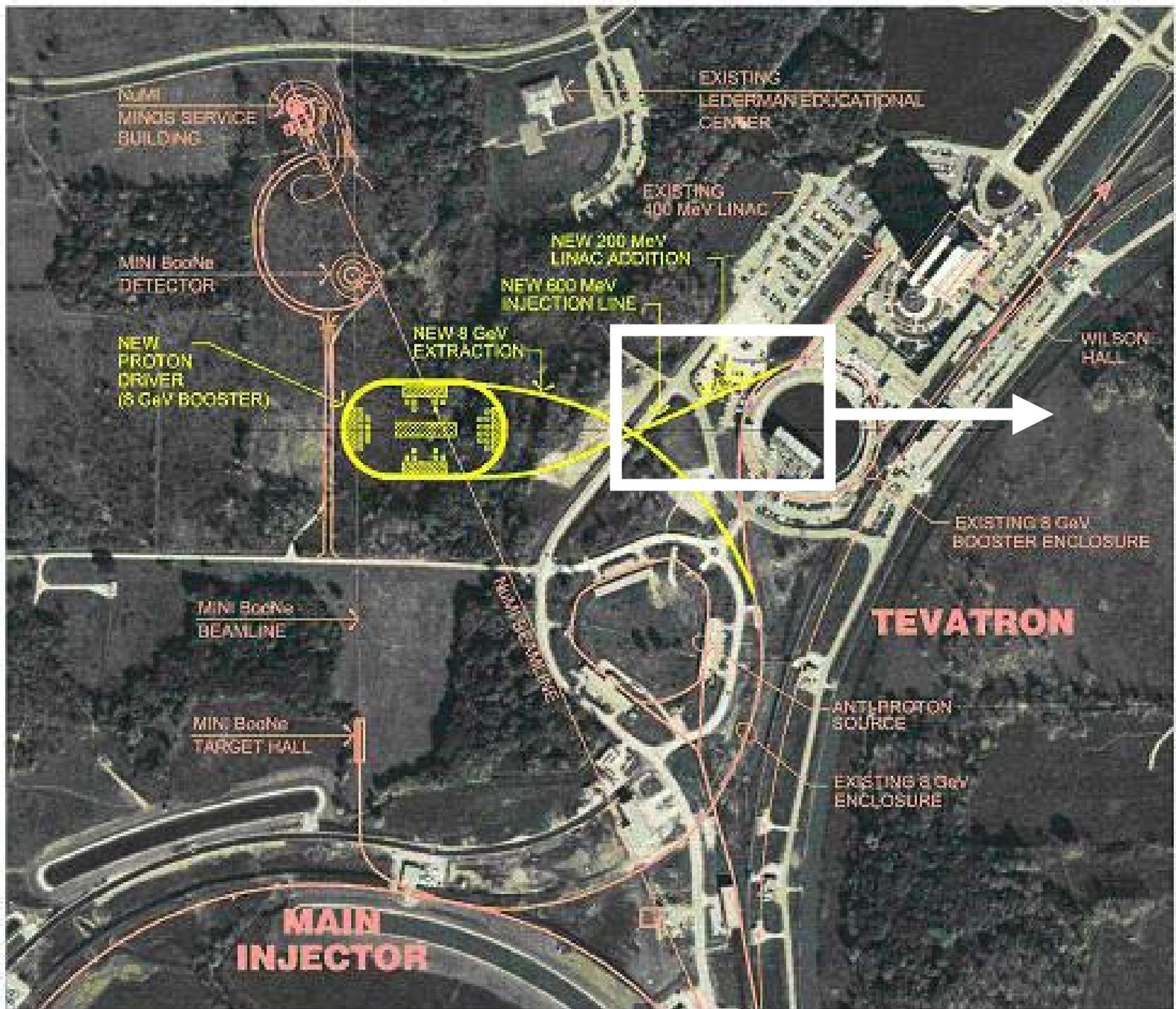
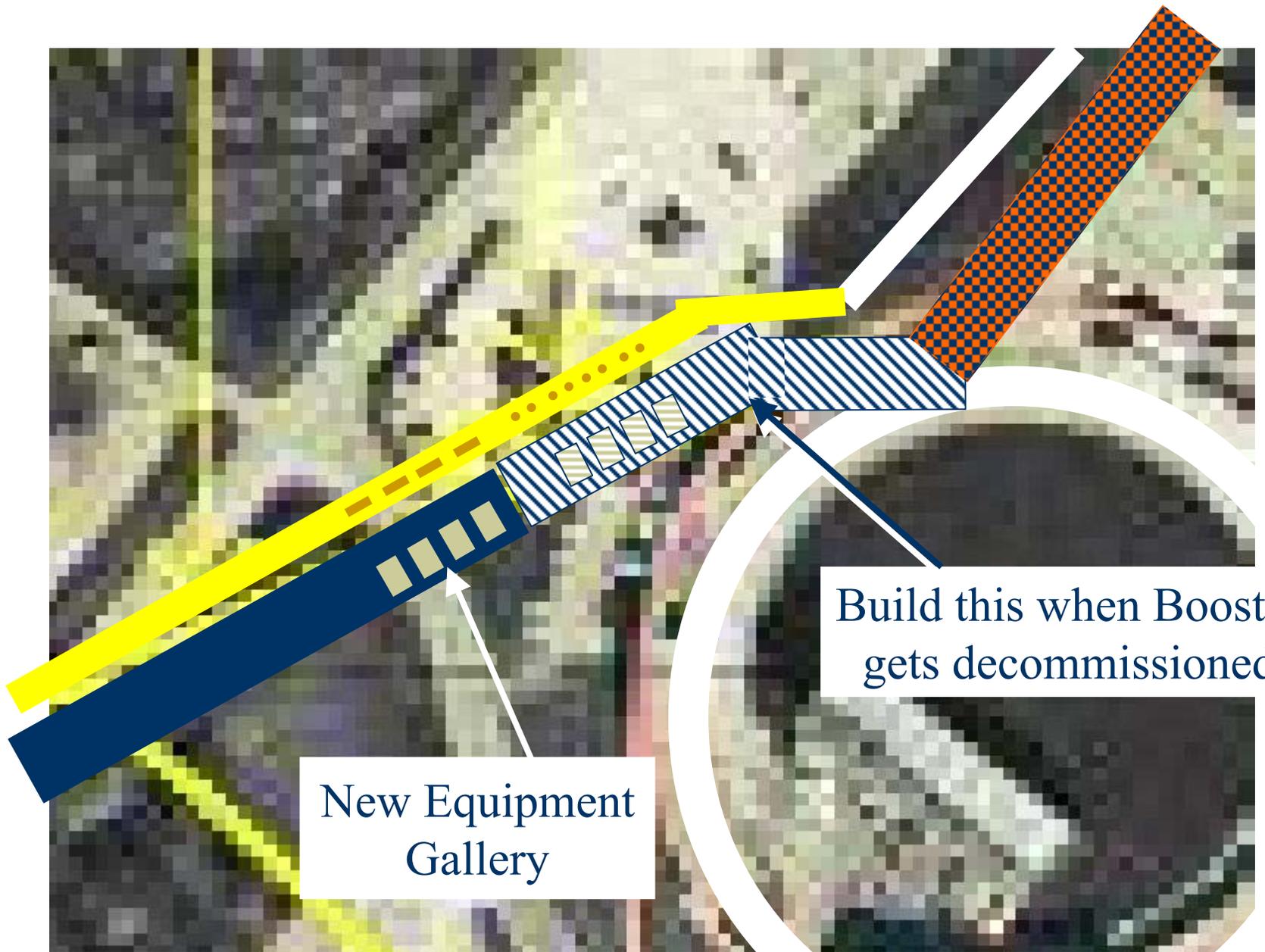


# Civil Construction Issues in PD2 Linac Upgrade

Elliott McCrory, *et al.*

March 21, 2002





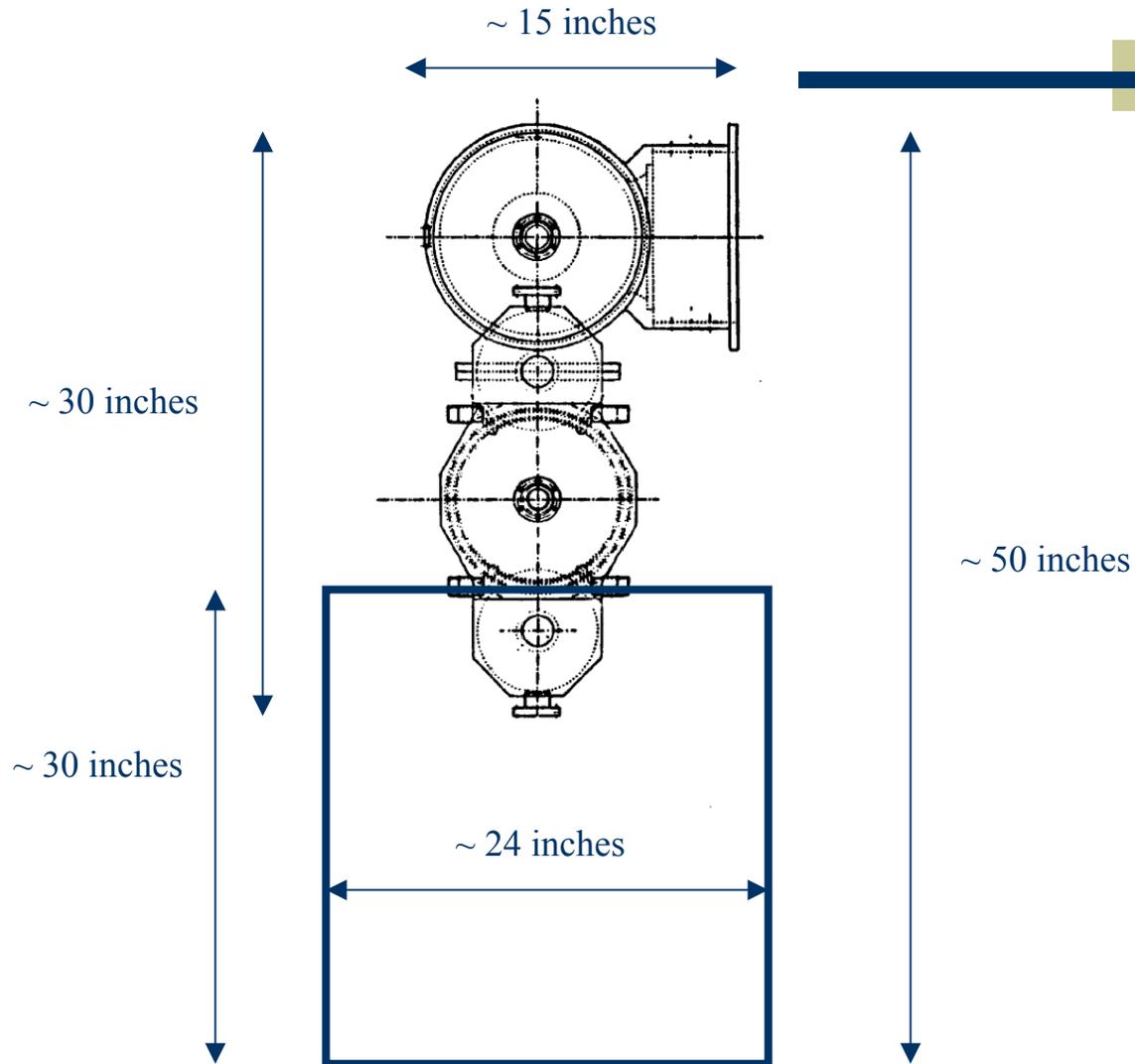
New Equipment  
Gallery

Build this when Booster  
gets decommissioned

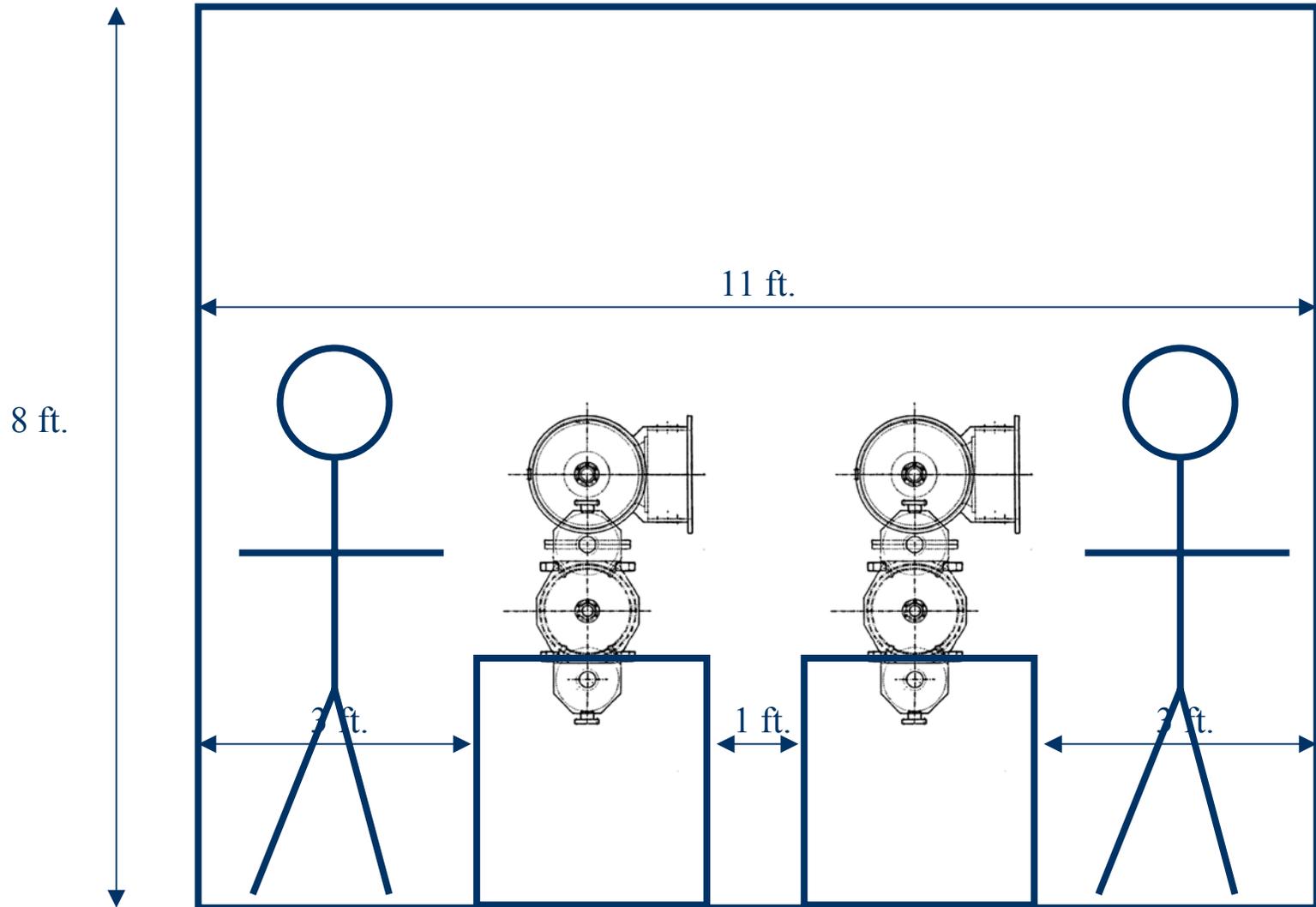
# Sighting Issues

- ◆ New equipment gallery cannot invade Booster shielding
  - Or new Linac shielding
- ◆ Need an 805 MHz buncher cavity about every 30 meters in injection line
- ◆ Put the Klystrons as close to cavities as possible
  - Will put the four new cavities fairly far down the injection line.
  - Can move these up if/when there is an energy upgrade

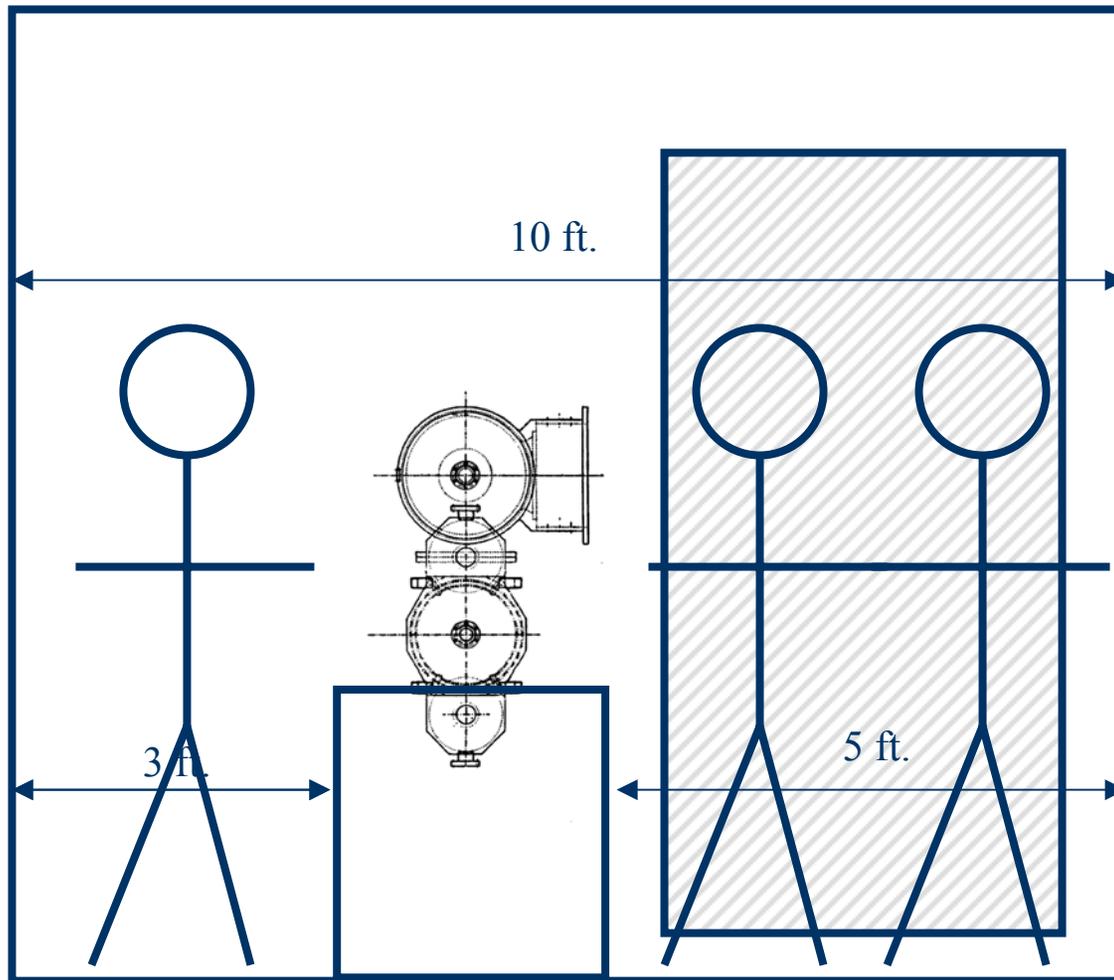
# Size of a Side-Coupled Module



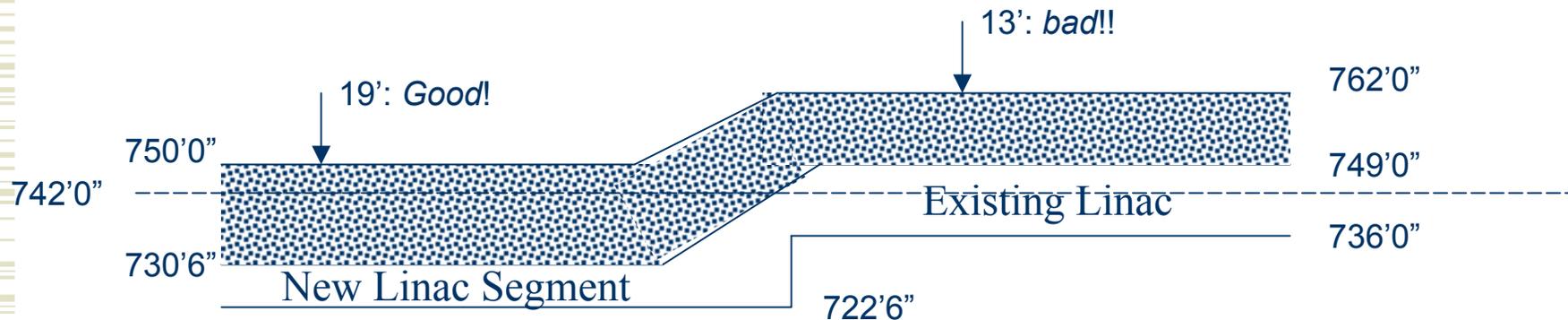
# Size of the Tunnel?



# With an Unknown Thing Down The Side



# Depth of Linac Upgrade Segment



8-foot berm (approx) above grade.  
*Steel is three times better than dirt.*

# Other Shielding Issues (M.F.)

- ◆ Low-energy end
  - X-Rays from any new RFQ will require new enclosure around it
  - Backscattering of neutrons must be reduced from present levels
- ◆ 400 MeV Labyrinth
  - Must make the bend to the new Linac section very cleanly
- ◆ Electronic protection of transfer line
- ◆ More dirt on new Linac section enclosure!