

# The Long Down

## Scope of Work Sketch

### Facilities Management

- Install electrical tie line from 22 MVA to 40MVA substation
- Clean CHL 1 process cooling piping
- Replace tunnel dehumidifiers
- Extension of building 68 (Tentative)
- Perform Hall A penetration for ESR II
- Replace MCC roof and HVAC systems
- Upgrade Test Lab roof
- Expand injector test cave (Tentative)
- Counting house sustainability improvements
- Renovate truck ramp flood gates for FEL and Halls

### Hall A

- Perform arc magnet mapping (ENG)
- Upgrade Compton Polarimeter
- Upgrade Moeller Polarimeter
- Remove G2P
- Install First Experiment (Apex or A1N)
- Install Cryogenic Moeller
- Perform Radiation Hardening
- Upgrade Cryogenics
- Install/Modify Detector Systems
- Commissioning

### Hall B

- Disassemble and remove CLAS
- CLAS12
  - Assemble torus
  - Install new cryogenic distribution system
  - Modify space frame level 1
  - Modify forward carriage
  - Install new tagger window
  - Upgrade beamline
  - Install hardware for DAQ
  - Install central detector
  - Install drift chambers
  - Install high threshold CC
  - Install forward carriage detector packages
  - Commissioning

### Accelerator Software

- Full integration of the C100 into the high level apps
- Rewrite of lock servers
- Ongoing development and support for the CED
- Develop infrastructure to replace CDEV servers

### EHS&Q

- Support 12 GeV & ongoing program
- Support TEDF transition to operations.

### Free Electron Laser\*

- Upgrade Injector
- Upgrade Cryomodule
- Construct Booster based on new design  
*(prefer to remain in operation if possible)*  
*\* Contingent on funding*

### Information Technology

- Design and Deploy Hall Remote Access System

### Hall C

- SHMS concrete shield house construction
- Decommission and remove Qweak
- Repair A-can leak or replace with C-can
- SHMS rail section installation and alignment
- SHMS carriage installation
- SHMS concrete shield house construction
- Magnet, power supply and control installation
- Shield house installation preparation
- Detector Installation and testing
- Commissioning

### Accelerator w/ Engineering Support

- Upgrade injector
- Prep for cryomodule installation
- Install 5 cryomodules in north linac
- Install 3 cryomodules in south linac
- Arc 1 magnet upgrade
- Arc 3 magnet upgrade
- Prep, install and commission 5 spreader / recombiners
- Install and commission the arc-10 connect
- Install and commission Hall D tagger/transport
- Install new box power supplies
- Recondition central helium liquefier 1
- Complete commissioning of central helium liquefier 2

### Hall D

- Downstream platform track install
- Upgrade solenoid controls
- Install solenoid yoke 1 baffle stiffeners
- Install air line
- Modify PS mag pole
- Install cladding
- Install tagger magnet gantry
- Paint solenoid
- Install Tagger stands
- Complete Hall D LCW
- Install Tagger LCW manifold
- Assemble downstream carriage
- Install solenoid platform
- Install racks in Counting House
- Install collimator shielding
- Install BCAL rails into solenoid
- Assemble BCAL light guide/readout
- Install PS magnet
- Stack FCAL blocks
- Install gas system
- Assemble BCAL wedge
- Fabricate/test thin window tagger
- Install racks in Hall D
- Commissioning