Civil Engineering, Infrastructure & Siting (CEIS) Working Group Introduction

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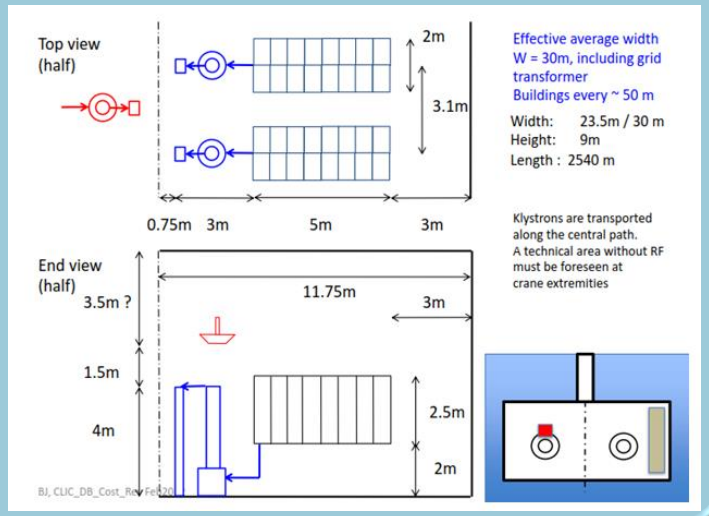
PBS and PiP Status Update

- Integration Drawings and Drive Beam Injector Building Layout.
- 380 GeV Klystron option to 3 TeV Upgrade option.
- PiP Update

Civil Engineering & CV Integration – Drive Beam Option

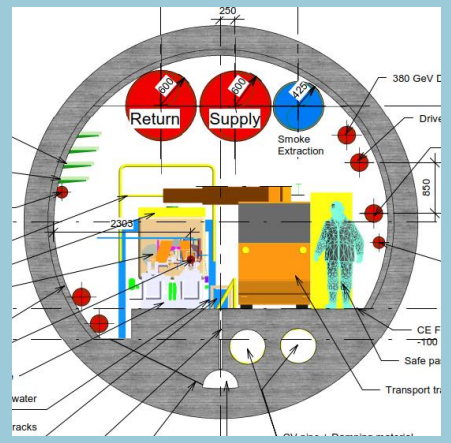
Drive Beam Option

- Layout of drive beam building based on this information taken from CDR (Bernard).
- Length of one "container" is 11.75m
- Height of 9m. Is this excessive or correct



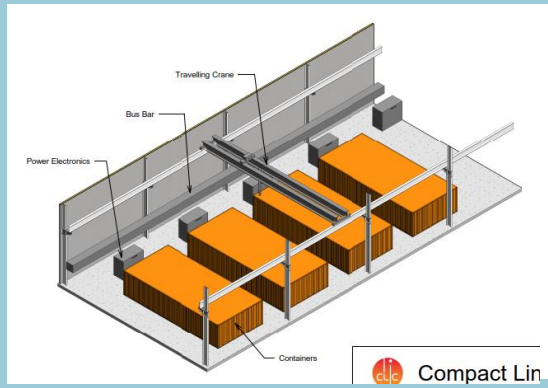
Drive Beam Option

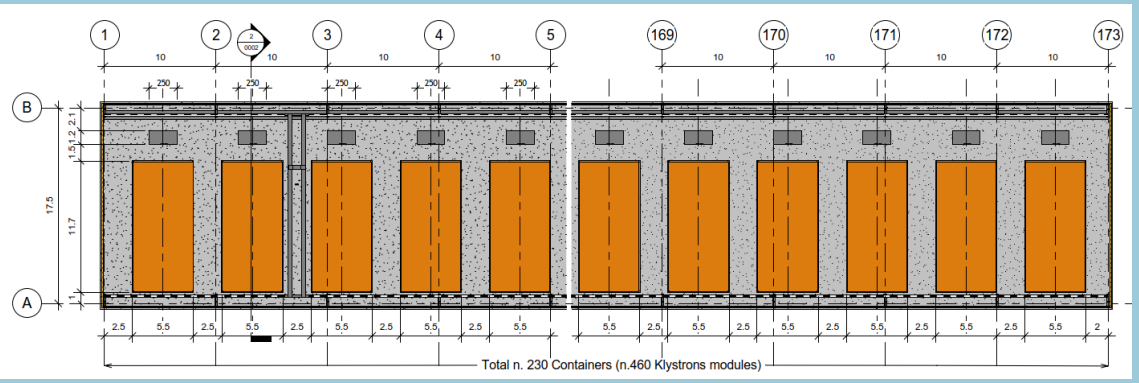
- Integration of smoke extraction ducts now incorporated
- Exact location of drive beam/main beam pipes still to be considered.



Drive Beam Option

- At the moment minimal space for transportation (1.5m width) – is this enough?
- Access stairwell located every 200m
- Intermediate requirements for building access etc…?

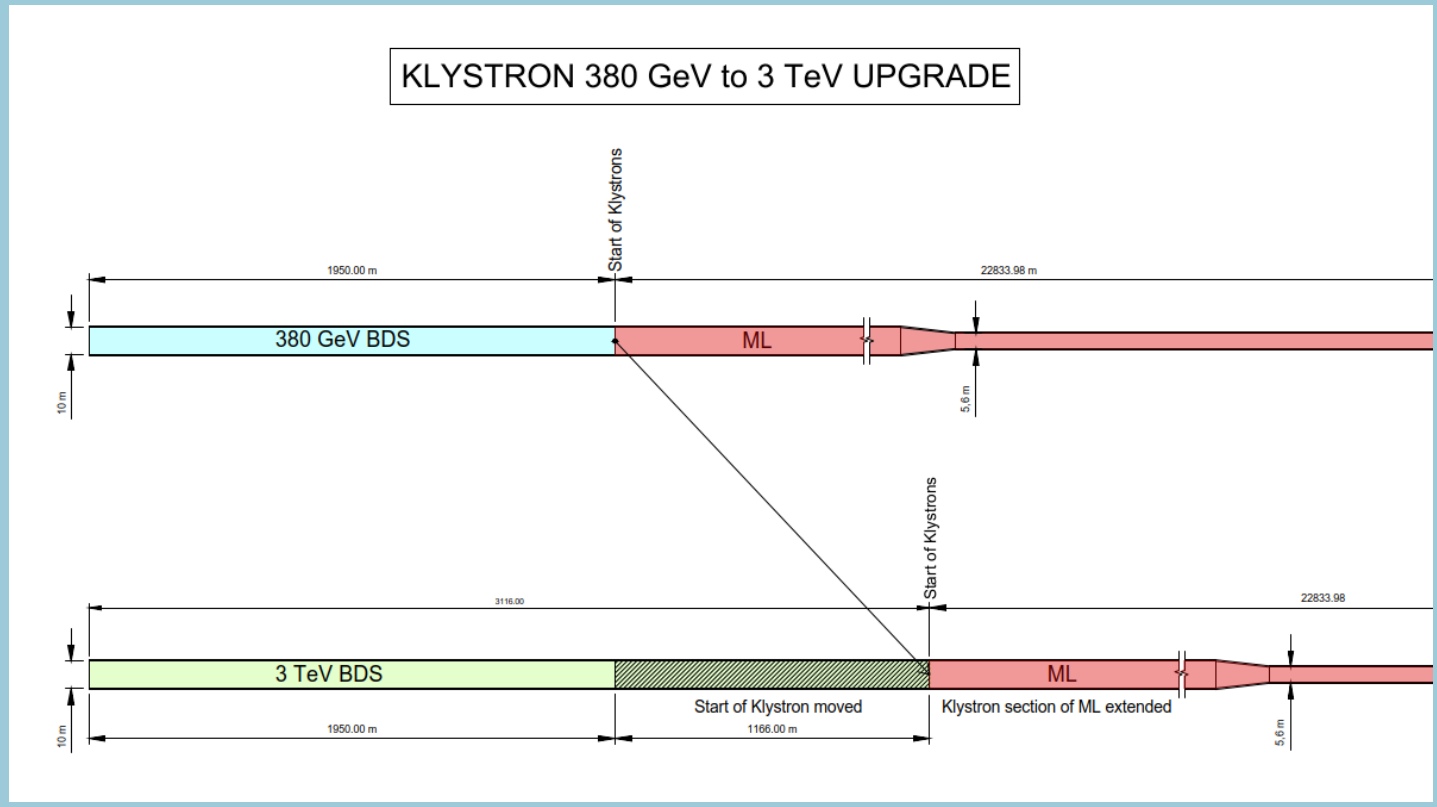




Civil Engineering – Klystron Option Upgrade

Klystron Option with upgrade

- Current proposal is for a 380 GeV Klystron option with possible upgrade scenarios using drive beam technology.
- The BDS length would have to increase in length (1166m) Therefore Klystrons have to be relocated.
- This requires an increase in length of the 10m diameter tunnel by the same amount.
- Transition requirements from Klystron to drive beam unknown. Tunnel dimensions for transition?



Project Implementation Plan Summary

Chapter	Discipline	Pages	Comments	Responsible person	PiP Status		Cost Status	
CEIS								
	Civ. Eng	5/5	Pages increased to 5 for CE	John Osborne/Matt Stuart	First draft completed	☺☺	First Estimate	☺
	Electicity supply	5/3		Davide Bozzini	First draft completed	☺☺	First Estimate	☺
	CV	4/3		Mauro Nonis	First draft completed	☺☺	Not Received	☹
	Transport and Installation	4/3		Ingo Ruehl/Michael Czech	First draft completed	☺☺	First Estimate	☺
	Safety systems	4/3	incl. enviroment and access	Simon Marsh	First draft completed	☺☺	Not Received	☹
	Radiation studies	3/3		Markus Widorski	First draft completed	☺☺	**N/A**	
	Cryo	0/3	in case of SC solenoid, check	Dimitri Delikaris	NA		N/A	

Total Pages: 25

Project Implementation Plan (PiP) Produced for ESU.

- 25 page document compiled and reviewed.
- Final edit of the document to be completed by the end of September.
- Cost Estimates for most disciplines completed.
    - Still waiting for CV and Safety.
- First draft of PBS completed

Project Implementation Plan Summary

Future Study:

- Still some Work on integration of the CV ducts required.
- RP parameters defined, shielding wall thickness and local protection still to be determined.
- Smoke extraction Integration started – still needs completing.

Summary:

- PiP First draft completed and sent to reviewers.
- Next PBS review will be in October (exact date TBC) – Official reviewers to be present
- Still require costs from some disciplines.
- Next CEIS Meeting on the 05th of October 2018