



# Status of Proposal for New C/C Investigation

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# Charge

- Produce a comprehensive study that defines the **civil construction** of a Linear Accelerator constructed near the surface of the earth so that the Area systems can evaluate the overall value as compared to the civil construction defined in the RDR baseline.

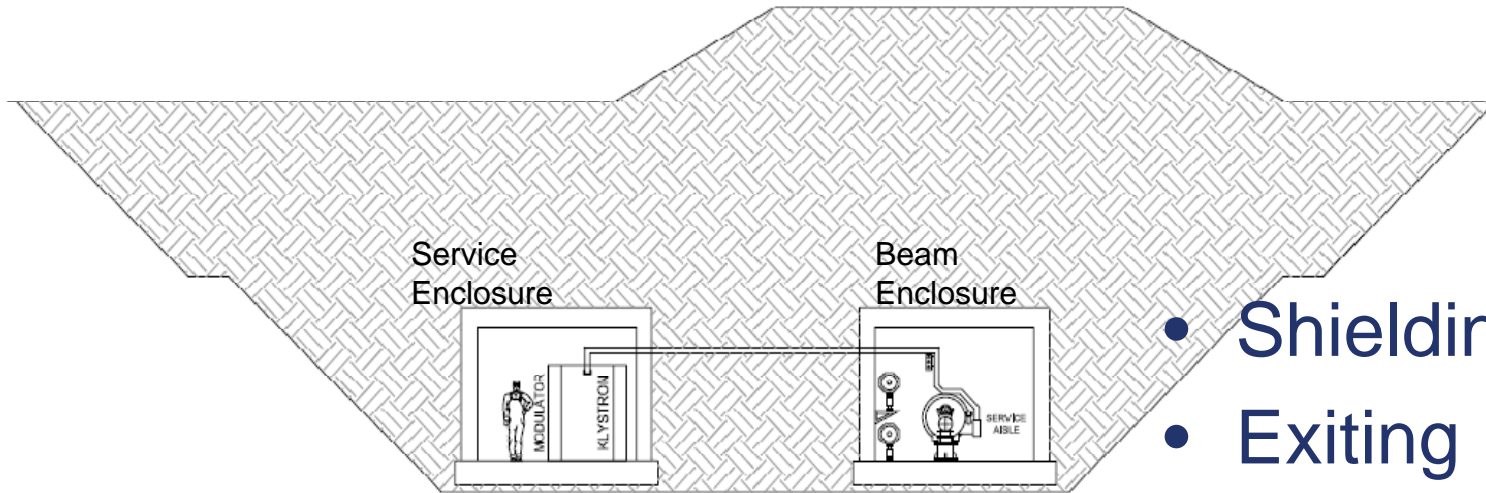


# RFP Tasks

- Phase 1
  - **Develop various design solutions for an ideal site; evaluate the various designs with the stakeholders to determine the best value solution.**
- Phase 2
  - **Generate a complete cost estimate that can be compared to the RDR estimate.**
- Phase 3
  - **For identified sites, determine cost impacts to construct.**



- Current Baseline

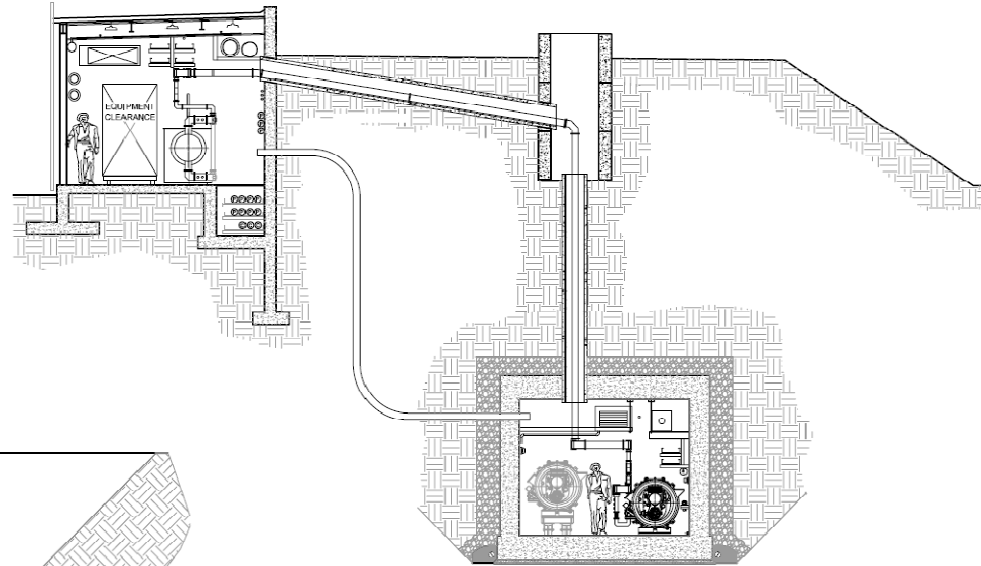
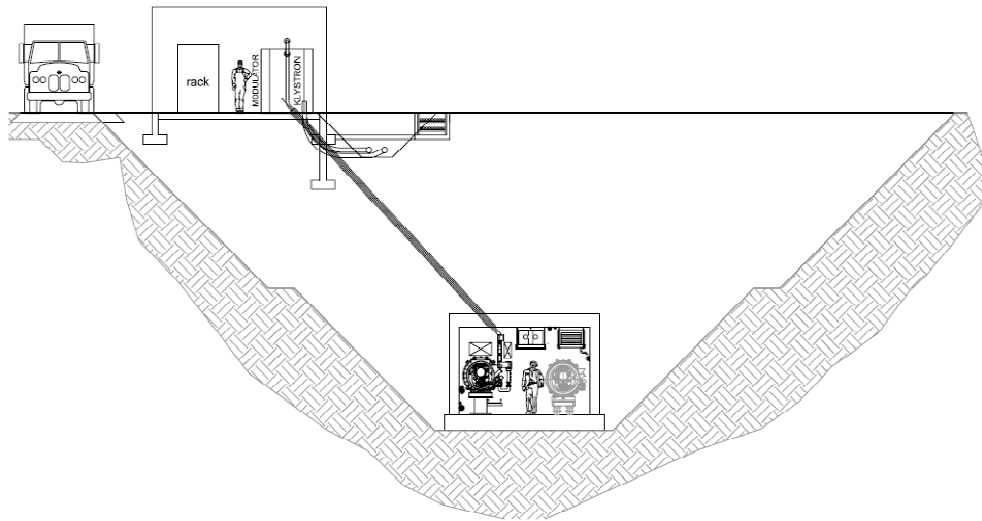


- Twin Enclosure- Layout- Contents of each tunnel same as RDR

- Shielding
- Exiting
- Stability
- Balanced cut and fill
- Installation
- Environmental



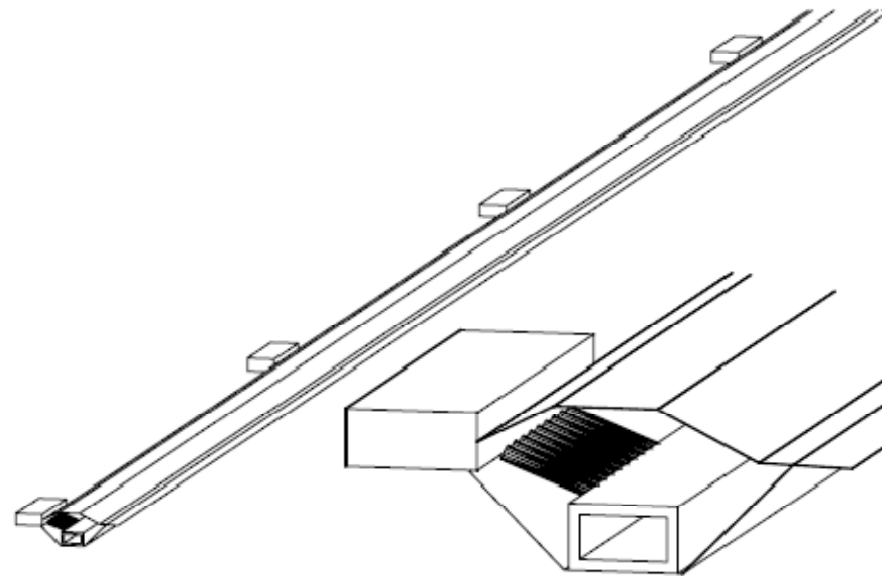
- Shielding
- Waveguide Penetrations
- Up to ~40' depth



Continuous Surface  
Gallery – Beam enclosure  
has same contents as RDR  
Beam Tunnel- Surface galley  
same as Service Tunnel



- Shielding
- Service Building Spacing
- Service Building equipment layout

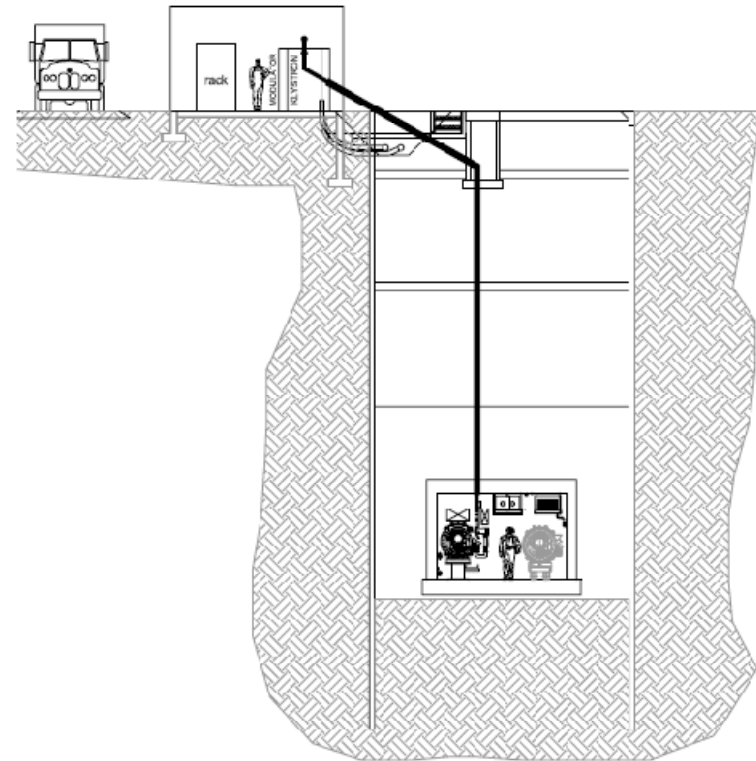


- Spaced Service Buildings
  - **Klystrons, Magnets and Cavities in Beam Enclosure**



- Intermediate Depth Enclosure
- ~40' to 80'

- Braced Sheet Pile Wall
- Braced Slurry Wall
- Tie Back Systems
- Waveguide Length





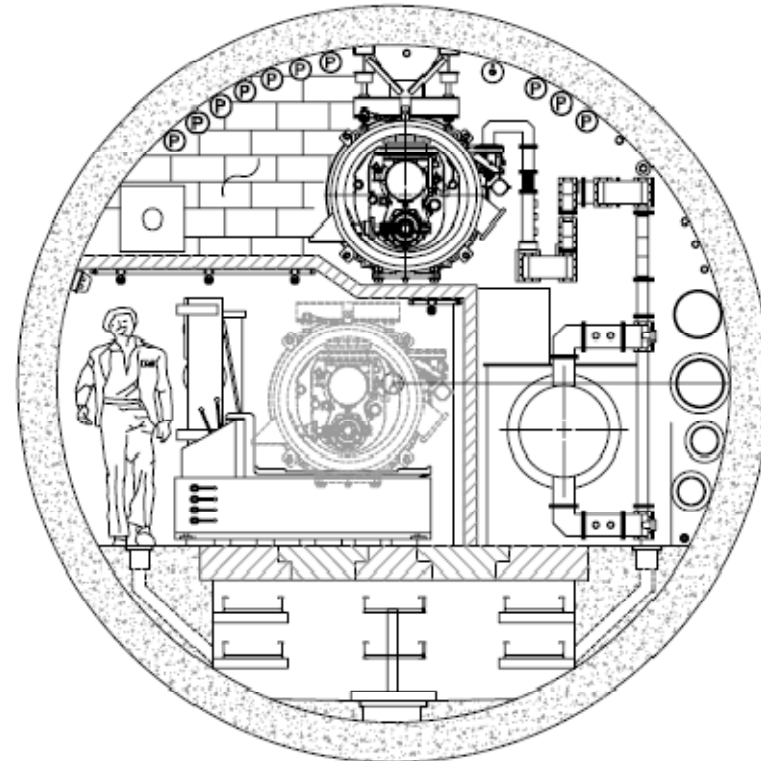


- **Soft, Mixed Face or Rock Twin Tunnels**
  - **Similar to RDR baseline**
  - **for use at depths > 80'**



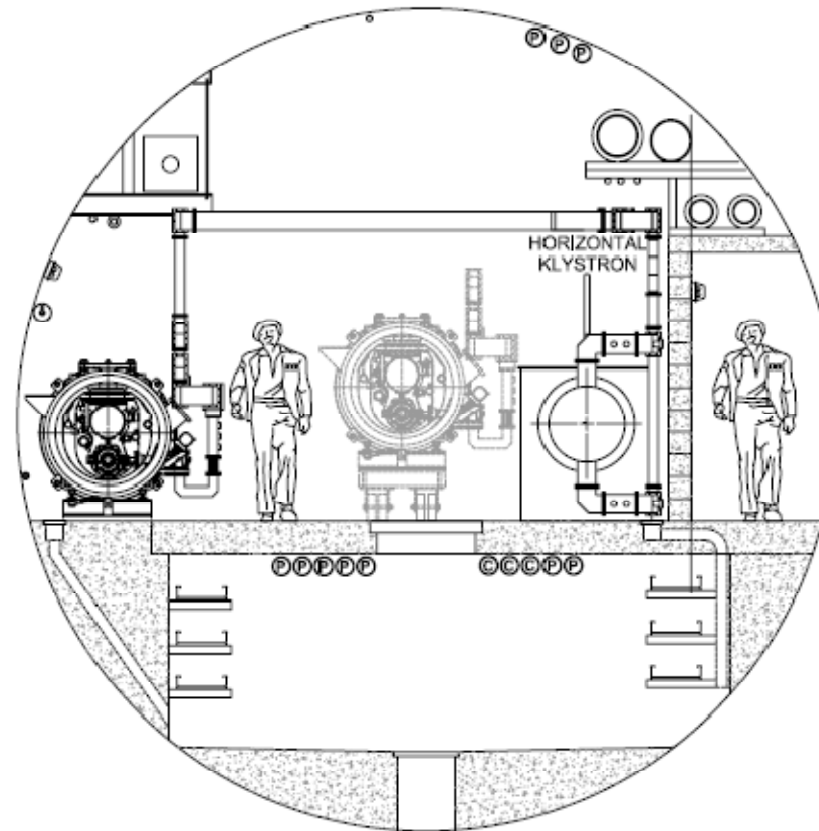


- Single Tunnel – tight configuration





- Single Tunnel – Spacious Configuration





# Proposal Status

- RFP Just Received
- Starting work on existing support task that is already in place.
- Total level of effort (Hanson, Primera and Fermi) assumed to be equal to previous studies, per Tomski.
- Work must be defensible and above reproach
  - **Designs accepted by stakeholders**
  - **Designs Valued Engineered**
  - **Costs substantiated with backup**



## CF&S only part of answer

- While discussions of the near surface design has focused on the Conventional Facilities, the impacts, both positive and negative, must be evaluated project wide.
  - **Stability**
  - **Installation**
  - **Cryo**
  - **Waveguide Length**
  - **Equipment Access**