay Street Connecting, etc.)

- <http://www.freightrrofny.info/>

A layout designed with the above type of railroading in mind.

- <http://nyhrr.com/Overview.htm>

Birmingham, AL, industrial switching. Steel, cast iron pipe, coal, iron ore, and even a port! Tons of interchange possibilities. Look at the Mary Lee, Woodward Iron, Birmingham Southern. HABS/HAER has much data on Birmingham.

<http://www.bhamrails.info/index.htm>

Givens (The Absolutes that Cannot be Changed)

Layout Size 12x 17 foot nominal size, see map for location of obstructions like VAC, doors, windows. Short walls that intersect sloping ceiling are 6' (72") (North and South Walls, Walls A&B below) with a room ceiling height of approximately 12' at top of slope (see elevation).

Layout space utilization—there is a need to make space flexible so it can also work as modeling area (work bench), library, and storage for models. Low-level, in-wall storage is also a possibility given slope of walls.

The owner is 6'2" tall (74")

Druthers (Things or Conditions I Would Like to Have, Negotiable)

Location: SW Pennsylvania, New York/New Jersey Harbor area, or even Birmingham Alabama region preferred, but open to suggestions.

Eras: Transition 1950-1954 preferred. (Other potential dates would include late fifties, early sixties, Penn Central Merger era of 1968, CR 1976.)

Prototype-informed freelanced roads are preferred over poorly-rendered prototype roads.

Genre or Scenario: setting will be heavy on switching, either industrial or commercial or a combination of both, could include way-freights, should have yard operations. Suggested preferences include, but are NOT limited to:

- Steel mill intraplant or interplant switching and terminal roads, examples of which include Union, Monongahela Connecting, Lake Terminal, McKeesport Connecting, Newburgh and South Shore. Can be integrated mill or mini-mill scenarios.
- Urban switching with rail-marine component (Hoboken Shore, BEDT).
- Urban switching without a rail-marine component (examples include the Whitehall Branch PRR, Kingsbury Branch Milwaukee Road, Kansas City Terminal).

Can be point to point or point to staging or staging to staging.

Space and/or consideration must be made for operators to work without interfering with one-another. Minimum aisle width should be 36", with only very limited choke points if absolutely necessary.

Benchwork:

- No duckunders; gates or lift-ups only if absolutely necessary.
- Single deck is preferred, but multi-level designs are also encouraged.
- Modular (modular or sectional design, dominoes or doorminoes, etc.), removable benchwork designs are strongly suggested but not required .
- Benchwork height should trend towards the 50-58 inch range, but allow adequate space for the transition from benchwork to back wall.

Trackwork: industrial switching areas can have tighter radius curves and switches, with a minimum radius of 18" HO (9" N) suggested. An exception might be dockside trackage using girder rail. If mainline is included, mainline switches must be #6 or better and curves minimum of 30"

(15"N). Using larger radii ensures consistent operation. HO code 83 or smaller (CV, ME, Walthers, Proto:87 Store Switches or girder rail), N code 55 (Atlas). Proto:48/O 36".

Motive power: diesels will dominate, with some steam in transition era. Alcos, Baldwins, FM's, GE's, and EMD's in order of preference. Critters OK. Juice jacks considered.

No need for passenger operations, or long high speed mainline running. [In N, a mainline could be incorporated and the industrial switching done as way freights on the running tracks paralleling the main (e.g. the B&O main through parts of eastern Pittsburgh was 2 tracks plus two running tracks for switching).]

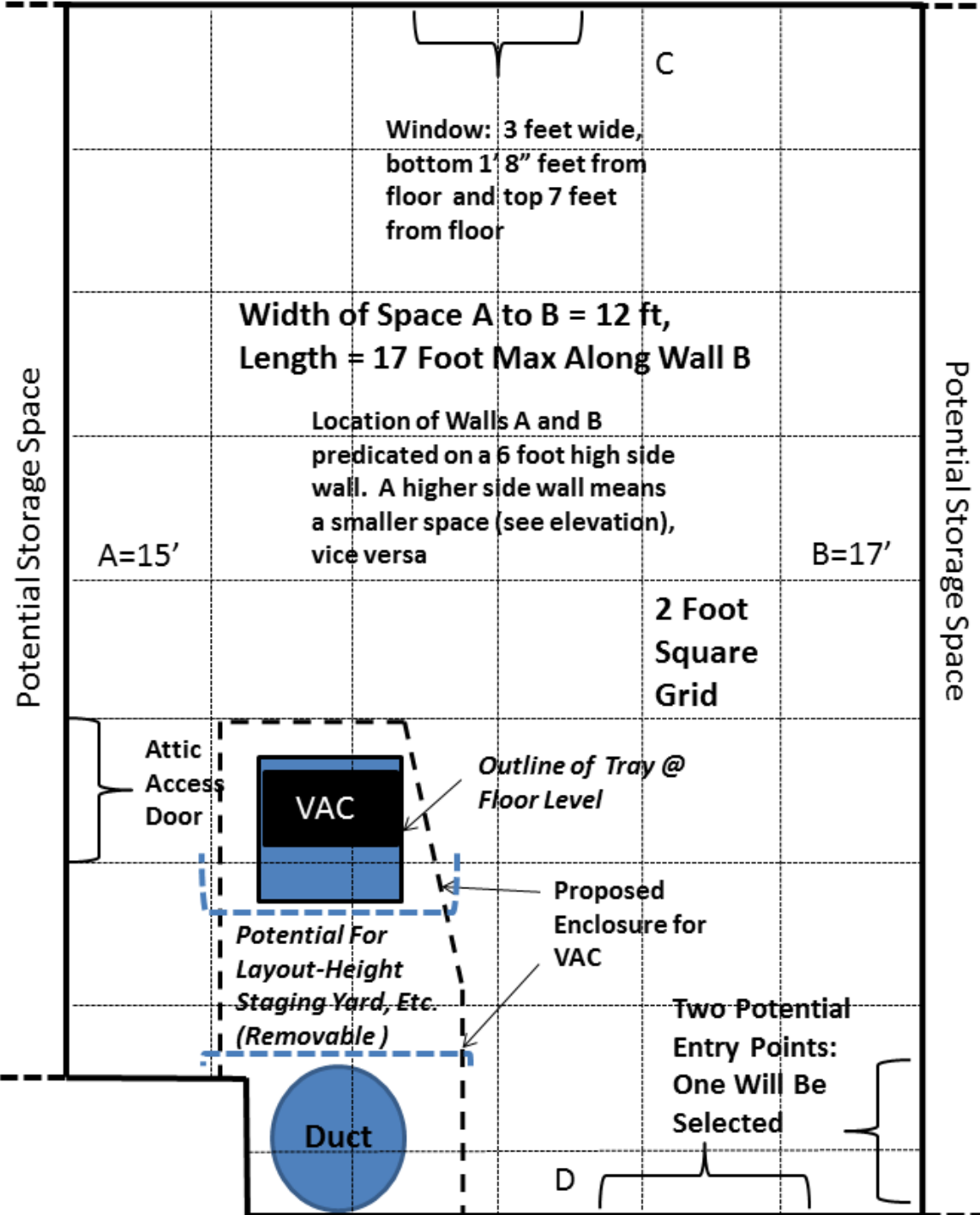
DCC and sound in bigger scales, DCC in N (unless a fixed sound source would work).

Room Drawings and Elevations

A few things to note about the room drawings below. The grid shown is a 2' grid on both plan and elevation. The space between the duct and the VAC unit is constrained by width and by vertical clearance, and the vertical clearance window is shown on the diagram (there are pipes up to about 3" and a horizontal duct above the clearance). A removable staging yard or other tracks could be placed there, but mind the vertical clearances.

The layout space as drawn is constrained assuming the 6 foot walls would be the ideal height to deal with the ratio between floor space and sloping ceiling, which is limiting in "urban canyonland" settings.





Potential Storage Space

Potential Storage Space

Window: 3 feet wide,
bottom 1' 8" feet from
floor and top 7 feet
from floor

Width of Space A to B = 12 ft,
Length = 17 Foot Max Along Wall B

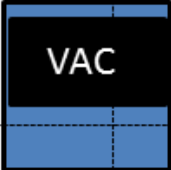
Location of Walls A and B
predicated on a 6 foot high side
wall. A higher side wall means
a smaller space (see elevation),
vice versa

A=15'

B=17'

2 Foot
Square
Grid

Attic
Access
Door



Outline of Tray @
Floor Level

Proposed
Enclosure for
VAC

Potential For
Layout-Height
Staging Yard, Etc.
(Removable)

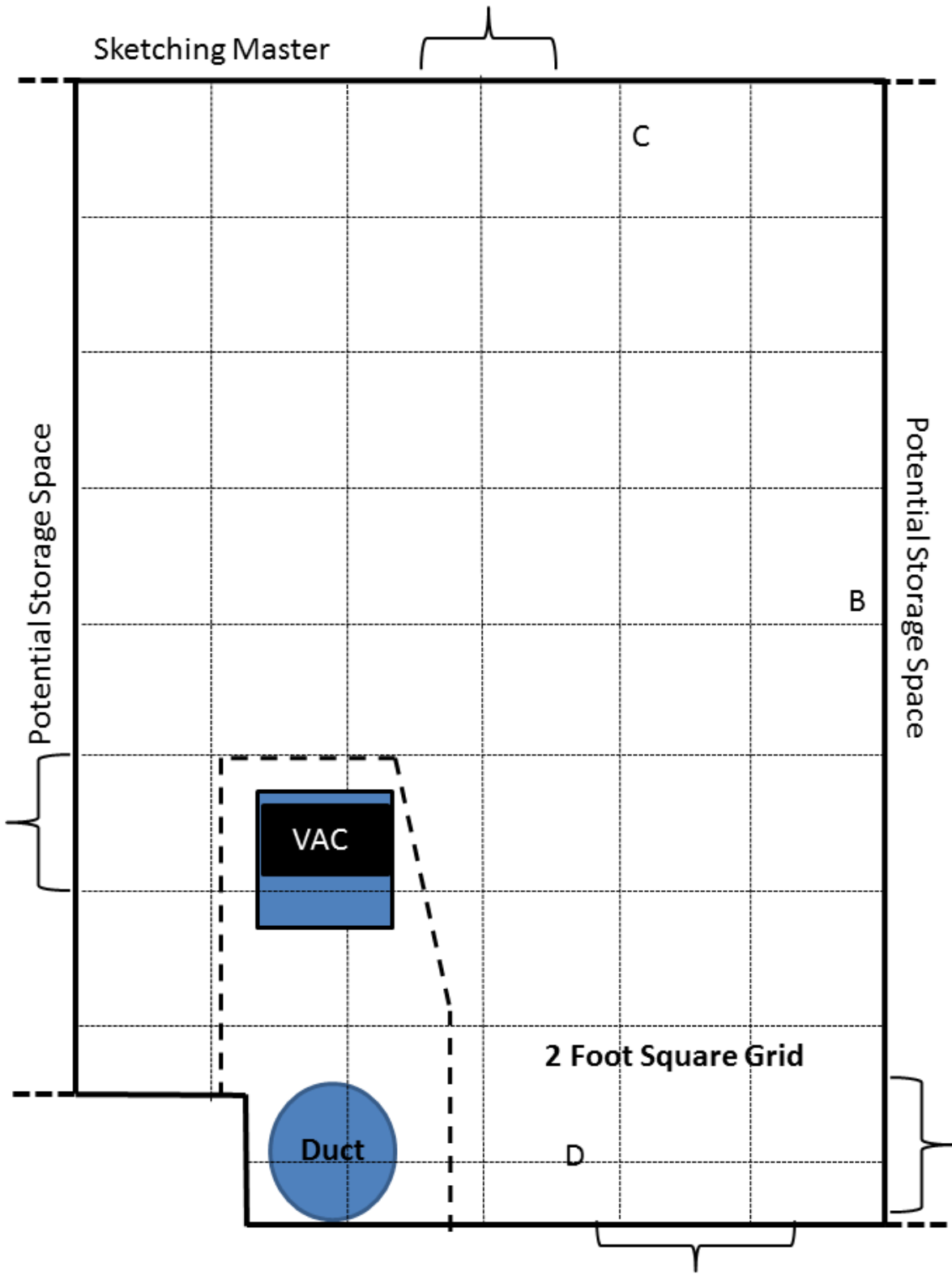
Two Potential
Entry Points:
One Will Be
Selected

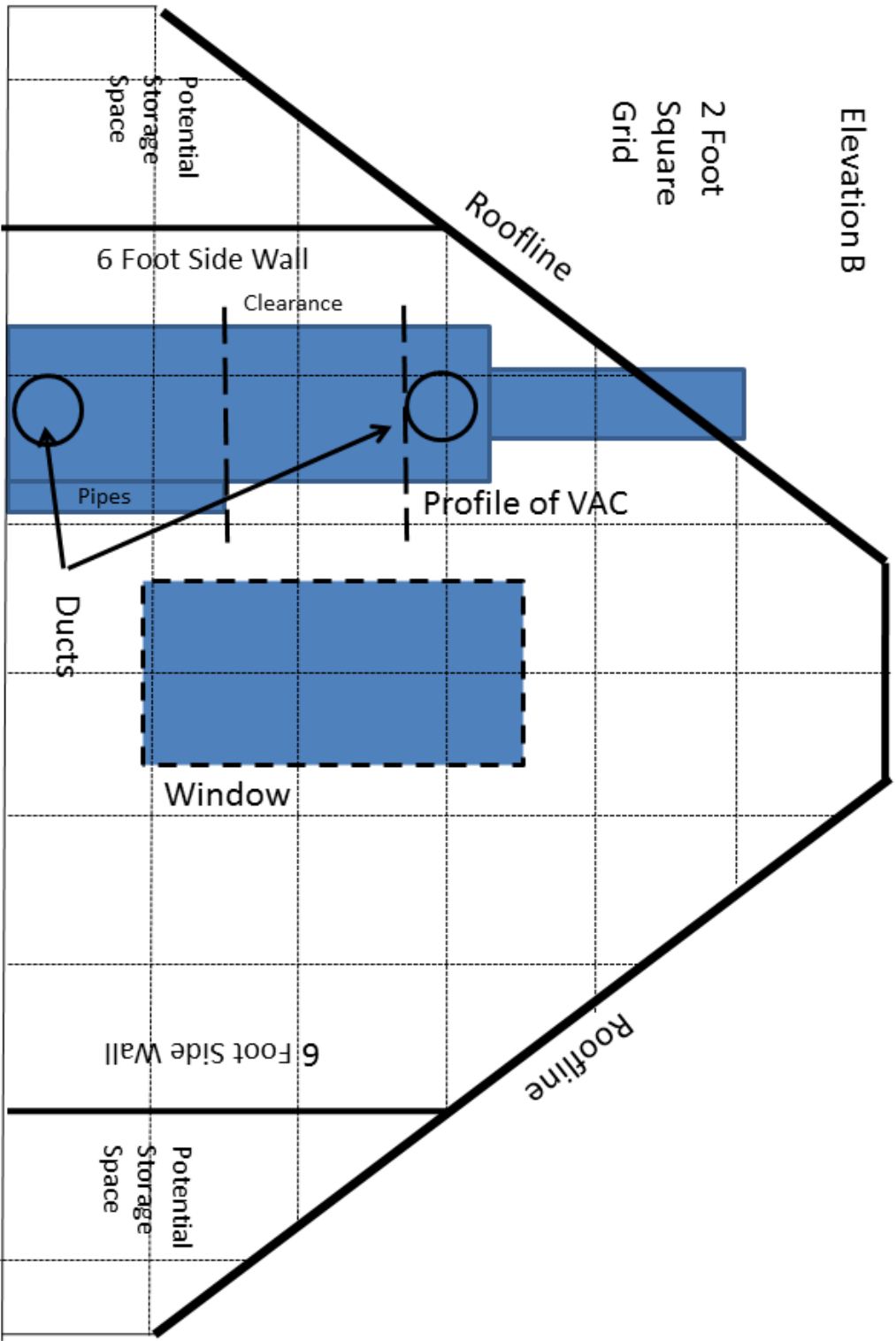


Duct

D

C





Elevation A

2 Foot
Square
Grid

