

Master Planning Task Force

April 26, 2011

Members

P Pier Oddone	A Bruce Chrisman	A Steve Holmes	P Greg Bock
A Vicky White	P Bob Kephart	P Giorgio Apollinari	P Mike Lindgren
A Roger Dixon	A Steve Wiesenthal	P Randy Ortgiesen	P Young-Kee Kim
A Patricia McBride	P Paul Czarapata	P Peter Garbincius	P Steve Dixon
P Stuart Henderson			

Guests

R. Stanek, K. Yurkewicz, V. Shiltsev, N. Grossman

A. TeVatron Decommissioning Task Force Report

R. Stanek presented the status of the TeVatron Decommissioning Task Force efforts in preparation for the S&T Review scheduled later this year (presentation is attached). The following specific items were discussed:

1. R. Stanek noted that resources required to continue the decommissioning planning effort have been identified, but that they are driven by other concerns and higher priorities. A fair amount of effort is required to complete this work in preparation for the S&T Review;
2. The funding of the decommissioning effort was discussed and it was agreed that, ideally, separate project/task codes should be established to track this effort;
3. It was agreed that the decommissioning effort should result in displays that highlights the TeVatron accelerator and detectors in a way that excites and captivates our visitors, ranging from large middle/high school students groups up to 70 people to small groups of adults. This would be done in two (2) phases. Phase 1 would be the current visitor's experience while Phase 2 could be expanded at a later date;
4. P. Garbincius commented that other laboratory's efforts could be used to inform our plans since without a long term goal in mind, the displays could end up not depictive enough;
5. K. Yurkewicz provided input from the Education Office (M. Bardeen). This included the following:
 - a. The Laboratory receives approximately 25,000 visitors per year;
 - b. The majority of student visitors occur in the Spring of the year;
 - c. Student visitors come in groups between 60-70;
 - d. The current student experience is to visit Wilson Hall including the 15th floor and the Remote Operations Center and then a tour in the Linac and Main Control Room.
 - e. The student groups include a large "Ask-A-Scientist" event in WH1West and then break into three (3) smaller groups for the remaining tours.
6. P. Garbincius noted that the most requested tour from his experience with the "Ask-A-Scientist" is to see a "real accelerator and a real detector";
7. Previous investigations indicated that the DZero detector area was not suitable for large groups of visitors. This is based on the size and configuration of the supporting space;

8. CDF has the potential to provide the visitors with a unique experience in viewing a detector and portion of the accelerator tunnel in addition to the research and development efforts associated with the Illinois Accelerator Research Center (IARC);
9. B. Kephart noted that if CDF were to be used for visitors, the existing entry would need to be modified to accommodate large groups, including accessibility concerns. The cost of these modifications needs to be understood and a funding source identified;
10. K. Yurkewicz noted that, ideally, CDF could become the main visitor experience on site. This could be configured to accommodate three (3) types of spaces designed to accommodate the middle/high school tours. The first would be a large space (70 people) for the "Ask-A-Scientist" portion and two (2) areas for a smaller group (~20). These could be a typical control room and a tour of the detector hall and tunnel. It was noted that these groups would return to Wilson Hall for lunch;
11. P. Oddone suggested that the existing 2nd floor of CDF be reserved for possible expanded visitor space for Phase 2 as discussed above. This included the Theater and two (2) adjacent conference rooms. In addition, the existing control room could be preserved.
12. P. Oddone questioned the status of the Wilson Hall atrium work and if the planned work in the planters could be done in such a way to provide an assembly space for the large groups of middle/high school students. The students could then break into smaller groups for the other tours. It was decided that this project should be discussed with him further;
13. B. Kephart pointed out that, in the future, some of the work in the CDF pit may not be suitable for visitors. B. Kephart was requested to assess the environmental, safety and health requirements of the planned/expected use of the existing CDF building and their impact on visitors. It was noted that the design of such future work should be done in such a way to accommodate visitors in a safe manner;
14. There was concern that highlight only CDF might not properly showcase the other areas of the Laboratory that contribute to the Fermilab mission;
15. The Office of Public Affairs should continue to be involved with the display plans for potential visitor areas;
16. After discussion, it was unclear how the goal of this effort had morphed into a "museum" concept that was discussed in public since this implies the wrong use. Care should be taken in future discussions to stress that this effort will result in useful and valuable educational experience for visitors.

B. Illinois Accelerator Research Center Office Space

B. Kephart provided an overview (presentation attached) of the background and plans for the office spaces in the Illinois Accelerator Research Center (IARC). The following specific items were noted:

1. The initial project included space for 151 office areas (cubicles and private offices). The arrangement of the spaces was determined to be less than ideal;
2. Revised floor plans with a modified aisle arrangement include space for 145 office areas (cubicles and private offices);
3. The plan presented included space for the IARC Office, Project X Project Team (project office plus engineers), Accelerator Physics Center (APC) and some Technical Division (TD) personnel.
4. The APC group could be relocated from existing offices in Wilson Hall;
5. G. Apollinari noted that the TD requirement for the IARC offices could be adjusted since most of the existing staff is located across the street;
6. V. Shiltsev noted that the office spaces, mostly cubicles, are half the size (90 square feet) of the existing spaces in Wilson Hall (~140 square feet) and could potentially be seen as a "downgrade" by his staff;

7. The space requirements for the office areas in IARC are based on GSA recommendations;
8. It was noted that the IARC offices will likely be much nicer than the CDF/DZero trailers;
9. There was discussion of the dispensation of the existing trailers (portakamps) at CDF and DZero. It appears likely that they will continue to be utilized in the near future, but a long term plan has not been developed;
10. There was discussion of the existing space in Wilson Hall that is currently occupied by APC staff. Y-K Kim discussed the possibility that this space could be used to relieve the pressure from new projects (G-2, mu2e, etc..) for consolidated office space near the existing experiments;
11. The plan presented by B. Kephart is only one possible office plan and that other options are available and will be considered;
12. B. Kephart noted that a decision needs to be made shortly concerning the IARC landlord with the suggestion that the Office, Technical and Education building be assigned to Technical Division (TD) now and that eventually CDF migrate from the current assignment of Particle Physics Division (PPD) to TD at some point in the future after the completion of the decontamination/demolition work is complete.

C. Action Items from This Meeting

1. B. Kephart was requested to assess the environmental, safety and health requirements of the planned/expected use of the existing CDF building and their impact on visitors.
2. Briefing to P. Oddone on status of Wilson Hall Atrium Improvements projects. Assigned to R. Ortgiesen.

D. Previous Action Items

1. IARC Employee Entry. Decision needed after discussions with stakeholders
2. Muon Campus Color Palette: G. Van Zandbergen requested to develop a color/material scheme for the area that includes mu2e and G-2.

E. Next Meeting

1. Not Scheduled



Tevatron Decommissioning Task Force Report

Rich Stanek
(for the TeV Decom Task Force)

TeV Decommissioning Effort



- Task Force recently formed to plan TeV, CDF and D0 decommissioning
 - Two Phases defined
 - Phase 1 involves three steps
 - Stabilize and secure systems (hazards removed or mitigated)
 - Clean out areas and remove components that have immediate reuse
 - Prepare CDF and/or D0 with a small section of TeV for public display
 - Display estimated for both “basic” and “complete” concepts
 - Phase 2 is full decommissioning (clean tunnel)
 - Cost estimates will be prepared in a way that allows varying the scope based on available funding
 - Written guidelines outlining the methodology and eventual end goals of Phase 1 will be presented to DOE to gain concurrence
 - Will work with consultants to analyze how the possible use of CDF/D0 tours would be incorporated into the overall visitors experience at the Lab
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Decommissioning Details



- Preliminary Phase 1 plan involves
 - Within the next few months
 - Advertise valuable equipment that will become available after TeV shutdown
 - Working with CDF/D0 Collaborations, finalize disposition of equipment
 - Determine final scope of work and estimate cost and schedule
 - Gain DOE concurrence
 - Immediately after the end of the TeV Run
 - Experiments perform necessary calibrations and surveys
 - Remove or mitigate hazards, stabilize systems
 - When clean out begins
 - Using available workforce, clean out spaces that will be reused and remove and ship equipment that was requested
 - Requests for large component must provide an alternative funding source
 - Store fixtures and documentation that will be needed for Phase 2
 - Prior to setting up for public display
 - Develop overall concept for public tours consistent with Master Site Plan

Members of Task Force



Marge Bardeen

Peter Cooper

Donald Cossairt

Paul C. Czarapata

Bill Shull

George Ginther

Jack Kelly

Jonathan Lewis

Rhonda B. Merchut

Ron Moore

Kurt Riesselmann

Russ Rucinski

Philip Schlabach

Rich Stanek

Katie Yurkewicz

Young-Kee Kim

Greg Bock

Peter H. Garbincius

Michael Lindgren

Randy Ortgiesen

Phase 1 Objectives



- Allows us to present areas of the Lab that have for the most part been non-accessible to the public
 - Puts TeV/detectors on display in a way that excites/captivates our visitors
 - **Defer high cost of total D&D (Phase II) until future time**
 - Provide cost effective options for staging the displays
 - Final display concept can be implemented over a period of time
 - Phase I goal to be completed in ~ one year

 - Secure areas and set up displays without interfering with the reuse of spaces which are planned for future work
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Deliverables for S&T Review



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- Present a consistent and integrated plan for CDF, D0 and TeV decommissioning at this year's S&T Review
 - Phase 1
 - Defined Scope of Work
 - List of Assumptions
 - Work Breakdown Structure
 - Resource Loaded Schedule with backup documentation
 - Phase 2
 - Revisit old estimate for full decommissioning & disposal
 - Fill in any missing information
 - Separate line item estimates for
 - Removing and disposal of 50 TeV magnets/year
 - Ongoing yearly maintenance costs for keeping tunnel/halls presentable
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Status



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- Made some progress in the last few months
 - Still have a long way to go to be ready for S&T Review
 - Have several decisions that still need to be made
 - In general, Scope of Work is known
 - Working on the WBS and getting resource estimates
 - Trying to keep the Task Force focused on what is needed for S&T Review
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Scope of Work - Examples



- Stabilize and Secure Systems
 - Turn off and disconnect high voltage/high power systems
 - Remove cryogenics and warm systems
 - Shutoff cooling water and drain water systems
 - Remove/secure hazardous and radioactive materials
 - When complete, could walk away from systems without any safety concerns
 - Still have to deal with yearly maintenance items
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Scope of Work (cont'd)



- Clean out and Remove Components
 - Clean up areas around detectors and in tunnels, office spaces and assembly areas
 - remove debris, clean aisles/walkways
 - Replace and fix required lighting
 - Harvest equipment (that was requested for reuse) from detectors and tunnel
 - Remove electronics → recycle to PREP or send to University home or send for disposal
 - Dispose of equipment that takes up valuable space
 - Counting/Control room equipment (if not part of display)
 - Large power supplies, cabinets of spare parts...
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Scope of Work (cont'd)



- Setup Basic Display

- Allow controlled tour access to buildings, tunnels and collision halls but limit investment in additional display items
- Slightly better than what we do now for detector tours
- Detectors opened up for access/viewing followed by short walk through TeV tunnel (CDF)
- Improve walkways and stairs

- Setup Complete Display

- Improve display by adding additional kiosks, video screens, poster boards, etc. → round out overall visitor experience
 - Tell a more complete story
 - Keep parts of control room/counting room intact (possibly)
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Interaction with IARC



- Topic of much discussion
 - Personally I believe interaction of the CDF display and IARC will be minimal (contrast CDF – history vs. IARC – future)
 - IARC will primarily be a working space
 - May actually have “proprietary work” being done
 - Question of whether the North IARC entrance (road side) should be used as a visitor entrance or not
 - Probably not → Wrong side of building, dangerous looking over pit railing, adds cost to IARC...
- Cannot jeopardize “mission of IARC”
 - Have commitment to State and to DOE
 - Tour paths/displays cannot interfere with users in CDF

Issues/Questions



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- Hard to get dedicated attention to work on plan
 - Everybody's busy, this doesn't seem to be priority
 - How to handle the budget for this work (SWF and M&S/FESS charges)
 - Scope of “complete display” still not decided
 - **Grand Plans Take Grand \$** Need integrated concept for CDF & D0 displays which enhances overall visitor experience → takes time
 - Should CDF and D0 be displayed at the same level?
 - **Do not want to change characterization of the space (NOT a public area)**
 - **Occupancy rules change**
 - Ownership & reuse of spaces
 - Who is landlord for the CDF/DO buildings?
 - CDF and D0 both have reuse plans, is there agreement on what needs to be cleaned out? e.g. CDF cable carrier, 2nd floor of CDF, etc.
 - What about the CDF & D0 trailers?
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Summary

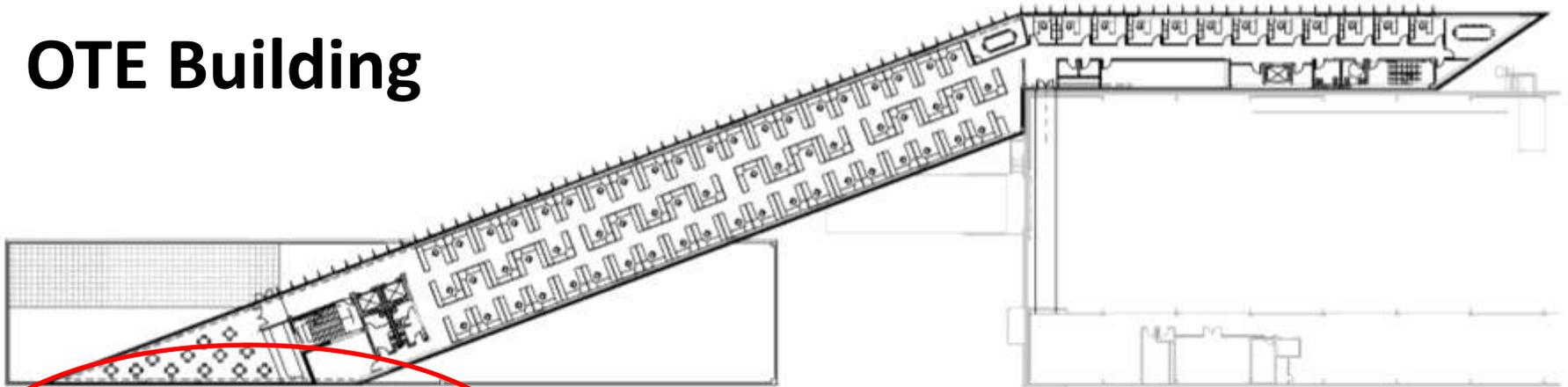


- Concerned that there are several issues still to be decided (and not much time before S&T Review)
 - Want to go into the S&T Review with a coordinated project plan not disjointed projects
 - inconsistencies will be easily noticed and become findings
 - illogical decisions will be questioned
 - missing parts of the estimates will be noted
 - We have the right people making the estimates just need to get more of their time and attention
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IARC Office Space



OTE Building

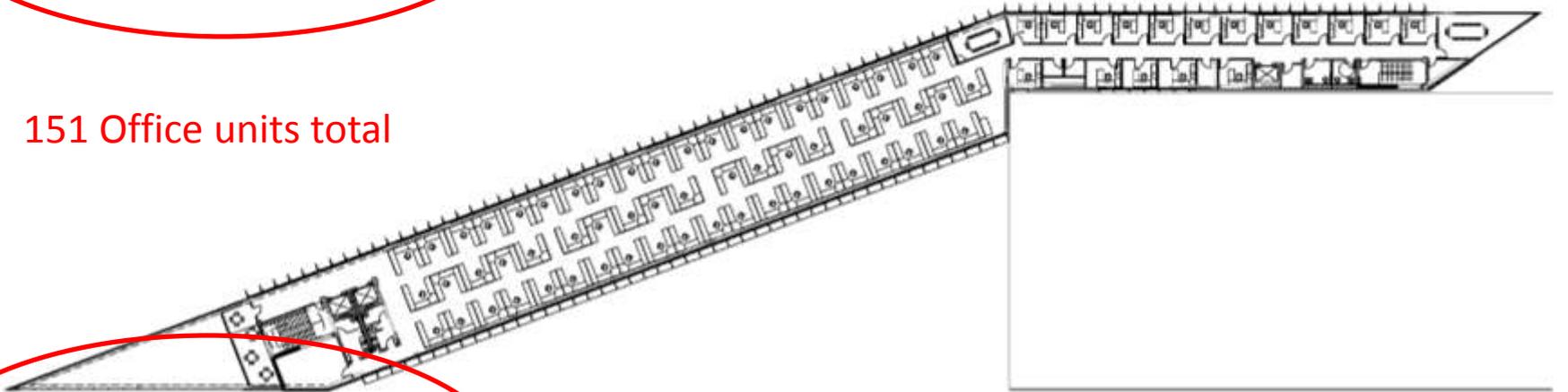


Optimized Office Plan: Second Floor Plan

73 Total Office Units:

- 59 Cubicles (90sf each @ 9'x10')
- 12 Private Offices (120sf each @ 10'x12')
- 2 Conference Rooms

151 Office units total



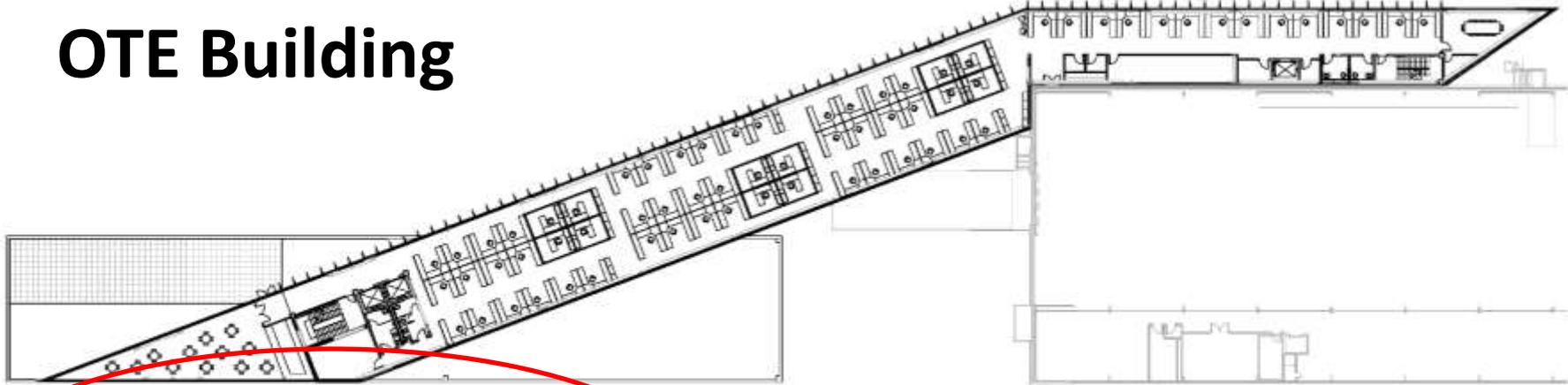
Optimized Office Plan: Third Floor Plan

78 Total Office Units:

- 59 Cubicles (90sf each @ 9'x10')
- 17 Private Offices (120sf each @ 10'x12')
- 2 Conference Rooms

Maximum Efficiency

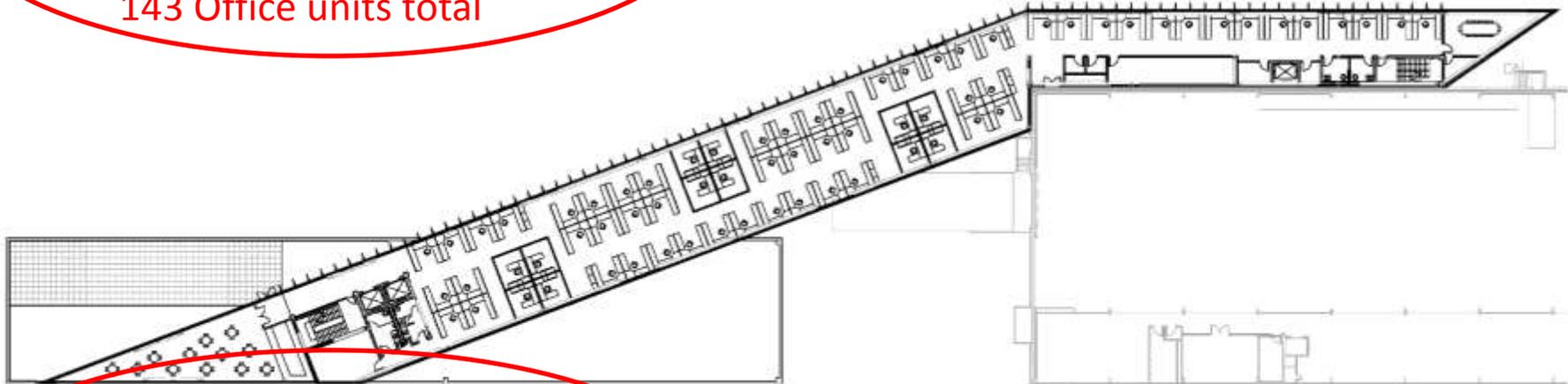
OTE Building



Sight Line Alternate 1: Typ Floor Plan

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|--|--|
| 69 Total Office Units, Second Floor; | 74 Total Office Units, Third Floor; |
| - 56 Cubicles (90sf each @ 9'x10') | - 56 Cubicles (90sf each @ 9'x10') |
| - 12 Private Offices (108sf each @ 9'x12') | - 16 Private Offices (108sf each @ 9'x12') |
| - 1 Conference Room | - 2 Conference Rooms |

143 Office units total



Sight Line Alternate 2: Typ Floor Plan

- | | |
|---|---|
| 70 Total Office Units, Second Floor; | 75 Total Office Units, Third Floor; |
| - 57 Cubicles (90sf each @ 9'x10') | - 57 Cubicles (90sf each @ 9'x10') |
| - 12 Private Offices (120sf each @ 10'x12') | - 16 Private Offices (120sf each @ 10'x12') |
| - 1 Conference Room | - 2 Conference Rooms |

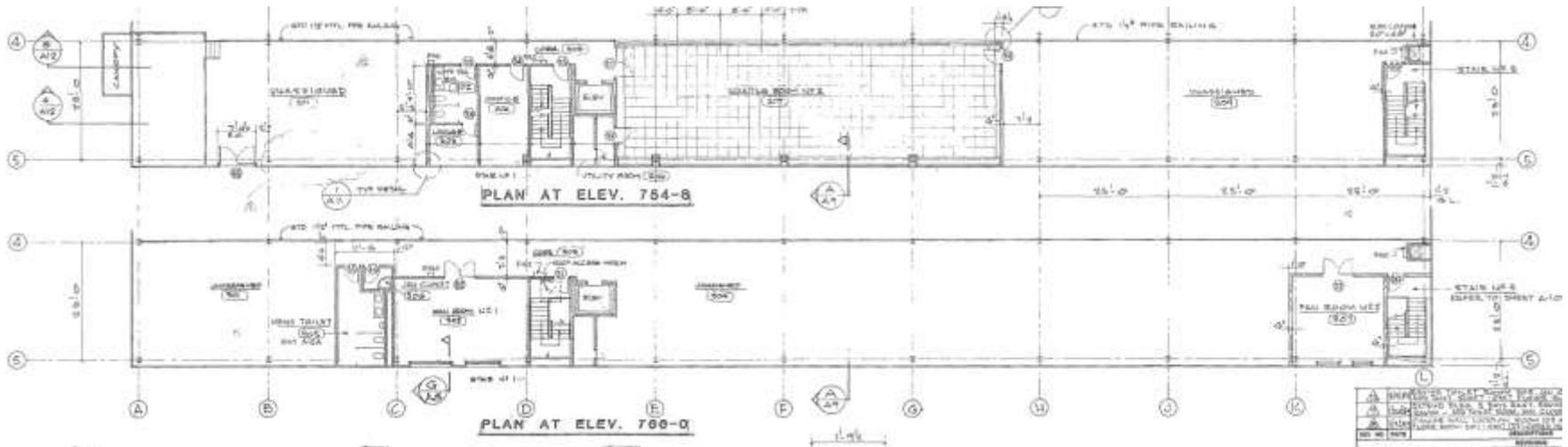
145 Office units total



Staggered Aisles

CDF

- Assume 1st floor space is all technical and equipment space
- Assume “2nd floor Theater” remains conf room (- 8 offices)
- Assume future displays do not remove space (e.g control room)
- Assume some smooth transition from PPD
- Assume CDF office space is refurbished... available in 2014



2nd & 3rd Floors (original)

40-50 Office units

(Toilet Rooms require ADA updating)

Potential number of offices

145 Office units in OTE bldg
40 more in refurbished CDF
185 total

Office Requests

- Project X
 - AD
 - TD
 - APC
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- Note that we have not made a details plan for how many offices we will need to support the Industry/University/Education part of IARC Mission



- Phase I Scope (2016 construction start)
 - 3 GeV continuous-wave superconducting H⁻ linac; 1 mA (3 MW);
 - Beam transport and a splitting station capable of sending 3 GeV beam to at least three independent experimental areas;
 - Scope includes 1st round PX experimental Program
- Phase II Scope
 - 3-8 GeV superconducting pulsed H⁻ linac; 300 kW with maximum duty factor of 4%. Constructed sequentially or overlap with phase I
 - Modifications to the Main Injector and Recycler to support acceleration and extraction of high intensity/high power proton beams
 - ⇒ Scope begins at the ion source and ends at the 3-way beam splitter (3 GeV) and Main Injector extraction kicker (60-120 GeV)

 - ⇒ Assumes LBNE and may include Phase II experimental program

PX Office Space Request

Accel only, add 10-20% for exp program mgmt



- Would like to create a central project office in a single contiguous area:

	Now	2013	2015
– Project Management Team	5	12	12
• Project Manager	1	2	2
• Project Scientist	1	1	1
• Project Engineer	1	2	2
• SRF Coordinator	1	1	1
• International Coordinator	1	2	2
• Associate for Planning & Reporting	0	2	2
• Associate for ESH/QA	0	2	2
– Project Controls	.5	3	5
– Project Finance	.5	2	2
– Procurements Manager	0	1	3
– Spare/Visitor Offices	2	3	5
– Project Support	0	6	10
– TOTALS	8	27	37

- **Project X would like to locate this office in the IARC building**
 - ~< one floor
 - **Good access to TD and reasonable access to AD/APC**
- Management starting at Level 2 should remain in their home divisions



- Incoming Inspection
 - IB-4/ Superconducting + magnet components
 - Other accelerator components
- Superconducting C&CM fabrication
 - MP-9
 - ICB
- Magnet Fabrication
 - Conv: IB-2/modest portion of the building
 - SC: OB-3/modest portion of building
- Will need staging/assembly areas for accelerator components
 - Offices for personnel involved in these activities should be nearby
- Possible request for additional IARC technical spaces and offices



- Superconducting components
 - IB-1/MTS
 - MDB/HTS-1, HTS-2, Spoke test facility, FE test facility (new HINS)
 - NML + CMTF
- SC Magnets
 - IB-1/MTF
- Beam Tests
 - MDB/East side
 - NML
- Note:NML and CMTF both have offices to support work in those areas

Division/Center Requests

- AD: 20 Offices for People working on Project X
- TD 12 Offices for people working on Project X
- APC 60 Offices: entire center
- IARC building: bldg manager, IARC Dir, admin, IP & IT support (~5?)
- Notes:
 - PX is mostly physicists and are beyond Steve's numbers which were for the project office (but possible overlaps)
 - APC numbers include 12 offices for Industry (Muons inc, Euclid, Tech X)
 - Several people pointed out that industry is likely going to want engineers sitting nearby (mechanical, RF, electrical)
 - Given IARC mission: Did NOT ask CD, PPD, or any one else

Totals (~ 2014...very rough)

- PX Office 45 (including exp prog managers)
 - AD: 20
 - TD 12
 - APC 60 (incl 12 for industry)
 - IARC Industry 40 (guess)
 - IARC education 5 (guess)
 - IARC bldg 5 (prev slide)
 - Total 189
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- Disclaimer:
 - Likely some double counting, several WAGs
 - Yet requests match available IARC offices better than we had any right to expect given the methodology at this time

Misc Issues

- IARC will need a landlord. I suggest TD.
- TD should assume ownership of OTE bldg immediately,
 - then CDF bldg after some amount of D&D
 - who will own collision hall ?
- TD must receive appropriate funding in addition to the responsibility