



WBS 121.5 – Conventional Facilities

Management

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PIP-II Director's Review

10-12 October 2017

In partnership with:

India Institutes Fermilab Collaboration

Istituto Nazionale di Fisica Nucleare

Science and Technology Facilities Council

Outline

- Conventional Facilities Management

Charge 3:

Is the project being appropriately managed? Are the management structure and resources adequate to produce a credible technical, cost and schedule baseline?

Conventional Facilities Management Structure

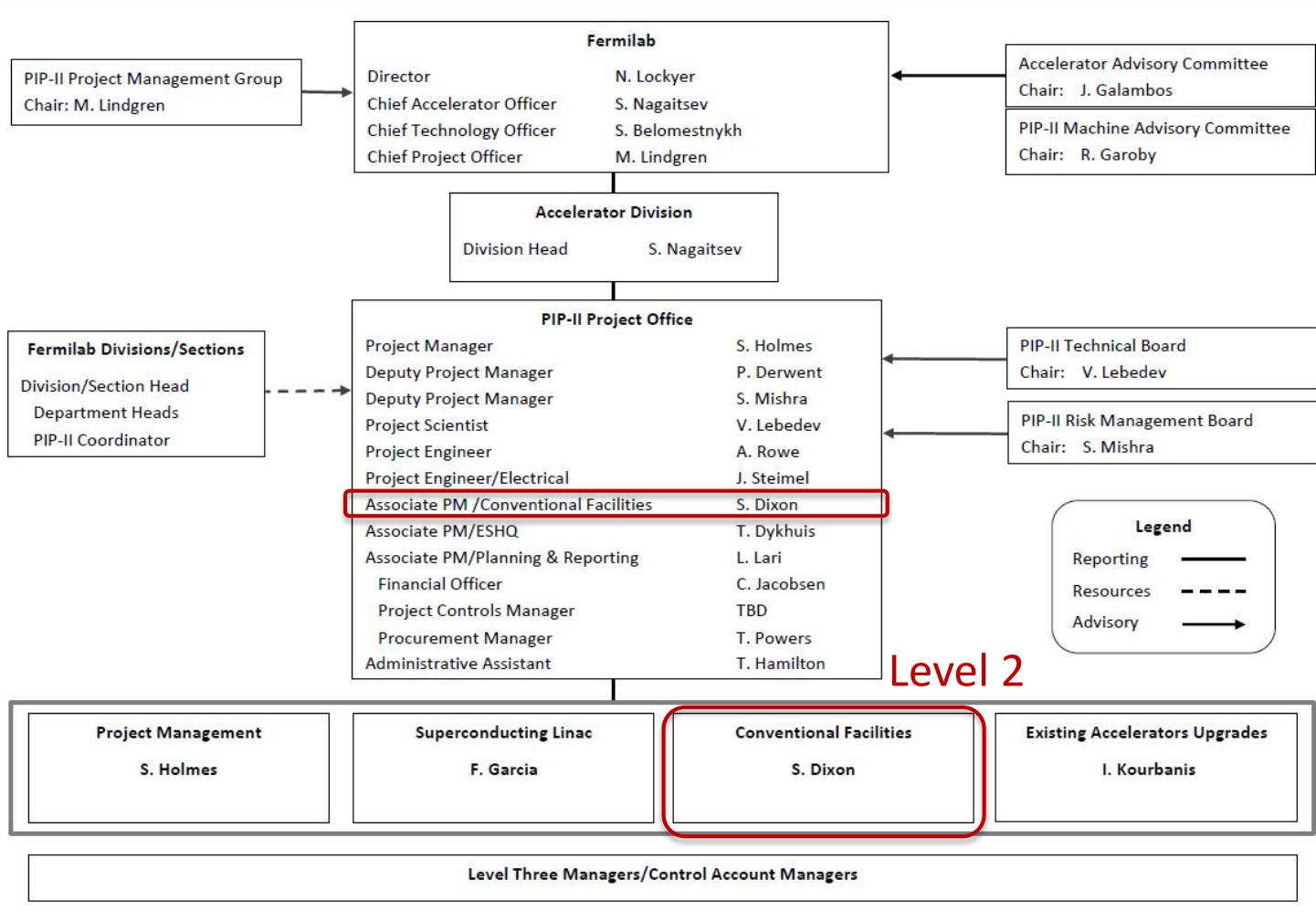
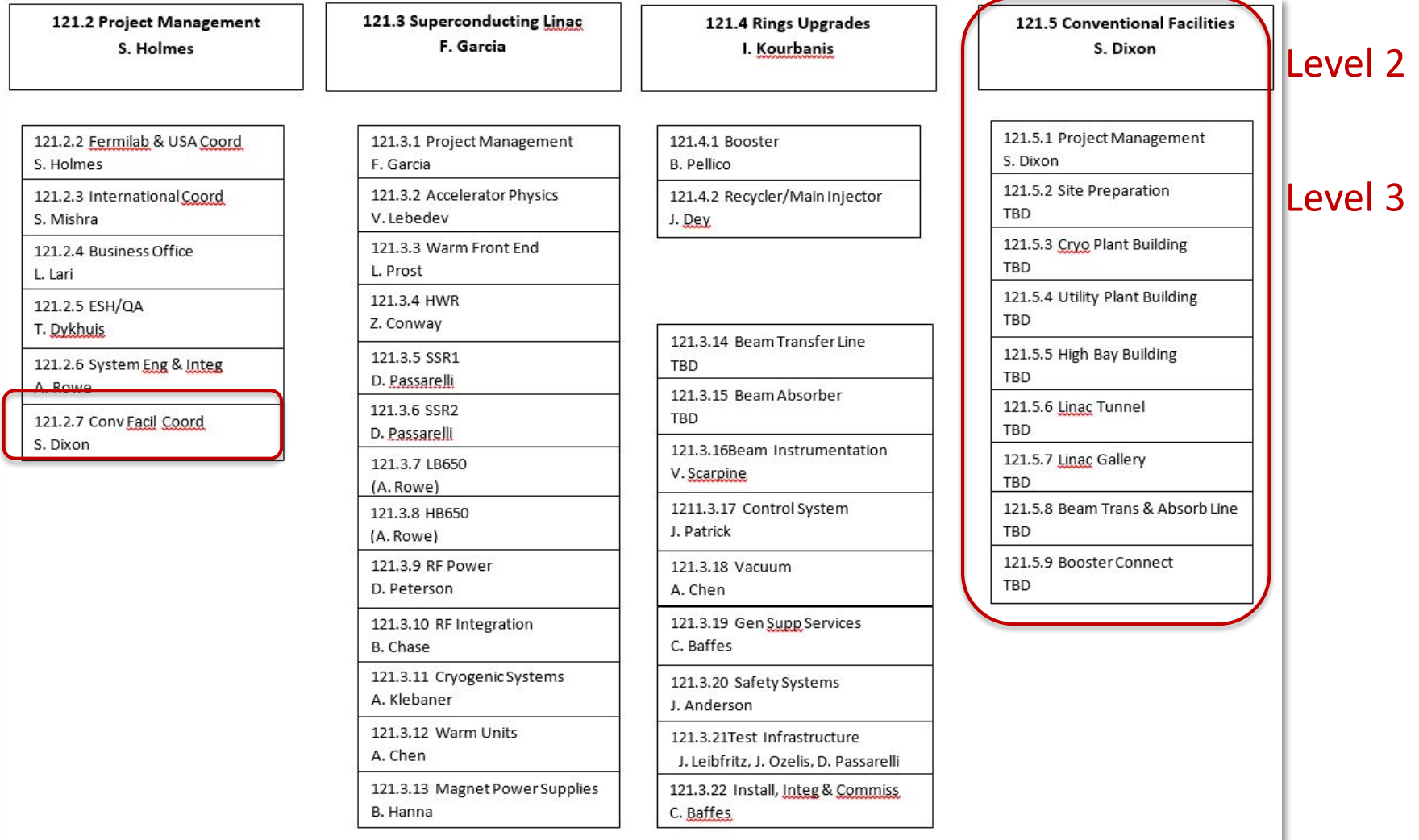


Chart from PIP-II-doc-118, PIP-II Management Roles, Responsibilities, Authorities, and Accountabilities

Conventional Facilities Management Structure



Conventional Facilities Management Structure

PIP-II Associate Project Manager for Civil Construction

Authority and responsibility for organization and management of all civil construction activities on PIP-II. Specific responsibilities include:

- Develop design criteria for all conventional facilities in collaboration with the Project Engineer and Deputy PM for Development and Accelerator Integration;
- Develop the PIP-II construction package strategy;
- Develop PIP-II civil construction cost estimates and schedules;
- Provide coordination of Architectural Engineering firm(s) engaged in the development of conventional construction drawings and specifications;
- Review and approve all PIP-II construction drawings, specifications, estimates, and schedules;
- Review and approve all PIP-II construction contracts;
- Provide coordination of Construction Management firm(s) engaged in the physical construction of PIP-II ;
- Monitor construction, cost, and schedule progress on all PIP-II construction contracts;
- Provide documentation of the above, as required.

Accountable to: Fermilab PIP-II Project Manager

From **PIP-II-doc-118**, *PIP-II Management Roles, Responsibilities, Authorities, and Accountabilities*

Conventional Facilities Management Structure

Level Three Managers/Control Account Managers

It is anticipated that for each major effort a single person will play the dual roles of L3M and CAM, with a primary responsibility for organizing and executing the development and construction activities at the major subsystem level. Specifically:

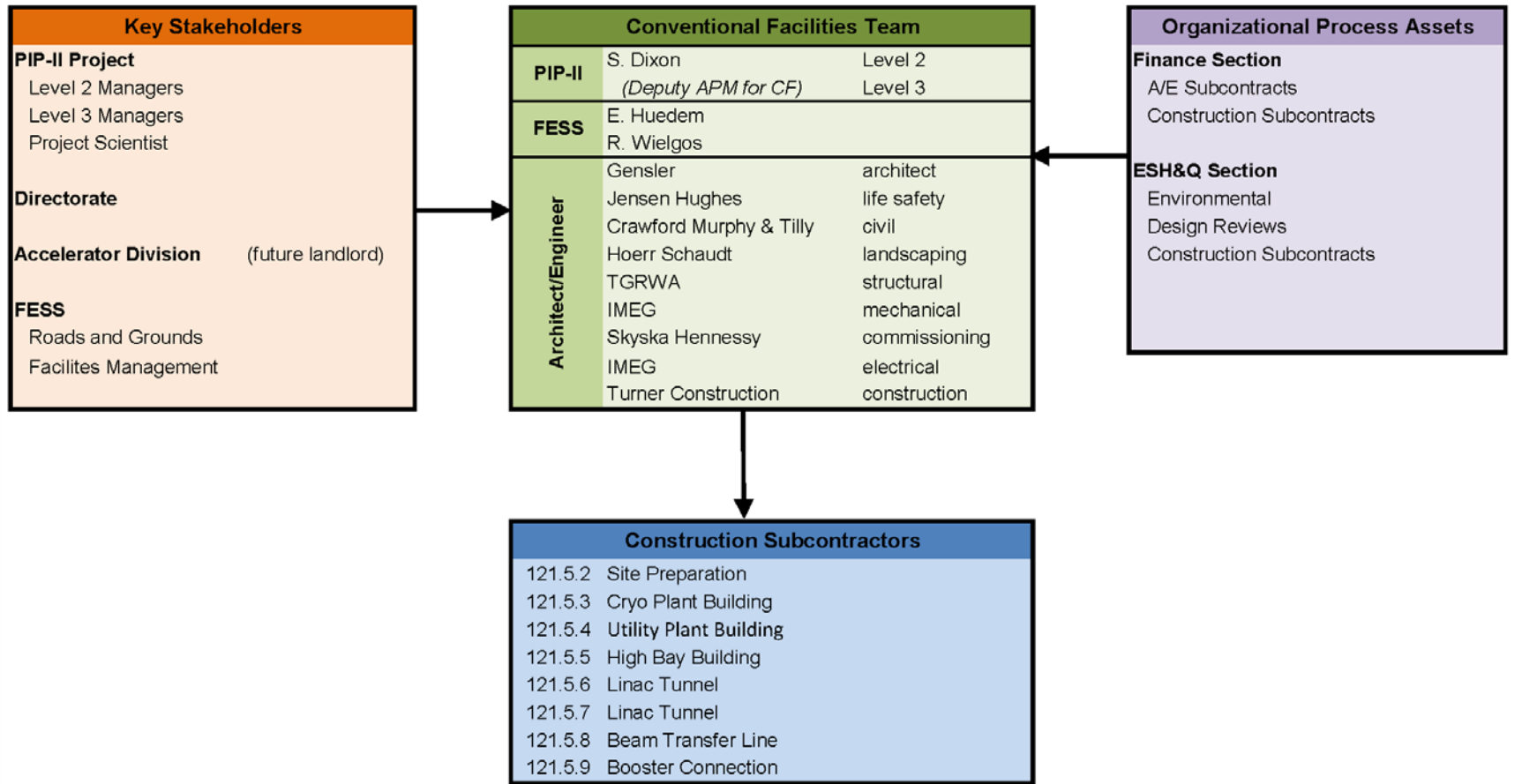
- Level Three Manager: Organizes and executes work at level three of the PIP-II Work Breakdown Structure. This includes planning, budgeting, scheduling, developing resource estimates, tracking and reporting progress against technical, cost, and schedule goals.
- Control Account Manager: Manages the work within the proscribed Earned Value Management System (EVMS) framework.

In addition a subset of these positions will carry responsibilities as the Sub-project Manager within the Indian Institutions Fermilab Collaboration. The SPMs are responsible for coordinating work with his/her International counterpart.

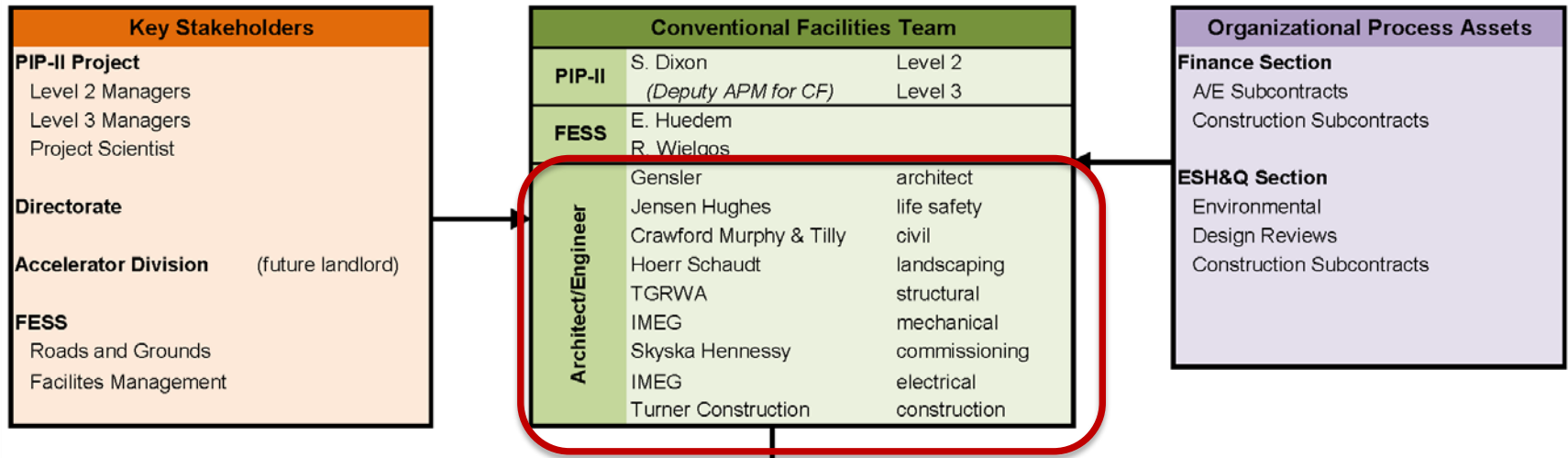
Accountable to: Level Two Manager; Divisional PIP-II Coordinator

From **PIP-II-doc-118**, *PIP-II Management Roles, Responsibilities, Authorities, and Accountabilities*

Conventional Facilities Team



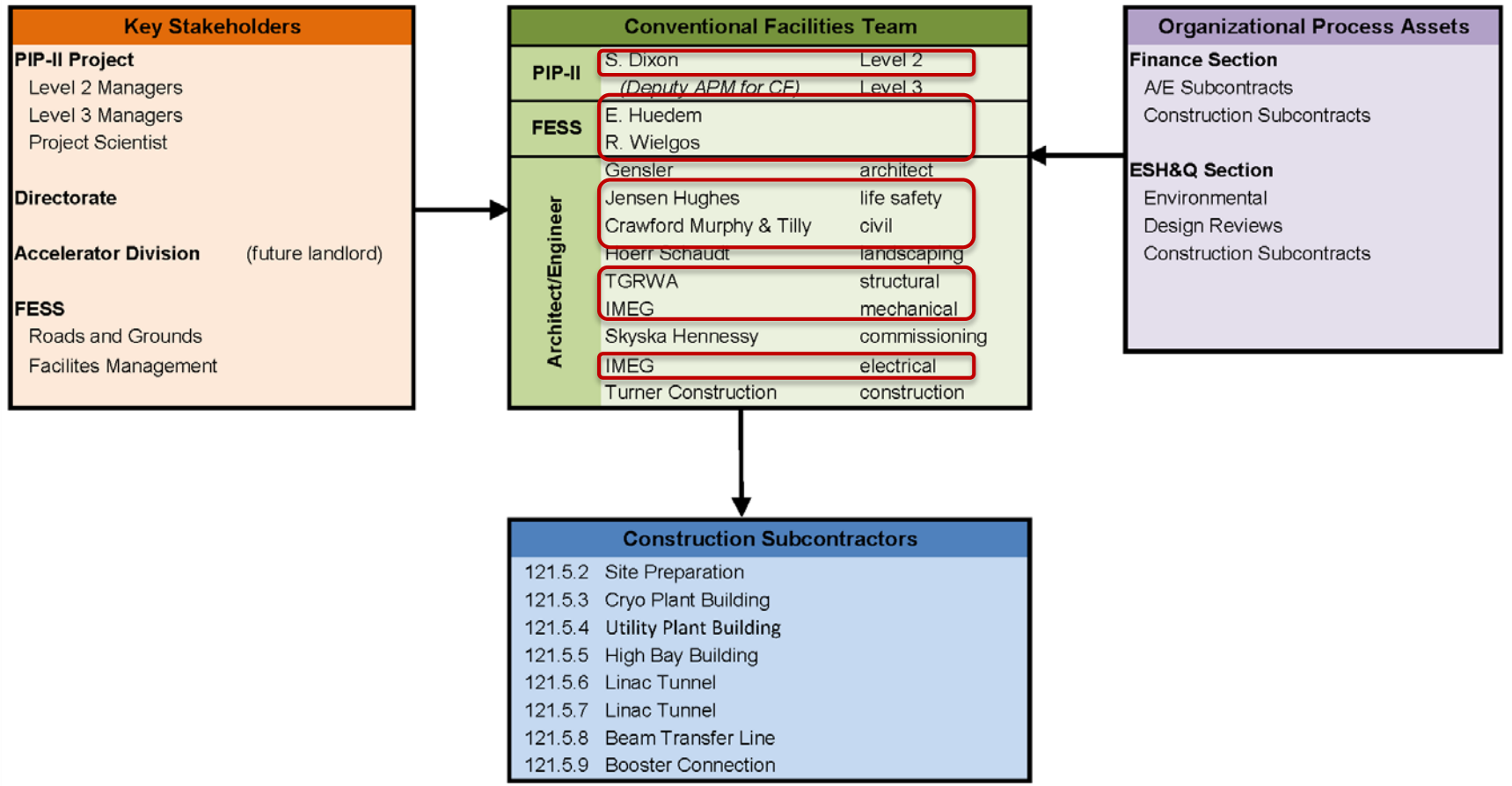
Conventional Facilities Team



- A/E team selected in February 2017;
- Utilized standard Finance/Procurement procedures;
- Selection Panel included PIP-II, Procurement, Engineering and ESH&Q representatives;
- Selected for Preliminary Design, Final Design and Construction Phase support;

Construction Subcontractors	
121.5.1	Cryo Plant Building
121.5.2	High Bay Building
121.5.3	Linac Tunnel
121.5.4	Beam Transfer Line
121.5.5	High Bay Building
121.5.6	Linac Tunnel
121.5.7	Beam Transfer Line
121.5.8	Beam Transfer Line

Conventional Facilities Team



- Previous experience at Fermilab shown in red
- Consultants with previous experience make up ~85% of project scope

Approach

- Broken the work into reasonable work packages;
 - Assumes funding will be available over a number of FYs;
 - Construction packages can be combined if funding changes;
 - Logical construction sequence;

Construction Subcontractors	
121.5.2	Site Preparation
121.5.3	Cryo Plant Building
121.5.4	Utility Plant Building
121.5.5	High Bay Building
121.5.6	Linac Tunnel
121.5.7	Linac Tunnel
121.5.8	Beam Transfer Line
121.5.9	Booster Connection

Approach

- “Design-bid-build” for construction packages;
 - Standard Fermilab procurement methods and requirements;
- *“Conventional Facilities construction will primarily be accomplished through a number of competitively solicited, fixed price construction packages in order to achieve best value procurements.” [1]*

[1] – from Section 6 of PIP-II Assumptions Document in PIP-II-doc-144

Summary

- Experienced Team with knowledge of Fermilab processes and procedures;
- Work packages are assembled in a logical manner to provided a reasonable construction sequence with flexibility built in;
- Design and Construction approach is based on standard Fermilab procurements with the alternate methods available if needed;
- Management team is ready for CD-1 approval.

Questions