

**USP 800 PHARMACY
RENOVATION
FOR
Grady Health Systems-
Grady Memorial Hospital**

**80 Jesse Hill Jr. Drive SE
Atlanta, GA 30303**

Volume 1: GENERAL CONSTRUCTION



**PREPARED BY:
Moody•Nolan, Inc.
ARCHITECTS ENGINEERS PLANNERS
300 Spruce St. #300
Columbus, OH 43215
(614) 461-4664 FAX (614) 280-9252**

**HENDERSON ENGINEERS
8345 Lenexa Drive, Suite 300
Lenexa, KS 66214
Phone (913) 742-5000**

To be completed

Design Development
0 MN Project Number 19107.01

March 29, 2019

TABLE OF CONTENTS
(NOT ALL SECTIONS USED- SEE DRAWINGS FOR LOCATIONS)

Cover Sheet
Table of Contents

BIDDING REQUIREMENTS AND CONTRACT CONDITIONS

00 01 07 General Conditions of the Contract
00 01 08 Supplementary Conditions
00 21 50 Bidding Requirements (CM may provide)

SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

01 11 00 Summary of Work
01 14 00 Work Restrictions
01 14 00a ICRA Attachment
01 31 00 Project Meetings
01 31 40 Project Coordination
01 32 40 Schedule
01 33 20 Shop Drawings, Product Data, and Samples
01 45 00 Quality Control
01 45 60 Testing Laboratory Services (by Hospital)
01 50 00 Temporary Facilities
01 56 20 Dust Barriers
01 60 00 Product Requirements
01 73 00 Execution Requirements
01 73 20 Cutting, Patching and Sleeves
01 74 00 Cleaning
01 74 10 Waste Mgmt & Recycling
01 78 00 Project Close-Out
01 78 23 Operating & Maintenance Data
01 78 40 Project Record Documents
01 91 13 General Commissioning Requirements

DIVISION 2 – EXISTING CONDITIONS

02 41 19 Selective Demolition – Building

DIVISION 3 – CONCRETE

03 01 32 Cementitious Leveling
03 30 00 Cast-in-Place Concrete
03 62 00 Non-shrink Grouting

DIVISION 4 – MASONRY

No work

DIVISION 5 – METALS

05 50 00 Miscellaneous Metals

DIVISION 6 - WOOD & PLASTICS

06 11 50 Wood Blocking

06 20 00 Finished Carpentry

DIVISION 7 - THERMAL & MOISTURE PROTECTION

07 21 16 Thermal Batt Insulation

07 53 23 EPDM Roofing (place holder for actual) would apply around exhaust hoods

07 62 00 Flashing & Sheet Metal (place holder for patching)

07 81 00 Applied Fire Proofing

07 84 00 Firestopping

07 90 00 Sealants

DIVISION 8 - DOORS & WINDOWS

08 11 00 Hollow Metal Doors and Frames

08 14 23 Wood Doors (verify 08 14 29 pre finished wood doors)

08 30 50 Access Doors

08 42 29 Sliding Automatic Entrances (note: hands free wave sensor to be in door frame)

08 xx xx Interior Windows

08 71 00 Finish Hardware

08 81 00 Glass

DIVISION 9 - FINISHES

09 21 16 Gyp Bd Shaftwall Assemblies

09 22 16 Non-Structural Metal Framing

09 29 00 Gypsum Board (includes paperless drywall at exterior windows & wet areas w level
5 finish requirement)

09 30 13 Ceramic Tiling (patch corridor walls NICU)

09 51 13 Acoustical Panel Ceiling (add small section of Cleanable tile in Cancer)

09 65 13 Resilient Base & Accessories

09 65 16 Resilient Tile Flooring

09 65 19 Resilient Sheet Flooring

09 91 00 Painting-Sherwin Williams place holder

DIVISION 10 - SPECIALTIES

10 14 00 Signage

10 26 00 Wall & Door Protection

10 44 00 Fire Extinguishers & Cabinets

10 51 13 Metal Lockers

10 56 00 Storage Shelving

10 80 00 Toilet Accessories

DIVISION 11 - EQUIPMENT

11 53 00 Safety Cabinets, Hoods, Refrigerators

11 70 00 Healthcare Equipment

DIVISION 12 – FURNISHINGS

- 12 31 00 Manufactured Metal Casework (Stainless Steel)
- 12 32 00 Manufactured Wood Casework
- 12 36 61 Simulated Stone Countertops (Solid Surface)
- 12 56 00 Furniture

DIVISION 13 - SPECIAL CONSTRUCTION

No Work

DIVISION 14 - CONVEYING SYSTEMS

No Work

DIVISIONS 15-20-

No Work

DIVISION 21 - Fire Protection

- 21 00 00 TOC for Div 21
- 21 00 10 General Requirements for Fire Protection
- 21 05 00 Common Work Results For Fire Suppression
- 21 05 15 Basic Fire Protection Piping Materials and Methods
- 21 13 13 Water Based Fire Suppression Systems

DIVISION 22 – Plumbing

- 22 00 10 General Plumbing Requirements
- 22 00 15 Coordination
- 22 05 00 Common Work Results For Plumbing
- 22 05 15 Basic Piping Materials and Methods
- 22 05 19 Meters and Gauges for Plumbing Piping
- 22 05 23 General Duty Valves For Plumbing Piping
- 22 05 29 Hangers and Supports For Plumbing Piping
- 22 05 53 Identification For Plumbing Piping & Equipment
- 22 07 00 Plumbing Insulation
- 22 11 00 Water Distribution Piping and Specialties
- 22 11 11 Mechanically Joined Plumbing Piping Systems
- 22 13 00 Sanitary Drainage and Vent Piping and Specialties
- 22 14 00 Storm Drainage Piping and Specialties
- 22 40 00 Plumbing Fixtures

DIVISION 23 – HVAC

- 20 05 48 Seismic Controls for MEPFT
- 23 00 10 General Mechanical Requirements
- 23 00 15 Coordination
- 23 05 00 Common Work Results For HVAC
- 23 05 10 Basic Piping Materials and Methods
- 23 05 13 Common Motor Requirements for HVAC Equipment
- 23 05 19 Meters and Gages for HVA Piping
- 23 05 23 General Duty Valves for HVAC Piping
- 23 05 29 Hangers and Supports For HVAC Piping and Equipment

23 05 48	Seismic Controls for Mechanical
23 05 50	Vibration Isolation for HVAC Piping and Equipment
23 05 53	Identification for HVAC Piping and Equipment
23 05 93	Testing, Adjusting, and Balancing For HVAC
23 07 00	HVAC Insulation
23 09 00	Instrumentation and Control for HVAC
23 09 23	Direct Digital Controls for HVAC
23 21 13	Hydronic Piping
23 21 16	Hydronic Specialties
23 31 13	Metal Ducts
23 33 00	Air Duct Accessories
23 34 16	Centrifugal HVAC Fans
23 37 13	Diffusers, Registers, and Grilles
23 74 13	Outdoor Central Station Air Handling Units

DIVISION 26 – Electrical

26 00 00	General Electrical Requirements
26 05 00	Common Work Results For Electrical
26 05 02	Equipment Wiring Systems
26 05 10	Common Work Results for Communications
26 05 19	Low-Voltage Electrical Power Conductors and Cables
26 05 26	Grounding and Bonding For Electrical Systems
26 05 29	Hangers and Supports For Electrical Systems
26 05 33	Raceway and Boxes For Electrical Systems
26 05 53	Identification For Electrical Systems
26 09 23	Lighting Control Devices
26 24 16	Panel Boards
26 27 26	Wiring Devices
26 28 16	Enclosed Switches and Circuit Breakers
26 29 23	Variable-Frequency Drives
26 41 13	Lighting Protection
26 51 00	Interior Lighting

DIVISION 27 – Communications

No work- Hospital will provide low voltage wiring and devices- contractor to provide box and conduit up to above ceiling

DIVISION 28 – Electronic Safety and Security

28 00 00	TOC for Div 28
28 46 00	Fire Detection and Alarm

DIVISIONS 21-28 – PMEC- SEE NEXT PAGE

DIVISIONS 29-30

No Work

DIVISION 31 – EARTHWORK

No Work

DIVISION 32- EXTERIOR IMPROVEMENT

No work

DIVISION 33 - UTILITIES

No work

DIVISION 41- MATERIAL PROCESSING

No work

Moody Nolan Inc
300 Spruce Street
Columbus, Ohio 43215
Office (614) 461-4664
Fax (614) 280-888

See VOLUME 2: Mechanical and Electrical SPECIFICATION- Seal & Signature at DIV 21

SECTION 01 11 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 GENERAL PROJECT DESCRIPTION

- A. Project Description: This project consists of renovating three Pharmacies within the Main Hospital to comply with new USP 800/797 Guidelines at 80 Jesse Hill Jr. Dr. SE, Atlanta, GA. Currently the dead line to comply is December 1, 2019.
- B. USP 800/797 deals with Hazardous Drugs (HD's) and the handling of HD's. Sterile preparations were developed to provide a complete set of standards to help ensure the safe handling of HD throughout the Health Systems. There is growing evidence highlighting the acute and chronic health effects can occur due to occupational exposure to over 200 hazardous drugs used commonly in healthcare settings.
- C. Extreme caution and awareness surrounding is very important. Care is required when working around existing systems serving the Pharmacies. ICRA plans and maintaining these plans are critical.
- D. Review by the State Department of Health and SFM Review and approval is required.
- E. The three Pharmacies. Each will be permitted separately are as follows:
 - a. **Main Inpatient Pharmacy** (MIP) located in the basement
 - b. **NICU Pharmacy** located on the fifth level
 - c. **Cancer Pharmacy** located on the tenth level

1.02 DESCRIPTION OF WORK.

- A. The **MIP Pharmacy** has two primary phases. Demo and remodel adjacent spaces before any serious remodeling is necessary in the actual main Pharmacy so the pharmacy can stay operational. There will be some prior relocations by the hospital.
- B. The Critical Path however is getting **NICU Pharmacy** up and operational first. This Pharmacy and a couple adjacent offices will relocate prior to work starting. The entire area will be available during one phase. The relocation will only require a small temp infill wall and a door to be installed for the temp Pharmacy room.
- C. Though not on the Critical Path, the **Cancer Pharmacy** will progress at the same time as NICU. Cancer Retail and Cancer Compounding Pharmacy co-exists. Work will be on the Compounding side only. The Compounding functions will be temp relocated prior to demolition and new work. There is one primary phase.
- D. The three Pharmacies square feet by construction intensity is made up of the following:

<u>Construction Intensity</u>	<u>MIP</u>	<u>NICU</u>	<u>Cancer</u>	<u>Total</u>
Heavy (compounding)	1,670 sf	375 sf	235 sf	2,280 sf
Moderate	840 sf	285 sf	30 sf	1,155 sf
<u>Light (more finishes related)</u>	<u>2,935 sf</u>	<u>70 sf</u>	<u>5 sf</u>	<u>3,010 sf</u>
Total	5,445 sf	730 sf	270 sf	6,445 sf

- E. Other square feet data related to areas in the basement surrounding MIP:
1. "Facilities" to be renovated in MIP Phase I at 3,490 sq ft.
 - i. "Terry's" office-add 205 sq ft. not contiguous (new PYXIS work room)
 2. "Surgery Support" to be renovated in MIP Phase I at 1,160 sq ft
 - i. Surgery Support Surgery within total 830 sq ft
 - ii. Surgery Support Office within total 330 sq ft
 3. "Pharmacy Storage" for reference only at 2,710 sq ft
 - i. Office portion within total area 940 sq ft.
 4. "Pharmacy Y2K" for reference only at 685 sq ft
 5. "Bed Storage" for reference at 2,240 sq ft
 - i. Carve out a room around existing sump pump 70 sq ft
 - ii. Carve out a room with new double doors for Surgery support storage 780 sq ft
 - iii. Carve out a room for Pharmacy IV Storage from Material Management and from the old "Pharmacy Storage" at 1,390 sq ft
 6. Existing Pharmacy area
 - i. Investigational storage room 75 sq ft
 - ii. New wall area at Bulk Storage 115 sq ft
 - iii. Misc area around three doors NA in sq ft
 - iv. Misc area in existing Compounding area 190 sq ft
 - v. Misc area around AHU #6

1.03 PROJECT SCHEDULE

- A. Contractor will prepare a detailed construction procedure and schedule and submit it to the Architect and Owner for approval. Such procedure and schedule must be approved in writing by the Architect and Owner prior to the start of construction work. See General Conditions, Article 14 and Section 01 32 40.
- B. Completion of the work within the time frame allotted is critical to the project and the schedule will be strictly adhered to. Contractor shall be responsible for the expediting of the fabrication and delivery of materials and equipment and shall coordinate delivery of same with the approved construction schedule to allow for completion within the time period agreed upon.
1. It is recognized that the work can be unavoidably affected or influenced by governing regulations, natural phenomena including weather conditions and other forces outside the Contract Documents. However, every effort must be made to keep the project on schedule due to the firm deadline established by the Owner for the work.

1.04 MISCELLANEOUS PROVISIONS

Performance Requirements for Completed Work: Provide the final and completed project complete and ready for use in every respect by the completion date specified herein.

1. with all applicable governing regulations, codes and standards is intended and required for the work and for the Owner's occupancy and utilization.
 2. In addition to the requirement that every element of the work comply with applicable requirements of the Contract Documents, it is also required that the work comply with all applicable industry standards and governing codes and regulations.
- A. AE team under current contract will have one Punch list for NICU and Cancer at the same time and one for MIP. Currently the architect will be on site once every three weeks but will be on a conference call or similar weekly. The on site meetings will be set to allow MN to fly in and out on the same day if needed in support of local MN representation.

END OF SECTION



GRADY CANCER CENTER PHARMACY ASSESSMENT

DATE: MARCH 28, 2019

EXISTING MEP CONDITIONS

The compounding pharmacy was remodeled in 2015 with an ante room and HD buffer room. The non-HD drugs are compounded in a glovebox within the pharmacy work area. The spaces are constructed with modular walls consisting of glass and aluminum frames with a lay-in ceiling system. The pharmacy has had some concerns with pressure and findings during certification. These issues have been exacerbated by a remodel of the floors above which included a replacement of the HVAC unit serving this space.

Mechanical

The pharmacy area is served from terminal units from AHU 81. A dedicated terminal has been provided to serve the Ante room and the HD buffer room and a separate terminal unit serves the general pharmacy area. Supply air enters the cleanroom spaces through HEPA fan filter units. Space exhaust was originally designed to be exhausted through the roof. However our site investigation shows that an inline exhaust fan was installed above the pharmacy workroom ceiling discharging exhaust through a louver in the wall. This area is a return air plenum and locating a positive pressure duct in a return air plenum is a violation of building codes. The exhaust fan is controlled by a VFD mounted in the plenum space.

Plumbing

A sink and eyewash are located within the anteroom. Both are served by the building hotwater recirculation system.

Electrical

The existing receptacles within the pharmacy are served by the emergency power system. The lights are a sealed type adequate for the clean room environment. The existing exhaust fans and terminal units are served from an equipment branch panel.

RECOMMENDATIONS

Modifications to the pharmacy floor plan will have minimal impacts on the MEP system however some modifications will be needed to provide the required space conditions.

MEP SYSTEMS

The existing exhaust system was changed to an inline fan during the original pharmacy construction. This fan was designed for 800 CFM of exhaust. Utilizing an inline fan for hazardous exhaust is not allowed by code unless the positive pressure duct is contained in a negative pressure plenum. This discharge ductwork will be enclosed in a drywall plenum and provided with a small amount of exhaust to maintain a negative pressure. The existing supply terminal units will be replaced to provide the additional flow required within the spaces. A low return grill will be installed in the Anteroom and route through a small inline fan to the plenum return for the space. This will increase the required supply air from the existing AHU but not enough to cause any concerns. The refrigerators housed within the HD compounding area do not currently have a low exhaust grille behind them per USP 800 requirements. The existing exhaust to the room will need to be modified to provide this ductwork and a grille behind each of the refrigerators. A return grille with duct to the pharmacy plenum will be added to the bulk storage room due to the added door in the opening. Digital temperature and humidity sensors will be added to the anteroom and the HD compounding room and tied into the BAS for monitoring. A new sink will be added to the existing sink location the water and sanitary connections will be modified to support new sink connections. Electrical receptacles will be relocated to the new wall behind the refrigerators and a dedicated circuit and receptacle will be added for the new HD refrigerator proposed for the room.

GRADY MAIN PHARMACY ASSESSMENT

DATE: MARCH 18, 2019

EXISTING MEP CONDITIONS

The compounding pharmacy was remodeled in 2016 with an ante room HD buffer room and non HD bufer room. The spaces are constructed with modular walls consisting of glass and aluminum frames with a lay-in ceiling system. The existing walls do not extend to the roof deck to provide a pressure seal around the spaces. This has created pressure issues within the space and the open plenum increases the risk of contaminants from the plenum. The existing location would be very difficult to seal a wall ablove the ceiling as it is in a major infrastructure path with conduit, pneumatic tubes, sanitary, steam condensate, heating hot water, and duct mains all routing over the space.

Mechanical

The existing compounding pharmacy is served from AHU 6. AHU 6 is located in mechanical room BE075 is an old air handling unit which is not able to maintain the airflow capacity required. The supply and return ductwork rout through the crawl space and up through a chase in the compounding areas and across the pharmacy. Each of the compounding rooms has a dedicated termianl unit from AHU 6 serving the terminal devises. Return air from the space low wall return routes to the AHU return main over the compounding room and connects with a manual balance damper. The spaces have been reported to have temperature, humidity, and pressure issues. The ante room cannot maintain 30 ACH which caused the HD buffer room to be shut down. An additional heatpump was added to serve two additional fan filter units in the non-HD buffer room to increase airchanges and provide additional cooling to the space.

The anteroom and non-HD buffer rooms are provided with fan filter untis which connect both to the supply air terminal unit and the return duct. This is to allow additional recirculation within the space and reducing the quantity of air from the supply air. Because the return main surves a larger area the duct pressure at this point is fairly high. The fan filter units have problems overcoming this pressure and therefore the supply air into the space is much less than originally designed. The HD buffer room supply air enters the room through a HEPA filter supply grille but does not contain a booster fan. This HEPA filter increases the pressure required for the supply air and the existing air handling unit cannot provide adiquate supply air to maintain the space pressure requirements. The room is exhausted through a low wall exhaust grille and through the MIC compounding glove box. This exhaust quantity is not adiquate to allow the room to maintain the required 30ACH of supply air.

The exhaust fan is located in the lightwell over the maitenance shop. It is a laboratory style exhaust fan with an upblast discharge 10 feet above the room. The lightwell could possible trap the exhaust as the airflow patterns would not allow the exhaust to diffuse. The fan operates at a constant volume and serves other areas withing the pharmacy exhaust.

Plumbing

A sink and eyewash are located within the anteroom. Both are served by the building hotwater recerculation system.

Electrical

The existing recepticals within the pharmacy are served by the emergancy power system. The lights are a sealed type adiquate for the clean room environment. The existing exhaust fans and terminal units are served from an equipment branch panel.

RECOMMENDATIONS

Two options are being considered for the main pharmacy compounding room. One option1 is to remodel the pharmacy in its existing location and option 2 will be to build the compounding area in the existing maintenance area adjacent to the pharmacy. The MEP systems will be the same in each option but there are changes for each and differing scope for each of the option. The description below will describe the common design parameters for each option then discuss the additional scope for each individually.

Demolition in option1 will include the entire HVAC system serving the compounding spaces with ductwork capped back to the mains. Power and plumbing will be relocated as required to serve the new space. Option 2 demolition will include the branch ductwork in the maintenance area and removal of the existing lights and electrical for the space.. An extension of the domestic hot water recirculation system will need to be brought to the new sink location.

MEP SYSTEMS

AHU

To provide the required additional cooling and ventilation for the new compounding area the existing AHU 6 will be replaced with a new AHU. To minimize downtime the new AHU will be installed in the space adjacent to AHU6 and then tied into the existing supply and return before the existing AHU is removed. An inline fan ventilation the craw space with a 30x30 duct will need to be relocated to allow room for the installation of this new AHU. The new AHU will be approximately 14,000 CFM in capacity and provided with a return connection, merv 8 prefilters, a steam heating coil, steam humidifier, chilled water cooling coil and supply fan array. Each coil will have a 16" minimum access section for maintenance of the coil and filters. The return fan will be an inline return fan in the location of the existing fan and relieve and outdoor air dampers/connections will be in the ductwork of the mechanical room. The existing final filter bank will be reused and supply air connections will take place upstream of the existing filter bank. The OSA will be connected to the existing AHU OSA opening in the floor after the original AHU is removed. Temporary cooling will be required in the pharmacy area during the tie-in of the new AHU with the existing ductwork.

Chilled water and steam will be tied into the existing mains within the mechanical room. The steam main tie-in will require a hot tap to avoid shutdown of the steam main. All controls will be tied into the building automation system.

Power for the supply and return fan will be provided from an existing equipment branch panel and power to the motor variable frequency drives. Additional power will be provided for lights within the AHU and UV lamps.

EXHAUST FAN

The existing exhaust fan serving the pharmacy will remain so the existing chemo room can be used for storage. A separate fan for the exhaust serving the toilet and janitors closet will be provided in the light well.

A new exhaust fan will be provided to exhaust the HD buffer room, Bio safety cabinets, and the hazardous drug storage area. This exhaust will be utilizing utility set type exhaust fans with a discharge routing up the wall of the light well to discharge outside of the enclosed area. The fan will be provided with a VFD to control fan speed and airflow. The exhaust ductwork will route from the discharge of the fan to above the lightwell to prevent recirculation of exhaust within that space.

AIR DISTRIBUTION

Each room will have a dedicated terminal unit will be provided for each space to control space temperature and supply airflow. The return main into each space will be provided with a return terminal unit for control of pressurization. A portion of the clean room air will be recirculated to provide required air changes and reduce the reheat requirements on the building. Any recirculation returns will be decoupled from the AHU return to simplify balancing of the room. The existing compounding areas will remain in operation during construction however modifications to the supply main connections over the current IV clean room will be made after construction is complete and the existing new cleanroom is in operation. All supply and return ductwork with in the renovation air will be removed and relocated to best serve the cleanroom spaces. All cleanrooms spaces will be provided with a dedicated supply and return terminal unit to control airflow and pressurization. New terminal units will be provided for the general work are and bulk storage areas added as part of this scope. The existing HVAC ductwork and diffusers will be relocated in the investigational drug area and additional bulk storage areas locations. Lighting and

power will be revised based on floorplan changes in the other general remodel areas outside of the cleanroom areas.

SPECIFIC ROOM REQUIREMENTS

Ante Room

The ante room will be provided with two HEPA filter fan filter units located in the ceiling space to maintain 40 ACH within the room. Two low return grill will be provided with airflow controlled to maintain space pressurization. A digital pressure monitor with a color touchscreen display will be provided at the ante room door to measure the pressure differential between the ante room and general pharmacy space. Temperature and humidity sensors will be provided to monitor space conditions. Any access panels required for equipment maintenance will be provided with gasketed and cleanable doors. A handwashing sink will be located within the ante room on the clean side of the line of demarcation. An eyewash will be provided at the sink utilizing the sink bowl as a drain and provided with a high speed mixing valve. Sprinkler heads within the space will be fully recessed sealed heads in the space. Space lighting will be a gasketed cleanroom type designed to meet the space lighting requirements. Critical and normal branch power locations will be coordinated with the user.

HD Buffer Room

The HD buffer room will be provided with two HEPA filter fan filter unit located in the ceiling space to makeup the exhaust from the BSC. An exhaust duct from the dedicated roof exhaust fan will route to the BSC connection. The exhaust will connect to the BSC with an indirect canopy connection and additional exhaust required to maintain space air change rates will be provided through a low wall exhaust grille. A digital pressure monitor with a color touchscreen display will be provided at the buffer room door to measure the pressure differential between the buffer room and ante room space. Temperature and humidity sensors will be provided to monitor space conditions. Any access panels required for equipment maintenance will be provided with gasketed and cleanable doors. Sprinkler heads within the space will be updated to provide fully recessed sealed heads in the space. Space lighting will be a gasketed cleanroom type designed to meet the space lighting requirements. Critical branch power will be provided for the BSC.

Non Hazardous Buffer Room

The non HD buffer room will be provided with five HEPA filter fan filter units located in the ceiling space to maintain 40 ACH in the space. A low wall return will be provided within the space with a duct routed back to the RTU. A digital pressure monitor with a color touchscreen display will be provided at the buffer room door to measure the pressure differential between the buffer room and ante room space. Temperature and humidity sensors will be provided to monitor space conditions. Any access panels required for equipment maintenance will be provided with gasketed and cleanable doors. Sprinkler heads within the space will be updated to provide fully recessed heads in the space. Space lighting will be a gasketed cleanroom type designed to meet the space lighting requirements. Critical branch power will be provided for the laminar flow work bench.

Receiving Area

A new receiving area will be carved out near existing storage area. Supply and return will be modified to balance the space slightly negative.

HD Storage

An HD storage room will be provided to house all hazardous drugs not capable of being stored in the HD buffer room. The space will be served with supply air from the existing HVAC system and exhausted to the roof. A digital pressure monitor with a color touchscreen display will be provided at the buffer room door to measure the pressure differential between the buffer room and ante room space. Any access panels required for equipment maintenance will be provided with gasketed and cleanable doors. Sprinkler heads within the space will be updated to provide fully recessed heads in the space. Space lighting will be a gasketed cleanroom type designed to meet the space lighting requirements. Critical branch power will be provided for the refrigerators.