Permanent Pharmacy Placement Project (P4)

RELOCATION OF THE OUTPATIENT AND INPATIENT PHARMACIES

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SERVICE CHIEF, PHARMACY OPERATIONS

NIH Clinical Center

Pharmacy Mission

"……..to support and conduct clinical research by providing safe, high quality care – one patient – one medication at a time"

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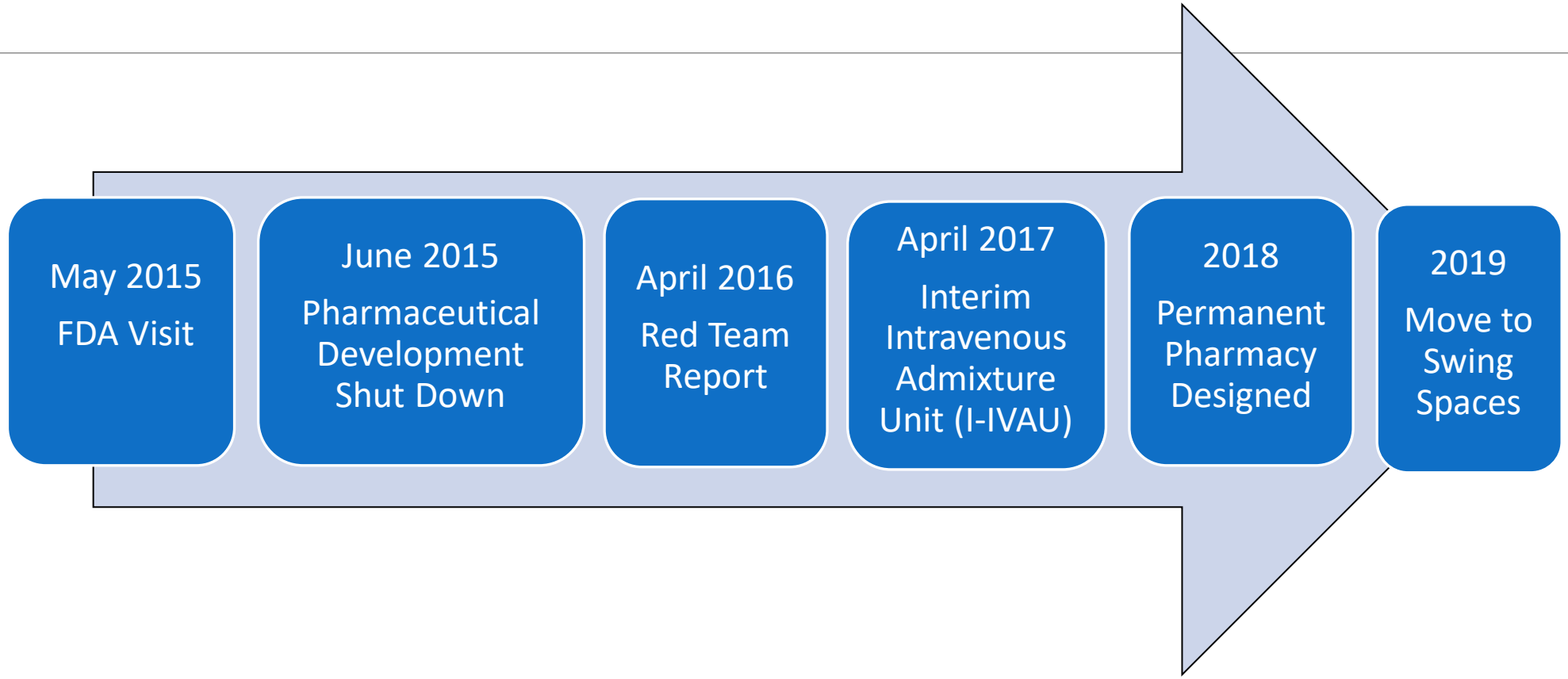
Background



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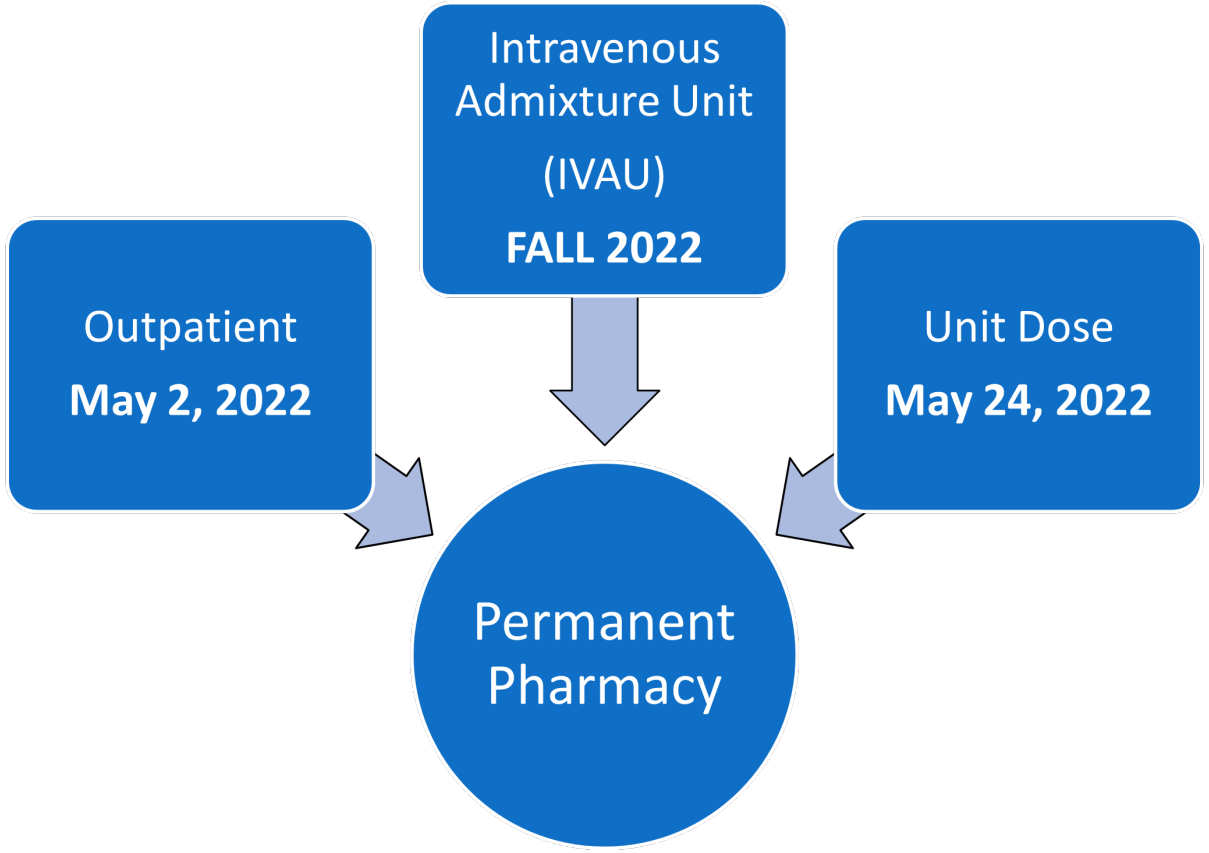
Scope and Timeline



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Relocation “Move” Goals

- Continuity of operations and safe, un-interrupted pharmaceutical care
- Successful implementation and integration of pharmacy automation systems
- Efficient relocation of inventory and supplies
- Trained, engaged and happy staff

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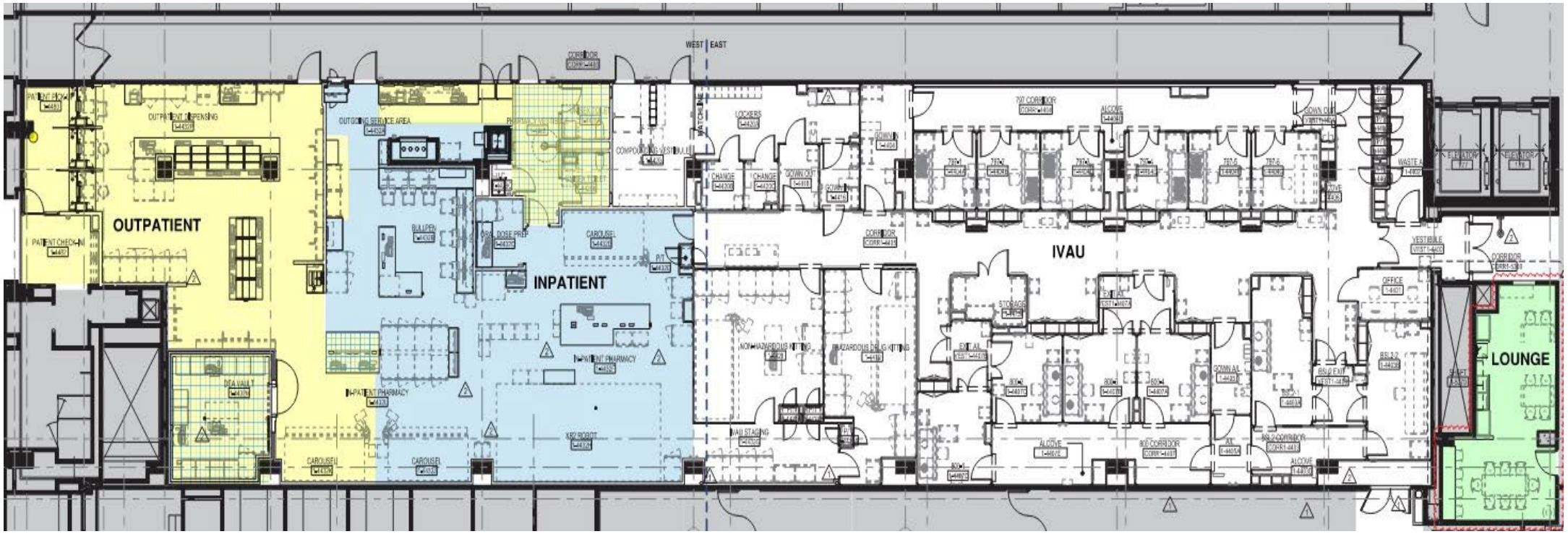
Permanent Pharmacy Layout



New Features

- Regulatory compliant facility
  - Segregated compounding areas
  - Engineering controls to support USP<797> & <800>

- Automation - Carousels, Robots, Packager, IV Workflow System
  - Medication safety
  - Efficient workflows
  - Inventory management

- Increased capacity
- Electronic documentation

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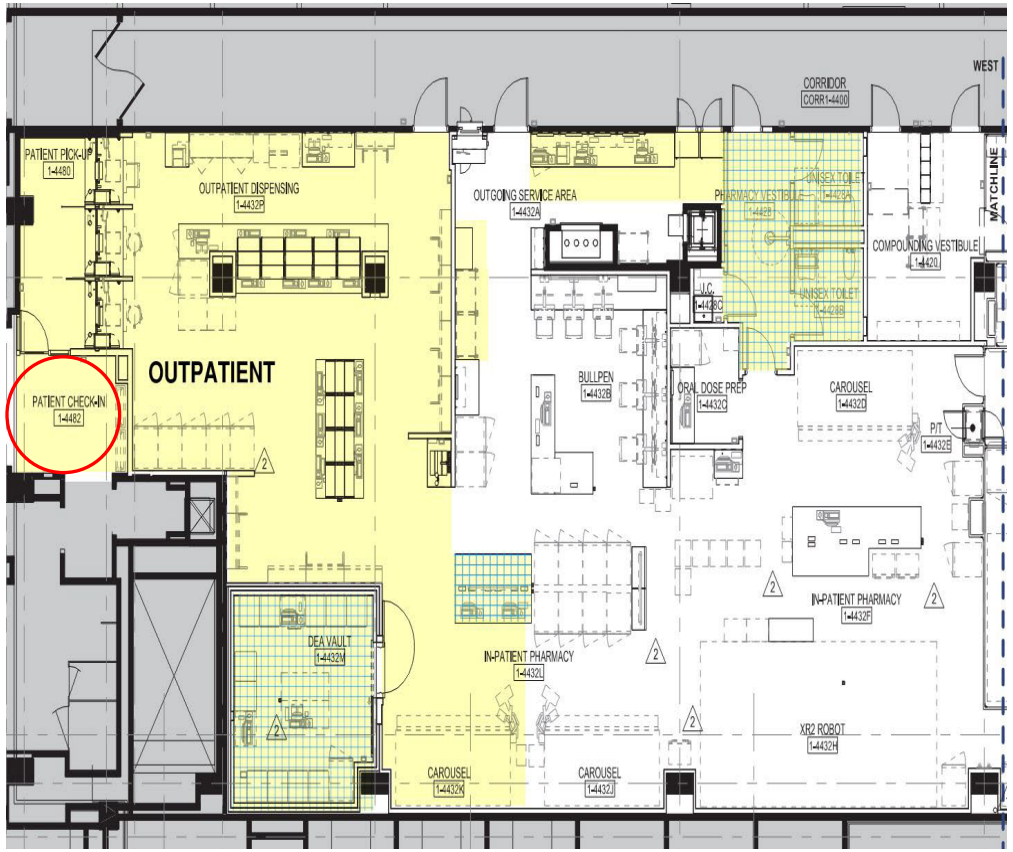
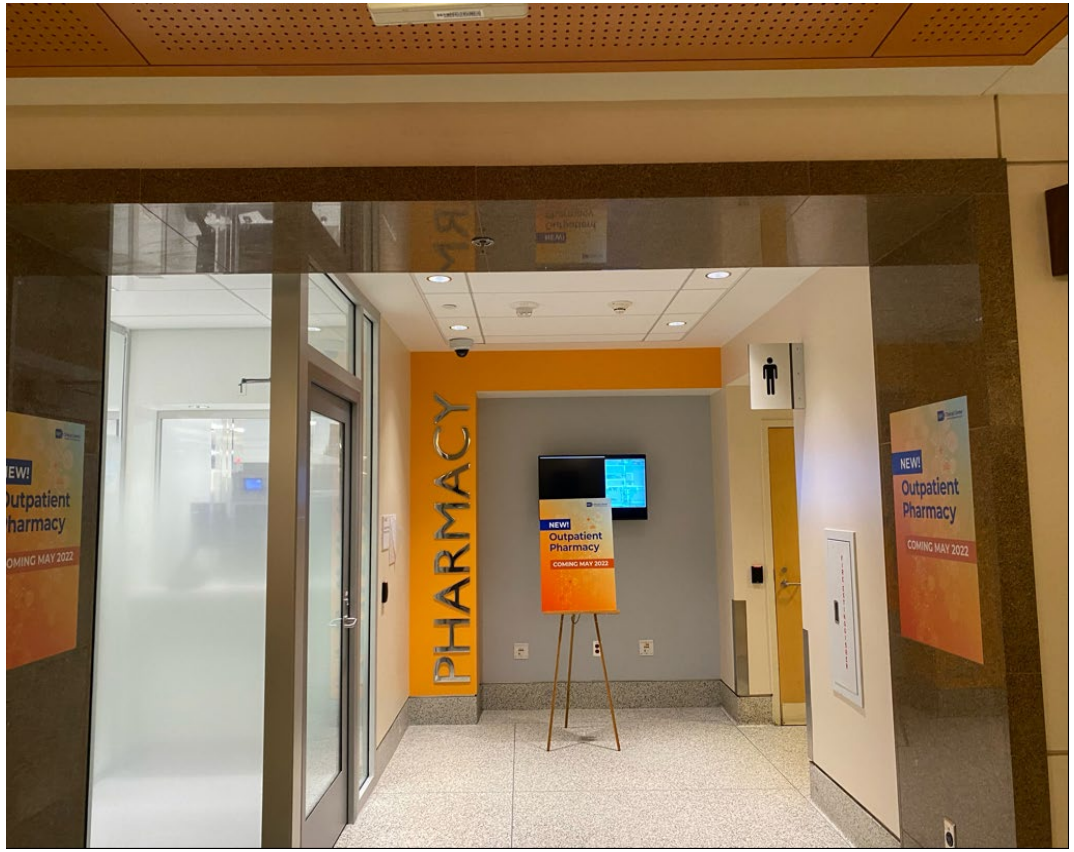
Common Automation

- **Omnicell Carousels**
  - Outpatient (1)
  - Unit Dose (2)
  - Intravenous Admixture Unit (2)

- **Benefits**
  - High density storage
  - Bar-code scanning
  - Inventory management
  - Technician efficiency
  - Medication security

Outpatient Pharmacy Layout





Outpatient Automation

- **ScriptPro Storage & Retrieval System (SRS)**
  - High density storage
  - Accurate retrieval
  - Enhanced security
  - Chain of custody

- **ScriptPro Robotic Dispensing System (Upgrade)**
  - Automates filling process
  - More time for clinical duties

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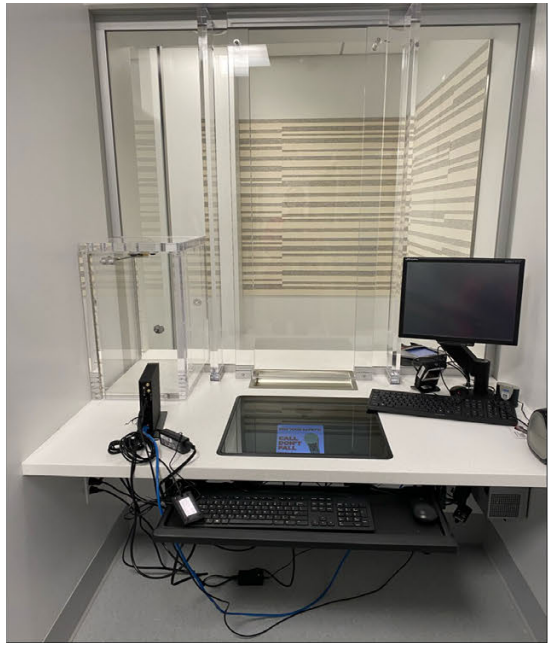
Outpatient Pharmacy

Entrance

Noise absorbing panel



Dispensing window

Outpatient Pharmacy

Robot

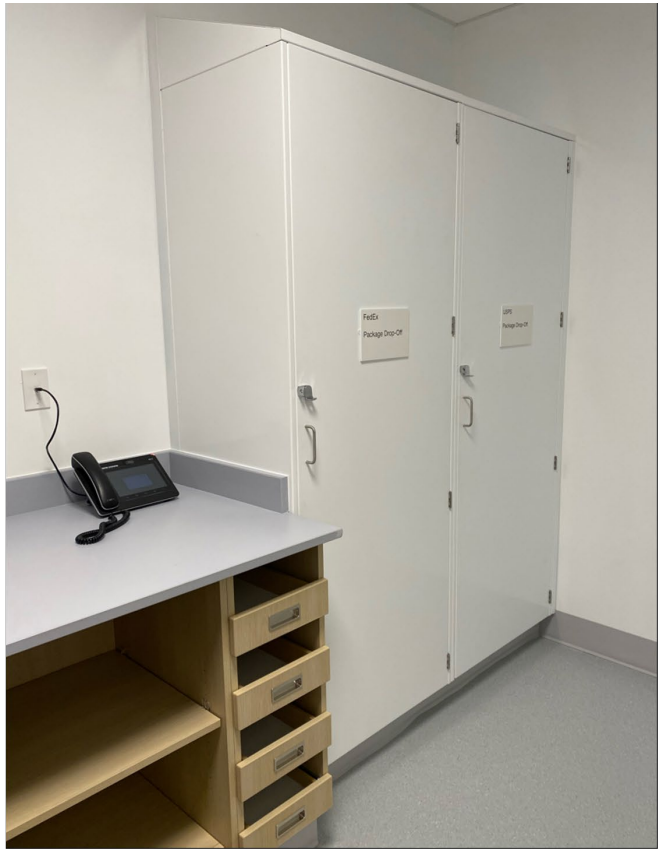
Storage shelves

Cold units

Verification station

Outpatient Pharmacy

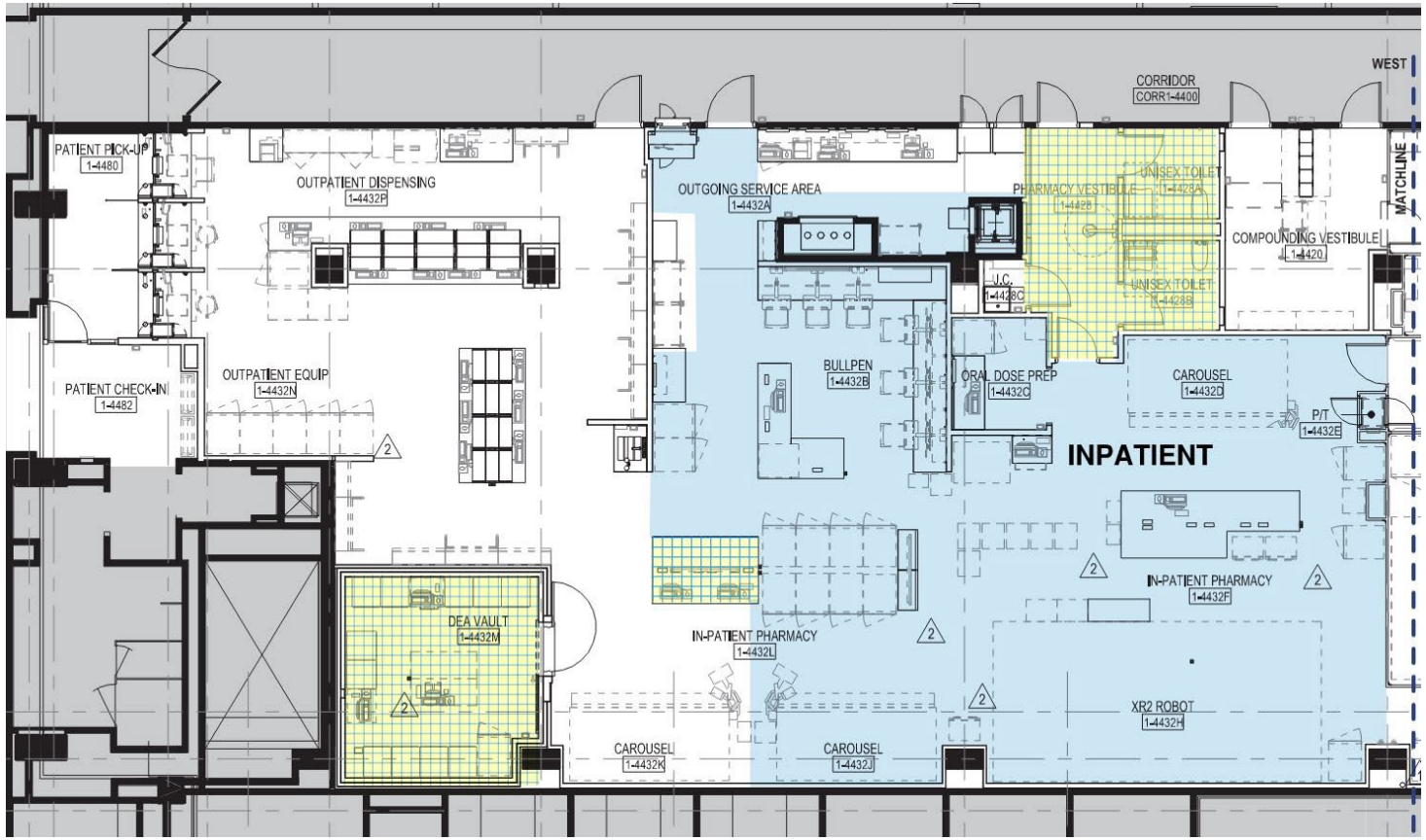
Mail packing station



Mail storage

Package pick-up

Unit Dose Pharmacy Layout



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Unit Dose Automation

- **Automated Central Pharmacy System (XR2)**
  - Inventory management
  - Automated workflows
  - Reduced medication waste
  - Barcode scanning for accuracy
- **Omnicell Medication Packager**
  - High speed medication packager
  - Automated canister recognition
  - Technician efficiency

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Unit Dose Automation

XR2

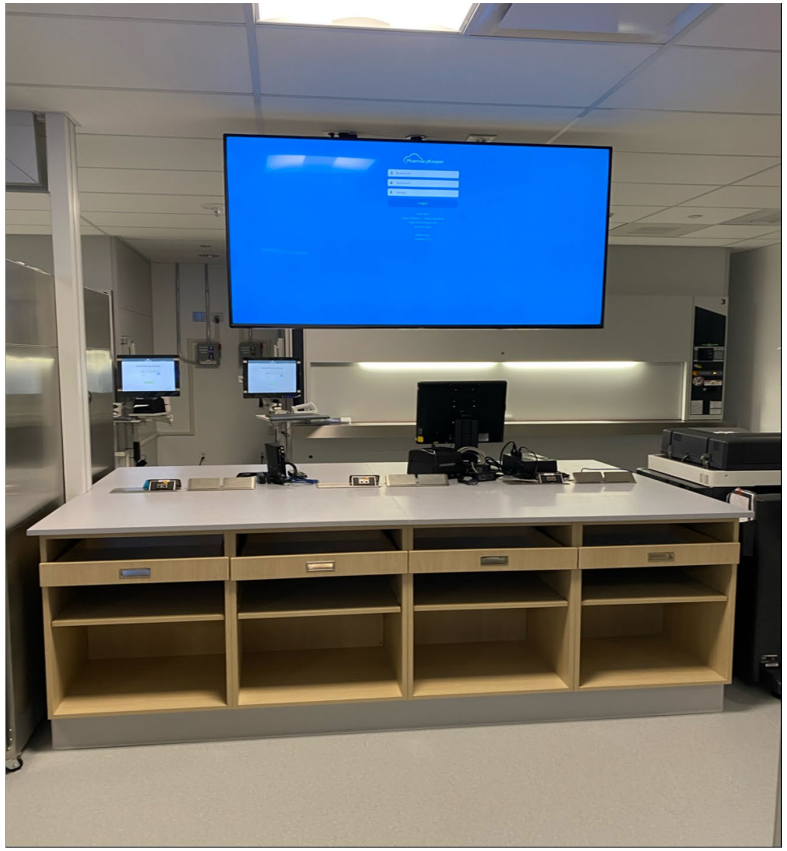
XR2 Interior

Medication Packager

Unit Dose Pharmacy

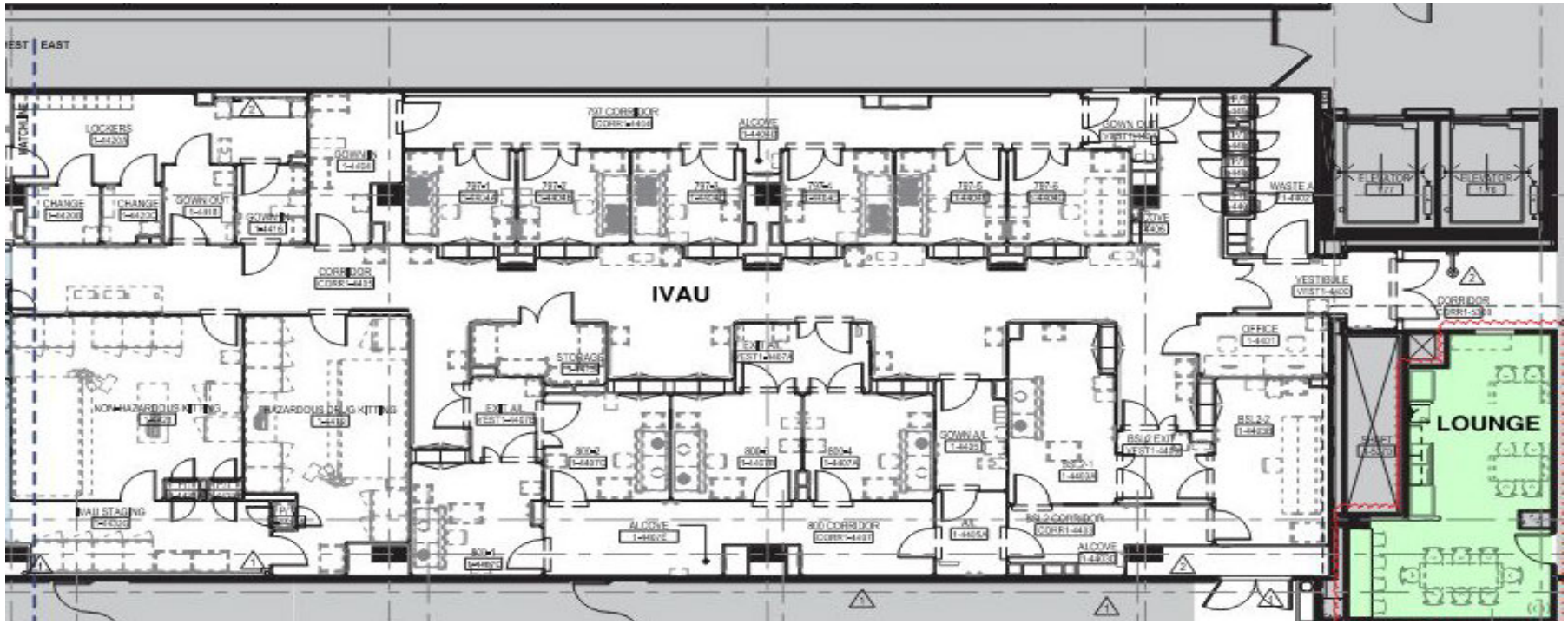
Order verification station

Oral dose repackaging station



Inventory processing station

Permanent Intravenous Admixture Unit (P-IVAU) Layout



Permanent Intravenous Admixture Unit (P-IVAU)

CURRENT

- Non-hazardous suite
  - 1 Buffer room
    - 3 Laminar flow workbenches
- Hazardous suite
  - 1 Buffer room
    - 2 Biological safety cabinets
  - 1 Biological safety room
    - 1 Biological safety cabinet
- Multiple cabinets per room
- Pass through limitations
- Automated IV workflows (10%)
- Remote product verification (limited)

PERMANENT

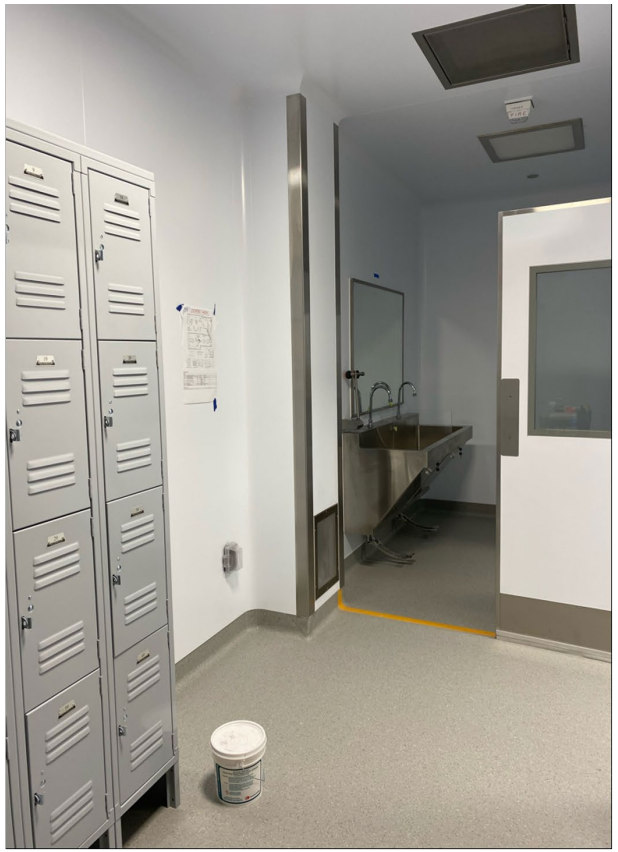
- Non-hazardous corridor
  - 6 Buffer rooms
    - 5 Biological safety cabinets & 1 non-hazardous isolator
- Hazardous corridor
  - 4 Buffer rooms
  - 4 Biological safety cabinets
  - 2 Biological safety rooms
    - 1 Biological safety cabinet & 1 hazardous isolator
- One cabinet per room
- Uni-directional Hepa-filtered Pass through
- Automated IV workflows (100%)
- Remote product verification (100%)

Permanent Intravenous Admixture Unit (P-IVAU) Automation

- Omnicell IVX
  - Streamlines workflow
  - Improves technician efficiency
  - Supports proper aseptic technique
  - Automates documentation
  - Pharmacist remote verification
  - Small footprint

Permanent Intravenous Admixture Unit (P-IVAU)

ISO8 main corridor



Locker/sink rooms

Non-hazardous corridor

Permanent Intravenous Admixture Unit (P-IVAU)

Biological safety cabinet
Non-hazardous buffer room

Biological safety cabinet
Hazardous buffer room

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It takes a village…….

- P4 Steering Committee
- Construction
- Pharmacy Core Group
- Communication Marketing
- Outpatient
- Unit Dose
- Intravenous Admixture Unit
- Informatics
- CQV/EMPQ

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Special Thanks……

THE CONSTRUCTION PROJECT TEAM

Rick Robey, Project Officer
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Joanne Meloro, IPS, CQV Manager
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Scott Salvatore, DPR Construction, Project Engineer
Bakari Greene, DPR Construction, Project Engineer
Emmeline St. George, DPR Construction, Project Engineer
Farshad Adli, DPR Construction, QA
Dan Simco, DPR Construction, Project Manager
Sarah Moreau, DPR Construction, Project Executive
Jeff Welter, Perkins & Will, Chief Architect
Nina Popovich, Architect
Bill Fitch, Design Electrical Engineer
Andy Ricker, Design Mechanical Engineer
Jack Hui, Fire Marshall
Paul Howey, FCIS
Jeff Haughey, HEFS

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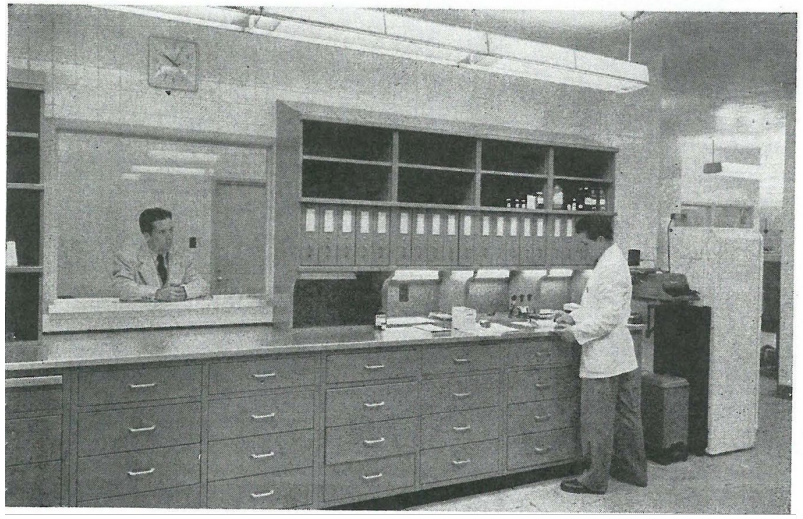
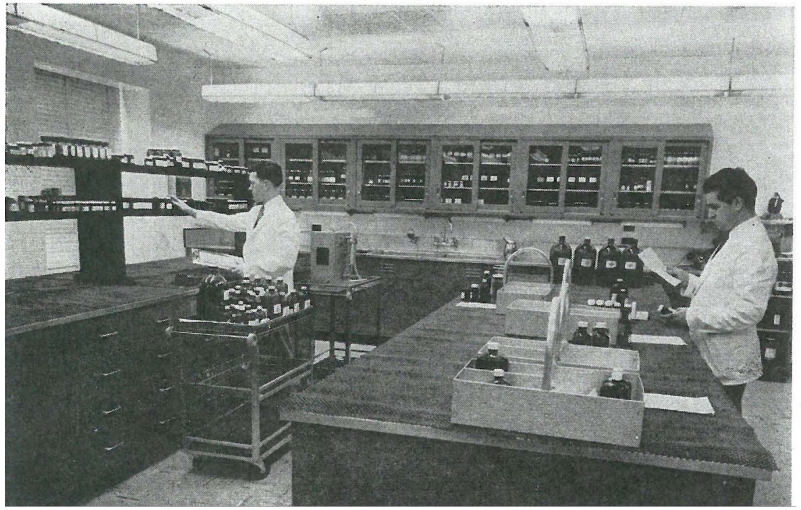
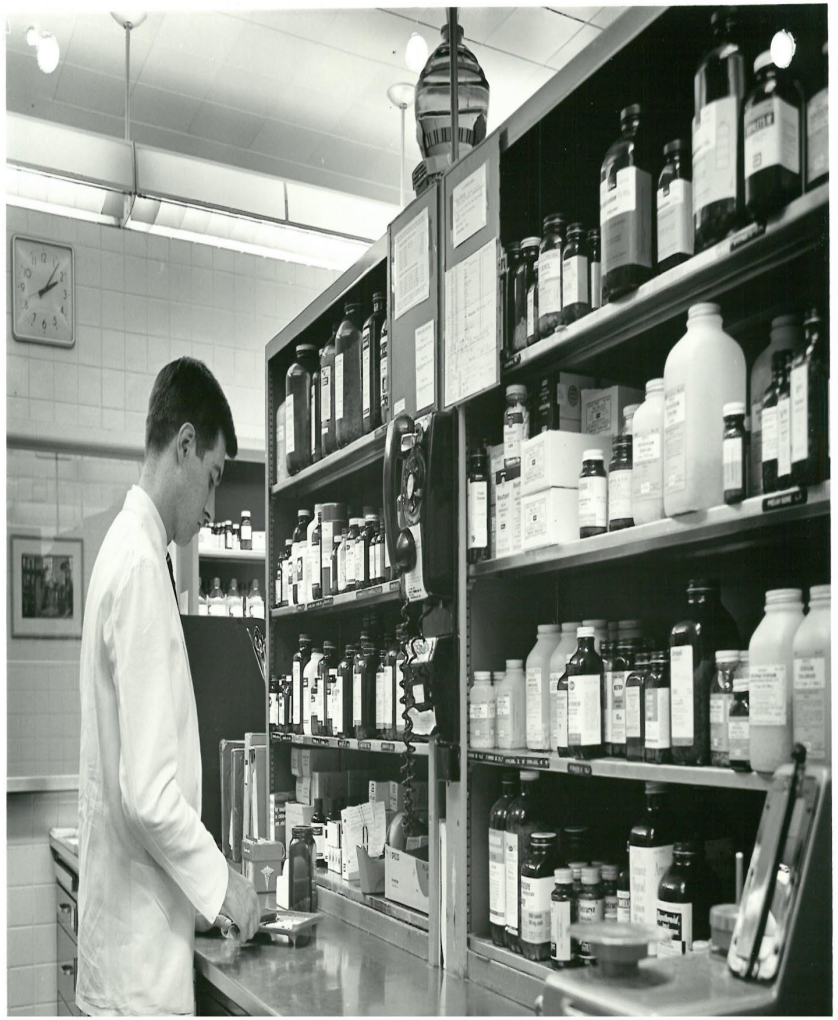
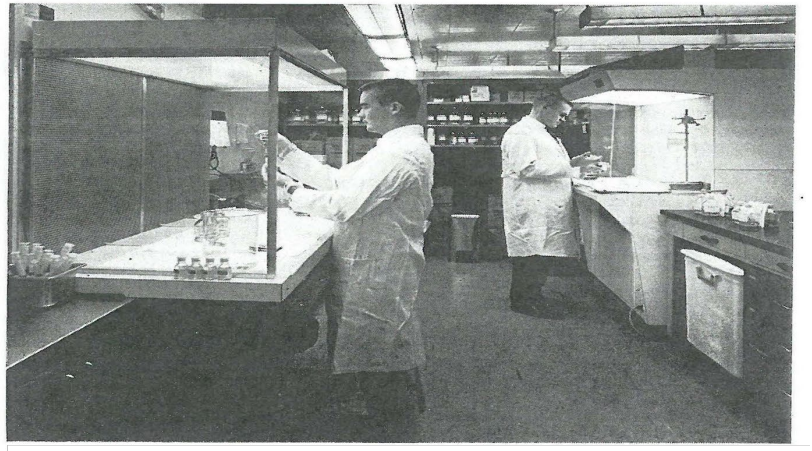
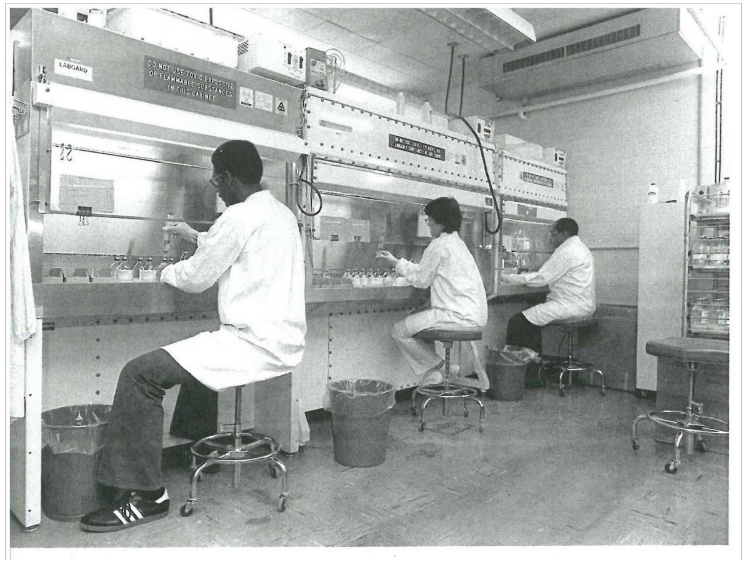
The way it was……











QUESTIONS?