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Assessment Report

Royal Medical Services Training Centre

Anman, Jordan

HDR

Sandia National Laboratories

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Section 1.0 Executive Summary

1.1 Introduction

The following document represents the joint SNL/IBCTR and HDR Team's Training Centre needs assessment for the Jordan Royal Medical Service (RMS) at the King Hussein Medical Centre (KHMC) and should be used as follows:

- to present options for future facility improvements,
- in support of obtaining additional funding for the facility and finalization of a plan for equipment, human resource development, and technical assistance, and
- as a platform to guide future considerations to provide training centre facilities in support of the Biorisk Management (BRM) training and other training to compliment RMS capabilities.

1.2 Background Information

RMS has developed a comprehensive Institutional Biorisk training program targeted towards both newcomer and current laboratorians and has dedicated the time and effort to train their technical staff in support of establishing a regional Center of Excellence (COE) for BRM training.

Training is currently being provided on the first floor of the Princess Iman Research & Laboratory Sciences Centre. Facilities include a lecture room that can accommodate approximately 20 people (lecture style) and a conference room that can accommodate approximately 12 people (around a table). Both rooms are currently being shared with the Research & Laboratory Sciences Centre.

The SNL/HDR team had the opportunity to observe a one-day Institutional Biorisk training session and observe the delivery of the courses and see firsthand how the facilities can support the trainings.

1.3 Training Centre Goals and Objectives

Facilities for training are intended to simulate the lab environment such that the trainee can experience a hands-on situation in a lab environment, without disrupting routine laboratory operations.
The primary goals of facilities for training are:

- The training centre design should promote laboratory biosafety and biosecurity
- Create flexible space to support a variety of training modules and teaching styles for the instructor
- Enhance training capacity and capability

1.4 Facility Considerations

Existing Facilities

The existing spaces used for training include a Lecture Room and a Conference Room on the first floor of the multi-floor Princess Iman Research & Laboratory Sciences Centre. This area also has a shared office area for five people who support the Research Centre. Both rooms used for training are also shared with the Research & Laboratory Sciences Centre. The spaces are adequate for classroom and lecture style trainings, but cannot support advanced laboratory trainings requiring Biological Safety Cabinets or sinks. In addition the existing furniture and IT technology should be improved for both the trainers and the trainees.

New Construction

The new facility will create a safe, secure training environment for training activities protecting trainees, trainers and the surrounding environment. The proposed design would ideally contain one floor above grade, totaling approximately 1,500m^2. New construction would also provide the opportunity to conduct field biosecurity/biosafety training, on the grounds surrounding the new Centre while also providing

sufficient space for dedicated parking for the trainees, the mobile laboratory and other field response vehicles.

KHMC has identified a potential site of roughly 14,000 M^2 for the new Training Centre. In addition, the site has sufficient area (1200 M^2) to accommodate another wing in the future that could provide space for enhanced training and research capabilities. The approximate construction cost for a greenfield project such as this if it were to go to open tender would be in the range of $350 - $400 JD/square meter per the RMS engineering group. The construction budget for the first phase of the new training centre would be in the range of $525,000 to $600,000JD. Please note that this is a construction cost value only and will need to be increased for price escalation, equipment, furniture, site acquisition, and final design and other administrative costs.

Renovations
The existing Training Centre is currently being provided on the first floor of the Princess Iman Research & Laboratory Sciences Centre. The building is a 7 story medical laboratory and research building that was first occupied in 2001. The building is a concrete framed building in good condition and does have water, sewer, power, and ventilation. The two primary rooms on the first floor used for training are the Lecture Room and a Conference room. SNL/HDR explored two levels of renovation within the existing are on the first floor. Option 2 looked at using only the lecture room and the conference room. Option 3 looked at using the existing office area as well in order to provide enhanced training capabilities. The construction cost for renovation could be more per square meter than new construction due to the scale and complexity of the projects. More design should be done to determine exact costs should it be decided that RMS will move forward with this approach.

Enabling Project
If renovations to the existing facility is not possible due to cost, schedule, or ability to allocate the area to the Training Centre, SNL/HDR has shown an option to construct a small dedicated training centre in the parking are near the existing mobile laboratory to enable the training to be improved and have dedicated space to accommodate the RMS mission.

1.5 Recommendations

The new construction option affords RMS the best option to provide appropriate and flexible facilities to support the overall training mission. RMS should look to secure adequate funds to support this approach.

Therefore, the Assessment documents that follow are NOT to be used for construction as additional comprehensive technical documentation is required to develop design criteria and specifications to support the construction strategy.

END OF EXECUTIVE SUMMARY SECTION

2.0 Programming and Planning Criteria

2.1 Space List Summary

The following is a proposed space list for a new Training Centre Facility which has been developed through discussion with the Design Team (SNL/IBCTR and HDR) and RMS program representatives. It records the areas of programmatic spaces required in the new facility and should be used as the basis for developing further programmatic and design documentation for the new facility.

The proposed space listing includes areas dedicated for classroom training as well as a fully functional training laboratory. Administrative offices, meeting areas, and amenity spaces are also included in the list. There are specialized laboratories/spaces for:

1. molecular analysis training
2. decontamination and waste handling
3. sample packing and shipping training
4. sample storage training
5. cleaning and sterilization
6. Information and physical security
7. material loading

Total gross area of the initial phase of the building is approximately 1,500 m^2. Total net area in the program space list is approximately 890 m^2. This net area typically excludes corridors, stairs, elevators, shafts, service rooms and washrooms as well as the areas occupied by walls and columns.

The following pages illustrate the proposed space listing.

Space List

Project Name: RMS Regional Training Centre
Project / Facility Number: N/A

Date: April 09, 2019
Location: Amman, Jordan
Issue: 1.0

Function/Group Name Room Name	Staffing Headcount	Qty	Size (SM)	Office & Classroom	General Lab	Specialty Lab	Building Support	Total Area (SM)	Comments
General Training Laboratories									
Training Pre Function Area		1	30	30				30	*Area for tables for training material, student lockers*
Large Lecture Room		1	60	60				60	*Seating for 36 students*
Medium Conference Room		2	40	80				80	*Seating for 24 students, videconferenciing*
Breakout Rooms		2	20	40				40	*Seating for 10*
BSL2 Training Lab		1	60		60			60	*20 Students, 4 sinks*
BSC Training Lab		1	20		20			20	*sink, 1 BSC*
PPE Training Lab		1	20		20			20	*Entry to Training Lab, sink, PPE Storage*
Training Materials		1	10	10				10	*Microscopes, and lab equip for training*
Storage		1	10				10	10	*Table and chair storage*
Subtotal: General Training Laboratories	**0**			**220**	**100**	**0**	**10**	**330**	
Specialty Training Laboratories									
Molecular Diagnostics Lab (PCR)									
PCR Master Mix (Clean)		1	16		16			16	*Positive Air Flow, Passbox*
PCR Ante Room		1	4		4			4	*To buffer PCR Clean and Extractions.*
PCR Extractions		1	20		20			20	*Negative Air Flow, Passbox*
PCR (Post) Amplification		1	20		20			20	*Positive Air Flow, BSC*
DNA Sequencing Lab		1	20		20			20	*Sequencer*
Biomedical Engineering									
Calibration Lab		1	20		20			20	*BSC (2)*
Repair Lab		1	20		20			20	*Parts inventory*
Waste Management Lab		1	20		20			20	*Autoclave (Floor)*
Glasswash and Drying Lab		1	20		20			20	*Washing sink, dishwasher, drying racks*
Equipment Room		1	10		10			10	*Refrigerators (-20(1)) & Freezers (- 80 (1))*
		0	0		0			0	
		0	0			0		0	
Subtotal: Specialty Training Laboratories	**0**			**0**	**170**	**0**	**0**	**170**	
Office and Classroom									
Training Centre Director	1	1	15	15				15	*Office*
Training Coordinator Office	1	1	15	15				15	*Office*
Visiting Trainer Office	2	1	20	20				20	*Shared Office*
Open Office Area	4	1	25	25				25	*Flexible work spaces (Admin, Scheduling, 2 open)*
Small Conference Room		1	20	20				20	*For 10 people*
Print Room		1	10	10				10	*Printer for assembling training materials*
Subtotal: Office and Classroom	**8**			**105**	**0**	**0**	**0**	**105**	
Building Support									
Security Vestibule		1	15				15	15	*Hold area for security clearence*
Building Lobby		1	60				60	60	
Security Office		1	20				20	20	*Access to vestibule and lobby, cameras*
Men's Restroom		1	20				20	20	
Women's Restroom		1	20				20	20	
IT server room		1	20				20	20	*For LIMS system and other servers.*
Café Area		1	40				40	40	*Shared area for tea breaks*
Central Gas Cylinder Storage Area		1	15				15	15	
Central Biowaste Collection Area		1	15				15	15	
Loading Dock Area		1	40				40	40	*Interior area to unload*
Field Operations Storage		1	20				20	20	*Field Operations Gear*
Subtotal: Building Support	**0**			**0**	**0**	**0**	**285**	**285**	
Total Net Space (Square Meters)	**8**			**325**	**270**	**0**	**295**	**890**	
Percentage of Total Net				36.5%	30.3%	0.0%	33.1%	100.0%	
Grossing Factor (Net x)									Typical Grossing Factor Range (1.8 - 1.5)
Total Gross Space (Square Meters)	**1.67**							**1,486**	Total Net + circulation + building infrastructure
Net percentage of Gross	59.9%								

2.2 Laboratory Planning Concepts

The following planning concepts are meant to reinforce biosafety and biosecurity processes associated with training activities anticipated to be conducted in the new facility. However, it must always be remembered that "physical barriers do not substitute for good laboratory practice" (Agriculture Research Service (ARS) Facilities Design Standards).

A. Laboratory Planning Concepts

- Allow for work to be carried out under the appropriate conditions that support international biorisk management best practices and in accordance with current recommendations on approved diagnostic techniques. Minimize high risk activities involving live agents in favor of molecular diagnostics whenever possible.
- Functions are consolidated & co-located in order to reduce travel distances for moving infectious materials within the facility.
- Office areas and Public spaces are located away from labs in a separate, but adjacent zone.
- Lab spaces are larger and open where it is possible for different programs/users to share space based on similar biorisks associated with the activities to be conducted
- Smaller support spaces are provided for common equipment and functions that require some level of isolation.
- To allow for ease of sharing equipment, support spaces are accessed from a common corridor to avoid creating traffic through the laboratory spaces.
- Biosafety cabinets are located away from circulation and high traffic routes.
- A wash up & sterilization area is provided in close proximity to the laboratories in order to minimize travel distances for infectious waste.
- Sterilizers, pass boxes and ante rooms are provided to allow for the most appropriate method of transfer to be used when moving materials in or out or between laboratories.

2.3 Program Components

A. Training Areas

Training areas in the facility include one fully functional BSL2 Training Laboratory. The training laboratory includes a large open lab area with flexible/mobile casework to allow for a variety of teaching arrangements. The training lab also includes several supporting areas for PPE training, Biosafety Cabinet training, and microscope use training. In addition there are several Conference Rooms that can be used for teaching and non-lab classes, and breakout rooms for small group discussions. There is also one large Lecture Room that can accommodate 36 students in a lecture seating format.

B. Specialty Training Laboratories

Specialty laboratories provide the ability to train students in simulated lab areas on specific techniques to improve testing outcomes and encourage good biosafety practices. Molecular diagnostics (PCR) is one of the fastest growing areas of lab testing. This area will encourage proper flow and processing the sample to achieve good results. A DNA Sequencing lab provides an area for equipment and reagents. The biomedical Engineering area is to accommodate calibration and equipment repair training for a program that has been recognized in Jordan. A lab for waste management will provide the ability to do hands on training with autoclaves. And there is a lab for proper training on glass washing and drying.

C. Office Areas

The office area is to support the staff required to organize, run, and maintain operations of the Training Centre. There is also a shared office area for visiting Trainers. The small conference room provides an area for training development and the print room provides and area to assemble training materials.

D. Building Support

A new facility requires areas to support the building and its occupants. At the front door we envision a security vestibule and a security office to screen visitors prior to entry to the facility. This will encourage laboratory safety. An IT Server room will house all Laboratory Information Systems (LIMS) that can be used for training and support for the building. The Café will provide a shared area for trainees and can serve as a large flexible common area. The loading dock area of the building will also include areas for bio waste collection, empty and full cylinder storage and manifolds, and an area for equipment used for the field operations training units.

2.4 Total Net Space and Total Gross Space

The Space Listing is intended to outline the individual space required in the building to support the targeted training mission envisioned by RMS.

A. Total Net Space

Total Net Space is the sum of all the identified rooms or areas within the building. The space listing for the new Training Centre has identified the Total Net Space as 890 square meters.

B. Total Gross Space

Total Gross Space is the sum of the Total Net Space plus the amount of the grossing factor. This is the total area needed to build. The space listing has identified the Total Gross Space as 1,486 square meters, so we would round that up and say that we will need 1,500 square meters for this facility.

a. The primary reason that a factor is used at this phase of the project is that we do not have an actual design for the building. We still need to account for internal hallways, areas for mechanical electrical plumbing equipment, and even the area for walls and structural columns.
b. The grossing factor is a percentage factor that is used to convert Total Net Space into the Total Gross Space. We multiply the Total Net Space by 1.67 to calculate the Total Gross Space.

End of Planning Criteria Section

3.0 Assessment

This assessment is to provide recommendations for the potential Royal Medical Services (RMS) Biorisk Management (BRM) Training Facility development. The Sandia/HDR team met with RMS delegates from 8 to 11 April 2019. The team observed a one-day Institutional Biorisk training targeted towards newcomer and current laboratorians at RMS, received tours of the RMS mobile lab and microbiology departments, viewed existing and potential sites for housing a training centre, and held discussions with management leadership and senior staff for the centre.

The existing spaces used for training include a Lecture Room and a Meeting Room on the first floor of the multi-floor Princess Iman Research & Laboratory Sciences Centre. This area also has a shared office area for five people who support the Research Centre. Both rooms used for training are also shared with the Research & Laboratory Sciences Centre.

Figure 1: Princess Iman Research & Laboratory Sciences Center

3.1 Observations of the Existing Training Centre

The current Training Centre uses two rooms; the Lecture Room and the Meeting Room, on the first floor of the Princess Iman Research & Laboratory.

The Existing Lecture Room:

- Approximately 5470cm x 8310cm
- Painted Walls, seamless vinyl flooring, acoustical tile ceiling
- Windows on two walls (original single pane glass), with curtains
- Fluorescent Lighting (on or off)
- Overhead projector and monitor
- Whiteboard (partially covered by monitor)
- Moveable seating (3 chairs attached together) and moveable tables

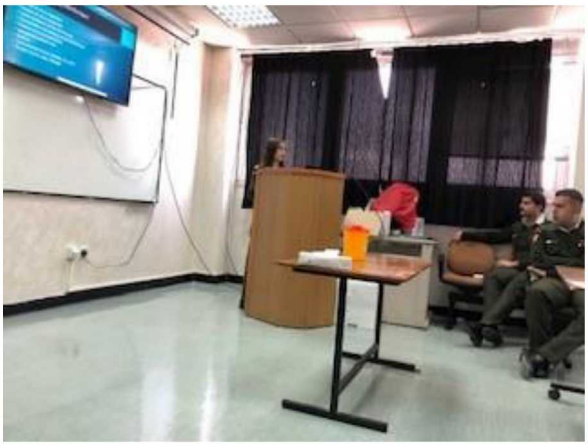


Figure 2: Existing Lecture Room Podium and Monitor

Figure 3: Existing Lecture Room Furniture

The Existing Meeting Room:

- Approximately 3900cm x 6000cm
- Painted Walls, seamless vinyl flooring, acoustical tile ceiling
- Windows on two walls (original single pane glass), with blinds
- Fluorescent Lighting (on or off)
- No Overhead projector, screen, or monitor
- No Whiteboard
- Moveable seating and two tables

Figure 4: Existing Meeting Room View 1

Figure 5: Existing Meeting Room View 2

Observations

Observing the one day Institutional Biorisk training exercise gave SNL/HDR the opportunity to see the trainers and the trainees teach and learn. A modern training facility is designed to enable a variety of teaching methodologies from lectures to team based activities. The furniture should also be easily moved and configured to respond to the various teaching activities. Finally, technology should be seamless and allow the trainer to convey the intended message and the trainee should be able to see and read the information presented without disruption.

The Existing Lecture Room:	**The Existing Meeting Room:**
• Technology: the existing monitor appeared to be too small for the room size and mounted too high for viewing comfort, podium was too tall for some trainers • Finishes: Floors walls, and ceiling looked original and in fair condition. • Lighting was fluorescent and not switchable or dimmable • whiteboard was partially blocked by monitor • Furniture was not flexible or easily moveable	• Technology: No monitor or projector • Finishes: Floors walls, and ceiling looked original and in fair condition • Provide dimmable lighting • No whiteboard • Flexible and stackable caster based chairs (same as Lecture Room for flexibility)

3.2 Improvement Options

The SNL/HDR team looked at possible improvements to the facilities for training as an opportunity to improve the teaching and learning experience, and to look at both new and renovated options to give RMS flexibility to improve and grow facilities for the training program. We have grouped seven options into three categories as follows:

New Construction (Option 1)	Renovation (Option 2 and 3)	Enabling Project (Option 4)
• 1 - New construction affords the opportunity to accomodate current and future training programs in flexible space • The site can accomodate field training lanes for biodetection or tacticle movement and a clandestine lab. • Highest cost	• 2a and 2b use existing Training Centre areas • 3a,b,c enhance training and use more area (requires relocation of non-training offices) • Space would be improved but not provide sufficient area for advanced training • Low to Medium cost	• 4 - If renovation is not possible, this option can be constructed near the mobile lab without disrupting existing lab operations • Space would be improved but not provide sufficient area for advanced training • Medium cost

3.3 Option 1 – New Construction

New construction offers RMS the most opportunity to design a flexible training areas to facilitate a variety of trainings. The programmatic functions and room areas are listed in detail in Section 2. The Engineering group at the hospital campus identified a site in the east corner of the main KHMC campus that could be used for the new Training Centre.

Figure 6: Site location selected for the new Training Centre

Figure 7: Area of the specific site

Site

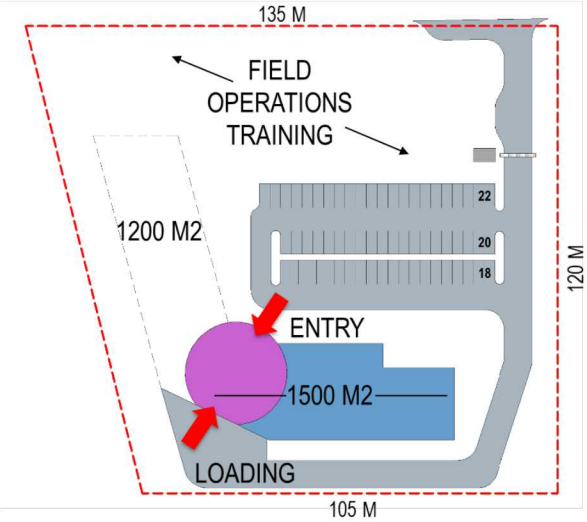
The specific site for the new Training Centre is approximately 14,000 square meters and is located on the eastern edge of the King Hussein Medical Centre campus. The yellow circle and line in Figure 7 above indicates the potential location for a new entry off of the main road as access to the identified site. This site has many advantages for the Training Centre program and a couple of disadvantages that can be addressed during design and construction.

Image indicates a proposed test fit of a new Training Centre of approximately 1,500 square meters, parking, and the new entry and road.

Advantages	Disadvantages
Good visibility to road	Utility infrastructure
Sufficient area for Phase 1 and Phase 2	Campus entry through residential area
New entry possible	
Expansion capability	
Site promotes lab and field training	

Advantages – The new entry from the main road would need to go through an approval process to grant access to our site.

Disadvantages – The utility infrastructure in this general area of campus is designed for the current residential use. It is the intention of KHMC to develop this area of campus and utility infrastructure in this area should be upgraded. The campus entry through the residential area will be changing in the future as the current residential use will be changing to uses more compatible with the campus and the Training Centre.



The proposed new one story 1,500 square meter new facility is shown in blue/pink below is based in the space list sown in Section 2 of this report. We have also shown potential parking (60 spaces) and roadways in gray. Field Operations Training is a program that RMS has expressed interest in providing and can easily be accommodated on the site. The site is also large enough to expand the building for future training and research programs shown in dotted lines and labeled 1,200M^2.

3.4 Option 2 – Renovation

Figure 8: Existing first floor

The existing areas identified for possible renovation are the areas on the first floor that are currently used for training activities; the Lecture Room and the Meeting Room. The Lecture Room is a rectangular room with a podium and wall mounted monitor on the short wall and seating lining the perimeter and lecture style in the center.

The dimensions of this room are not adequate to provide area for sink's, BSC's, and lecture space. Our recommendation is to improve the technology; monitor, podium, IT, and phone. In addition, provide new flexible seating and tables to facilitate different teaching styles.

The Meeting Room is also a rectangular room with a large conference table and chairs centered in the room. This room could remain a meeting room or be renovated into a laboratory for BSC training. See options for renovation of the existing areas below.

Option 2a – Renovation with Meeting Room

This option shows the existing lecture set up in lecture seating format with chairs only.

Figure 9: Plan view lecture seating

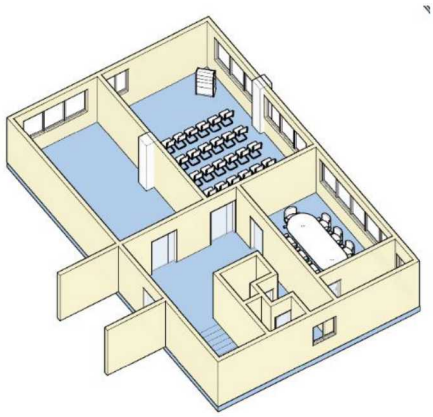


Figure 10: 3D View

Recommendations:

Training Room:	**Meeting Room:**
• Technology upgrade: new monitor (larger), new podium (shorter), new overhead projector • New finishes: repaint walls, repair acoustical tile ceiling, new door with window, new darkening blinds • Provide dimmable lighting • Move or adjust whiteboard to make it more useable • Flexible and stackable caster based chairs and a few more moveable tables	• Technology upgrade: new monitor, new overhead projector • New finishes: repaint walls, repair acoustical tile ceiling, new darkening blinds • Provide dimmable lighting • New whiteboard to make it more useable • Flexible and stackable caster based chairs (same as Lecture Room for flexibility)

Option 2b – Renovation with Laboratory

This option shows the existing lecture set up in team exercise seating format with tables and chairs. The Meeting room would be completely remodeled into a training laboratory. This would allow the RMS to provide advanced training without needing to disrupt routine testing and research on other floors of the building. In addition, the walls to the corridor would be glass walls so that trainees can see into the lab and observe training. This lab would be deigned to international best practices to promote improved biosafety and biosecurity protocols.

Figure 21: Plan view team activity seating

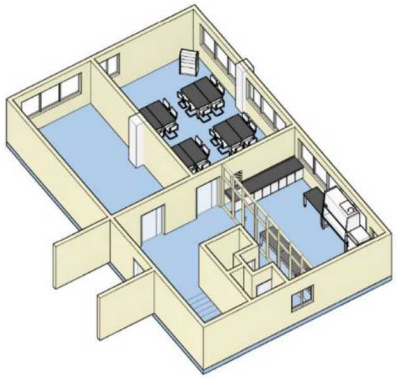


Figure 12: 3D view

Training Room:	**BSC Training Lab:**
• Technology upgrade: new monitor (larger), new podium (shorter), new overhead projector • New finishes: repaint walls, repair acoustical tile ceiling, new door with window, new darkening blinds • Provide dimmable lighting • Move or adjust whiteboard to make it more useable • Flexible and stackable caster based chairs and a few more moveable tables	• Technology upgrade: 2m BSC, power outlets • New finishes: repaint walls, repair acoustical tile ceiling, new darkening blinds • Provide new LED lighting • New sink near the door • Flexible tables • Glass walls and door on the corridor side

3.5 Option 3 – Enhanced Renovation

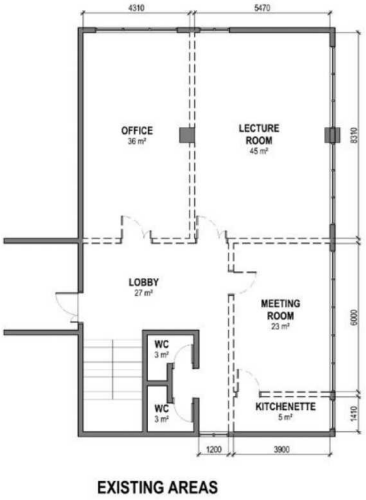


Figure 33: Option 3 – Demolition Plan

This option explores the capability of the existing area on the first floor to provide area for a flexible training laboratory with training sinks and BSC's. This will allow RMS to add additional training modules to their curriculum. We would like to see the entire floor be vacated and the existing walls demolished.

The existing Lecture Room and Office would become one large room for training. This will allow us to design a large training laboratory which can be reconfigured to accommodate a variety of seating options to allow for a many different teaching programs.

The existing meeting room and kitchenette would be reconfigured, depending on RMS preference, into a PPE training area, and a dedicated training laboratory that could accommodate a variety of advanced training needs.

3a – Flexible Training Centre

Option 3a we renovate the existing Lecture Room and Office area to create a fully functional flexible Training Laboratory with training sinks and BSC's.

Figure 14: Option 3a – Flexible Training Centre w/PPE and BSC

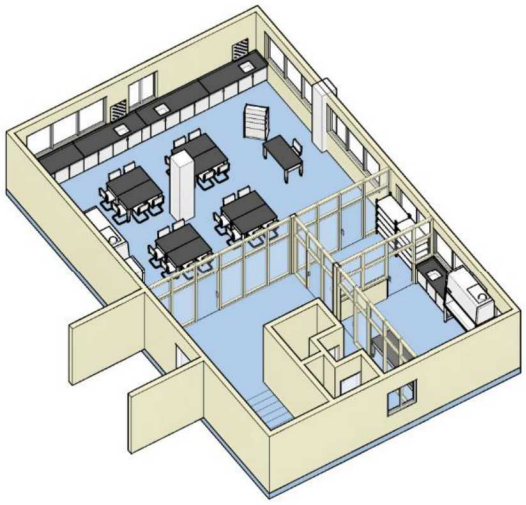


Figure 15: 3D view

Training Room:	**PPE and BSC Training Lab:**
• Complete renovation of existing Lecture and Office. • Technology: 2m BSC, new monitor (larger), new podium (shorter), new overhead projector, screen, whiteboard • 4 training sinks • New finishes: paint walls, new acoustical tile ceiling, new darkening blinds • Provide dimmable lighting • Flexible and stackable caster based chairs and a few more moveable tables • Glass wall and door on the corridor side	• PPE area to promote good lab practice • Technology: 2m BSC, power outlets • New finishes: repaint walls, repair acoustical tile ceiling, new darkening blinds • Provide new LED lighting • New sink near the door • Flexible tables • Glass walls and door on the corridor side

3b – Retain Conference Space

In this option we renovate the existing Lecture Room and Office area to create a fully functional flexible Training Laboratory with training sinks and BSC's. The area that is currently being used as a conference room would be remain a conference room to support existing operations and be shared with the Training Centre. The existing office area would need to be relocated to another part of the building.

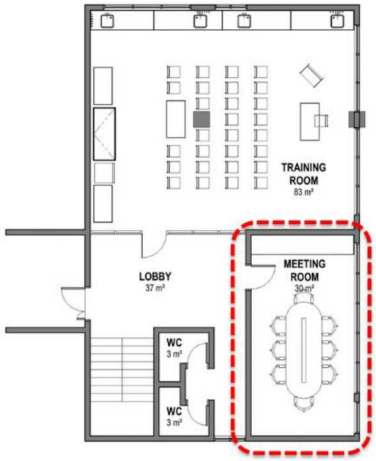


Figure 46: Option 3b – Flexible Training Centre w/Meeting Room

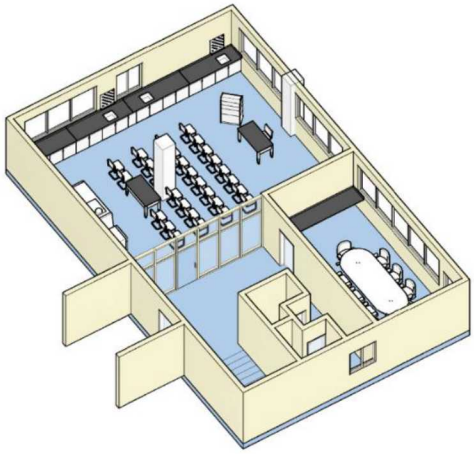


Figure 17: 3D view

Training Room:	**Meeting Room:**
• Complete renovation of existing Lecture and Office. • Technology: 2m BSC, new monitor (larger), new podium (shorter), new overhead projector, screen, whiteboard • 4 training sinks • New finishes: paint walls, new acoustical tile ceiling, new darkening blinds • Provide dimmable lighting • Flexible and stackable caster based chairs and a few more moveable tables • Glass wall and door on the corridor side	• Technology upgrade: new monitor, new overhead projector • New finishes: repaint walls, repair acoustical tile ceiling, new darkening blinds • Provide dimmable lighting • New whiteboard to make it more useable • Flexible and stackable caster based chairs (same as Lecture Room for flexibility)

3C – Retain Space for Office

In this option we renovate the existing Lecture Room and Office area to create a fully functional flexible Training Laboratory with training sinks and BSC's. The area that is currently being used as a conference room would be renovated into the relocated office area to maintain existing operations. Office furniture and seating should provide flexibility, promote improved ergonomics, and productivity.

Figure 58: Option 3c – Flexible Training Centre w/Office

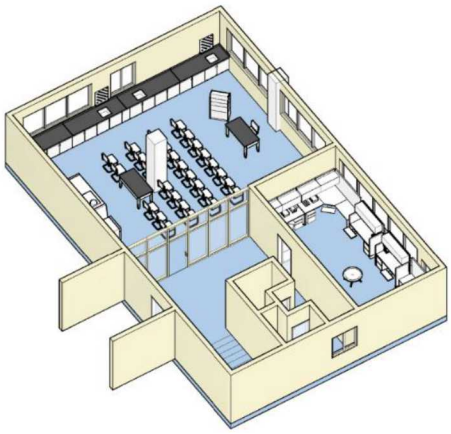


Figure 19: 3D view

Training Room:	**Office:**
• Complete renovation of existing Lecture and Office. • Technology: 2m BSC, new monitor (larger), new podium (shorter), new overhead projector, screen, whiteboard • 4 training sinks • New finishes: paint walls, new acoustical tile ceiling, new darkening blinds • Provide dimmable lighting • Flexible and stackable caster based chairs and a few more moveable tables • Glass wall and door on the corridor side	• Technology upgrade: additional power, data, and phone • New finishes: repaint walls, repair acoustical tile ceiling, new blinds • New lighting • Modular and adjustable work surfaces and shelving • Flexible caster based chairs

3.6 Option 4 – Enabling Project

This option was developed as an enabling project to be a bridge between renovation and new construction. If the existing Training Centre space on the first floor cannot be renovated due to space not being available, cost, or schedule; this option would allow the training program to develop additional training offerings for more advanced trainings. In addition the existing space on the first floor would remain in operation during the construction of this new area.

This project is not intended to be a permanent solution but rather an interim step to allow RMS the ability to offer enhanced training modules to grow the program until the facility on the new site is constructed.

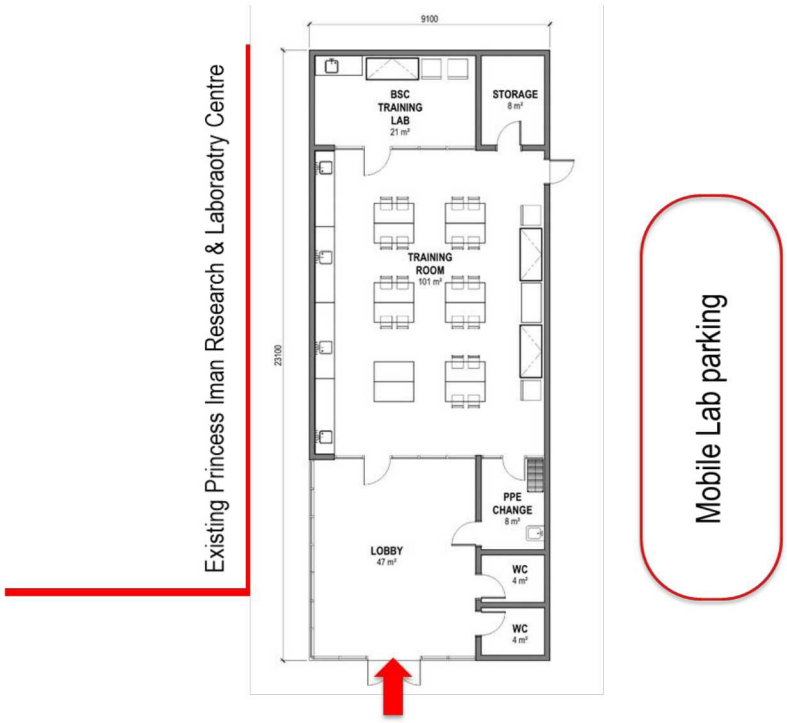


Figure 20: Option 4 – New Construction near the existing mobile lab parking area

Training Room: • Complete renovation of existing Lecture and Office. • Technology: 2-2m BSC, new monitor (larger), new podium (shorter), new overhead projector, screen, whiteboard • 4 training sinks • New finishes: paint walls, new acoustical tile ceiling, new darkening blinds • Provide dimmable lighting • Flexible and stackable caster based chairs and a few more moveable tables • Glass wall and door on the lobby side	**PPE and BSC Training Lab:** • PPE area to promote good lab practice • Technology: 2m BSC, power outlets • New finishes: repaint walls, repair acoustical tile ceiling, new darkening blinds • Provide new LED lighting • New sink near the door • Flexible tables • Glass walls and door on the corridor side
Lobby/Storage/Toilets (WC): • Lobby also will accommodate tea breaks • Storage area is for training materials and microscopes • Men and Women toilets	

3.7 Scorecard

The Scorecard is a tool used to measure the options developed against a common group of success factors. The success factors are indicative of a given options ability to achieve success in that category. The scale uses the colors Red (Not Good), Yellow (Marginal), and Green (Good) to indicate how well that Option meets the success factors. The below chart indicates how each Option indicated above ranks compared to the other Options.

	Existing	Reno 2a	Reno 2b	Reno 3	New
Lecture Training	■	■	■	■	■
Group Training	●	▲	■	■	■
Wet Lab Training	●	●	▲	■	■
Specialty Lab Training	●	●	▲	▲	■
Flexibility for Trainers	▲	▲	▲	■	■
Support Space for Trainees	●	●	▲	■	■
Technology Enabled	▲	■	■	■	■
Future Program Expansion	●	●	●	▲	■

Figure 21: Scorecard

END OF RMS ASSESSMENT SECTION