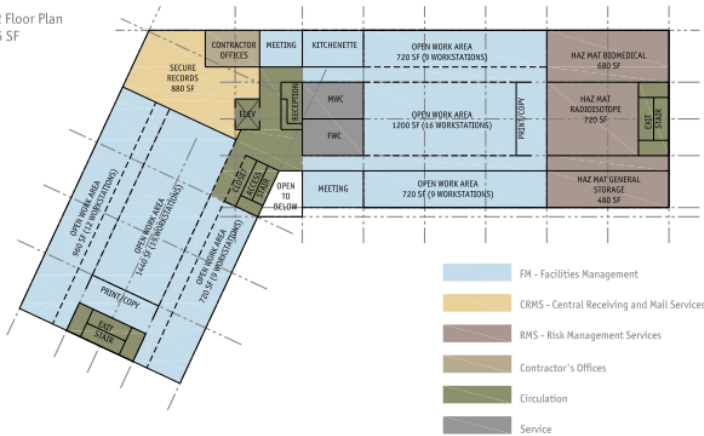


CAMPUS OPERATIONS BUILDING

CONCEPT BRIEF

Level 2 Floor Plan
13,595 SF



Level 1 Floor Plan
12,210, 5F





THE UNIVERSITY OF BRITISH COLUMBIA

Campus Operations and Risk Management
ADM 106, 1138 Alumni Avenue
Kelowna, BC V1V 1V7

TABLE OF CONTENTS

BACKGROUND.....	5
CURRENT SPACE NEEDS.....	6
1. WORKSHOPS.....	6
2. CENTRAL RECEIVING AND MAIL SERVICES (CRMS) AND SHARED LOADING DOCK (2 HEIGHTS, DOUBLE-WIDE)	6
3. CONSUMABLE GOODS/ CENTRAL STORES (TO BE MANAGED BY CRMS)	6
4. RECORDS MANAGEMENT STORAGE (NOT INCLUDED IN FLOORPLAN)	7
5. MEETING ROOMS AND INFORMAL COLLISION SPACES (PARTIALLY INCLUDED IN FLOORPLAN).....	8
6. CONTRACTOR STORAGE SPACE (CUSTODIAL, LANDSCAPING) AND CONTRACTOR OFFICE SPACE.....	9
7. CURRENT SPACE OCCUPIED THAT COULD BE RELOCATED – STAFF AND STORAGE	9
8. TEACHING AND HAZARDOUS MATERIALS TESTING SPACE (COULD BE ACCOMMODATED IN FLOORPLAN)	11
9. HAZARDOUS MATERIALS HANDLING (ESTIMATED 1000SQFT).....	12
10. UBC VEHICLES, PARKING, AND SERVICING (COVERED, OPEN, ELECTRICAL).....	17
FLEET INVENTORY:.....	17
FLEET SERVICING AND FUELING	17
12. LAUNDRY SERVICE (OPTIONAL)	18
13. ADEQUATE OUTDOOR SPACE.....	18
14. ADDITIONAL CONSIDERATIONS.....	18
APPENDICES.....	18
CAMPUS OPERATIONS BUILDING – FLOOR & SITE PROPOSAL	18



BACKGROUND

The original concept for the Campus Operations building was developed in 2014 by Meiklejohn Architects for the purposes of developing a functional program to address growing space demands within the Campus Operations and Risk Management portfolio. This concept has been recently expanded to include additional Facilities Management, Risk Management Services, Project Services, Campus Security, and Central Receiving and Campus Mail needs. Recognizing that the majority of services provided by operational units are conducted out of spaces located within the core of campus, efforts have been made to provide options for freeing up this space for teaching and research purposes. It is important to note, however, that the proposed building still requires reasonable proximity to the campus core in order to ensure that client access and response times are not affected.

Consolidating operational services into one building offers the following benefits:

- Frees up potential teaching and research space (both land and building) that can be reallocated to the faculties (i.e. Library, EME). It is estimated that at a minimum the proposed building would **free up almost 10,000 sqft of building space and 5200 sqft of land space** (consumed by portables and c-cans). Relocating the current location of the Quonset building and associated activities would also make approximately **1.5 acres of land in a prominent campus gateway** available for other uses.
- Moves medium- to long-term faculty storage outside of the campus core (i.e. seasonal field equipment, consumables).
- Creates synergies between operational departments that work closely together and the types of space they require (i.e. loading dock).
- Allows for safer and more efficient operations by providing space that is needed to conduct specialized types of work (i.e. welding, painting, electrical testing, and hazardous materials waste management).
- Removes temporary, deteriorating, and potentially unsafe office and storage locations (i.e. c-cans and aging portables).
- Creates opportunities for sustainable activities (i.e. hazardous waste reduction, composting, tree transplanting).
- Enables growth of critical services to support expanding teaching and research activities.

Currently the floor plan prepared by Meiklejohn Architects **does not include accommodation for the main office for Campus Security, Project Services, or a training room and fume hood for hazardous materials testing for Risk Management Services**. If these activities were included, this would result in the release of an **additional 1096sqft of space** in the Library building (in addition to the 1755 sqft that would be released with the relocation of CRMS included in plan), and 300 sqft of space in the Administration building, as well as decreased demand on classroom bookings and better access to required health and safety related training, especially as it relates to lab safety training, for students and faculty. **In addition the building could also include functions such as a chemical and biology stores that**



could be managed by operations to support the Faculties due to the synergies that could be realized by providing this type of service to the campus.

CURRENT SPACE NEEDS

1. WORKSHOPS

The majority of workshop activity is currently conducted in one-fifth (1000sqft) of the Quonset (5000 sqft). The future requirement for workshop space in a new facility is over 3000 square feet and would include the welding booth, paint booth, carpentry shop, electrical service area, and an irrigation equipment/parts/assembly area.

2. CENTRAL RECEIVING AND MAIL SERVICES (CRMS) AND SHARED LOADING DOCK (2 HEIGHTS, DOUBLE-WIDE)

The current central receiving area (1760 sqft) located in the Library building would be relocated to the Campus Operations building. CRMS could provide a greater warehousing function that could include central stores and records management support. Risk Management Services also requires access to the loading dock for the transportation of hazardous materials. By sharing this loading dock, Campus Operations would create further efficiencies, improve regulatory compliance, and reduce the existing risk of hazardous materials spills. It is important that building design would accommodate the required high ceiling to support these activities as well have gas storage cages (covered and locked x2 - segregated) for emergency gas storage, and storage of oxygen for first aid.

3. CONSUMABLE GOODS/ CENTRAL STORES (TO BE MANAGED BY CRMS)

Although CRMS records only show where materials come from, and not necessarily the contents of any given package, CRMS was able to suggest a number of items that may be beneficial to keep on-hand. These suggestions are based on informal conversations with lab staff and discussions with Facilities Management about stored materials.

Items that may be kept in a “local stores” include:

- Items that require ongoing storage throughout the year while the inventory is slowly depleted (i.e. surplus renovation materials fluctuate, exam booklets continually consume over 30 sqft of storage)
Note: It is recommended that a space review be conducted to evaluate the need for this type of storage, which would be supported through the proposed building if practical.
- Building maintenance supplies (filters, belts, floor tiles, marmoleum, ceiling tiles)
- Plumbing supplies (elbows, tees, fixtures, toilet parts)
- Facilities and security hardware (screws, bolts, nails, nuts, extension cords, locks, light bulbs, lamps, cameras)
- First aid supplies

While more faculty input would be required to determine possible synergies, the following may also be accommodated within a central stores area:



- Lab general supplies (gloves, paper towels, kim wipes, autoclave bags, sharps containers, dust masks)
- Lab consumable supplies (petri dishes, test tubes, caps, plastic tips, pipettes, syringes, slides, coverslips, tissue culture flasks and disposables)
- Non WHMIS controlled high consumable chemicals (agar, buffers, media, salt, baking soda, cleaners, oil)
- Bio Bars, which act as a vending machine for certain biological reagents that are not WHMIS controlled; there are already two of these on campus which make a small profit
- Surrendered lab consumables that are no longer needed by a lab that could be reallocated to another

Although some users may feel they already have adequate solutions to their storage/supplies problems, it is possible that the spaces these users are currently occupying could be repurposed as well to free up space in future buildings, if a central stores service is supported.

ITEM	Estimated SPACE Requirement (ft ²)
CRMS ongoing storage	100
Building maintenance supplies (filters, belts, floor tiles, marmoleum, ceiling tiles), plumbing supplies (elbows, tees, fixtures, toilet parts), Facilities and security hardware (screws, bolts, nails, nuts, extension cords, locks, light bulbs, lamps, cameras, Salto locks)	3600
Minimally conditioned space for fleet, golf cart storage, irrigation equipment, emergency traffic signage, etc.	4600
Minimally conditioned garage for fleet servicing	400
Records management (requires input from Chief Librarian responsible for the program. CRMS currently provides records pick up and retrieval)	Not included at this time
Lab general supplies (Needs further faculty input)	Not included at this time
Lab consumable supplies (Needs further faculty input)	Not included at this time
Bio bars (Needs further faculty input)	Not included at this time
Non WHMIS controlled high consumable chemicals (Needs further faculty input)	Not included at this time
Total	8700

4. RECORDS MANAGEMENT STORAGE (NOT INCLUDED IN FLOORPLAN)

Currently, the Chief Librarian is confident that there is enough records storage space in the Commons Building to support growth up to the next decade. Whether records space is sufficient after that date depends on the speed and intensity with which our special collections grow (which will compete for space with institutional records in the Vault), and the degree to which we accumulate paper records.

While it's clearly impossible to be *sure*, the trend certainly indicates that the creation of paper records is on the decline and that digital storage may be an important consideration for the future. This should



mean that we will hit a peak (if we haven't already), creating a moving "hump" of records which will age until the time of their disposition.

However, given the premium that is placed upon campus space, space in the Commons Building is a valuable resource probably not best allocated to this purpose, so some consideration should be provided to where UBC records are stored. Currently CRMS supports the records management program by providing distribution services as well as access to tracking software.

If the proposed building was used to support storage needs, it would be important to consider a processing area and commercial shredder in the same area, depending on whether the area is only used for storage or whether related activities will take place in the same space. An estimate or mock up space could be provided by the Chief Librarian.

A Records Management fee schedule that shows some comparative current rates for records storage and associated activities have been provided by the Chief Librarian.

5. MEETING ROOMS AND INFORMAL COLLISION SPACES (PARTIALLY INCLUDED IN FLOORPLAN)

Based on historical data, Campus Operations has determined that a number of meeting rooms would be required to support work activities, as well as an open concept work environment.

Current demand is estimated at:

- Project Services – 2 hrs per person per week = **8 hours per week**
- RMS – 6 hours per person per week = **18 hours per week**
- Campus Security = **20 hours per week**
- Facilities Management – 5 hours per manager per week (20 hours per week) plus Energy Team - (10 hours per week) = **30 hours per week**
- Director = 20 hours per week

In addition, it is suggested that two larger meeting rooms - which could be combined to create one large (20 person) meeting room - be provided to accommodate:

- 4-8 persons
- 8-12 persons

These rooms would provide the following:

- Emergency Operations Centre
- Walk-in meetings – dedicated breakout space, including a private location (i.e. Campus Security meetings)
- Hard and soft interview rooms (i.e. Campus Security interviews)
- Allow for discrete areas between groups & noise reduction
- Meeting space for entertaining external agencies, etc.

Additional collision space and adequate kitchen facilities should also be considered to support staff wellbeing and productivity.



6. CONTRACTOR STORAGE SPACE (CUSTODIAL, LANDSCAPING) AND CONTRACTOR OFFICE SPACE

Landscaping contractors currently have two 20 foot c-cans in the boneyard area (i.e. near Kon-Kast), totaling approximately 200 square feet. These could be transferred to a Campus Operations Building or associated partially conditioned storage area.

The **custodial** contractors currently have two spaces (aside from janitorial closets in various buildings). The contractors' 200 square feet in EME would remain as this space serves supply needs for several buildings. However, the 300 square feet in UNC would be relocated to the Campus Operations building.

Supplies in each building's small janitorial closet should likewise remain where they are as these supplies are accessed regularly and are needed to serve each building specifically.

7. CURRENT SPACE OCCUPIED THAT COULD BE RELOCATED – STAFF AND STORAGE

It is suggested that almost all of the staff workstations (over 50 staff) could be relocated to the proposed building, **providing that acceptable operational response times and client services could be maintained** (i.e. not too far on the periphery of campus). The following table highlights areas that are currently occupied and could be relocated. It is recommended for workflow efficiency purposes that drop down spots be located strategically throughout the campus to support operational staff when out in the field. In addition, adequate end of trip facilities to support biking to work as well as showers for employees who perform 'dirty' work should be considered for the proposed building.

It is important to note that teams whose services require close proximity to the campus core, such as Campus Security's Dispatch, should be kept at their current locations.

	Relocate – Building Interior	Keep at current location
CHP	3000 sq' of storage and consumable supplies, main floor area	
	3 offices, 9 engineers - 400sq' (relocate 7 of 9 engineers and provide 5 workstations)	2 engineers – remainder of space may be needed for the addition of future mechanicals
ADM	1 office - AD, 70sq' (ADM006G)	Campus Security - Dispatch
	14 staff in open work stations, 1000sq	
	CORM Dir. and admin assistant 200 sqft	
	1 consumable storage room, 200sq' (ADM020)	
EME	1 staff open work station mech room, 100sq' (EME 100)	200 sqft custodial space to serve supplies needed for multiple buildings
	Contractor storage (Best), 200sq' (EME 100)	
	Consumable supply storage, 500sq' (EME 100)	
	Blueprint & O&M storage, 500sq' (EME 100; include viewing/plans table)	
UNC	300 sqft of custodial contractor supply and workspace	



	Custodial office space 300'sq	Safewalk closet
LIB	<ul style="list-style-type: none"> ○ RMS – 3 workstations ○ Campus Security – 5 workstations (if relatively close to main campus) ○ First aid station – if relatively close to main campus <ul style="list-style-type: none"> ○ LIB-016A: 16.16m² ○ LIB-016B: 11.55m² ○ LIB-016C: 19.12m² ○ LIB-016D: 12.39m² ○ LIB-016E: 10.15m² ○ LIB-016F: 11.11m² ○ LIB-016G: 18.65m² ○ LIB-018: 10.43m² <p>= 1095.6 sqft</p> <ul style="list-style-type: none"> ○ Central Receiving Mail Services <ul style="list-style-type: none"> ○ LIB-011: 153.92 m² ○ LIB-015: 7.44m² ○ LIB017U: 14.17m² <p>= 1755.3 sqft</p>	
	<ul style="list-style-type: none"> ● Facilities 150sq' storage LIB021 	
ART		400sq' storage in mechanical room
Total	9,470.9 sqft	

- Approx 100sq' storage per mech room (2/building in most buildings; 3 in SCI)

	Relocate – free up land space	Keep @ current location
STORAGE (C-Cans) Location indicates what building is adjacent to the C-Can		
QUO	1x20' electrical supplies (160 sqft)	
	1x20' hazmat storage (160 sqft)	
	1x20' Styrofoam surplus (160 sqft)	
	1x20' Surplus furniture (160 sqft)	
KON KAST	1x40' tables (320 sqft)	
	1x40' tablet furniture (320 sqft)	
	1x40' surplus furniture (320 sqft)	



	1x40' engineer's storage (320 sqft)	
GEO		1x40' geo-storage (320 sqft)
GYM		1x40' exam folding tables (320 sqft)
		1x40' ceremonies (320 sqft)
		1x40' gym equipment (320 sqft)
		1x40' M-lot Varsity club (320 sqft)
N of Lot H	4 x 20' landscaping (640 sqft)	
Trailer (Lot F)	Drop down stations (2) meeting space 160 sqft	
QUO	Portable 2 - 1200sq' - 11 staff in 4 offices & 2 workstations	
M-Lot		1x20' electrical service for Portable N (160 sqft)
Total	5,200 sqft	

8. TEACHING AND HAZARDOUS MATERIALS TESTING SPACE (COULD BE ACCOMMODATED IN FLOORPLAN)

A training space lab in the proposed building is recommended to increase the frequency and availability of laboratory based safety training (Chemical Safety, Biological Safety), and streamline and limit equipment duplication of lab tasks conducted by CORM team members. RMS in Vancouver has assigned training and testing spaces that are integral to the delivery of their programs. Activities conducted in the space would include:

1. Laboratory Based Safety Training: Currently, RMS borrows laboratory space when available from existing teaching labs. This limits training to outside of the main academic year. The campus community sometimes has to wait up to two months to complete Laboratory Safety training. With a small dedicated lab space, laboratory safety training can take place monthly, thereby increasing service to the University community.
2. CORM Use Laboratory Space: Currently, Risk Management Services, the Energy Team and the Engineering Team all perform water testing for different purposes in at least three different ad-hoc locations on campus. Each of these three groups maintains their own equipment, spends time and money on calibration and replacement parts and equipment. With a small dedicated lab space, a single set of high quality of equipment complete with appropriate facilities could be maintained, saving all departments' time, money and space.
3. Chemical testing: Access to a fume hood would allow RMS to perform tests on unknown chemicals in order to safely prepare them for disposal.
4. Teaching space redundancy: Should a teaching space be involved in a significant incident, having an extra lab space on campus creates redundancy that does not currently exist.

The existing functional program shows a Radioisotope storage area in the middle of the building with a large footprint. Given the very low amount of Radiolotope use on our campus, this space can be reduced (150 sqft would be sufficient based on the current use of Fipke 218B for this purpose). The



Radiolotope area should also be on an outside wall so that we do not inadvertently expose people on the other side of walls (to gamma radiation which is difficult to block).

This would allow the area currently marked as Radiolotope storage to be used for lab space, provided the appropriate equipment (eyewash station, shower, and fume hood) could be installed. Uses for this space could include:

- Training
- Water analysis
- Haz cat analysis for unknown materials
- Battery sorting
- Relocating our existing Biological safety Cabinet (for demo only)

9. HAZARDOUS MATERIALS HANDLING (ESTIMATED 1000SQFT)

Scope of hazmat area to increase to include recycling and treatment options. Summary table provided below with notes following table.

Room #	Areas (functions)	Functions	Pathways	Equipment
1	Solvent Storage / flammable (COULD BE DEPOT)	Storage of flammable and aqueous materials in 4L-20L containers as well as 45 gallon drums Divided into two sections flammable and Flammable/toxic	Loading dock – Rm1 – Rm5 for bulking liquid into drums and temporary storage – loading dock for pick-up by contractor and transportation off campus OR See “Solvent dewatering” Room 2 below OR Use existing storage trailer. Place next to building and use exclusively for storing flammable materials / solvents.	Stable shelving along walls and in rows Explosion proof mechanical venting Safety shower and eyewash station tied into alarm system Monitor for LEL
2	Solvent Dewatering / glass crushing	Dewater aqueous solutions to reduce waste volumes Potential use of plants to dewater	Loading dock – Rm1 – Rm2 for distillation/purification – back to RM1 for storage – loading dock for pick up and	Dewatering system Glass crusher Plants for dewatering



		Glass crushing of chemically contaminated glass to reduce volumes	transport back to researcher	
3	Chemical Waste	Store bottled chemicals (corrosives, highly toxic, oxidizers, dangerously reactive, compressed gasses (lecture bottles only)	Loading dock – Rm3 for unpacking (take out of boxes and place on shelves) – Rm5 for lab packing bottles into drums and temporary storage – loading dock for pick-up by contractor and transportation off campus	<p>Shelving (must segregate by incompatibility – distance or cabinets) see “UBC Chemical Storage Guidelines</p> <p>Table for placing boxes of chemicals that require segregation</p> <p>Chemical cabinets (flammable, corrosive)</p> <p>fumehood (to combine chemicals, handle containers for lab packing area, solvent distillation)</p> <p>Space for 3-5 45 gallon drums of contaminated glass waste</p> <p>Room for decanting with spill containment berm</p> <p>Corrosive area to be made with acid resistant materials (Plastic / fiberglass) not metal</p> <p>Drums for storing chemically contaminated solids</p>



	Chemical Exchange	Hold chemicals for reuse by another user	Loading dock – Rm3 for segregation and storage until requested by researcher	Shelving Desk Flammable cabinet
	Battery Storage	Segregate batteries into bins then send for recycling	Loading dock – Rm3 for segregation into appropriate bin – hold until bin is full – call recycler for pick up – recycler leaves empty bin	Boxes with batteries from generator 5-6 battery bins (nickel cadmium, lithium lead acid, alkaline, & others) Table and chair for processing batteries
	Paint Waste	Store 1 gallon cans and 20L pails	Paint storage is nearly 100% Facilities Management related, so it should be moved from RMS to Facilities Management paint area. Transportation for disposal could then be requested through RMS.	Shelving Flammable cabinet
	Oil Waste	Consolidate oil from labs, machine shops, field researchers, and Facilities into 45 gallon drum and send off for recycling when full	Loading dock – Rm3 to pour into drum – pick up by contractor	Space for 1 or 2 - 45 gallon drum and room to consolidate
4	Biohazard/Biomedical	Risk Group 1, 2, and Biomedical (blood contaminated materials, sharps containers) waste storage Comply with Health Canada Laboratory Biosafety Guidelines (Level 2	Loading dock – Rm4 for segregation – RG1 to landfill (dumpster), RG 2 and Biomedical to be pick up by contractor	Shelving for RG 2 and Biomedical waste (20L pails or sharps containers) (4-5) 45 gallon drums to hold chemically contaminated animals



		containment) for floors, walls, ceilings, sealants.		Space for up to 12 - 45 gallon square tubs
	Pathological (walk in freezer)	Storage of pathological/carcass wastes	Loading dock – Rm4 Freezer	Walk in freezer with shelving (20L pails or 20Kg boxes) OR 2 chest freezers for 45 gallon tubs, 20 L pails or boxes
	Waste Neutralization	Once silver is recovered from fixer (acidic), mix with developer, add to tank, mix with water to dilute, neutralize with sodium hydroxide, test pH and discharge to sanitary	After silver is recovered, neutralize, test and discharge to sanitary pH 7 ideal (5.5-9 is acceptable) Waste neutralization can be accommodated into HazMat Chemical Waste area as long as sufficient ventilation (snorkel), water and emergency washing facilities are supplied.	Plumbing for neutralization tanks (2) – do in two stages
	Staging and Consolidation Area	Area for preparing chemicals for shipment	Move chemicals from rooms 1, 3, 4, 6 to area to be lab packed or bulked into 45 gallon drums or 20L pails – to be removed off site by chemical contractor	Rinse station for emptied chemical containers Area for soaking labels off of glass bottles for reuse Storage area for glass and lids Large scale Drum cart Bucket storage area
6	Radioisotope room	Store short-term and long term radioactive wastes	Loading dock – hold short term till ready	Decontaminatable cinder block walls for shielding



		See Atomic Energy Control Board R-52 Design Guide (Finishing Fixtures and Storage)	for discharge to sewer or landfill OR Loading dock – hold long-term until enough for shipment – ship off campus Keep Rad storage as far as possible from other building users. Isolate as much as possible.	Shelving Rad storage area should be as isolated as possible
7	Storage Room	Storage of tools, equipment, spill cleanup equipment, personal protective equipment, neutralization chemicals, first aid supplies, and other miscellaneous non-hazardous materials.	Receive products through office or loading dock – move to Rm7 – hold until needed	Storage for up to 20 empty boxes, 16 empty drums, uncontaminated solid waste, PPE, first aid kit, spill clean up materials

Additional considerations for hazardous materials areas:

- Space in front of each room for segregating materials received from loading dock
- Secondary containment of either 110% of maximum container or 10% of total anticipated volume
- Fume hood could be located in solvent distillation room
- Safety eyewash/showers need to be readily accessible to most rooms therefore more than one station is most likely required (see WCB Regulations for requirements)
- Would require gate/fence or other method of creating secure compound
- Alarm system and automatic notification system
- Square metres should be no more than ½ UBC Vancouver’s solvent storage and ⅓ the other storage areas
- All doorways to be wide enough to accommodate drums, biohazard bins, scale and cart
- Washer and drier – to wash PPE regularly
- Storage areas for chemicals should have lower shelves for jerry cans (10 L) and higher shelves for glass bottles (Winchesters – 4 & 2.5 L)
- Loading dock should have a covered area for holding gases
- Emergency washing facilities should be located either in the loading dock or in hallway across from the corrosive storage area



Note that Risk Management staff would be located within the new building.

10. UBC VEHICLES, PARKING, AND SERVICING (COVERED, OPEN, ELECTRICAL)

The Campus Operations Building compound could serve as a location for storing and servicing fleet vehicles and equipment.

FLEET INVENTORY:

	Golf Carts	Vehicles	Heavy Vehicles/ Equipment
FM	19	3 (cube van, van, pickup truck)	5 (Bobcat, skid steer, tractor, toolcat, utility trailer; other equipment such as boom lifts and snow removal equipment would also be stored here)
CRMS	1	1 (van)	
RMS		1 (GMC van)	
Security	1	3 (Ford Escape, Subaru, UTV)	
PSO	n/a	n/a	
Total	21	8	5

This space could possibly also serve as a parking/storage area for other UBC vehicles, of which there are 56 registered (including 24 Golf Carts plus the UBee owned by Parking Services.)

FLEET SERVICING AND FUELING

A space to service and maintain fleet vehicles should include the following:

- Fleet vehicle & golf cart maintenance/servicing area (changing tires, washing, etc.) – double garage of 400 sqft to meet current and future needs
- Fuelling station – existing station could be used or relocated
- Heated wash Pit/Area (optional)
- Secure storage cages (optional)
- Overhead hoist and work pit (optional)

Note that any vehicle serving space must consider freight and service height requirements for the equipment being serviced.



12. LAUNDRY SERVICE (OPTIONAL)

Space to store uniforms and launder as needed would provide significant value to operational departments. In addition, this service could be expanded to support the cleaning of lab coats on a cost recovery basis while also supplying a needed service.

13. ADEQUATE OUTDOOR SPACE

Many programs within operations require adequate outdoor space, including:

- Recycling/composting area = 2500 sqft
- Tree Transplant Area = 2500 sqft
- Sand shed 12 x 12 = 144 sqft

14. ADDITIONAL CONSIDERATIONS

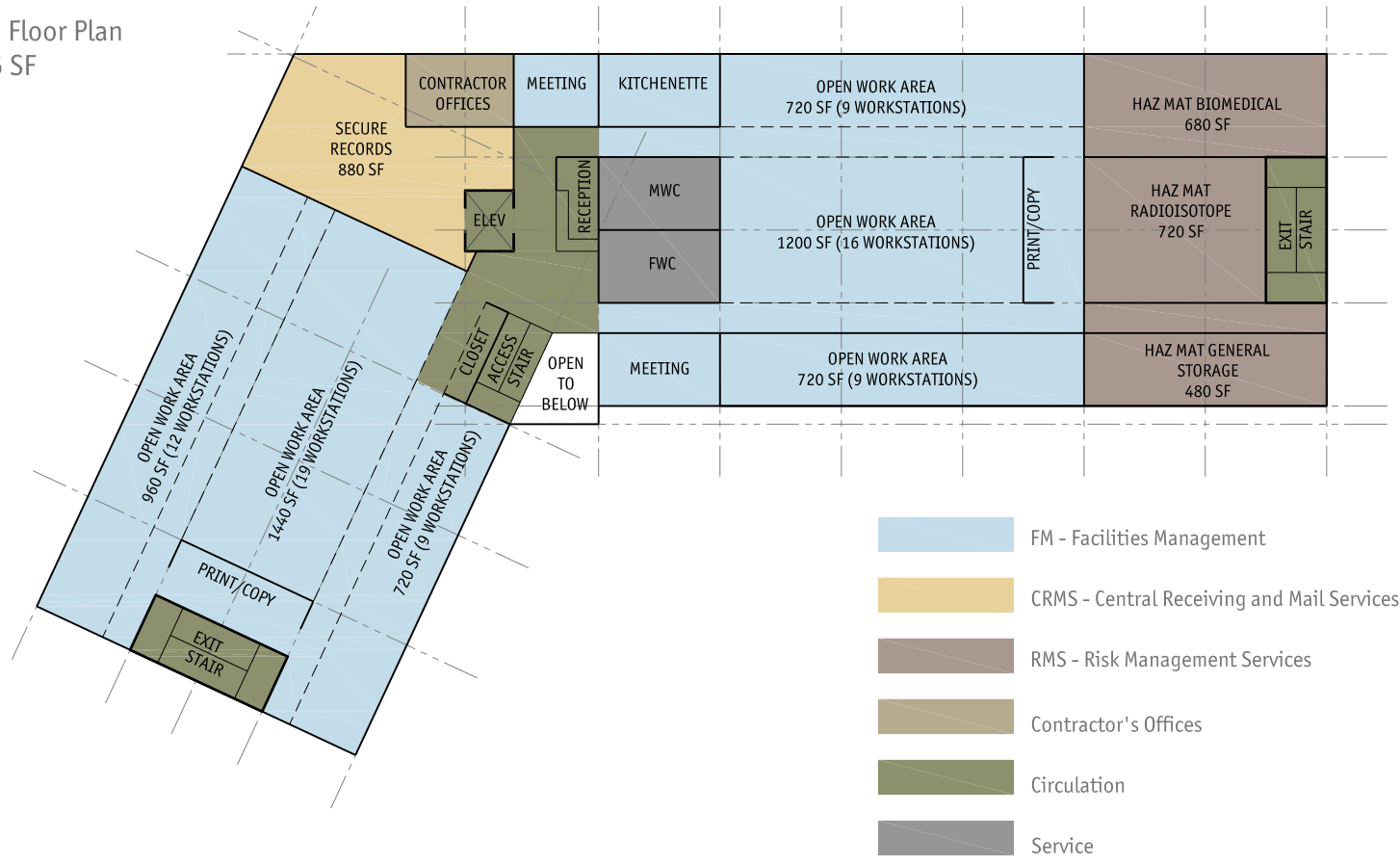
- Efficient building design
- The need for planning around the best possible transportation pathways relative to other buildings (Central Receiving and Campus Mail)

APPENDICES

CAMPUS OPERATIONS BUILDING – FLOOR & SITE PROPOSAL

The 2014 Campus Operations building floor and site proposal is attached.

Level 2 Floor Plan
13,595 SF



Level 1 Floor Plan
12,210, SF

