

COVID-19 SEAS Facilities Task Force Report

University at Buffalo, School of Engineering and Applied Sciences

June 25, 2020

Committee Members:

SEAS:

Sujata Rawal, Andrew Koenig, Patricia Mattulke - Dean's Office

Donald Goralski - Shared Instrumentation

Jane Stoye Welch, Holly Acito - Communication

Jason Lasker - SENS

ISE: Meredith Volker, Lora Cavuoto, Rishbabh Bhandawat

CBE: Moein Mohammadi, Todd Nibbe, Pedro Lei

MAE: Jason Armstrong, Javid Bayandor, Stephen Hart

MDI: Margie Poniatowski, Quanxi Jia

EE: Kimberly Kris, Jason Tillman

CSE: Christian Miller

BME: Cheryl Michalowski

CSEE: Todd Snyder, Donna Banach

DEE: Marianne Sullivan

Table of Contents

<i>Executive Summary</i>	2
<i>Subcommittees</i>	3
<i>Summary</i>	4 - 15
<i>Supporting Materials</i>	
A. <i>Subcommittee Concerns and Recommendations</i>	
B. <i>Location of existing hand sanitizing dispensers</i>	
C. <i>Spreadsheet of existing restroom configurations</i>	

Executive Summary

The School of Engineering is spread over six buildings (and additional outlier spaces) and has nine departments with many laboratories conducting robust research activities. Given this complex configuration, it faces some distinct challenges related to re-opening of its public spaces.

As laboratories were putting together re-opening plans for Phase-2, it became apparent that once these were operational, they would require passage through and use of public spaces. Departments indicated a need for consistent guidelines for use of these public spaces within the SEAS precinct.

The COVID-19 SEAS Facilities Task Force was thus formed. It included representatives from each department, comprising of where possible, one faculty, staff and student. They were tasked to identify areas of concern and provide recommendations based on each of their unique situations and areas of use and influence. The SEAS Task Force closely followed guidelines issued from University-level task forces and EH&S.

This document provides a summary of the findings of the Task Force, taking into consideration the guidelines provided by EH&S where available, and provides suggestions beyond what has been provided at the university level.

Subcommittees

To more effectively address the larger scope of public space, the Task Force established smaller working subcommittees to deal with various areas of concern, as follows:

1. Stairwells and Elevators
2. Collaborative and Common Spaces
3. Building Entrances and Hallways
4. Restrooms
5. Computer and Teaching Labs
6. Conference Rooms
7. General Safety
8. Communications

Each of these subcommittees investigated and discussed areas of concern, made suggestions and recommendations, collected cost and resource estimates and developed action plans needed to address the concerns. The subcommittee findings can be found in the following attached document A - Subcommittee Concerns and Recommendations.

Recommendations Summary

1.0 Stairwells and Elevators Summary

1.1 Stairwells

UB Guidelines:

- Wear face coverings
- Stay to the right
- Walk in a single file
- Wash your hands if you have touched anything

SEAS Recommendations:

- Designate stairway to be either **UP** or **DOWN** along with:
 - *Sign Indicating clear **exception in case of an emergency** and*
 - *Floorplan showing **Emergency Evacuation Route***
- Place hallway signs showing which Staiwell is UP or DOWN along with:
 - *Sign Indicating clear **exception in case of an emergency** and*
 - *Floorplan showing **Emergency Evacuation Route***
- Door handles to be wiped down by:
 - Custodial staff whenever possible
 - Area cleaning volunteers whenever possible
- Apply Self Cleaning Technology to door handle sleeves
Website: <https://shop.nanoseptic.com/Facility-Touch-Points-c5410077>
- *Additional Signage* would include:
 - UB Guidelines stated above, consolidated in one sign
 - UP and Down Signs (not applicable in case of emergency)
 - Wayfinding to indicate location of Up /Down stairwell
 - Stairwells clearly identified as being available incase of emergency
 - Floorplans with Emergency Evacuation Route to Stairwells

1.2 Elevators

UB Guidelines:

- Wear face coverings
- Maintain reduced occupancy
- Upon entering, face the wall
- Wash your hands if you have touched anything

SEAS Recommendations:

- COVID specific maximum allowable occupancy dependent on size of elevator (as opposed to weight) so awaiting guidance from UB Facilities.
- Encourage use of Stairs to:
 - Accommodate persons with physical limitations
 - Reduce traffic in elevators
- Elevator Buttons to be wiped down by:
 - Custodial staff whenever possible
 - Area cleaning volunteers whenever possible
- Add Hand Sanitizing Dispenser Units outside elevators at all floors
- Signage should be placed **inside** and **outside** the Elevators
- *Additional* Signage would include:
 - UB Guidelines stated above, consolidated in one sign
 - COVID specific Occupancy Limit, based on size (pending from UB)
 - Floor decals to indicate where to stand while waiting for elevator (pending from UB)
 - Floor decals to indicate where to stand inside the elevator (pending from UB)

2.0 Collaborative and Common Spaces

UB Guidelines:

- Wear face coverings
- Social distance
- Wash hands before and after
- Due to heightened risk of contamination in these public spaces, UB Custodial teams will be sanitizing commonly touched surfaces at least 3 times each day
- Learning Landscapes and Lobbies are considered areas of highest priority and will be monitored and sanitized by the UB Custodial staff throughout the day and during the overnight third shift
- Sanitizing of Kitchens and Breakrooms are the responsibility of the departments
- UB Custodial teams will mop the floor and empty the trash during building hours as access is provided

SEAS Recommendations:

- Despite recommendations by the task force to remove furniture from the common spaces, that is not a possible option in most situations since there is no space to store it.
- In larger areas such as the Bansal Atrium, where tables can be folded and stowed away in a corner, reducing the number of tables/ furniture maybe considered. The stowed away furniture will need to be secured in best possible manner
- Signage would include UB recommended posters for:
 - Social Distancing
 - Hand Washing
 - Requirement to wear a face mask
 - Others
- *Additional Signage* would include:
 - Floor decals to indicate social distancing
 - Floor decals to indicate traffic flow
 - Signage to indicate COVID specific Occupancy Limit for gathering

3.0 Building Entrances and Hallways

UB Guidelines:

- Wear face coverings
- Social distance
- Stay to the right
- Walk in a single file
- In the event that a group is coming your way, pull over, face the wall until the group has passed by
- Wash hands if you've touched anything
- Hand Sanitizing Dispenser Units will be deployed near main building entry doors, by first floor elevator banks and other strategic high-traffic areas
- All points of Egress must be maintained.

SEAS Recommendations:

- Where possible, leave vestibule doors open to reduce hand contact to surface
- Place UB standard signage outside building entrances, to be implemented upon entering building
- Use striping down center of hallways to establish traffic lanes
- Provide capacity limits for vestibules
- *Additional Signage* to include:
 - "If you see something, say something" (with respect to those ignoring COVID-19 guidelines)
 - UP and Down Signs (not applicable in case of emergency)
 - Wayfinding to indicate location of Up /Down stairwell
 - Stairwells clearly identified as being available in case of emergency
 - Floorplans with Emergency Evacuation Route

4.0 Restrooms

UB Guidelines:

- Wear face coverings
- Social distance
- UB Custodial team disinfects toilet seats, flush mechanisms, handrails, stall locks, faucet activator, paper towel dispensers and soap dispensers daily and throughout the day. Restrooms are a high focus area of the custodial team
- Handwashing is the preferable method of preventing infection and spread of COVID-19. Hand Sanitizers are to be used when soap and water are not an available option

SEAS Recommendations:

- Provide capacity limits based on size of restrooms
- In larger restrooms, rope off every alternate urinal, stall, sink
- In larger restrooms, place 6 feet markers on floor as reminder to keep distance
- Keep garbage bin near the door such that paper towel can be thrown in after using it to operate door knob.
- Use UV lights (especially in larger restrooms) for overnight cleaning
- Consider installing atleast one touchless faucet and one touchless towel dispenser in each restroom
- Turn off/ disconnect automated hand dryers known to promote spread of water droplets
- Signage would include UB recommended posters for:
 - Social Distancing
 - Hand Washing
 - Requirement to wear a face mask

5.0 Computer and Teaching Laboratories

UB Guidelines:

- Wear face coverings
- Social distance
- Because lab spaces are considered controlled environments, UB Custodial teams have limited access to these spaces. In these areas, UB Custodial will continue to empty trash and clean floors
- More extensive general cleaning and sanitizing will continue to be the responsibility of laboratory personnel
- Laboratory equipment should be sanitized according to manufacturer's recommendations
- EH&S to work with departments/unit to assist in developing their plans

SEAS Recommendations:

- Direct traffic flow to control In/Out where laboratories have two doors along with:
 - Sign Indicating clear exception in case of an emergency and
 - Floorplan showing Emergency Evacuation Route
- Disable keyboard and mouse from stations as a way to distance users
 - Computers would likely need to remain powered on to allow for remote access
- Capacity for laboratories to be confirmed by EH&S whether to 1/3rd, 1/4th or following 6 feet rule, based on type of seating
- Instructions to participants on the course- specific physical distancing protocol.
- Laboratories may need to be closed and locked when unsupervised
- Instructors may consider prioritizing lab access for students that cannot use or do not have personal computers to run software
- Wipe keyboard and mouse before and after use
- Consider use of personal keyboard covers
- Consider students bringing their own key board and mouse
- *Additional Signage* would include:
 - UB Guidelines stated above, consolidated in one sign
 - "Enter here", "Leave Here" where two doors present
 - Sign to be placed at computers saying "Use" and "Do Not Use"

6.0 Conference Rooms

UB Guidelines:

- Wear face coverings
- Social distance
- Custodial staff will clean conference and meeting rooms which are unsecured and not within an office suite during their third (overnight) shift
- These spaces will not be serviced during the day or between meetings
- Until further notice, UB recommends that all units continue to replace in-person meetings and gatherings with digital alternatives such as Zoom, whenever possible

SEAS Recommendations:

- Have an online calendar for sign-up. Each person entering the room MUST sign up unless there is a swipe card access to track entry. This can help contact tracing.
- Limit capacity per UB Guidelines, including for Breakrooms
- Have designated areas for each user (e.g. have people at corners or at ends to maximize social distancing.)
- If seats cannot be removed, rope off areas to create social distance
- Provide hand sanitizer (preferably contact less dispenser, by the door to clean hands after touching door knobs and light switches
- Have cleaning wipes ready for cleaning each one's own area before and after use
- *Additional Signage* to include:
 - Signage on conference room door indicating that people must sign up for usage and clearly provide sign up link
 - Contact information in case cleaning supplies are running low
 - Signage to indicate COVID specific Occupancy Limit for gathering

7.0 General Safety Operations

UB Guidelines:

- Emphasis on the Golden Rules for Protection and Prevention which comprises of:
 - Stay home if not feeling well (know the symptoms)
 - Obey Social Distancing Guidelines whenever possible (6 feet minimum)
 - Wear appropriate face covering and wear it correctly
 - Avoid touching your Face, Eyes, etc. with your hands
 - Wash hands frequently and thoroughly with soap and warm water
 - When hand washing is not available, resort to the use of alcohol based hand sanitizer

- Use UB recommended signage to communicate the above

- Touch Surface Risk and Guidance:
 - The CDC has downgraded their emphasis/position on viral spread through surface touch /contact
 - They say. “ It may be possible that a person can COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth , nose, or possibl their eyes. This is not thought to be the main way yhe virus spreads, but we are still learning more about how this spreads.”
 - This is part of the reason, UB guidelines aren’t emphasizing constant cleaning/ sanitizingt of all touch spaces in offices, labs, etc.

- Screening, Testing, Contact Tracing
 - There will be a requirement for employee screening to come to work each day. Details are being worked out.
 - Campus Committee is looking at Testing, Contact Tracing, Quarantine and Surveillance

- Current status for presence on campus is: Essential Staff Only. Important to note that at the present time only the following are approved to be working on campus:
 - Designated Essential Staff and Operations
 - Approved Labs under the VP for Reseach
 - Approved Clinical Functions
 - A few summer on campus classes (Nursing and Anatomy)
 - Main focus for rest of individuals is on Planning
 - Teaching and Classroom use is in Planning Phase

- UB’s Return to Campus Webpage is On the Administrative Gateway or Yellow Banner. This is a Live page and updated often. It includes the following Sections:
 - Need to know
 - Self Monitoring

- HR Guidance
- Safe Workplace
- Health and Well-being

- Refer to information on masks and face coverings on the Return to Work Site.

- Develop a culture of compliance and be a role model

- Use of Disposable Gloves:
 - The WHO and CDC do not recommend the routine use of gloves to prevent the spread of the SARS-CoV-2 virus
 - University is strongly discouraging the use of gloves outside of the lab environments in which they have always been used for hazardous materials
 - It is thought to give a false sense of security. People should be focused on not touching the face, and proper, regular handwashing
 - Gloves used in labs are to be removed prior to leaving the lab. If you are wearing gloves outside of the lab, colleagues may assume you are contaminating the environment, not with SARS-CoV-2 but with another organism

- HVAC Systems and the Coronavirus:
 - Neither CDC nor ASHRAE recommend additional cleaning of air handling systems, air handlers, ductwork, etc., due to Coronavirus. They indicate a low risk of COVID-19 transmission through HVAC systems
 - There are no known cases of COVID spread from HVAC ductwork
 - The University is therefore not planning on cleaning of HVAC ductwork
 - University does not recommend the use of portable HEPA filtration
 - Facilities continues to assess the risks for building occupants and optimize HVAC system performance for each individual building system. Providing a safe indoor air quality involves a balance of several factors including air change rates, introduction of outside air, temperature, humidity, filtration, and building pressure. Facilities teams are working to optimize building system parameters to provide the safest building environment we can for all of UB's 200 buildings
 - Additional information related to HVAC operations during COVID-19 pandemic is available from the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE)

- Other Building Systems:
 - CDC Re-opening guidance on building systems focuses on concerns with mold risk and/or Legionella bacteria after a prolonged shutdown period
 - Our buildings have not been in shutdown mode of operation
 - Facilities have been operating and maintaining the building systems throughout this time
 - This includes maintenance on air filters and operation of water systems

- Office of Fire Prevention and Control Guidance on Fire Safety Considerations related to COVID-19 Safety Planning:
 - Leaving Lab Doors open is prohibited
 - Propping open corridor fire doors is still prohibited
 - All points of egress must be maintained
 - If directional stairways are implemented, they must be clearly identified as being available in evacuation conditions
 - Installed barriers/shields must meet building code and not create a hazard
 - Barriers/shielding must be of approved materials and installed properly and safely
 - Hand sanitizer should only be used as a substitute method for hand hygiene when soap and water are not available
 - The amount of alcohol based hand sanitizer (both in operation and in storage) must adhere to flammable loading limits for buildings. If placed in corridors, it must not impede traffic flow
 - A code review is required if additional hand sanitizers are being installed by department/ unit with the exception of personal size bottles

SEAS Recommendations:

- Consider placement of UV lights in hard to clean laboratories and facilities
- Consider use of misting devices or atomizers to thoroughly disinfect multi-surface spaces
- Consider use of antiviral filters or UV lights in building ventilation systems

8.0 Communications

UB Guidelines:

- University Communications is working with Campus Planning to come up with COVID-19 related health and safety signage that is consistent across campus.
 - <http://www.buffalo.edu/ubnow/stories/2020/06/communications-plan-return-to-campus.html>
- All posters and signage related to the reopening of the campus have to be pre-approved
- In addition to the posters already available, the University is working to map out and design simple, location-specific signage to help direct individual's movements throughout, and engagement with, the physical spaces around campus. These include:
 - Floor appliques:
 - queueing
 - hall and stair traffic
 - encourage physical distancing
 - Signage to note areas with restricted capacities (e.g. elevators)
 - Signage to direct building ingress and egress
 - Window clings for doorways to buildings and mirrors in bathrooms
 - Health and safety reminders for Stampede busses and associated shelters
 - In general, anything with regard to traffic patterns, proper distancing, occupancy of large spaces, etc. that can be used by multiple units across campus will be provided by this group.
- All existing safety posters will be optimized for use on the digital signage as well as content for social media.
- Discussions related to cost are underway and they are working on a cost sharing model. Signage in general spaces may be covered by UB Facilities.
- Work is in progress, but there is no specific timeline yet. Facilities will likely install all the wayfinding signage wherever it is needed.

SEAS Recommendations:

- Posters that can be printed out are also available at SEAS website.
 - [:http://engineering.buffalo.edu/home/coronavirus.communicators.html#title_1783627942](http://engineering.buffalo.edu/home/coronavirus.communicators.html#title_1783627942)
- These posters will also be added to digital signage throughout SEAS
- Additional Signage likely required by SEAS includes:
 - UB Guidelines stated above, consolidated in one sign
 - UP and Down Signs (not applicable in case of emergency)
 - Wayfinding to indicate location of Up /Down stairwell
 - Stairwells clearly identified as being available in case of emergency
 - Floorplans with Emergency Evacuation Route to Stairwells
 - UB Guidelines stated above, consolidated in one sign
 - COVID specific Occupancy Limit, based on size
 - Floor decals to indicate where to stand while waiting for elevator
 - Floor decals to indicate where to stand inside the elevator
 - Floor decals to indicate social distancing
 - Floor decals to indicate traffic flow
 - Signage to indicate COVID specific Occupancy Limit for gathering
 - “If you see something, say something” (with respect to those ignoring COVID-19 guidelines)
 - Sign to be placed at computers saying “Use” and “Do Not Use”
 - Signage on conference room door indicating that people must sign up for usage and clearly provide sign up link
 - Contact information in case cleaning supplies are running low

Supporting Materials

- A. Subcommittee Concerns and Recommendations
- B. Location of existing hand sanitizing dispensers
- C. Spreadsheet of existing restroom configurations

A. Subcommittee Concerns and Recommendations

STAIRWELL and ELEVATORS COMMITTEE

Jason Armstrong, Stephen Hart, Moein Mohammadi, Don Goralski, Donna Banach

AREAS OF CONCERN	SUGGESTIONS / RECOMMENDATIONS / CONCERNS	COST / RESOURCE ESTIMATE	ACTION / INFORMATION NEEDED
Await	<p>There is likely to be a short supply of sanitary wipes and custodial staff will already be hard pressed to keep up with cleaning. Some responsibility needs to fall on the individual.</p> <p>General signage critical:</p> <ul style="list-style-type: none"> • Wash hands • Wear mask • Location of hand sanitizer? <p>Personal hand sanitizer- distribute personal refillable bottle?</p> <p>Apply 'Self-cleaning surface' technology to elevators and door handle sleeves</p>		
Stairwells	<p>Designated either UP or DOWN (except in case of emergency)</p> <p>Signage:</p> <ul style="list-style-type: none"> • Stairwell door signs (UP/DOWN), spacing between individuals (# of steps) • Hallway signs to indicate the location of UP/DOWN stairwell • Building maps with UP/DOWN stairwells indicated? <p>Door handles- facilities to wipe down daily?</p>	<p>Slip-on Door Handle Sleeves: 20 pack for \$54.95 https://www.nanoseptic.com/</p>	
Elevators	<p>Occupancy limit- dependent on size. Guidance from EH&S for consistency across school?</p> <p>Signage:</p> <ul style="list-style-type: none"> • Occupancy Limit (inside & outside elevators) • Floor markings to indicate where to stand in the elevator • Floor markings to indicate where to wait for elevator • Consideration for those unable to take stairs (e.g. physical limitation) <p>Elevator buttons- facilities to wipe down daily?</p>	<p>Elevator Button Covers: 25 pack for \$49.95 https://www.nanoseptic.com/</p>	

COLLABORATIVE and COMMON SPACE COMMITTEE

Stephen Hart, Lora Cavuoto, Todd Nibbe, Don Goralski

AREAS OF CONCERN	SUGGESTIONS / RECOMMENDATIONS / CONCERNS	COST / RESOURCE ESTIMATE	ACTION / INFORMATION NEEDED
Bell Hall 1 st Floor Lobby	Close Alcove on North side of Bell Lobby, Rope off inner chairs on both Fixed benches, limit couch to 1 person.	Between \$4-\$5 per roll	Caution Tape
Bell Hall 1 st Floor South Lobby	Keep end seats open on fixed bench and rope off inner seats, remove half of the movable furniture.		
Bell Hall 3 rd Floor ISE Lounge	Close space and remove furniture into storage.		
Furnas Hall 1 st Floor Lobby	Keep end seats and middle of fixed tall table open and rope off seating in between, limit 1 person for built in wall bench with occupancy sign. Remove and store the non-fixed furniture. 6ft markings on floor in front of elevators to help aid social distancing while waiting for elevators.		Caution Tape
Furnas Hall 3 rd Floor Table to Bench	Close space and rope off seats.		Storage
Bonner Hall 3 rd Floor East and West Lounge area	Remove Mobile Furniture and only keep end seats open on fixed counter. Rope off inner seating.		Caution Tape
Bonner Hall 4 th Floor Lounge	Close Space and store furniture		Storage
Davis Hall Bansal Atrium	Reduce number of tables, 2 chairs per table, sanitizing stations		Sanitizing stations
Davis Hall 2 nd Floor Atrium	Reduce number of tables, 2 chairs per table, sanitizing stations		Storage
Davis Hall 3 rd and 4 th Floor North side Lounge areas	Reduce number of tables, 2 chairs per table, sanitizing stations		
Davis Hall outside of Dean's Office and 3 rd Floor	Reduce number of seats for social distancing		
Davis Hall 1 st floor orange seating	Reduce number of orange seating and spread out for social distancing.		
Davis Hall Basketball Hoop and all picnic benches	Close basketball hoop and close down picnic benches by stacking them in the cove and roping it off.		Caution Tape
Grace Plaza	Limit concrete benches to 1 person by taping off seating.		Caution Tape

BUILDING ENTRANCES and HALLWAYS COMMITTEE
Meredith Volker, Todd Nibbe, Don Goralski, Jason Tillman

AREAS OF CONCERN	SUGGESTIONS / RECOMMENDATIONS / CONCERNS	COST / RESOURCE ESTIMATE	ACTION / INFORMATION NEEDED
Building Entrances & Exits -- General (Main, Alternate, Overhead walkways)	<p>Ensure that all doors are functional (right & left) to establish right & left traffic lanes. Ensure that automatic door buttons are functioning properly; speed up opening of slow doors Where possible, open up alternative entrances to directionally route traffic: Floor decals: Striping down center to immediately establish traffic lanes, keep right, single file.</p> <p>Mask required upon entry Sanitizing Stations / Touchless Sanitizing Station at doorways - signage to requiring usage before entering building Where vestibules exist, open interior doors to reduce hand contact to surfaces Personal UB branded hand sanitizers Additional signage indicating: single file, stay close to walls; do not congregate, be mindful / considerate of others nearby, in case of emergency please proceed to nearest stairwell and ignore COVID-19 guidelines</p>	<p>Door functionality</p> <p>Floor decals: \$1.25 - \$4.00 per</p> <p>Signage: SEAS / UB Comm</p> <p>Touchless hand sanitizers: \$88 per / Wall mounted \$23 per</p> <p>Personal: \$24.59 per 36 / Promotional \$1.39 (qty of 2550+)</p>	<p>Contact Facilities re: prospects for this</p> <p>Clarity re: UB branding & procurement for items that can't be printed in-house (e.g., floor decals)</p>
Davis Lobby / Steven Courtyard	Enter through east door, exit through west door; create appropriate signage; employ use of stanchions	Stanchions: 4 @ \$150 per	Firm up qty; purchase
Bonner (East)	Use vestibule as both entry and exit; use stairwell door as additional exit (pending East stairwell downward direction)		
Signage	<p>Do not congregate in vestibules; keep moving; respect social distance; stay close to walls; walk single file Occupancy Limits for vestibules Extend courtesy to those w/ physical disabilities Directional: directing people to alternate exits to relieve congestion Educational messaging regarding tips to minimize contact Automatic door directions -- use elbows, etc. SEAS message boards on monitors -- consider adding audio Free-standing pop-up banners for high traffic areas Create lanes in opposite directions (right lane / left lane) If you see something, say something (with respect to those ignoring COVID-19 guidelines) In case of emergency, please proceed to nearest stairway and ignore COVID-19 requirements</p>	<p>Floor decals: \$1.25 - \$4.00 per</p> <p>SEAS / UB Comm</p> <p>Floor tape: \$11.00 per 100ft roll</p>	Firm up qty; purchase

RESTROOM COMMITTEE
Lora Cavuoto, Meredith Volker, Andrew Koenig, Rishabh Bhandawat

AREAS OF CONCERN	SUGGESTIONS / RECOMMENDATIONS / CONCERNS	COST / RESOURCE ESTIMATE	ACTION / INFORMATION NEEDED
Bathroom signage	Signage regarding handwashing, surfaces Signage encouraging mask wearing in bathroom and keeping towel until exit (to pull door open)	Signs Paper/lamination. Keep in mind that water in bathroom may mean that lamination is necessary.	
Bathroom capacity	Smaller Bathrooms should have 1 person capacity and locks (example Bell Hall 3 and 4 Floor women's) Larger bathrooms (Davis 1st floor), taping off every other urinal/stall/sink, limit capacity	Door locks Garbage bags/tape	Can we lock the bathrooms? Will there be enough bathrooms for everyone to go? (occupancy codes. OSHA 1 toilet per 15 employees). Especially in smaller bathrooms – capacity. Could the locks have "occupied/unoccupied" sign? What kind of lock works with the doors we have/vendor for this? Congestion issues (elevators are near/lines for the bathrooms creating issues?)
Bathroom furniture	Remove extra tables and chairs (fewer surfaces to clean). Relatively few bathrooms have this		Storage? (where do we put the extra furniture?) Maybe be trash/surplus furniture
Bathroom garbage	Move garbage to the door (open door with towel/throw out the towel)	Signs	Space/layout of doorway area https://www.forbes.com/sites/irenelevine/2020/06/14/if-you-gotta-go-are-public-restrooms-safe-on-a-road-trip/#4b183b3c25d6
Bathroom distancing	Especially for larger bathrooms, 6 ft markers on the floor to remind/keep distance	Tape/decals	Something everyone needs. Coming up with a number for all to get volume discount..
Bathroom lighting	UV lights (especially in larger bathrooms, Davis 1 st floor) for overnight cleaning	UV light	Is this realistic? (in terms of cost). Theoretically, a ceiling mounted one with a timer for night time.
Bathroom Hand Sanitizers	If no new hand sanitizer possible, can we use signage to highlight the locations of existing hand sanitizers? Floor decals? Flags?	Signs Floor decals Flag (sticking out from wall where sanitizer is) \$40 automated, \$12 manual	
Bathroom Paper Towel Dispenser and faucet	install touchless faucet and touchless towel dispenser in each bathroom	Faucet \$350 per Paper towel dispenser (\$59/each x 73) = \$4307	
Bathroom Automated Hand dryers	Tape off automated hand dryers as they are promote the spread of water droplets	Tape	Concerns about additional paper towels being used (will we get a shortage?) Watch out for supplies walking out (mischief vs need). Especially if there's another TP shortage
Bathroom (Toilet, air flow)	Concern: flushing/particles into the air (lids? Covers? This is a concern but not sure we'll solve.) Concern: ventilation – especially in the tiny bathrooms		
Vigilance/Checking of supplies	Staff assigned to monitor supplies and clean / wipe downs (door knobs) and keep an eye on paper towels, toilet paper, and hand sanitizer supply		

AREAS OF CONCERN	SUGGESTIONS / RECOMMENDATIONS / CONCERNS	COST / RESOURCE ESTIMATE	ACTION / INFORMATION NEEDED
General	<p>Computer lab capacity expected to be 1/3 or 1/4 based on the type of seating.</p> <p>Post general signage in labs (wash hands, etc.). Direction to up/down stairwell.</p> <p>Traffic flow- some labs have two doors (one in & one out), but some labs only have one door.</p>		
Capacity	<p>Disable keyboard and mouse from stations as a way to limit capacity.</p> <p>Computers would likely need to remain powered on to allow for remote access.</p> <p>Concern: How is capacity enforced? Labs may need to be closed and locked when unsupervised.</p> <p>Concern: Instructors may consider prioritizing lab access to those students that cannot use or do not have personal computers to run software.</p>		
Sanitizing	<p>Wipe keyboard and mouse before and after use. May not be feasible due to supply shortage.</p> <p>Suggestion: Have students bring their own keyboard/mouse? Personal keyboard covers?</p> <p>Concern: Students may be uncomfortable using machines if wipes are not available</p>		

CONFERENCE ROOMS COMMITTEE
 Pedro Lei, Moein Mohammadi, Jason Lasker

AREAS OF CONCERN	SUGGESTIONS / RECOMMENDATIONS / CONCERNS	COST / RESOURCE ESTIMATE	ACTION / INFORMATION NEEDED
General	<p>No face-to-face meetings (see NOTE 1).</p> <p>Have an online calendar for sign up. Each one entering the room MUST sign up unless there is swipe card access to track entry. This can help contact tracing. Make sure there is a signage on the conference room door indicating that people must sign up for usage and clearly provide the sign up link.</p> <p>Limited occupancy (see NOTE 1): - For recording or online meetings, limit to 1 person per room - For breakroom, depending on room size Have designated areas for each user (e.g. have people at corners or at ends to maximize social distance) (see NOTE 1). If seats are not practical to be removed, block up some areas with yellow caution tapes. Also have office/table partitions might help.</p> <p>Provide hand sanitizer (preferably contactless dispenser, see NOTE 2 and 3) by the door to clean hands after touching door knobs and light switches.</p> <p>Have cleaning wipes ready for cleaning each one's own area before and after use. NOTE: There should be a signage for contact in case cleaning supplies are running low.</p>	<p>Automatic dispenser for alcohol spray: ~ \$35.00 @.</p> <p>Hand Sanitizer (alcohol based): ~ 50.00 @.</p> <p>Cleaning wipes: < \$5.00 per roll (75 counts).</p> <p>Partitions: price range is board, depending on shapes and sizes.</p>	

- NOTES:**
- 1) Enforcement of items 1, 3, and 4 depends on safety occupancy guidelines set by the NYS and/or UB, which have not been disseminated.
 - 2) Automatic dispenser for alcohol spray: ~ \$35.00 @.
https://www.amazon.com/Dispenser-Automatic-Induction-Non-Contact-Restaurant/dp/B086VY6NR/ref=sr_1_13?crid=BU931REEMZAH&dchild=1&keywords=contactless+dispenser&qid=1591043793&prefix=contactless+disp%2Cspecialty-aps%2C142&sr=8-13
 - 3) Hand Sanitizer (alcohol based): ~ 50.00 @.
https://www.amazon.com/160-Proof-Antibacterial-Sanitizer-Alcohol/dp/B086Q48R7Y/ref=pd_sim_b2b_3/146-2934747-1107614?encoding=UTF8&pd_rd_i=B086Q48R7Y&pd_rd_r=16c08b42-2867-4b77-883c-e08571bd08bc&pd_rd_w=W4M13&pd_rd_wg=GvXle&pf_rd_p=a07701e4-f565-442a-b97f-93ab23cb7ef8&pf_rd_r=BJEZWNC1G044AF5BQGGC&psc=1&refRID=BJEZWNC1G044AF5BQGGC
 - 4) Cleaning wipes: < \$5.00 per roll (75 counts).
<https://www.target.com/c/cleaning-wipes-supplies-household-essentials/-/N-4tgv2>
 - 5) Partitions: price range is board, depending on shapes and sizes.

AREAS OF CONCERN	SUGGESTIONS / RECOMMENDATIONS / CONCERNS	COST / RESOURCE ESTIMATE	ACTION / INFORMATION NEEDED
	<p>To battle the spread of COVID-19 on return to campus during reopening phases 2 and 3, the general instructions concerning the use of areas and the manners by which to conduct activities listed below are required :</p> <ul style="list-style-type: none"> ● congregation in lobby, foyer or hallways ● entering and exiting meeting- or classrooms ● public areas such as study lounges, kitchenettes ● information booths (or information apps) ● in-person consultations ● entry to and exit from offices and labs 	<p>UV lamp fixture \$1,350 per unit, additional timer and installations apx. \$1,000 per unit Electrostatic sprayers \$1,500 per unit Automatic hand sanitizer dispensers apx. \$40-\$50 per unit</p>	<p>Placement of UV lights in hard to clean laboratories and facilities Usage of misting devices or atomizers to thoroughly disinfect multi surface spaces Using antiviral filters or UV lights in building ventilation systems Automatic (touchless) dispensers</p>

COMMUNICATIONS / SIGNAGE COMMITTEE

Jane Stoye Welch, Holly Evert, Kimberly Kriz, Patricia Mattulke

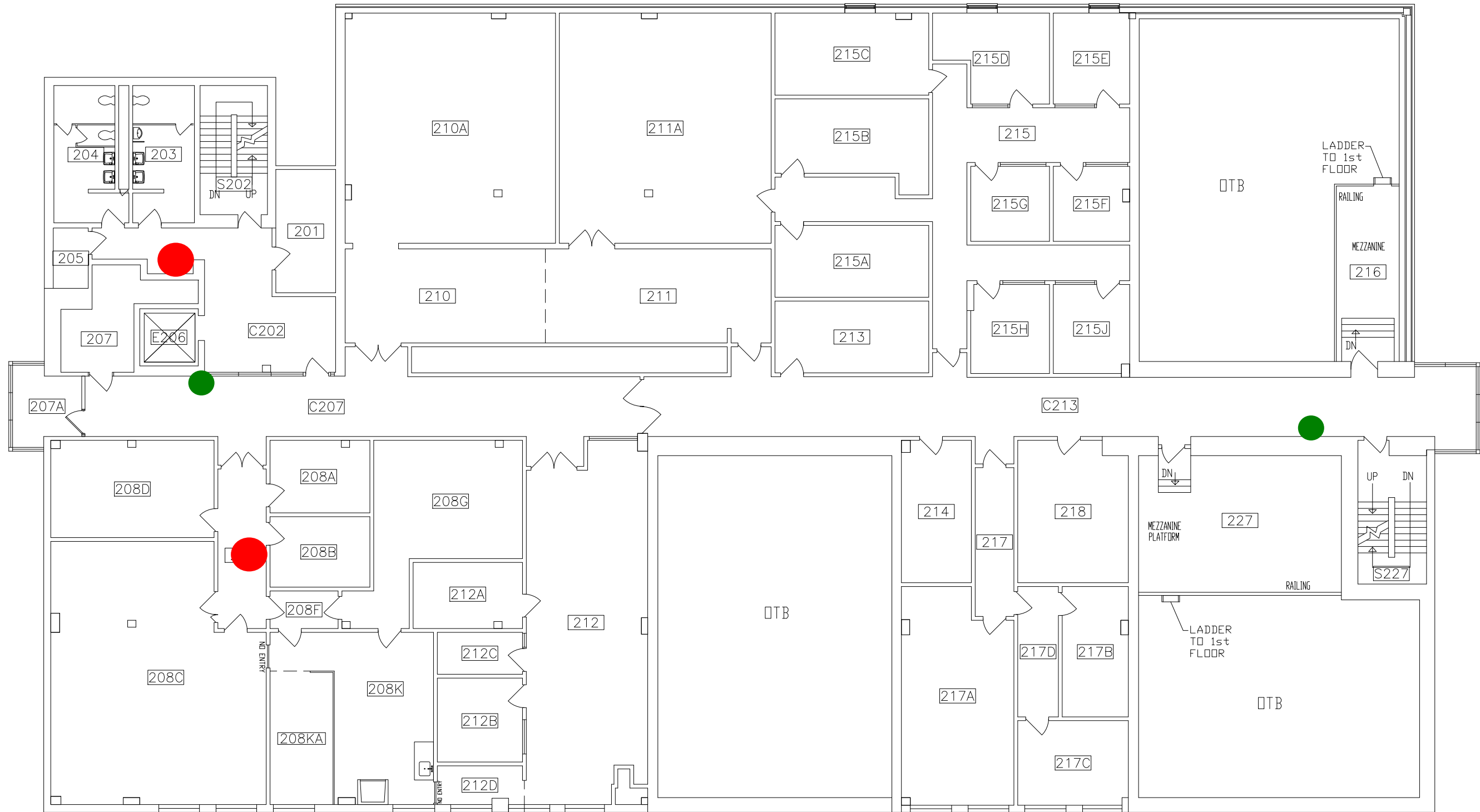
AREAS OF CONCERN	SUGGESTIONS / RECOMMENDATIONS / CONCERNS	COST / RESOURCE ESTIMATE	ACTION / INFORMATION NEEDED
Stairwells	Up / Down One-way Door Sign (not applicable in case of emergency) Spacing between individuals (# of steps apart to maintain social distancing) Wayfinding signage to indicate location of Up / Down stairwells. Building maps / floorplans indicating stairwell locations	12 stairwells Door signs and wayfinding signage can be printed from department copier/printers	Recommend to UB Communications
Elevators	Signage indicating Occupancy Limit (both inside and outside of elevators). Floor marking decals to indicate where to stand in the elevator Floor decals to indicate where to wait for the elevator Floor decals to indicate social distancing while waiting for the elevator	6 buildings; 10 elevators 12"x12" Floor decals est. cost \$6.95 per from local vendor Other decal estimates range from \$1.25 - \$4	Recommend to UB Communications
Collaborative and Common Spaces	Floor decals to indicate social distancing Floor decals / signage to indicate traffic flow Signage to indicate occupancy limit for gathering	See above for floor decal cost estimate	Recommend to UB Communications
Restrooms	Signage for occupancy limit and mask requirement Contact information for cleaning supplies	40 restrooms Door signs to be printed from department copier/printers	Recommend to UB Communications
Conference Rooms	Signage for occupancy Limit Signage to indicate that room is temporarily closed	Door signs to be printed from department copier / printers	Recommend to UB Communications
Entryways	Signage for hand sanitizer stations requesting usage upon entering building Entry only; Exit only signage	Signs to be printed from department copier / printers	Recommend to UB Communications
Hallways	Floor striping center lane to establish traffic lanes Keep Right and Single file signage	See floor decal cost estimate above Signs to be printed from department copier/printers Floor tape \$11 per 100 ft roll	Recommend to UB Communications
Computer Lab / Classrooms	Signage indicating "This Computer Not Available" to accommodate social distancing	Door signs to be printed from department copier / printers	Recommend to UB Communications

B. Location of existing hand sanitizing dispensers



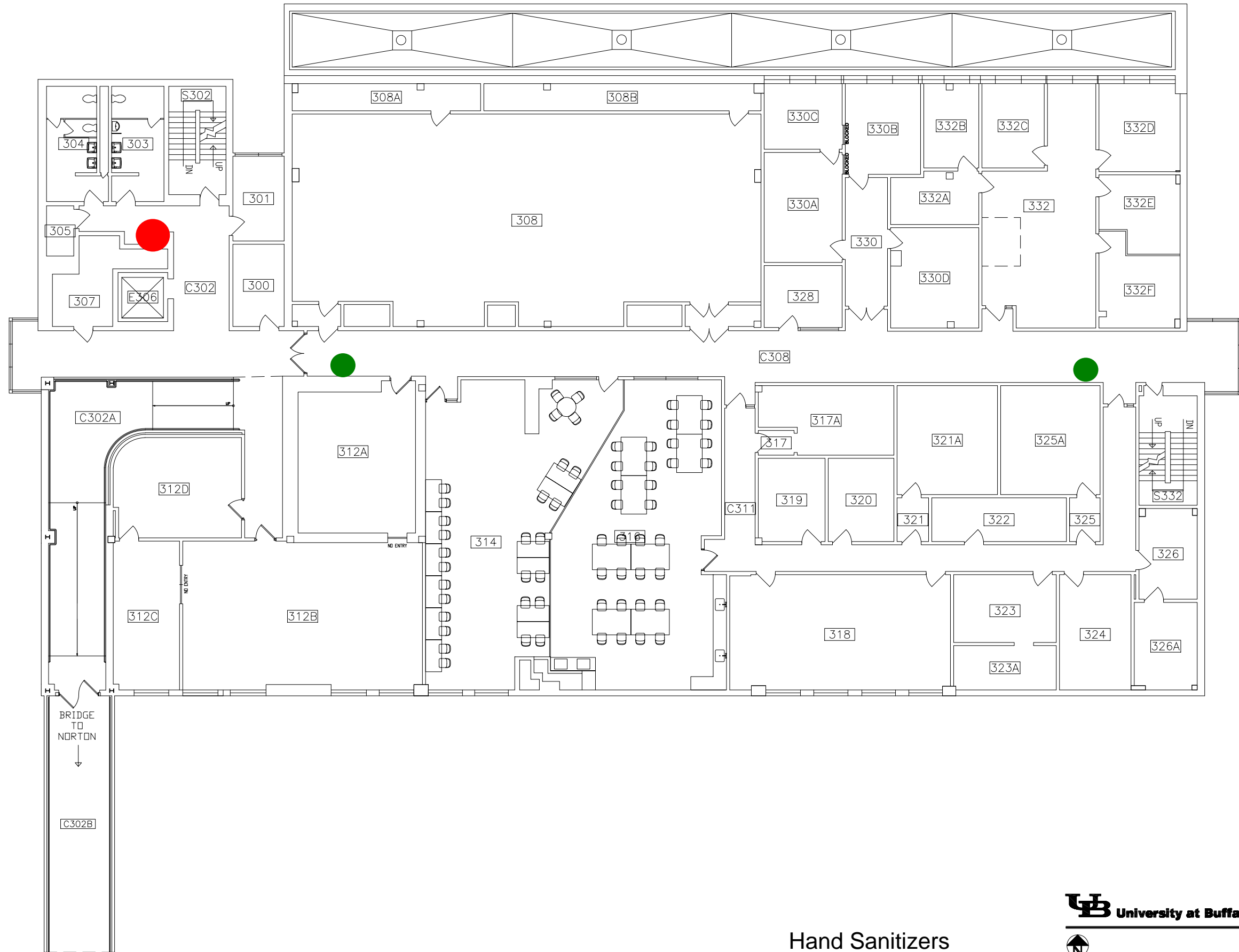
Hand Sanitizers

- Existing Location
- Proposed Location



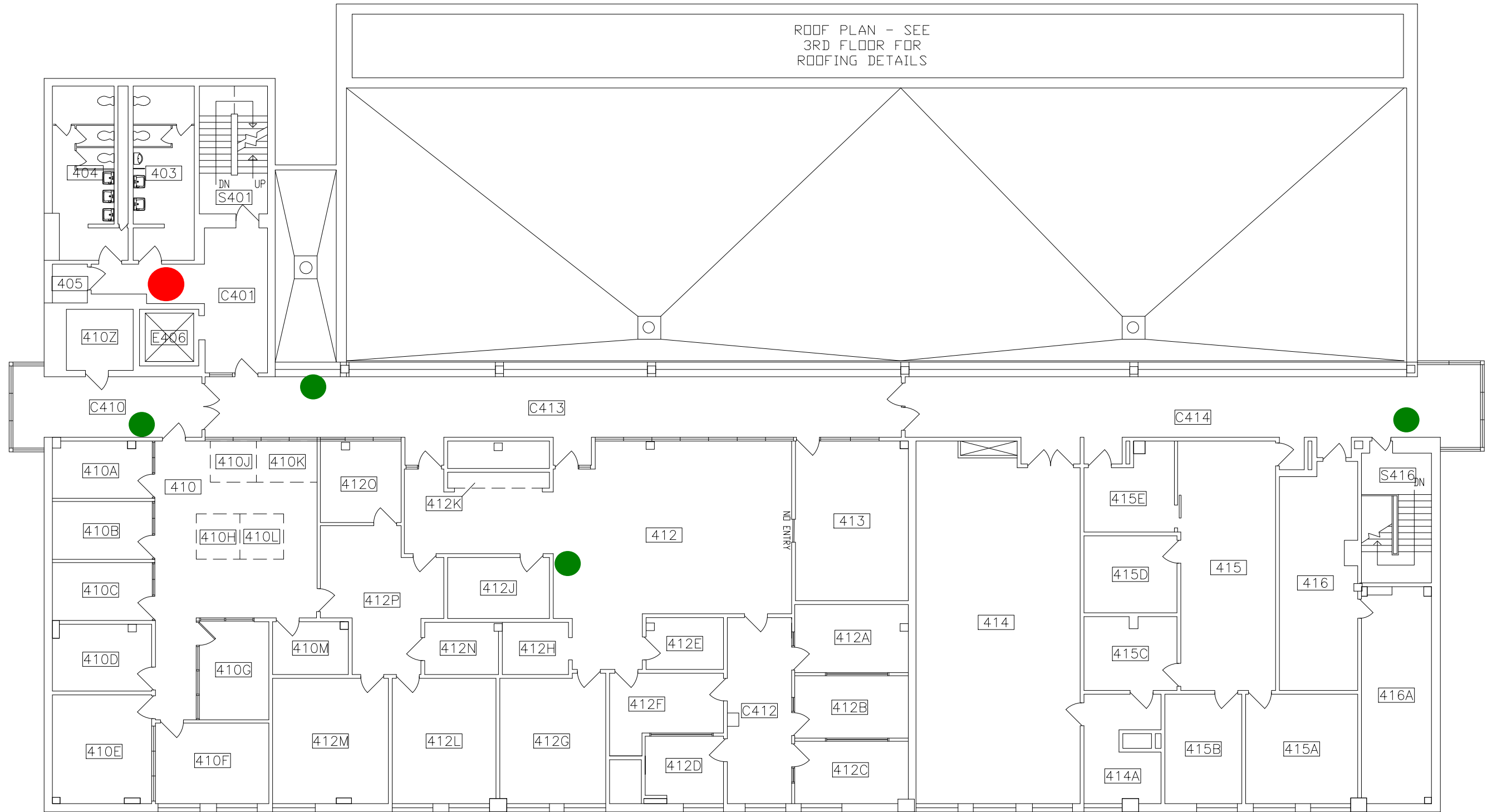
Hand Sanitizers

● Existing Location ● Proposed Location



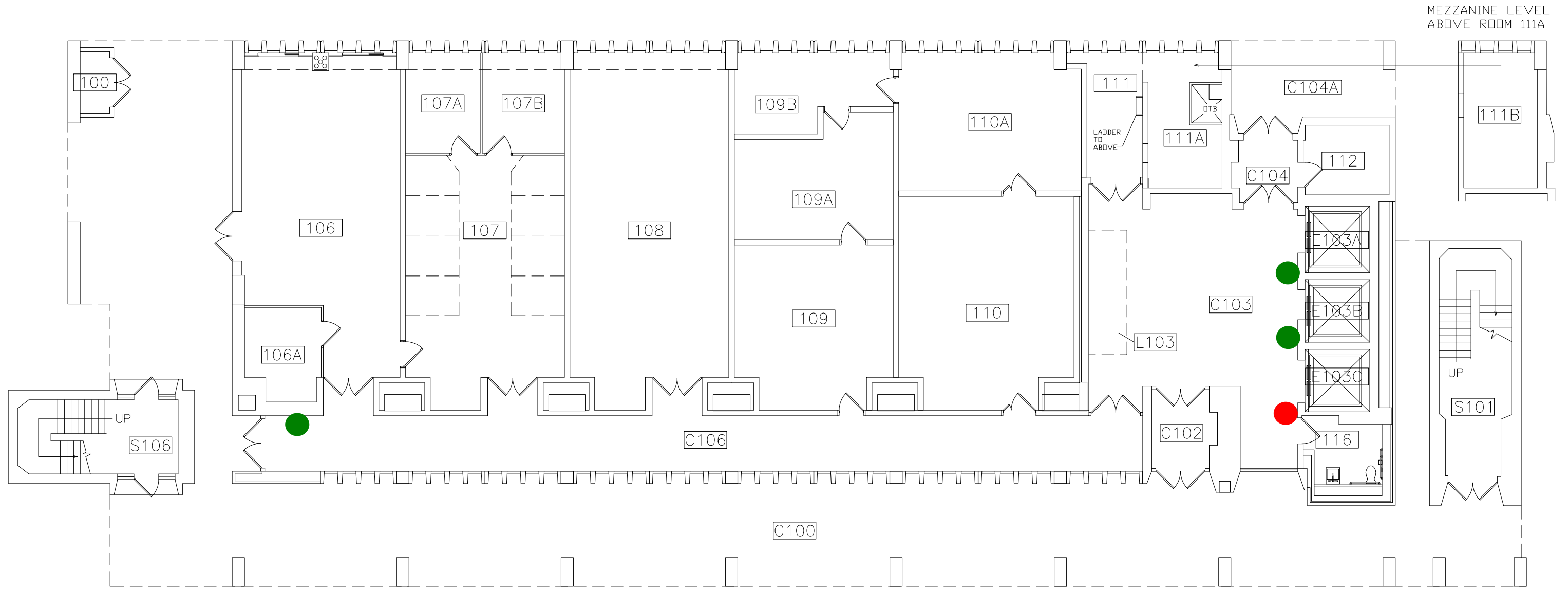
Hand Sanitizers

- Existing Location
- Proposed Location



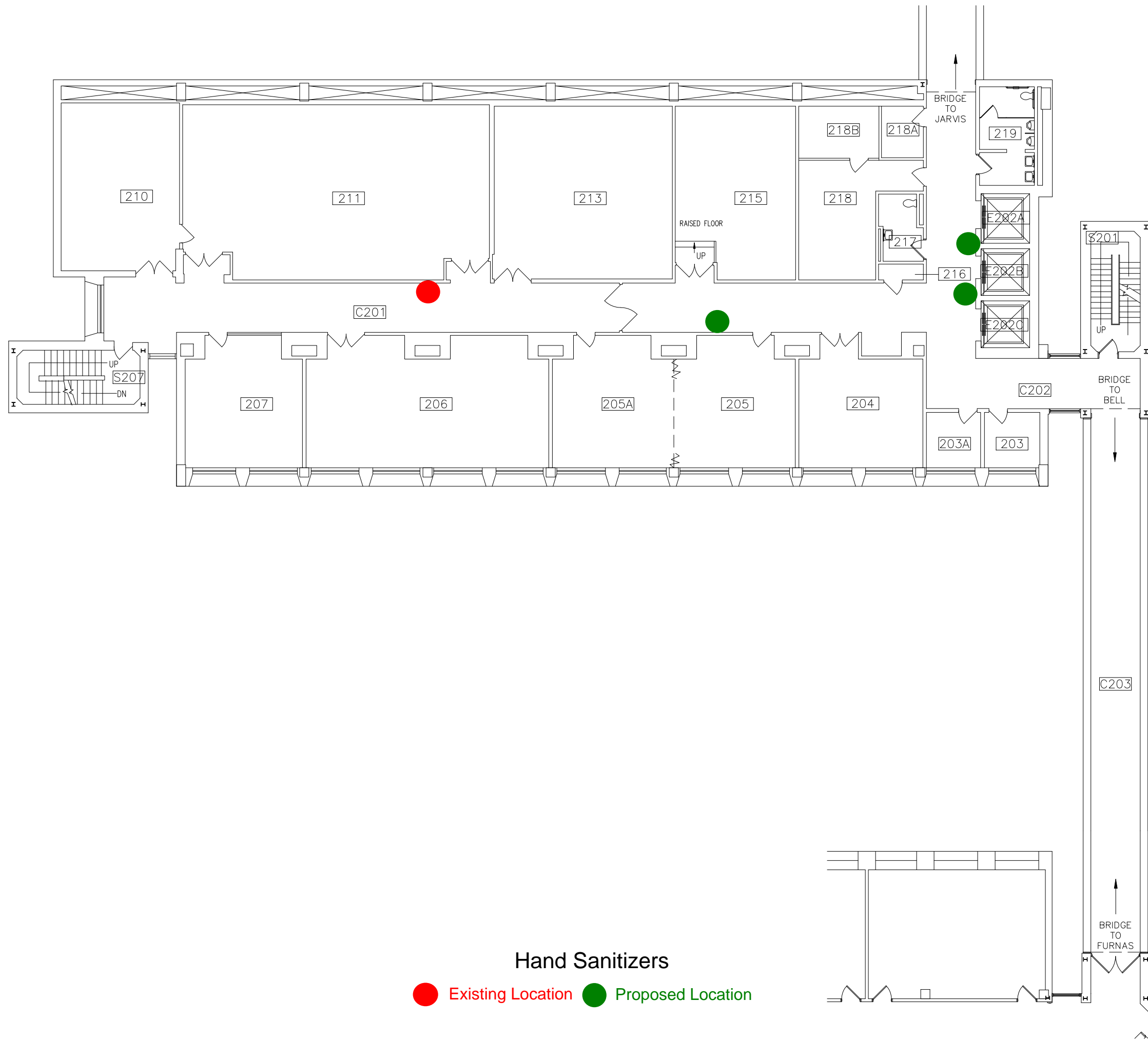
Hand Sanitizers

- Existing Location
- Proposed Location



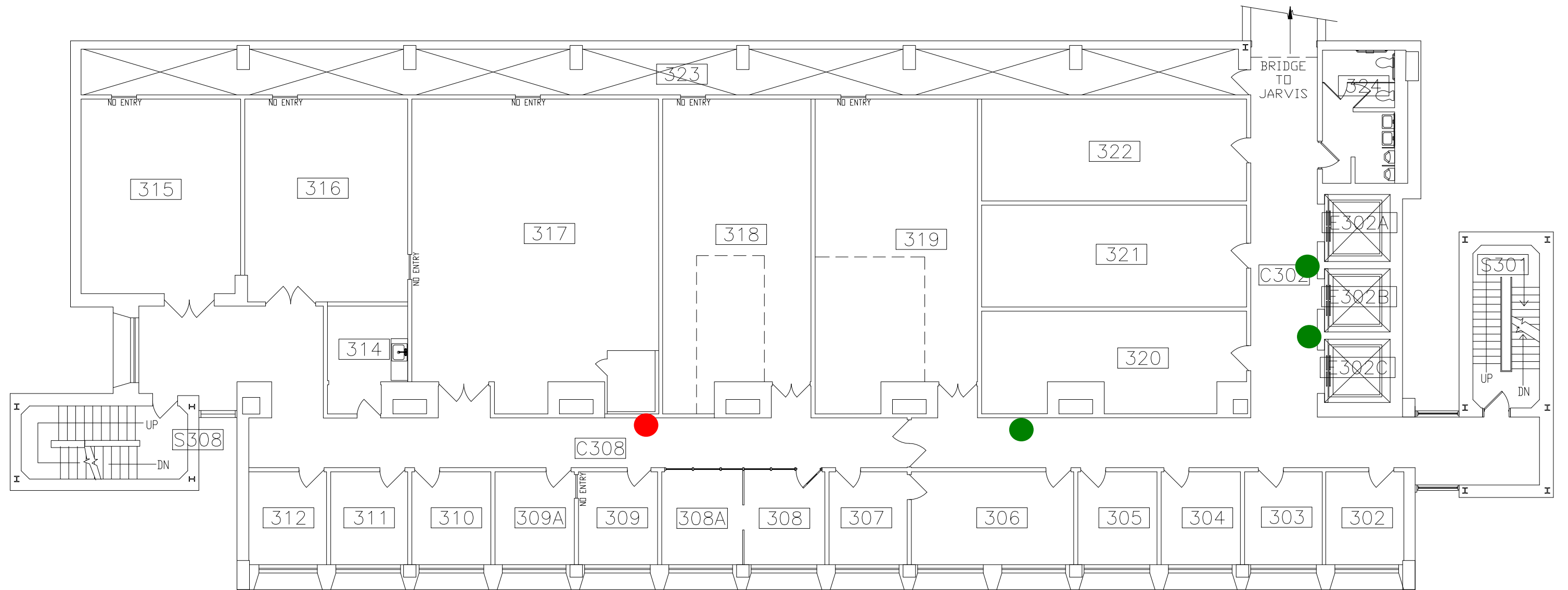
Hand Sanitizers

- Existing Location
- Proposed Location



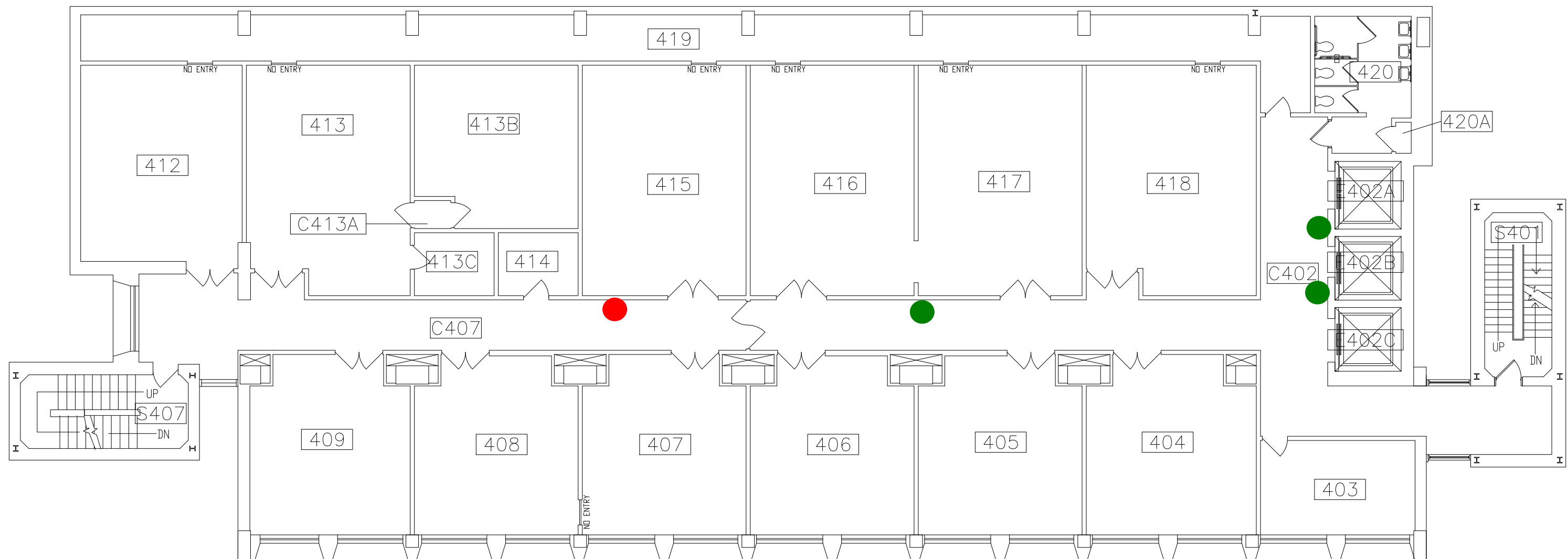
Hand Sanitizers

- Existing Location
- Proposed Location



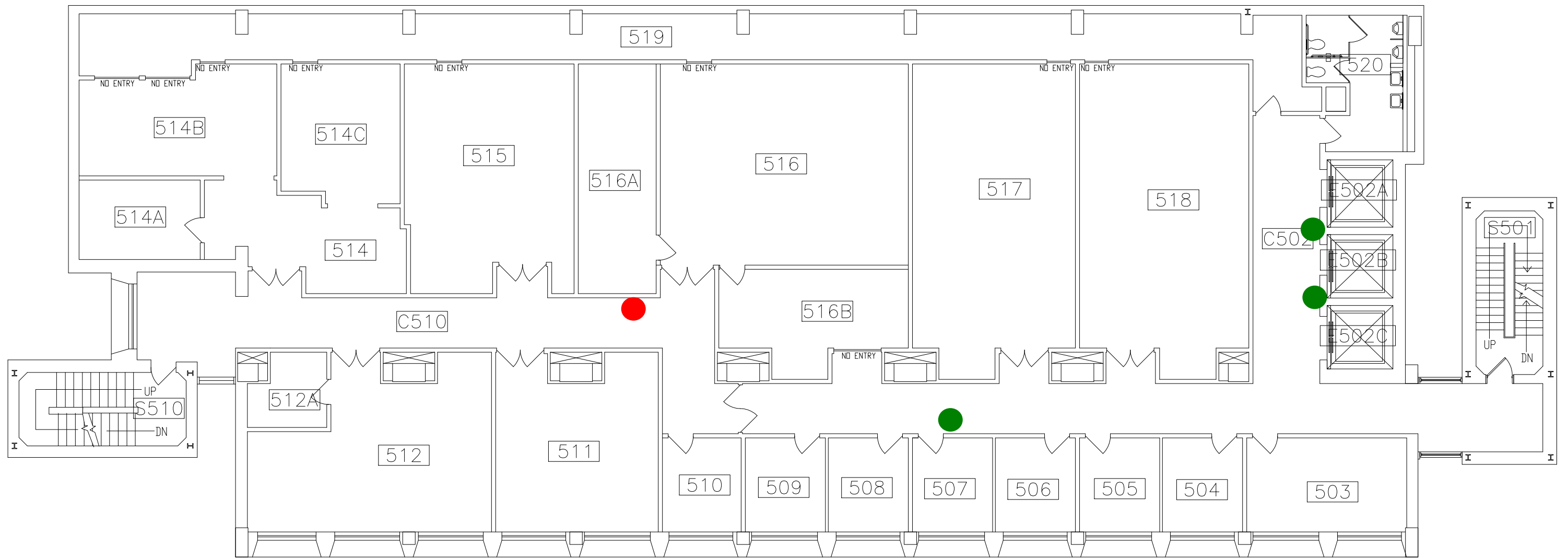
Hand Sanitizers

- Existing Location
- Proposed Location



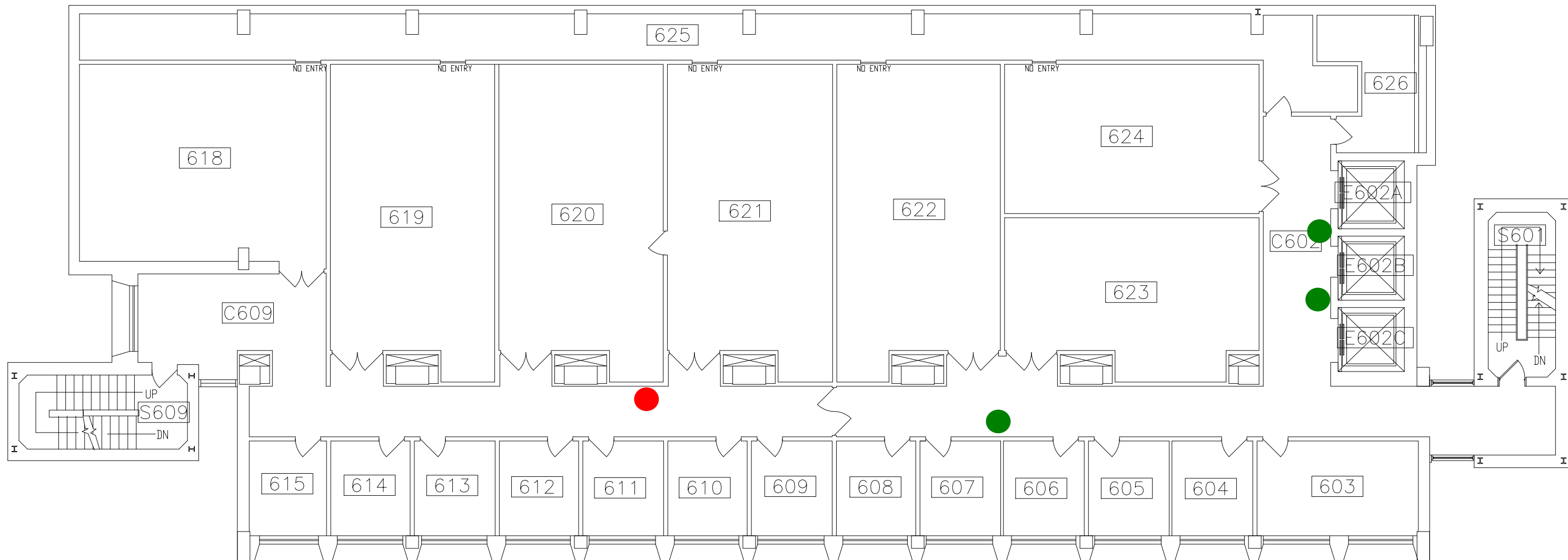
Hand Sanitizers

- Existing Location
- Proposed Location



Hand Sanitizers

- Existing Location
- Proposed Location



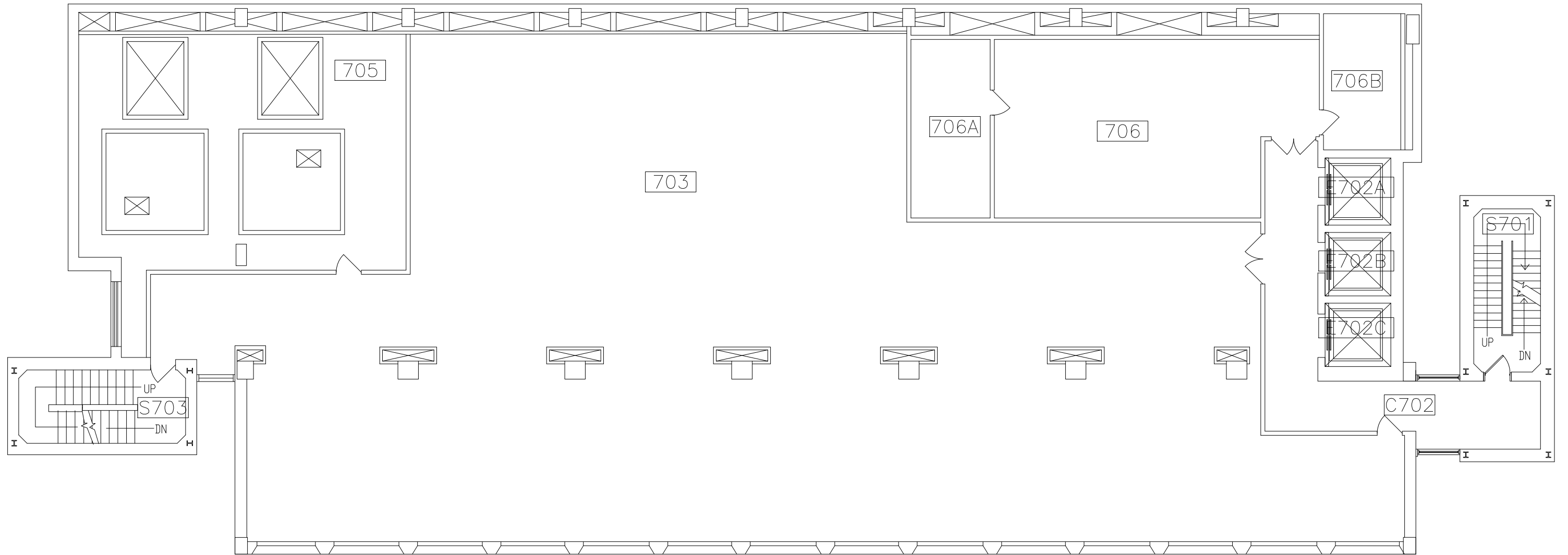
Hand Sanitizers
● Existing Location ● Proposed Location

UB University at Buffalo *The State University of New York*

Furnas Hall
Sixth Floor

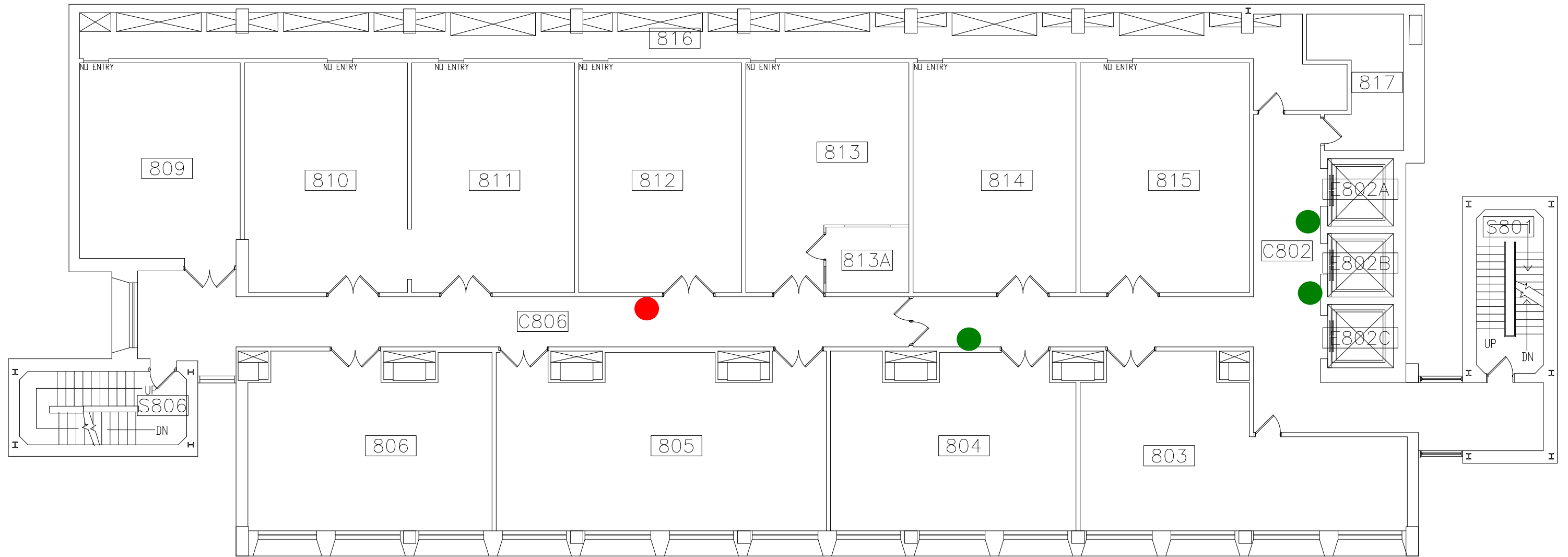
0 6 12 24
FT

Any University CAD drawing files of the University's buildings are to be used only as a general reference and should not be relied upon for building construction or any other work. All consultants are required to comply with the normal standards of site investigations, etc. as required by their profession and in accordance with their contracts with the University. The University at Buffalo's Facilities Planning and Design Department provides consultants with copies of the University CAD drawing files for general reference purposes only and disclaims any liability for the accuracy of the files for purposes of building construction or any other work.



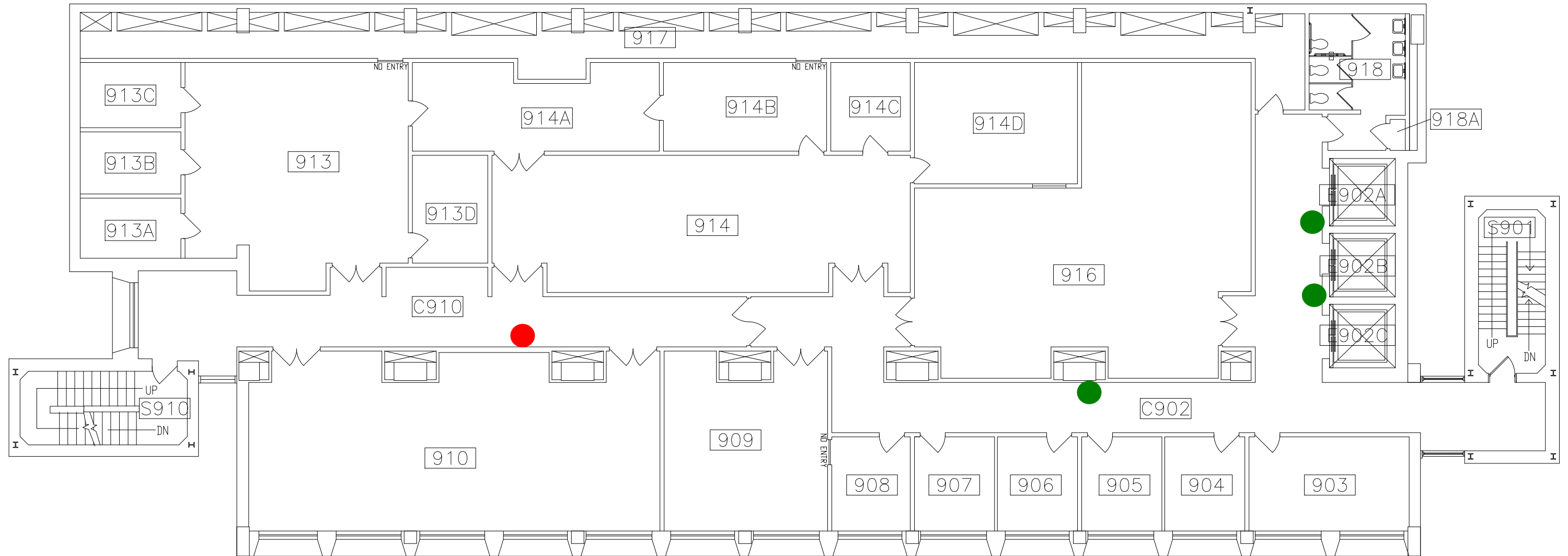
Hand Sanitizers

- Existing Location
- Proposed Location



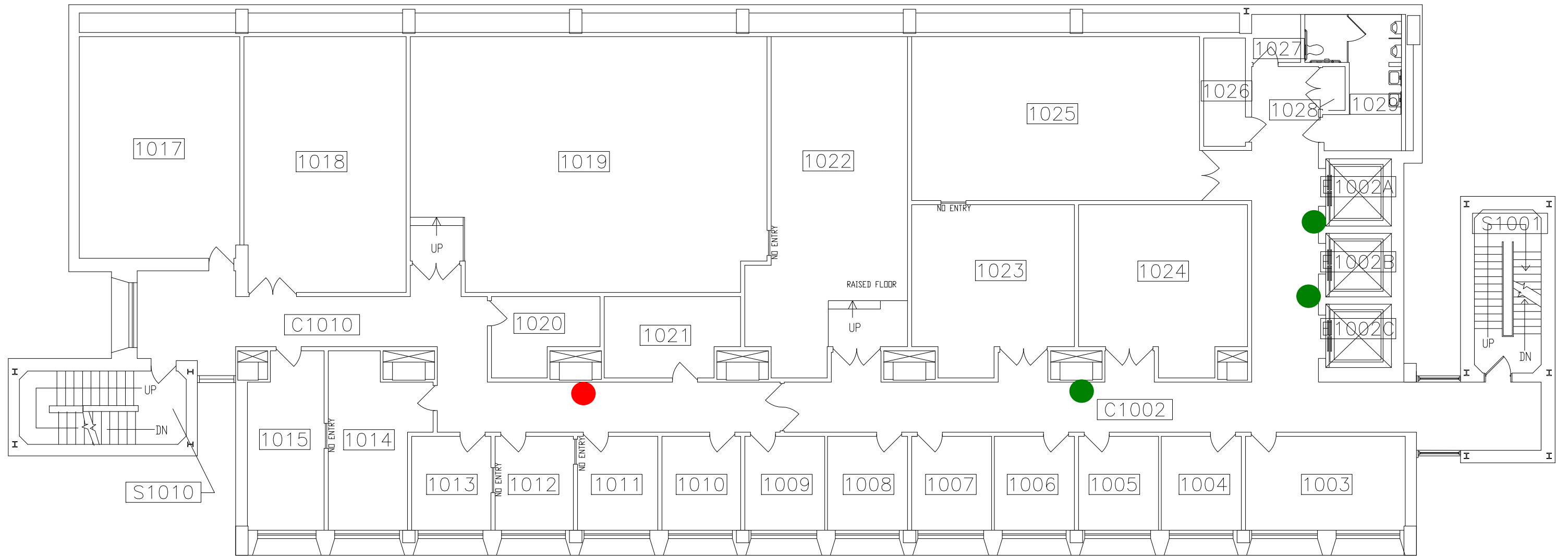
Hand Sanitizers

- Existing Location
- Proposed Location

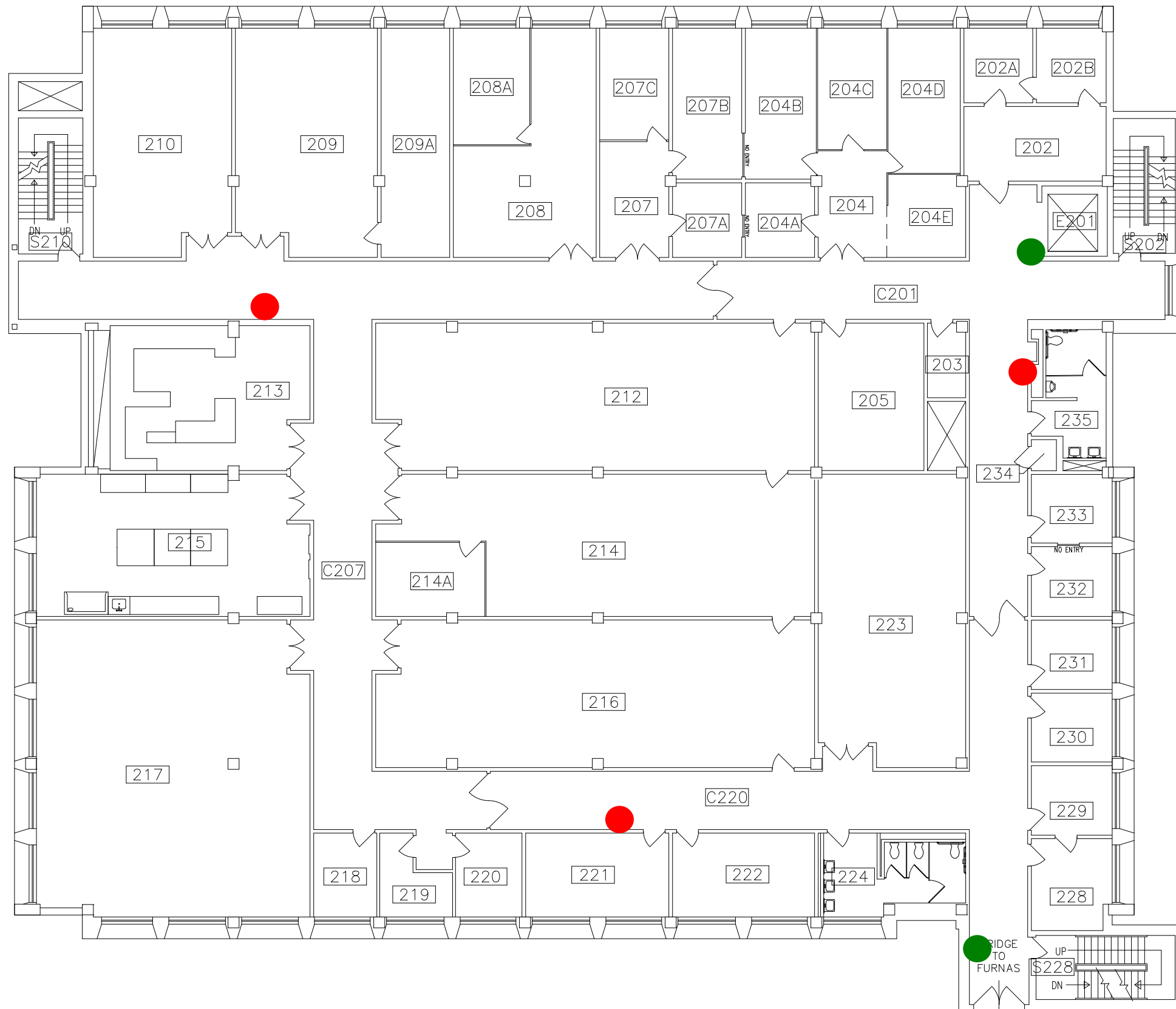


Hand Sanitizers

- Existing Location
- Proposed Location

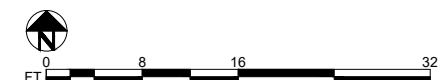


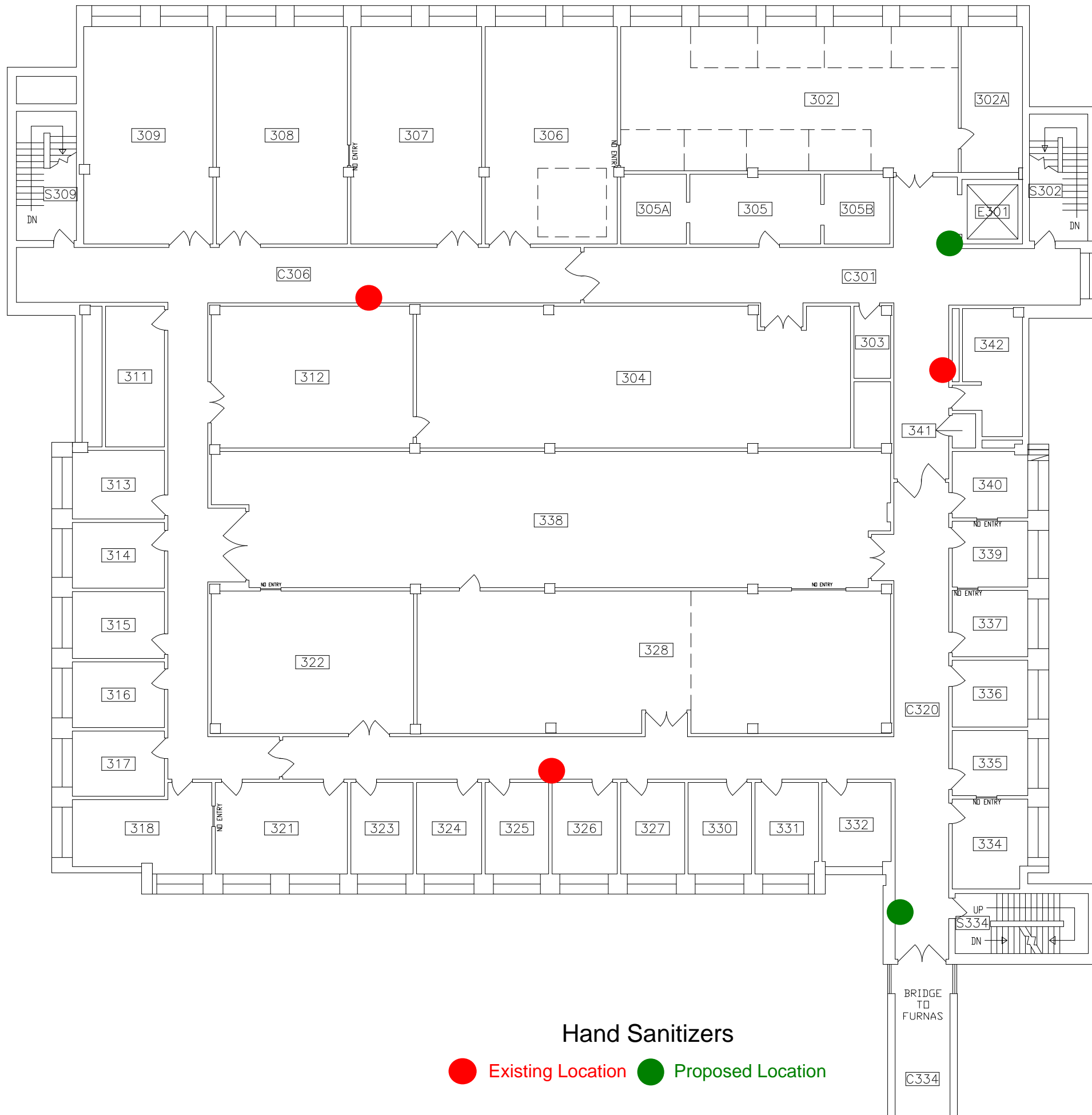
Hand Sanitizers
● Existing Location ● Proposed Location



Hand Sanitizers

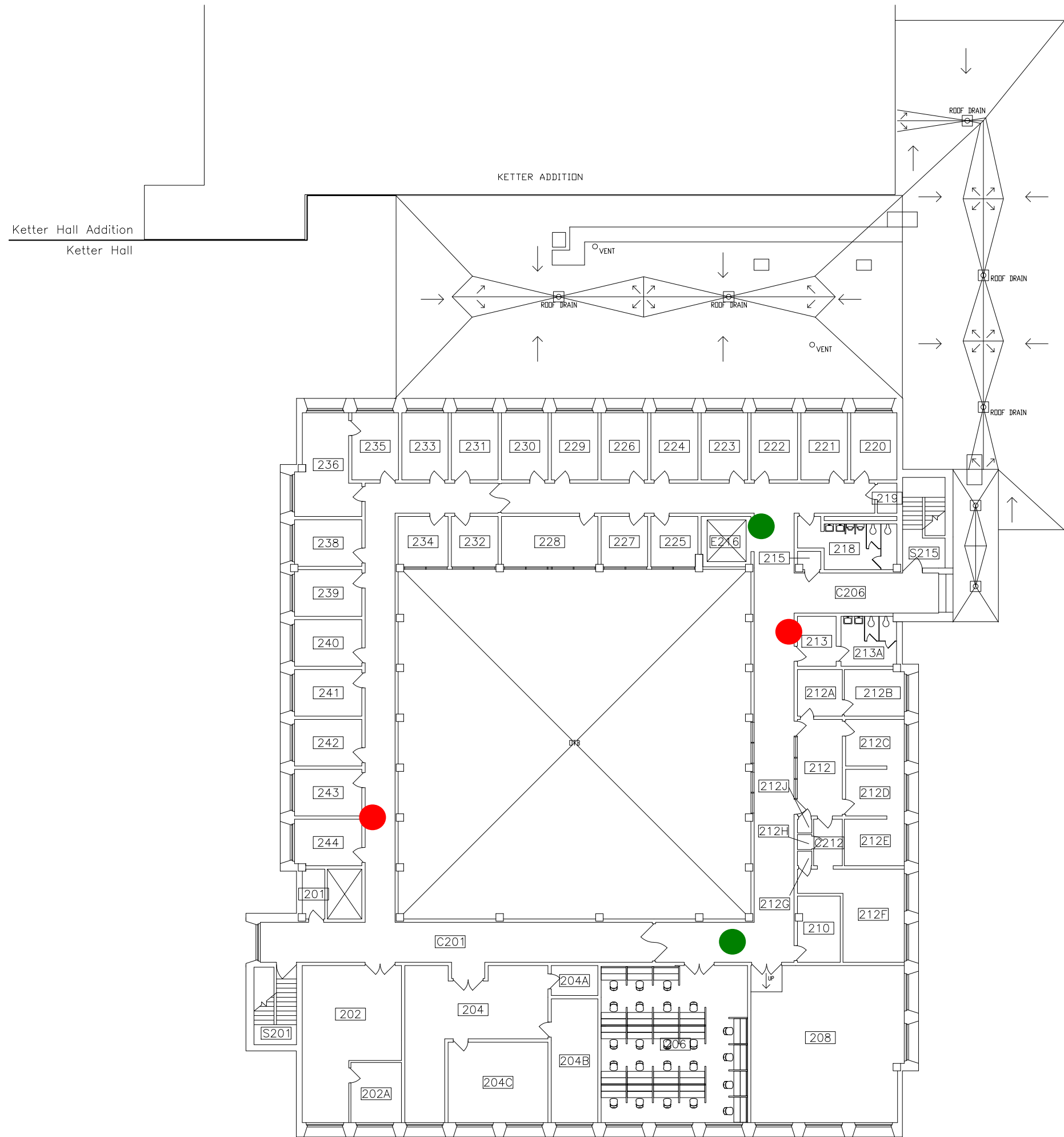
- Existing Location
- Proposed Location





Hand Sanitizers

- Existing Location
- Proposed Location





Hand Sanitizers

- Existing Location
- Proposed Location

UB University at Buffalo *The State University of New York*

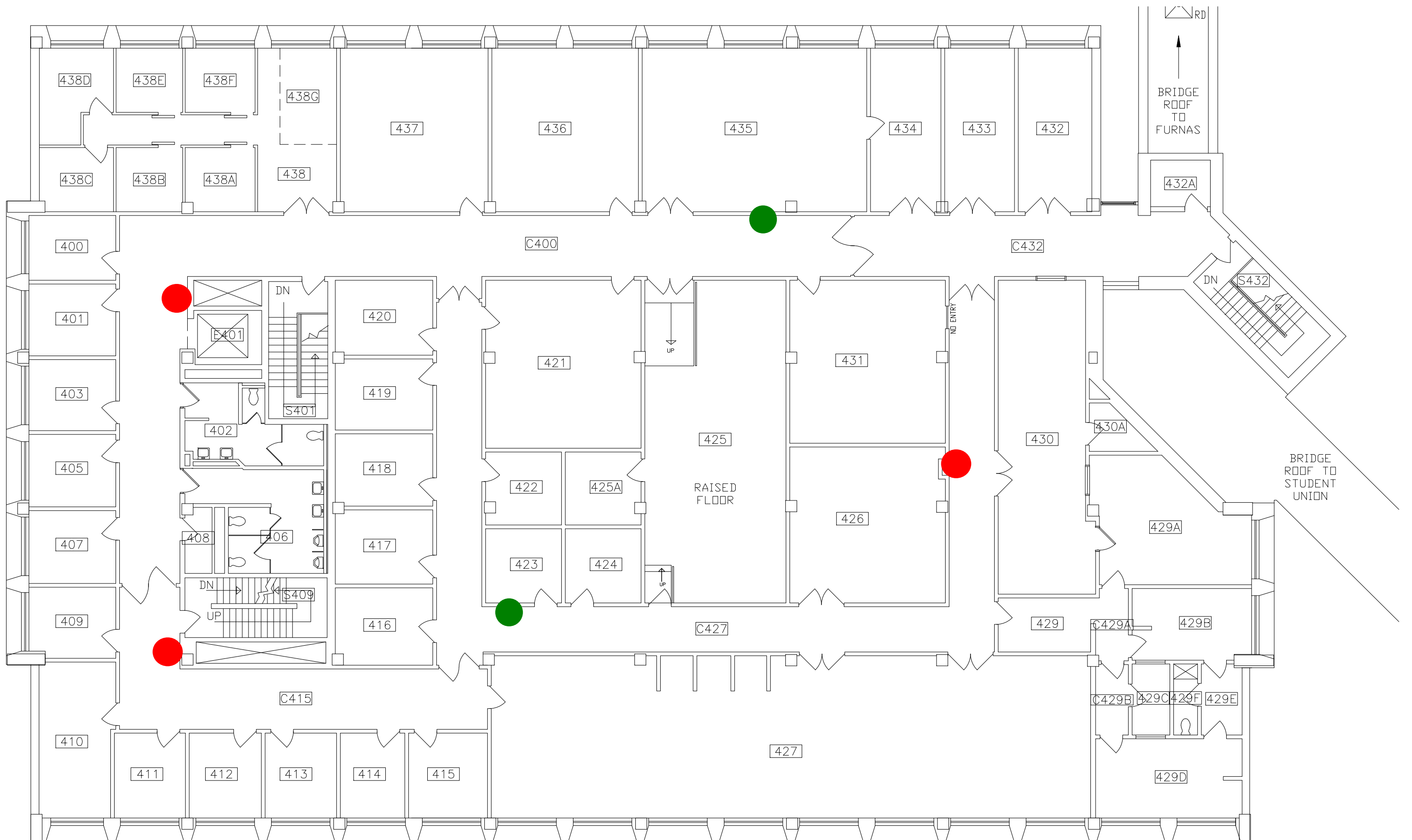
**Bell Hall
First Floor**

Any University CAD drawing files of the University's buildings are to be used only as a general reference and should not be relied upon for building construction or any other work. All consultants are required to comply with the normal standards of site investigations, etc. as required by their profession and in accordance with their contracts with the University. The University at Buffalo's Facilities Planning and Design Department provides consultants with copies of the University CAD drawing files for general reference purposes only and disclaims any liability for the accuracy of the files for purposes of building construction or any other work.



Hand Sanitizers

- Existing Location
- Proposed Location



Hand Sanitizers

- Existing Location
- Proposed Location

UB University at Buffalo *The State University of New York*

**Bell Hall
Fourth Floor**

Any University CAD drawing files of the University's buildings are to be used only as a general reference and should not be relied upon for building construction or any other work. All consultants are required to comply with the normal standards of site investigations, etc. as required by their profession and in accordance with their contracts with the University. The University at Buffalo's Facilities Planning and Design Department provides consultants with copies of the University CAD drawing files for general reference purposes only and disclaims any liability for the accuracy of the files for purposes of building construction or any other work.

C. Spreadsheet of existing restroom configurations

Public Restroom Breakdown

Bldg.	Floor	Room Number	Sex	Faucets		Urinals		Toilets		Towel Dispenser		Air Hand Dryer
				Automatic	Manual	Auto Flush	Manual Flush	Auto Flush	Manual Flush	Automatic	Manual	
Bell												
	4	402	F	0	2	NA	NA	2	0	0	3	1
	4	406	M	0	2	2	0	2	0	0	3	1
	3	302	F	0	2	NA	NA	0	2	0	2	0
	3	304	M	0	3	0	2	0	2	0	2	0
	2	202	F	0	2	NA	NA	2	0	0	2	1
	2	205	M	0	2	2	0	2	0	0	2	0
	1	119	F	0	2	NA	NA	1	1	0	1	0
	1	121	M	0	3	3	0	2	1	0	2	0
Totals				0	18	7	2	11	6	0	17	3
Bonner												
	4	404	F	0	3	NA	NA	0	3	0	1	0
	4	403	M	0	3	0	1	0	2	0	2	0
	3	304	F	0	2	NA	NA	0	2	0	1	0
	3	303	M	0	2	1	0	0	1	0	2	0
	2	204	F	0	2	NA	NA	0	2	0	1	0
	2	203	M	0	2	1	0	0	1	0	2	0
	1	104	F	0	2	NA	NA	0	2	0	1	0
	1	103	M	0	2	1	0	0	2	0	1	0
Totals				0	18	3	1	0	15	0	11	0
Ketter												
	2	213	F	0	2	NA	NA	0	2	0	2	0
	2	218	M	0	2	2	0	2	0	0	2	0
	1	121	F	0	3	NA	NA	1	3	0	2	0
	1	120	M	0	2	2	0	2	0	0	2	1
Totals				0	9	4	0	5	5	0	8	1
Davis												
	3	307	F	3	0	NA	NA	1	4	0	2	1
	3	308	M	3	1	2	0	0	2	0	2	1
	2	206	F	3	0	NA	NA	3	2	0	2	1
	2	207	M	0	3	3	0	1	1	0	2	1
	1	103	F	4	0	NA	NA	4	1	0	2	1
	1	104	M	0	3	4	0	1	1	0	2	1
Totals				13	7	9	0	10	11	0	12	6
Jarvis												
	3	No Female Restroom										
	3	342	M	0	2	2	0	0	2	0	2	0
	2	224	F	0	3	NA	NA	3	0	0	2	1
	2	235	M	0	2	1	0	0	2	0	2	0
	1	No Female Restroom										
	1	101	M	0	2	2	0	0	2	0	2	0
Totals				0	9	5	0	3	6	0	8	1
Furnas												
	10	No Female Restroom										
	10	1029	M	0	2	2	0	1	0	0	2	1
	9	918	F	0	2	NA	NA	3	0	0	2	1
	9	No Male Restroom										
	8	No Female Restroom										
	8	817	M	0	2	NA	NA	3	0	0	2	1
	7	No Restrooms										
	6	606	F	3	0	NA	NA	3	0	0	2	1
	6	No Male Restroom										
	5	No Female Restroom										
	5	520	M	0	2	2	0	2	0	0	2	1
	4	419	F	0	3	NA	NA	3	0	0	2	1
	4	No Male Restroom										
	3	No Female Restroom										
	3	324	M	0	2	2	0	0	2	0	2	0
	2	217	F	0	1	NA	NA	1	0	0	1	0
	2	219	M	0	2	2	0	1	0	0	1	1
	1	116	Uni	0	1	0	0	1	0	0	1	0
Totals				3	17	8	0	18	2	0	17	7
Grand Totals				16	78	36	3	47	45	0	73	18
				17%	83%	92%	8%	51%	49%	0%	100%	45%