RETURN TO
WORK TOOLKIT:

**HEALTHCARE PROTOCOLS IN
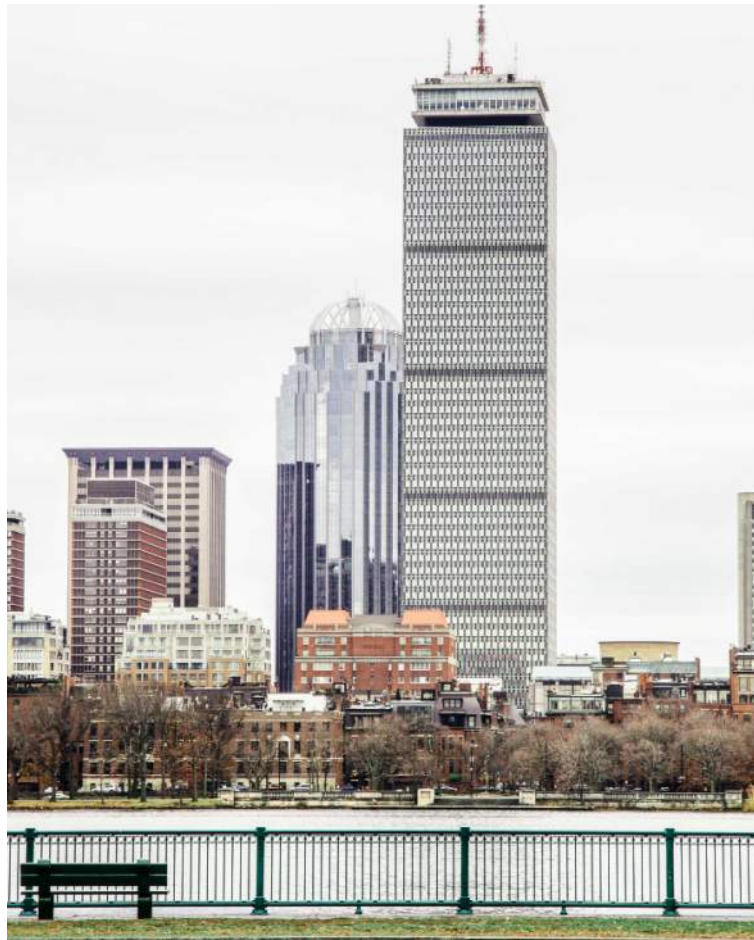THE WAKE OF COVID-19**

The Boston Real Estate

COVID
CONSORTIUM

A knowledge share of current industry best practices and due diligence around workplace design and construction requirements adapting to changes in code and regulatory amendments in the post COVID-19 world.

OUR
MISSION

Boston's Real Estate COVID Consortium's mission is to conduct a knowledge share of current industry best practices and due diligence around workplace design and construction requirements adapting to changes in codes and regulatory amendments in the post-COVID-19 world. Its members include professional multiple disciplines of real estate industry, including architecture and interior design, audio visual integrator, code consultants, commercial real estate brokerage, commissioning agents, environmental engineers, general contractors, furniture dealers, MEP/FP engineers and owner's project managers.

WE ARE
HERE FOR YOU

Since March 10th, when Governor Charlie Baker made the difficult decision to shut down large portions of Massachusetts, we have all been bombarded with a steady stream of COVID-19 impacts to the real estate industry, best practice guidelines and prognostications. Our mission is to curate this information and distill it down to the best of the best to help simplify & streamline your return to work planning process.

WE WANT TO
HEAR FROM YOU

We aim to be a trusted resource for our valued Boston real estate community. If you have any questions or ideas for content, please don't hesitate to reach out to Denise Pied (denise.pied@stvinc.com).

Please note, that although our current focus is limited to standard office space, we plan to cover special considerations for Life Science/Pharma, Healthcare & Academic markets in future publications.

ISSUE 09 RETURN TO WORK TOOLKIT:

Healthcare Protocols in the Wake of COVID-19

Future issues will take a deeper dive to spotlight relevant and timely topics including:

- Coronavirus Legal Advisory Topics
- A Focus on Life Science, + Academic Markets
- A Look Back at the Construction Restart Process - How are we doing?

CONTENT

Cover Artwork courtesy of SGA and Anthony Delanoix

REOPENING: YOUR SAFETY IS OUR PRIORITY

As Hospitals and Ambulatory Care Centers Reopen for Patients and Visitors

The Healthcare Mission is to provide services in a safe environment protecting patients, visitors and staff from catching or spreading the COVID-19 Virus. Healthcare Systems are providing consistent messaging throughout their systems to assure patients and providers of their commitment to safety. Standard system wide processes have been developed to address the needs of clinics and patient units. Specific individual solutions are based on the agreed upon philosophy and priorities of the organization. At UMASS Memorial Healthcare, solutions are based on safety, economics and minimal change to the environment.

Kathleen Hylka, Interim VP of Facilities and Support Services discussed the UMASS Memorial strategy. "Your Safety is our Priority" is the message of the organization. From the get-go the philosophical discussion has been on the importance of a partnership between the organization, the employees and the patients. Each member has a responsibility to stay safe and keep others safe.

Thank You to this week's lead contributer,

Mary O'Looney

Senior Planner | STV|DPM

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UMMHC Responsibilities:

- Provide proper PPE and education
- Provide informational signage
- Adjust space as required
- Ensure Housekeeping protocols are maintained
- Comply with Federal state and local codes and regulations
- Ensure protocols are in place and maintained for treating COVID positive patients and persons under investigation (PUI)

UMMHC Employees:

- Daily Self Report tool
- Maintain Social Distancing
- Wear a Mask
- Hand Sanitize
- Use proper level of PPE
- Follow cleaning protocols for staff only areas, including touchdown and office spaces, conference rooms and break rooms

Patients and Visitors:

- All Patients and Visitors must be screened before entering a facility
- All patients and visitors must wear mask and hand sanitize
- Visitor Restrictions are in place
- Signage and crowd barriers have been installed to assist with patient/visitor path of travel

Room Air Flow Safety:

- The CDC does not require negative pressure rooms for COVID patients. A negative pressure room is not an isolation room. The pressure is only negative in relation to the surrounding environment. At UMMHC Negative pressure rooms are used in COVID inpatient areas and Ancillary Testing areas.
- The use of portable HEPA filters is limited. The best use is in rooms under 200sf. Turn over time for exam rooms decreases because of the additional air filtration in the room when the HEPA filter is used .
- Air exchanges (ACH) are measured to determine, as per CDC guidelines, how long a room must be closed between patients to remove aerosolized viruses.

> *The UMass Memorial 26 bed locked acute psychiatric care and treatment unit was converted to negative pressure to facilitate the admission and treatment of patients needing immediate care while COVID positive.*
>
> *A temporary Negative pressure Infusion (Oncology) suite was provided for patients testing positive and requiring scheduled infusion therapy.*

4

De-densifying Space

All successful infection control programs require de-densifying the use of space.
This in turn has led to a leap in the use of technology for Telehealth appointments and Telemedicine by medical teams. Telemedicine hubs/Teleconference rooms are being fast tracked for use by patients, families, surgeons and medical teams and medical students to share, partner diagnose and plan surgical treatments. Telemedicine platforms are being installed in the ICU to allow for continuous patient monitoring and communication with the patient.

- De-densified clinic waiting areas of the future may have separate areas with separate airflows to separate contagious patients from non-contagious. Wait times and use of waiting rooms may be minimized.

- A temporary divided waiting area was created by installing existing on site Starc wall with custom cut plexi windows. The windows allow staff to view at risk patients.
- Staff Work areas and eating areas will allow for Social Distancing.

- Additional eating areas are being provided in visitor lounge areas that are currently not occupied because of visitor restrictions.
- Conference rooms are used as supplemental for staff eating areas between 11 and 2. Most meetings are through web-ex so again the rooms are underutilized and can now be used to keep staff safe while eating.
- UMMHC has tempered the use of Plexi sneeze guards because Infection control has determined that there is a false sense of security by staff when plex screens are installed. Eye protection/Face shields and/ or surgical masks are effective barriers to the spread of the virus.
- At UMMHC the goal is immediate safety. There is continuous feedback and assessment of the environmental and clinical protocol changes made due to COVID-19 , prior to committing to any financial investments in the change or ensuing renovation project.
- UMMHC perceives the next year to be a time of learning and evaluation of its efforts to prioritize safety.

Mary O'Looney LEED AP, NCIDQ, EDAC
Senior Planner, STV|DPM

Mary is a Senior Planner at STV/DPM. Her career spans 30 years of healthcare planning and design. Currently Mary is providing planning and project management services at the Office of Capital Planning at UMassMemorial Healthcare.

5

eICU DEPLOYMENT

As COVID-19 began to surge, hospitals were forced to deal with a rise in the quantity of patients with higher acuity needs. At UMass Memorial Healthcare, provisions were put in place early to handle this rise in COVID-19 cases. Initially a Command Center was set up to be a central location for all communications. All requests and concerns flowed through this one central location to best allocate time and resources to the areas that needed them most.

While the changes made during COVID were plentiful, below are a few that changed the way staff and visitors used the spaces within the hospital:

- Temporary spaces were set up both within the hospital and in external facilities to accommodate the rapidly growing need for patient beds.
- Hospital entrances were secured, and all traffic flowed through minimal entrances in order to monitor staff and visitors to ensure proper protocols were being followed.
- Elective and non-life-threatening procedures were postponed to minimize the unnecessary hospital traffic and allow additional rooms for use by COVID-19 patients.
- Staff were reallocated into different positions to accommodate the changing patient population and hospital needs.
- Units were set up to cohort all COVID+ patients together to minimize the risk for infection to those that had to be in the hospital.
- Technology was deployed to minimize the traffic in COVID+ areas.

With the ever-growing development of technology, telehealth has become a very convenient way to conduct a routine doctor appointment without having to leave your home. In addition to the outpatient setting, UMass Memorial Healthcare has been using a similar technology within the inpatient units as well. Prior to COVID-19 a team had been assembled to replace antiquated equipment in ICU rooms on multiple campuses to upgrade the existing "eICU" technology. The vendor, Caregility, along with Project Managers from Information Services (Zev Reiser) and Capital Planning (Trisha Cieplik of STV-DPM) were tasked with assessing each room for its IT, construction and technology needs and replacing over 100 existing units to remove all equipment that is no longer capable of being serviced or replaced. The actual construction and installation of each unit would require each ICU room to be shut down one at a time for approximately 3-5 days during construction and replacement of the unit. Modifications to emergency power and addition of IT cabling would cause undetermined impacts on adjacent ICU rooms and corridors. Due to COVID-19, the actual project was postponed as it was deemed too invasive to move forward at the time. Since ICU needs were exceeding capacity and field hospitals were being created to supplement the need for rooms, any project that would reduce capacity and put contractors at risk of becoming infected or spreading the virus was not justifiable.

Months of research and planning did not go to waste. IS along with Caregility were able to purchase and deploy 120 new units to various Intensive Care Units and temporary COVID field locations. Each piece of equipment consists of a camera, computer, microphone and monitor. The replacement units are set to be mounted to the walls in the ICU rooms, but the COVID units were deployed on carts so that they could be moved to rooms as required. The deployment of these units allowed doctors to remotely view and speak with patients and staff within occupied COVID positive rooms, which in turn minimized the traffic in each room while maximizing the level of care being provided.

Thank You to this week's lead contributer,

Trisha Cieplik

Project Manager | STV|DPM

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6

MEET THE TEAM

HEAR FROM THE INDUSTRY EXPERTS

STV|DPM has brought together a multidiscipline industry team (Project Management, Construction, Commercial Real Estate Brokerage, Commissioning, Code Review, Design, Environmental Engineering, Technology & Furniture) to conduct a knowledge share of current industry best practices and due diligence around workplace design and construction requirements adapting to changes in codes and regulatory amendments in the post-COVID-19 world. We strongly believe innovative project strategies & checklists around these disciplines could assist our active clients and other Real Estate leaders in assessing new in office & remote work requirements as they bring their employees back to work and going forward. The ultimate goal is to develop a "Toolkit" of best practices resources that could be rolled out as part of ongoing & new project work.

Owner's Project Manager
Denise Pied
Vice President, Project Executive | STV/DPM

Denise is a co-founder of the Boston Real Estate COVID Consortium. Denise leads STV|DPM's Corporate Market sector. Denise has over 20 years of experience leading project teams & advising clients' real estate project delivery strategies.

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Owner's Project Manager
Sandra Gucciardi
Director of Business Development | STV/DPM

Sandra is a co-founder of the Boston Real Estate COVID Consortium. At STV/DPM, Sandra is responsible for client strategy and development initiatives, and assists with the strategic direction to develop new business and product offerings.

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Owner's Project Manager
Eva Hamori
Senior Project Planner | STV/DPM

Eva Hamori is an industry leader in the management of complex client relocation projects. With her experience as a certified Change Management Advisor, she is able to create and implement change strategies which maximize adoption and minimize resistance.

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If you have any questions for the consortium or ideas for content, please contact
Denise Pied at denise.pied@stvin.com

Architect
Gable Clarke
Partner, Director of Interior Design | SGA

As a Partner and Director of Interior Design at SGA, Gable oversees corporate interiors projects of all scales. She is responsible for design oversight, client relations, business development, mentoring and firm leadership.

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Audio / Visual
Phil Muscatello
SVP, Marketing + Business Dev. | Adtech Systems Inc.

Philip is an owner of Adtech Systems. He currently serves as VP of Business Development. Philip received his MBA from Boston College and his BA from Saint Joseph's University.

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Commercial Brokerage
Adam Meixner
Senior Partner | 128 CRE

Adam's focus is on the Office Leasing and Sales sector within the Central 128/95-Mass Pike submarket. Assisting with space acquisitions/dispositions, lease renegotiations/extensions and strategic planning are among Adam's strongest assets when engaged as a Tenant Representative.

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Code
Chris Lynch
Principal | Code Red Consultants

Chris is a founding principal at Code Red Consultants and is a practicing fire protection engineer and code consultant. He excels at leading project teams and working with clients to ensure that new and existing buildings are safe and code compliant.

chrisl@crcfire.com

Construction
George McCarron
Project Executive | Lee Kennedy

George has over 40 years of experience in the construction industry. As a Project Executive with Lee Kennedy, his ability to grasp the needs of the client and communicate with design teams make him an invaluable resource and asset.

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Commissioning Agent
Steve Rizzo
President | Synergy Consultants

Being involved in the design and construction industry for 45+ years, Steve's expertise is in Building Commissioning and operations for HVAC, Plumbing and Electrical Systems. He specializes in complex medical facilities ranging from Gene Therapy development Labs to Patient Care Facilities.

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Design Engineers
Michael Camoscio
Associate, Senior Engineer | STV Incorporated

Michael manages multi-discipline projects for several public agencies. Mike leads the mechanical group in STV's Boston office and most recently advised the Convention Center Authority during setup for Boston Hope.

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Environmental
Stephan White
President | PES Associates

Stephan White is the founder and President of PES Associates, a national engineering and environmental firm with headquarters in Hingham, MA. Throughout his career, he has gained extensive experience in environmental consulting, property due diligence and industrial hygiene.

swhite@pesassociates.com

Furniture
Amy Lalezari
Partner, Director of Client Solutions | Environments at Work

Amy has over twenty years of workplace consulting experience. She is passionate about people, well-being, and performance and is dialed into key business drivers, research, and trends impacting the workplace. Her background in design, facility planning, and contract furnishings gives her a unique perspective within the commercial real estate community.

amyl@environmentsatwork.com

8

Furniture

Tim King

Project Executive | COP / DIRTT

Tim King is a construction expert focusing on pre-fabricated, offsite modular construction for Interiors work. With a concentration on the healthcare market, Tim brings pre-fab benefits of speed, flexibility and higher functionality to all market segments.

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MEP Engineers

Mike Quigley

COO | WB Engineers

Michael has 18+ years of experience in the industry, leading projects and people. His natural talent for being able to motivate a team to do great work and address complex scenarios is why he is leading WB's COVID-19 remobilization efforts.

mquigley@wbengineering.com

MEP Engineers

Ray Doyle

Managing Principal, Life Sciences | WB Engineers

Ray is the Managing Principal of WB Engineers + Consultants' office in Washington, DC, and a Practice Leader for Life Sciences. With over 25 years of experience, Ray helps clients find solutions to improve indoor air quality and reduce tenants' exposure to COVID-19.

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APPENDIX

1. Caregility UHE APS-322W Wall System Spec Sheet
2. UMass_Memorial_University _Hospital_RRR_ver 1.4

Access Point of Care System (APS) Wall System - APS-322W Specifications

UHE provides video connectivity for remote clinicians to check-in, assess and intervene with patients in ICU rooms 24/7. Connecting to a wall-mounted access point of care system (APS) in the room, clinicians have a full range of options to interact with the patient environment through the UHE-Sync application, including far-end camera control with "speed-to-zoom" mouse clicks, far-end audio control, pre-sets for camera positions, camera brightness settings, night vision, and more. Clinicians can easily add other participants to a video consult, including other members of the clinical care team, family and interpreters, as needed. In addition, bedside clinicians can request remote clinical support through an on-demand button.

Features:

- **All in One Video System:** 22" display, hardened Linux OS and embedded video client
- **Dual Infrared Light Bars**: Provides visibility in low light conditions
- **Sony Precision Camera:** Fast quiet PTZ operation, HD quality 30x optical zoom
- **Articulated Wall Mount:** Accurate positioning and easy access to power & network
- **Speaker Mounting Options:** Can be swapped with the camera position to fit the needs of your environment
- **Remote Power Management:** Eliminates need to locally power cycle unit
- Wall mounted **alert button** to request call

Technical Specifications:

Call Resolution	up to 720P/30
Supported Protocols	WebRTC
Video codecs	VP8
Audio output	20W mono channel
Speaker	8x1" voice optimized speaker array
Microphone	1x Cardioid Boundary
Audio codecs	Opus
Security	AES (128-bit), DTLS, SSL
Bandwidth	1.2Mpbs
Operating System	Hardened Linux
CPU	Intel i5-6500TE VPro 6th generation 2.3 GHz Quad Core
RAM	8GB
HDD	SSD 128GB
Display	22" 1080PHD resolution
Camera	1080P motorized PTZ 18-20X Optical zoom
Dimensions w/PTZ camera WxDxH (mm)	33.93x11.25x19.37 (862x286x492)
Weight-mounted lbs (Kg)	57.15 (25.92)
Weight-shipping lbs(Kg)	86 (39)
Network	10/100/1000 Ethernet, Wired
Power Input	110/220VAC autoswitching fused
Power Consumption	12V DC 100W
Approvals/Certifications	60601 FDA Registered Class I Medical Device

UHE ROOM READINESS REPORT – ICU Rooms

CUSTOMER: UMass Memorial –
University Medical Center

AUTHOR: Denison Merchant

DATE: March 3, 2020

VERSION: Rev 1.4

About Univago HealthCare Edition is a comprehensive, HIPAA compliant communications platform which connects all patient and clinician environments into one universal network. Attached to the network are secondary integration partner's, Caregility's Access Point of Care Systems (APS) which are video enabled and located wherever patients or clinicians are, hospitals, post-acute facilities, out-patient clinics or homes.

The UHE platform facilitates clinical collaboration and communication around all aspects of patient care. It is always on and available whenever and wherever the doctor or clinician needs to see and treat the patient. Whether used for continuous patient monitoring, ad hoc patient check in's, assessments or consults, scheduled specialty consults, care team coordination and planning, or managing patients through transitions of care, the UHE platform enables many telehealth programs.

As a single, universal, purpose-built platform, the UHE user interface (UI) and experience for both the clinician and the patient is consistent across all telehealth programs. UHE is easy to embed, manage, and support, all while ensuring high availability. UHE eliminates the lack of interoperability and serviceability of previous solutions, with a robust, proactive monitoring, immediate notifications and user and advanced reporting capabilities.

1. Secondary Platform Integration

Univago HealthCare Edition Platform as a Service has several ways that the UHE endpoints can connect and be integrated to second- and third-party software platforms.

Hospital will be utilizing the following integrations for their monitoring solution.

Secondary Platform: **Philips eCare Manager**

2. The Room Readiness Review

This Room Readiness Review was conducted as a joint effort between **UMass Memorial - University Hospital** and Caregility teams to determine the best configuration for the ICU rooms. During this review, a walk-through of each unit and unit room was completed for the purpose of identifying the locations for the equipment required to support the ICU Monitoring Program, electrical outlet needs and network drop requirements and any other details that affect the system configuration.

3. This Report

This Room Readiness Report presents the proposed **UMass Memorial - University Hospital** configurations based on information gathered during the site assessments and debriefing meetings. This document provides a framework for a detailed project implementation plan to be developed later. A preliminary equipment list or Bill of Material (BOM) will be developed separately from this document. This BOM will be refined as further planning and engineering is conducted.

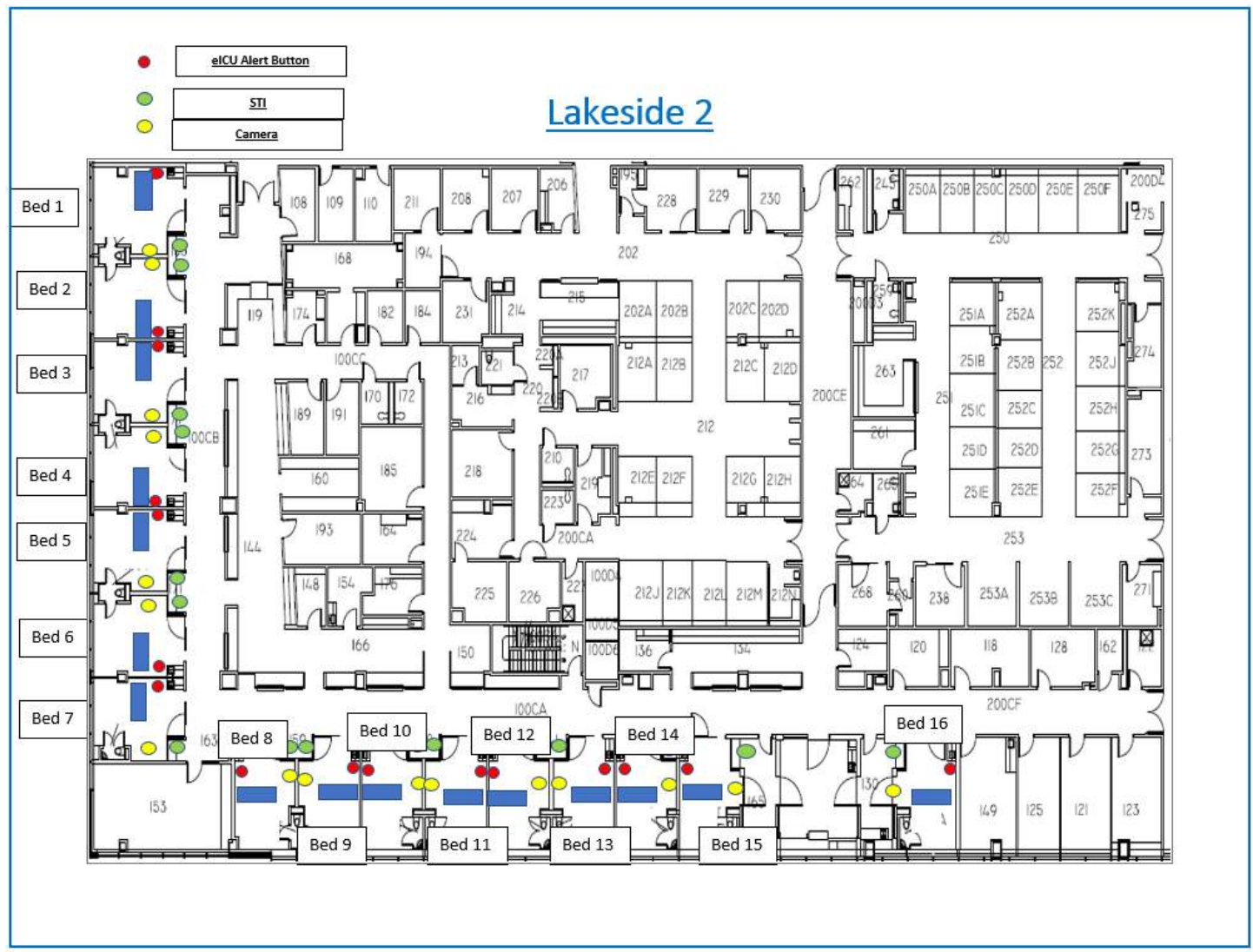# 1 UMass Memorial - University Hospital - ICU 11th Floor Location(s)

1.1.1 Facility Details

Name	Units	Address
UMass Memorial - University Medical Center		14 Prospect Street University, MA 01757
Lakeside 2	16	
Lakeside 3	16	
3ICU	15	
6ICU	16	
7ICU	16	
PACU	05	
Spares	02	
Total:	86	

1.2   Unit Details

Facility	Unit	Location	# of Room Systems	# of Mobile Carts	# of Spare Systems
UMass Memorial - University Medical Center	**ICU**	**Lakeside 2**	**16**	**0**	**02**
		Lakeside 3	**16**		
		3ICU	**15**		
		6ICU	**16**		
		7ICU	**16**		
		PACU	**05**		
		Total:	**84**	**0**	**02**

UMass Memorial - University Medical Center

Lakeside 2, Unit Floorplan Overview

UMass Memorial - University Medical Center, Lakeside 2 ICU

GENERAL COMMENTS

- In support of the Philips eCare solution, Caregility will be installing Univago Healthcare Edition (UHE) endpoints that will be installed in patient rooms. One endpoint will be installed for each patient bed. This solution will include the UHE Wall Solution, and in some cases a ceiling mounted remote camera.
- There are some basic power, network, cabling, and facility requirements that must be completed by the site/customer facilities to ensure the operation of the Telehealth Enclosure. Cabling requirements will include: all CAT6 cabling & connectors, site cable management including conduit, plenum cable, Wall-boxes, cable ports, pull strings, etc. between all equipment locations, network cables etc. The site/customer will be responsible for all cosmetic remediation for the all facility work.
- In all rooms power and LV (CAT 6) will need to be located where unit will be placed, if existing solution is not CAT 6 it needs to be replaced with CAT 6 cable.
- For exact specs or measurements please review the latest Facilities Preparation Document and the latest install document.
- Caregility preferred recommendation is to place new data and power to separate more viable locations
- Recommendation of button to be GREEN, although FDA Class I registration allows for Green and Blue.
- Recommendations based on assumption all rooms are similar. This report is prepared assuming remaining ICU rooms are identical to the room we were able to visit during onsite visit
- Please note that all documented component locations and heights are standard reference locations. Actual locations and selected components will be based on actual site conditions and the preferences documented on the Room Readiness Report and should be adjusted accordingly. Diagrams are not necessarily to scale.
- In all rooms eAlert button will be stay at its current location (underneath the UHE endpoint), all button will be RED as per customer
- For the footwalls with gas lines if customer wants Caregility to install mounting brackets, customer will have to place a backboard where the units will be secured and give us lengths so Caregility can bring proper mounting fasteners
- All rooms will have UHE endpoints off the center to the patient bed due to room layout
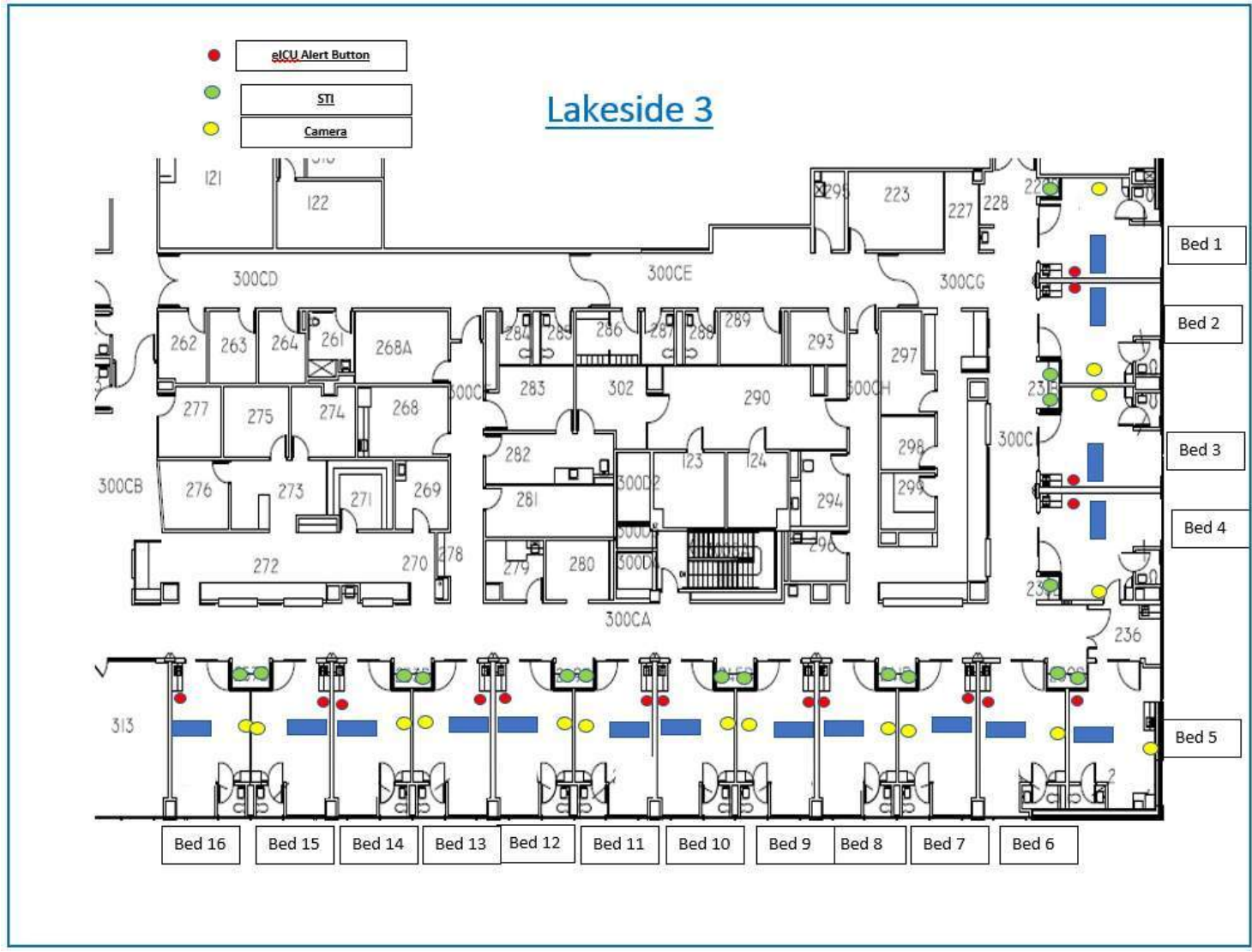- Highly suggested to have spare kit at site

2   UMass Memorial - University Medical Center, Lakeside 2 ICU Floor - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

LEGEND

○	Speaker
⊖	Power
◁	Data/LAN
▭	Enclosure/Camera
◠	Camera
◁	eLERT Button
▬	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020
UNIT & ROOM:	Lakeside 2 ICU 3	AUTHOR:	Denison Merchant

caregility
Changing the Point of Care

Unit Name: **Lakeside 2** Room Name: ICU 3	Ceiling Type: ☒ Drop ☐ Hard		Equipment: ☒ New ☐ Retro		☒ ProCon ☐ Axxis		☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C	

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists
Enclosure Location:	☒ Wall	☐ Ceiling		The enclosure will be located on the footwall wall, right side to the patient bed. There is TV center to the patient bed, customer wants to keep the TV as it is and mount UHE on the right side of patient bed under the digital clock. UHE enclosure can be mounted below the digital clock.					
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling		Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed						
Speaker:	☒ ENC ☐ Remote		Enclosure Mounted						
Microphone	☒ ENC ☐ Remote		Enclosure Mounted						
Alert:	☐ Green Button ☒ Red Button		RED eLert button will be located at the same location.						
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**								
Other room(s):	Similar: 1,2,4,5,6,7,8,9,10,11,12,13,14,15,16 Mirrored: Flipped: Mirror flipped:								
Notes and Pictures:	• UHE Enclosures will be mounted off center of the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • Other rooms were occupied. • Customer will move the picture frame to make room for UHE enclosure • As per customer request placing enclosure under the digital clock, not meeting ADA guideline of 80" clearance								

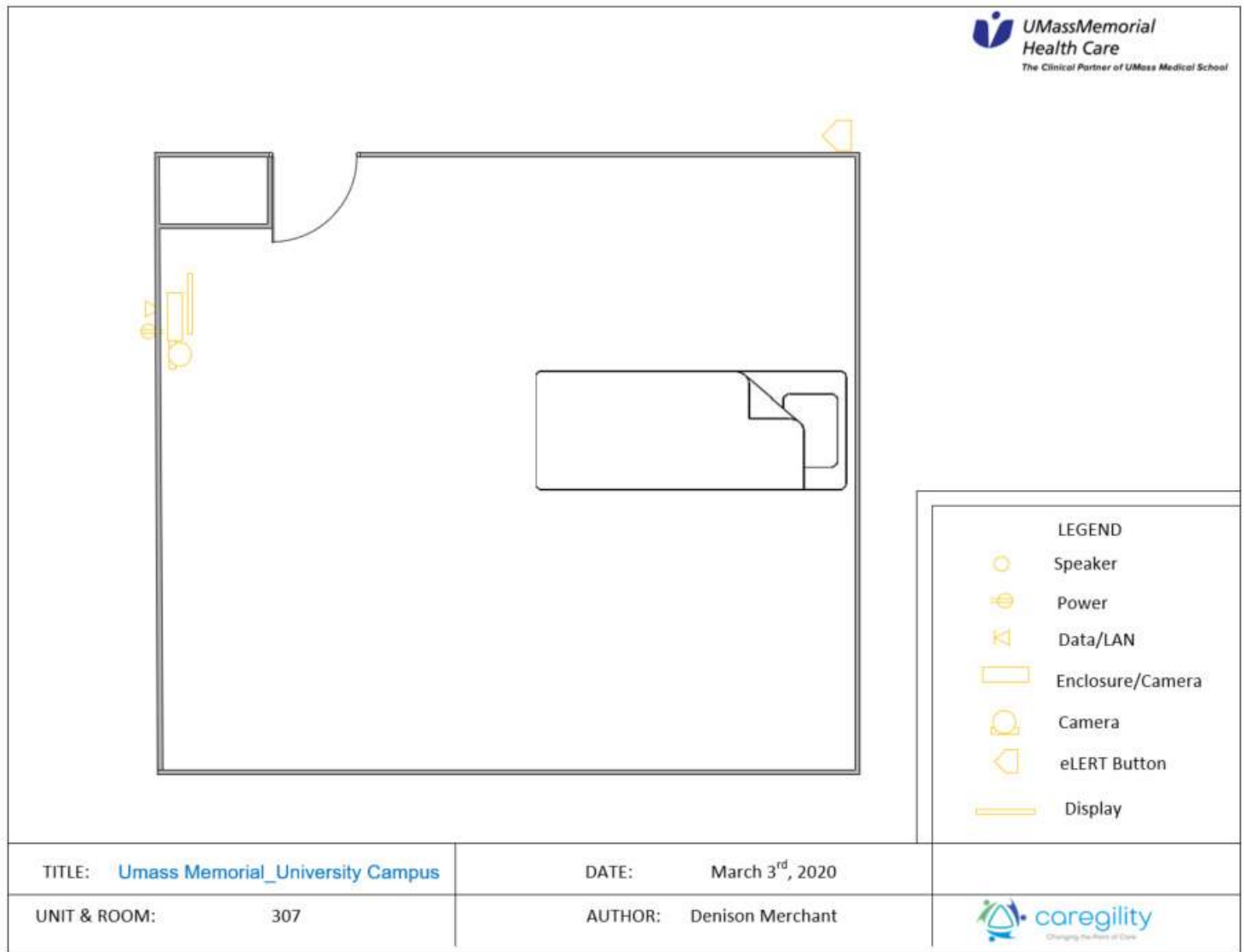# UMass Memorial - University Medical Center

Lakeside 3, Unit Floorplan Overview

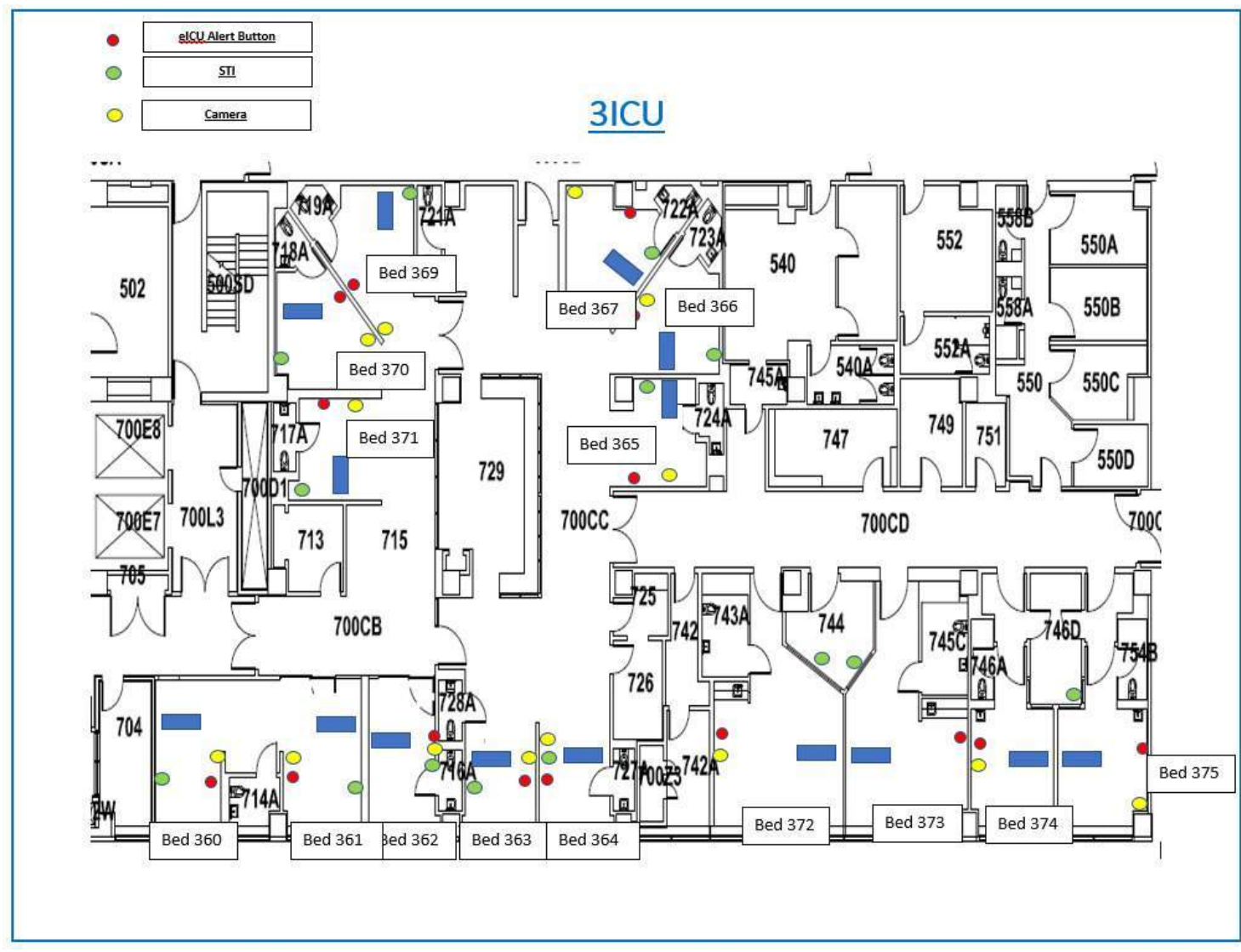# UMass Memorial - University Medical Center, Lakeside 3 ICU

GENERAL COMMENTS

- In support of the Philips eCare solution, Caregility will be installing Univago Healthcare Edition (UHE) endpoints that will be installed in patient rooms. One endpoint will be installed for each patient bed. This solution will include the UHE Wall Solution, and in some cases a ceiling mounted remote camera.
- There are some basic power, network, cabling, and facility requirements that must be completed by the site/customer facilities to ensure the operation of the Telehealth Enclosure. Cabling requirements will include: all CAT6 cabling & connectors, site cable management including conduit, plenum cable, Wall-boxes, cable ports, pull strings, etc. between all equipment locations, network cables etc. The site/customer will be responsible for all cosmetic remediation for the all facility work.
- In all rooms power and LV (CAT 6) will need to be located where unit will be placed, if existing solution is not CAT 6 it needs to be replaced with CAT 6 cable.
- For exact specs or measurements please review the latest Facilities Preparation Document and the latest install document.
- Caregility preferred recommendation is to place new data and power to separate more viable locations
- Recommendation of button to be GREEN, although FDA Class I registration allows for Green and Blue.
- Recommendations based on assumption all rooms are similar. This report is prepared assuming remaining ICU rooms are identical to the room we were able to visit during onsite visit
- Please note that all documented component locations and heights are standard reference locations. Actual locations and selected components will be based on actual site conditions and the preferences documented on the Room Readiness Report and should be adjusted accordingly. Diagrams are not necessarily to scale.
- In all rooms eAlert button will be stay at its current location (underneath the UHE endpoint), all button will be RED as per customer
- For the footwalls with gas lines if customer wants Caregility to install mounting brackets, customer will have to place a backboard where the units will be secured and give us lengths so Caregility can bring proper mounting fasteners
- All rooms will have UHE endpoints off the center to the patient bed due to room layout
- Highly suggested to have spare kit at site

2.1 UMass Memorial - University Medical Center, Lakeside 3 ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

LEGEND

○ Speaker

Power

Data/LAN

Enclosure/Camera

Camera

eLERT Button

Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020	
UNIT & ROOM:	307	AUTHOR:	Denison Merchant	caregility

Unit Name: **Lakeside 3** Room Name: ICU 307	Ceiling Type: ☒ Drop ☐ Hard	Equipment: ☒ New ☐ Retro	☒ ProCon ☐ Axxis	☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists
Enclosure Location:	☒ Wall		☐ Ceiling	The enclosure will be located on the footwall wall, left side to the patient bed. There is TV center to the patient bed, customer wants to keep the TV as it is and mount UHE on the right side of patient bed below the digital clock.					
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling			Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed					
Speaker:	☒ ENC ☐ Remote			Enclosure Mounted					
Microphone	☒ ENC ☐ Remote			Enclosure Mounted					
Alert:	☐ Green Button ☒ Red Button			RED eLert button will be located at the same location.					
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**								
Other room(s):	Similar: 301,302,303,304,306,308,309,310,311,312,313,314,315,316 Mirrored: Flipped: Mirror flipped:								
Notes and Pictures:	- UHE Enclosures will be mounted off center of the patient bed as per customer. - Customer will run new data and power - As per customer gas lines are not running through the foot wall. - As per customer request placing enclosure under the digital clock, not meeting ADA guideline of 80" clearance								

3 UMass Memorial - University Medical Center
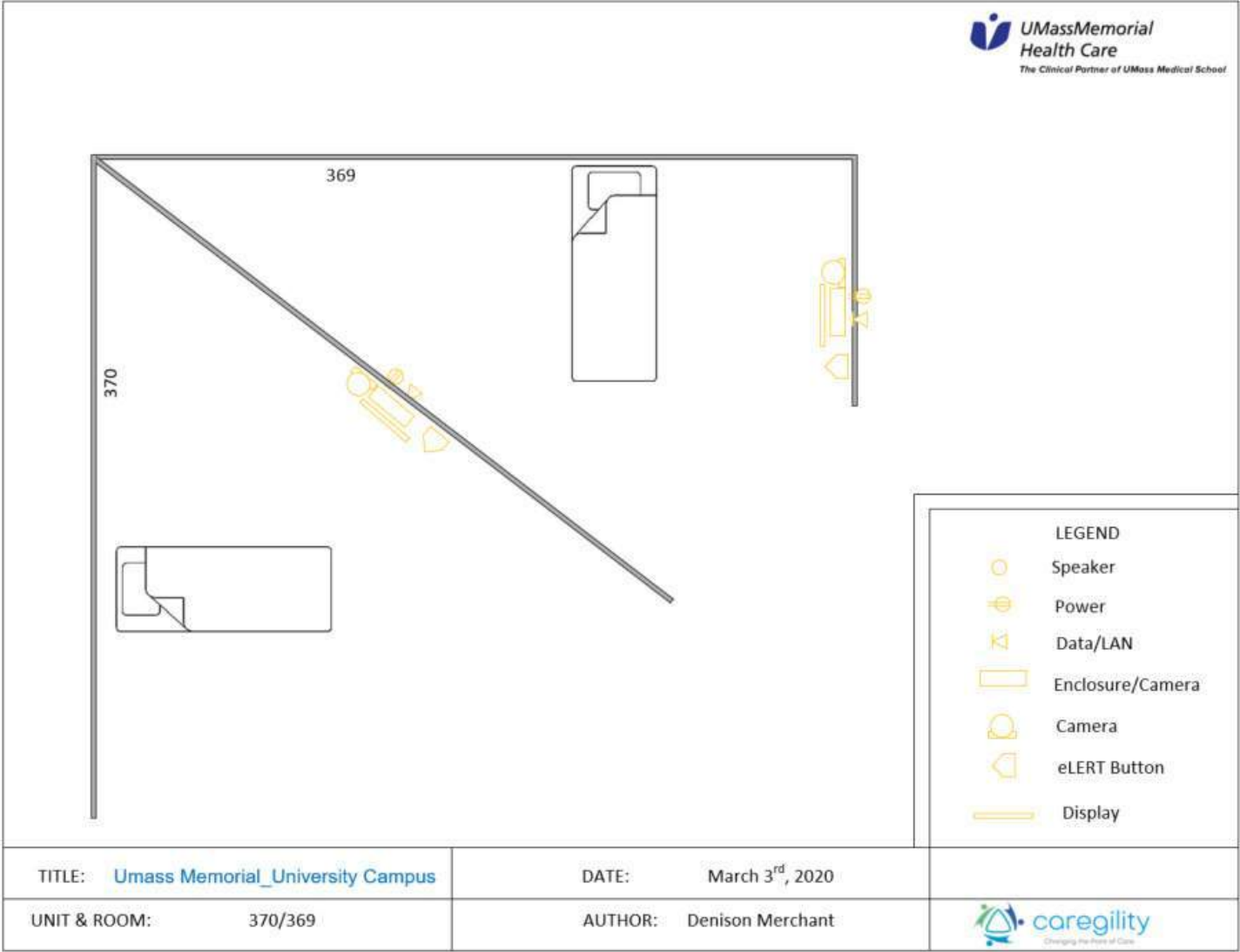
3ICU, Unit Floorplan Overview

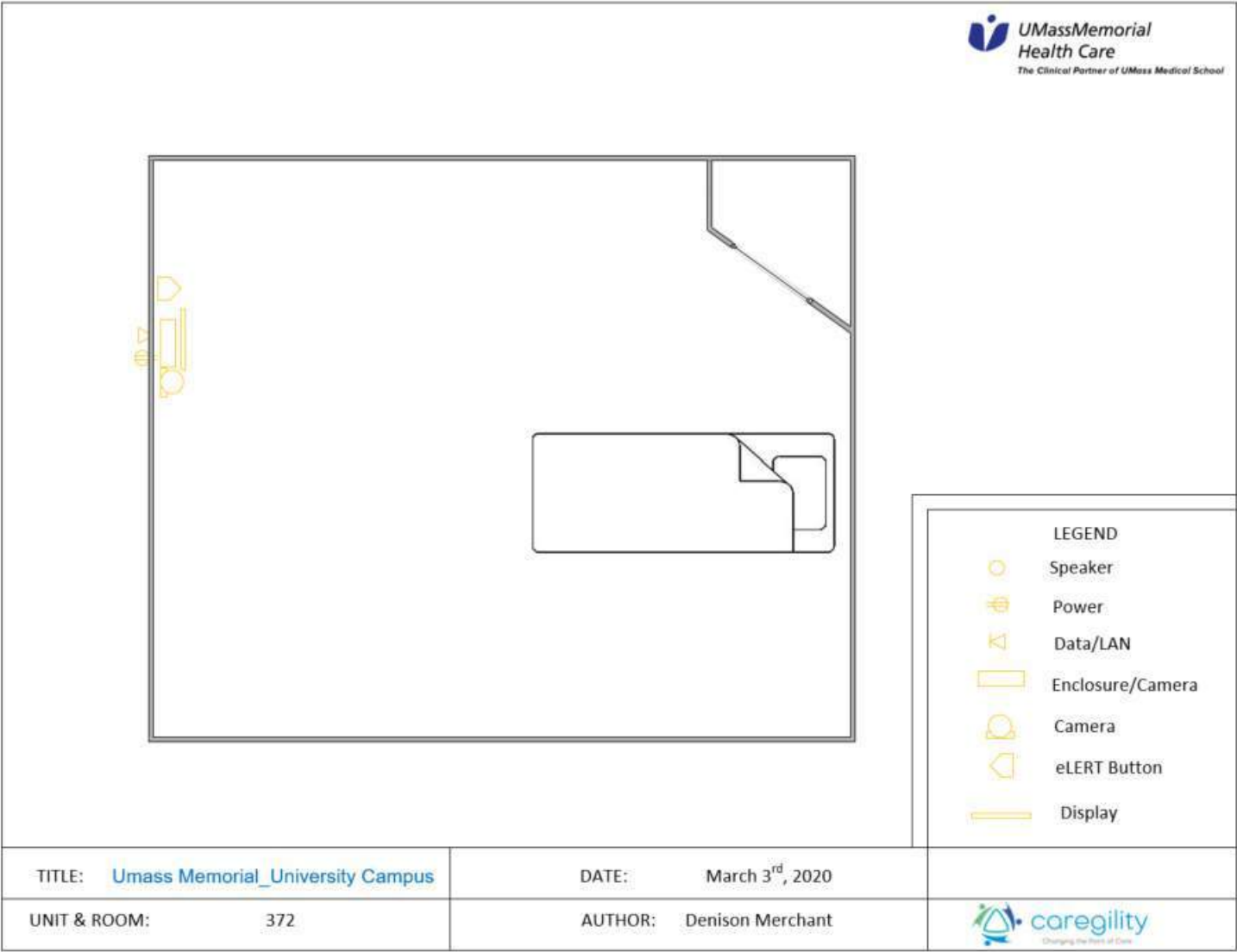# UMass Memorial - University Medical Center, 3ICU

GENERAL COMMENTS

- In support of the Philips eCare solution, Caregility will be installing Univago Healthcare Edition (UHE) endpoints that will be installed in patient rooms. One endpoint will be installed for each patient bed.   This solution will include the UHE Wall Solution, and in some cases a ceiling mounted remote camera.
- There are some basic power, network, cabling, and facility requirements that must be completed by the site/customer facilities to ensure the operation of the Telehealth Enclosure.   Cabling requirements will include: all CAT6 cabling & connectors, site cable management including conduit, plenum cable, Wall-boxes, cable ports, pull strings, etc. between all equipment locations, network cables etc.   The site/customer will be responsible for all cosmetic remediation for the all facility work.
- In all rooms power and LV (CAT 6) will need to be located where unit will be placed, if existing solution is not CAT 6 it needs to be replaced with CAT 6 cable.
- For exact specs or measurements please review the latest Facilities Preparation Document and the latest install document.
- Caregility preferred recommendation is to place new data and power to separate more viable locations
- Recommendation of button to be GREEN, although FDA Class I registration allows for Green and Blue.
- Recommendations based on assumption all rooms are similar. This report is prepared assuming remaining ICU rooms are identical to the room we were able to visit during onsite visit
- Please note that all documented component locations and heights are standard reference locations. Actual locations and selected components will be based on actual site conditions and the preferences documented on the Room Readiness Report and should be adjusted accordingly. Diagrams are not necessarily to scale.
- In all rooms eAlert button will be stay at its current location (underneath the UHE endpoint), all button will be RED as per customer
- For the footwalls with gas lines if customer wants Caregility to install mounting brackets, customer will have to place a backboard where the units will be secured and give us lengths so Caregility can bring proper mounting fasteners
- All rooms will have UHE endpoints off the center to the patient bed due to room layout
- Highly suggested to have spare kit at site

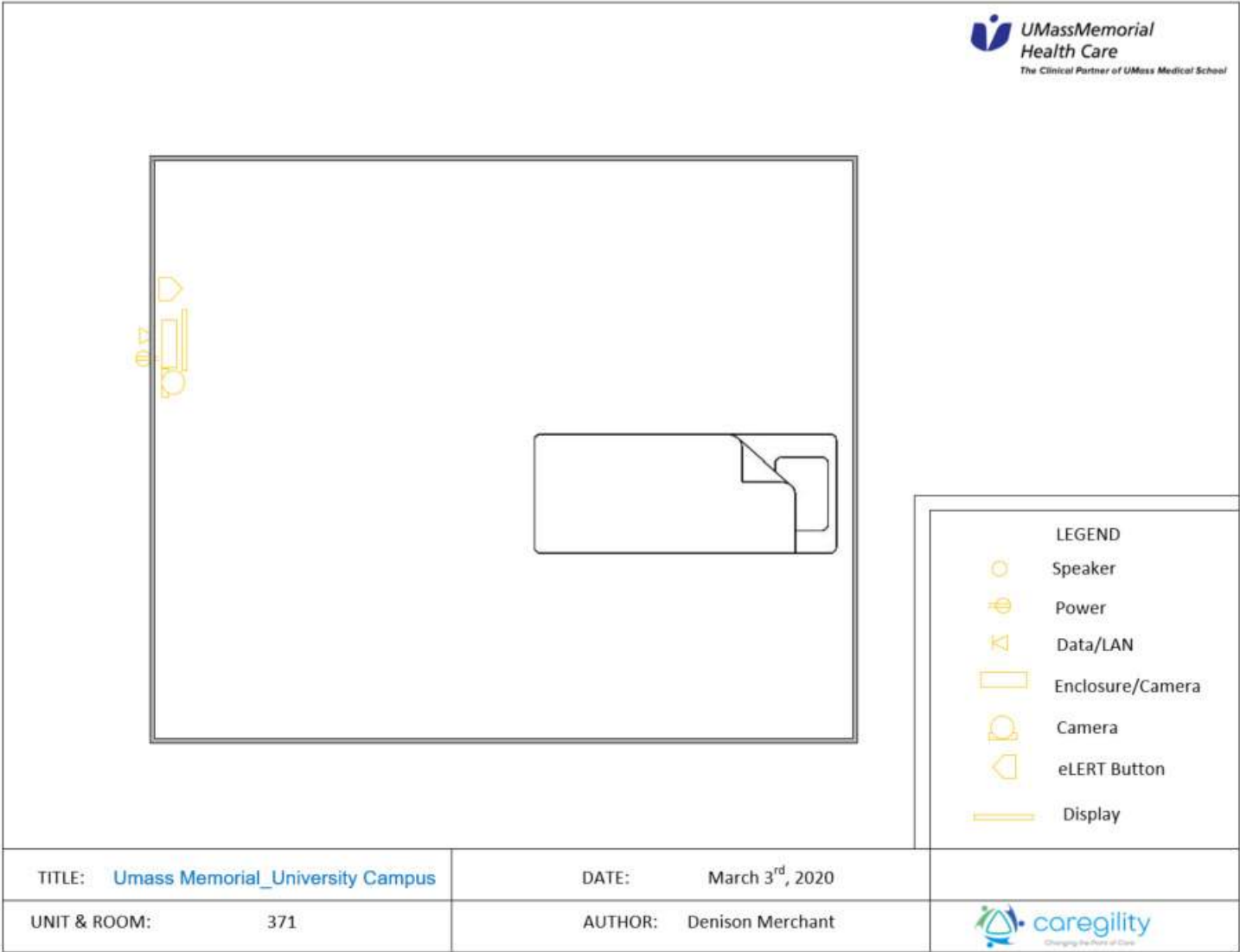## 3.1 UMass Memorial - University Medical Center, 3ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

369

370

LEGEND

○ Speaker

⊖ Power

◁ (Data/LAN icon) Data/LAN

▭ Enclosure/Camera

◠ Camera

◁ eLERT Button

▭ Display

| TITLE: | Umass Memorial_University Campus | DATE: | March 3rd, 2020 |
| UNIT & ROOM: | 370/369 | AUTHOR: | Denison Merchant |

caregility
Changing the Point of Care

Unit Name: **3ICU**	Ceiling Type: ☒ Drop ☐ Hard	Equipment: ☒ New ☐ Retro	☒ ProCon ☐ Axxis	☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C
Room Name: ICU 370				

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists

Enclosure Location:	☒ Wall ☐ Ceiling	The enclosure will be located on the right-side wall, left the wall clock. Angled side wall, there is curtain on the foot side of the bed.
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling	Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed
Speaker:	☒ ENC ☐ Remote	Enclosure Mounted
Microphone	☒ ENC ☐ Remote	Enclosure Mounted
Alert:	☐ Green Button ☒ Red Button	RED eLert button will be located at the same location
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**	
Other room(s):	Similar: 369, 367, 366 Mirrored: Flipped: Mirror flipped:	
Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.	

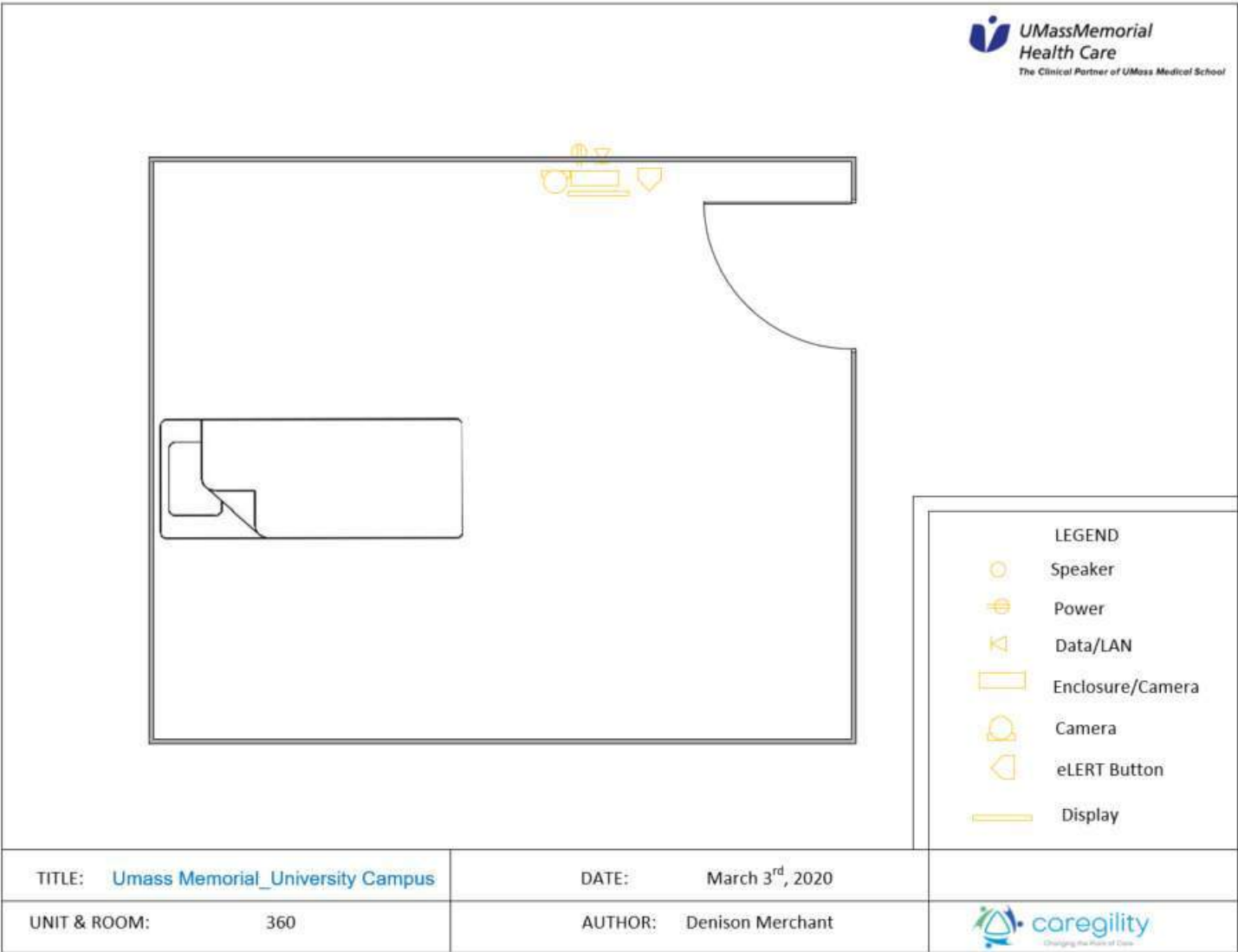## 3.2 UMass Memorial - University Medical Center, 3ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

LEGEND

○	Speaker
⊕	Power
◁	Data/LAN
▭	Enclosure/Camera
◒	Camera
◁	eLERT Button
—	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020	
UNIT & ROOM:	372	AUTHOR:	Denison Merchant	caregility

Unit Name: **3ICU** Room Name: ICU 372	Ceiling Type: ☒ Drop ☐ Hard		Equipment: ☒ New ☐ Retro		☒ ProCon ☐ Axxis		☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists
Enclosure Location:	☒ Wall	☐ Ceiling		The enclosure will be located on the foot wall, right side of the 70" TV.					
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling		Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed						
Speaker:	☒ ENC ☐ Remote		Enclosure Mounted						
Microphone	☒ ENC ☐ Remote		Enclosure Mounted						
Alert:	☐ Green Button ☒ Red Button		RED eLert button will be located at the same location						
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**								
Other room(s):	Similar: 373, 374, 375 Mirrored: Flipped: Mirror flipped:								
Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.								

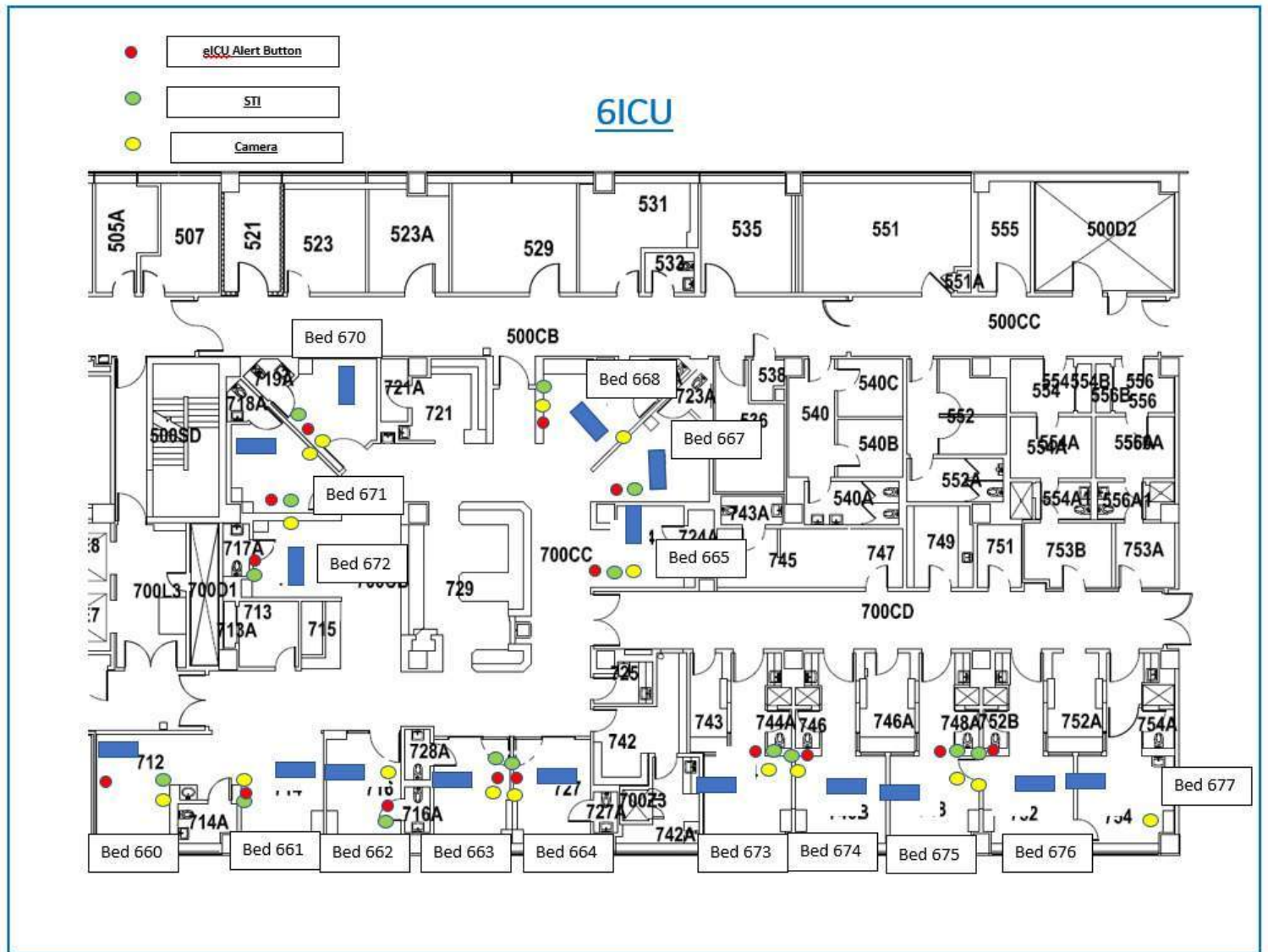## 3.3 UMass Memorial - University Medical Center, 3ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

LEGEND

○	Speaker
⊕	Power
◁	Data/LAN
▭	Enclosure/Camera
⌂	Camera
◁	eLERT Button
—	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020
UNIT & ROOM:	371	AUTHOR:	Denison Merchant

caregility
Changing the Point of Care

Unit Name: **3ICU**	Ceiling Type: ☒ Drop ☐ Hard	Equipment: ☒ New ☐ Retro	☒ ProCon ☐ Axxis	☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C
Room Name: ICU 371				

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists

Enclosure Location:	☒ Wall	☐ Ceiling	The enclosure will be located on the foot wall.

Camera:	☐ Wall ☒ Enclosure ☐ Ceiling	Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed

Speaker:	☒ ENC ☐ Remote	Enclosure Mounted

Microphone	☒ ENC ☐ Remote	Enclosure Mounted

Alert:	☐ Green Button ☒ Red Button	RED eLert button will be located at the same location

Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**

Other room(s):	Similar: 365, 362, 363, 364 Mirrored: Flipped: Mirror flipped:

Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.

3.4 UMass Memorial - University Medical Center, 3ICU - Specific Room Details

UMassMemorial Health Care
The Clinical Partner of UMass Medical School

LEGEND

◯	Speaker
⊖	Power
◁	Data/LAN
▭	Enclosure/Camera
◠	Camera
◁	eLERT Button
▬	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020
UNIT & ROOM:	360	AUTHOR:	Denison Merchant

caregility
Changing the Point of Care

Unit Name: **3ICU** Room Name: ICU 360	Ceiling Type: ☒ Drop ☐ Hard	Equipment: ☒ New ☐ Retro	☒ ProCon ☐ Axxis	☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists
Enclosure Location:	☒ Wall	☐ Ceiling		The enclosure will be located on the side wall.					
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling		Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed						
Speaker:	☒ ENC ☐ Remote		Enclosure Mounted						
Microphone	☒ ENC ☐ Remote		Enclosure Mounted						
Alert:	☐ Green Button ☒ Red Button		RED eLert button will be located at the same location						
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**								
Other room(s):	Similar: 361 Mirrored: Flipped: Mirror flipped:								
Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided. • Very challenging room, no place on the wall to mount the enclosure un-restricted. • Both ICU rooms were occupied – couldn't see the room. • UHE cart could be an option, discuss with customer if someone can go in the room and take the measurements.								

4   UMass Memorial - University Medical Center
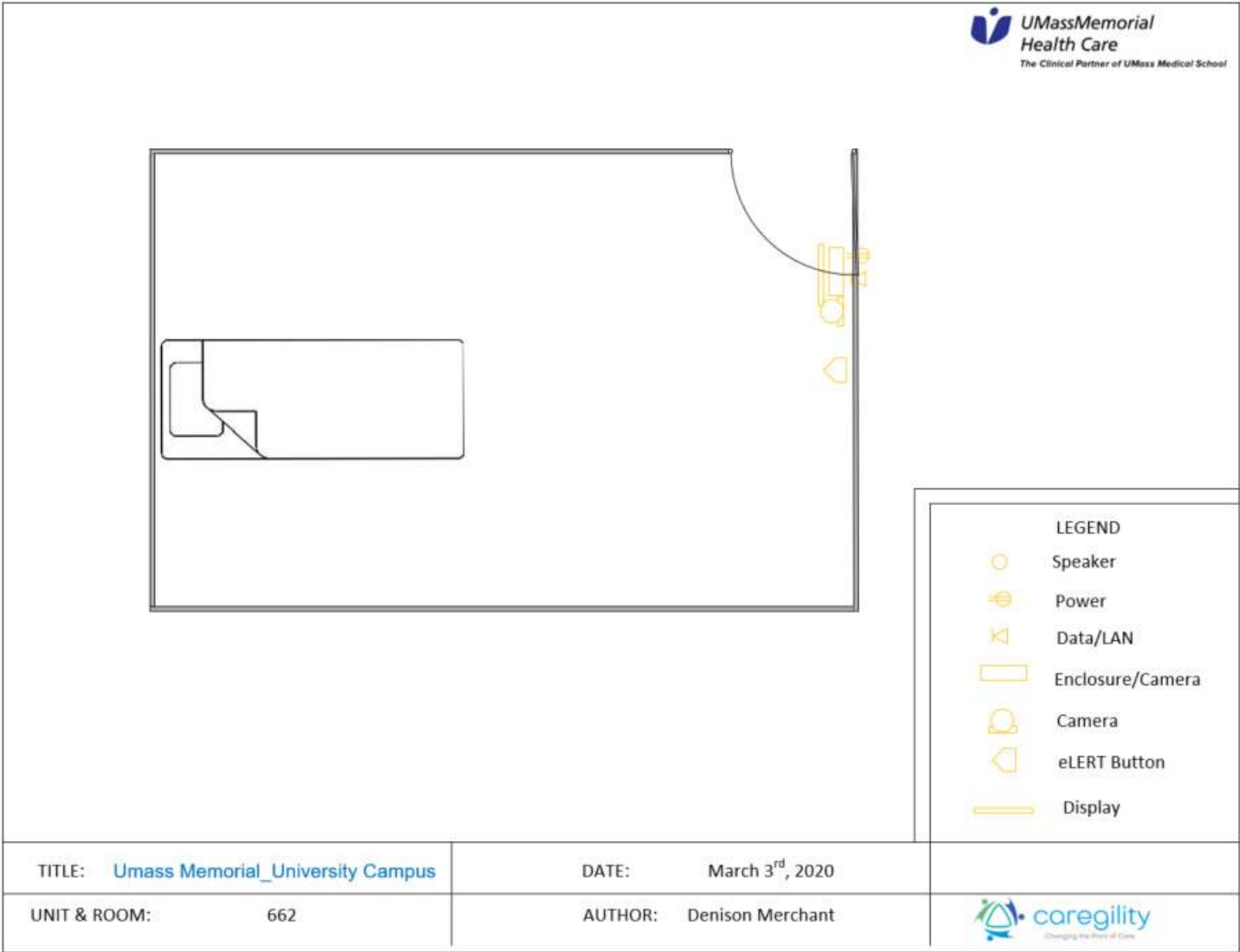
6ICU, Unit Floorplan Overview

UMass Memorial - University Medical Center, 6ICU
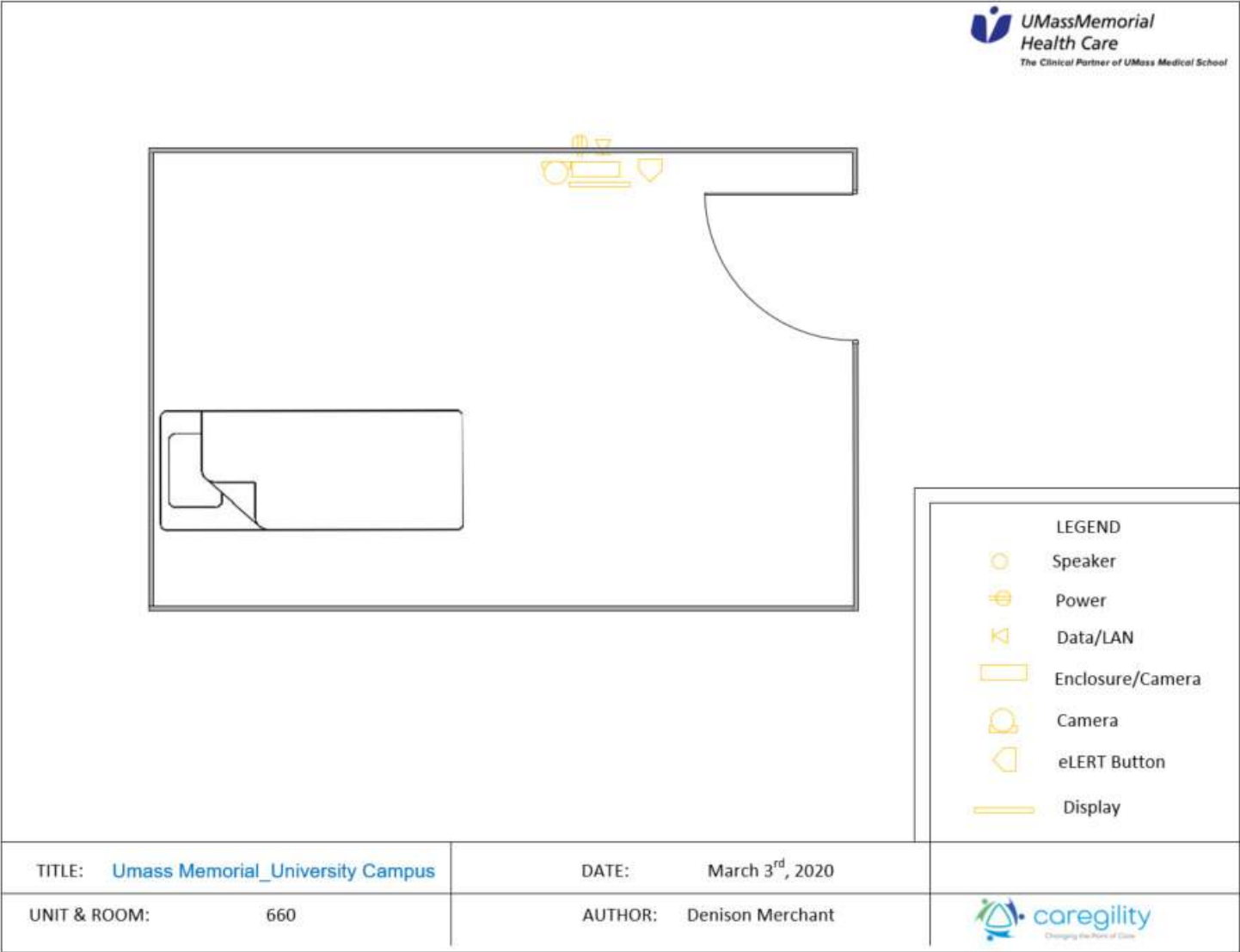
GENERAL COMMENTS

- In support of the Philips eCare solution, Caregility will be installing Univago Healthcare Edition (UHE) endpoints that will be installed in patient rooms. One endpoint will be installed for each patient bed. This solution will include the UHE Wall Solution, and in some cases a ceiling mounted remote camera.
- There are some basic power, network, cabling, and facility requirements that must be completed by the site/customer facilities to ensure the operation of the Telehealth Enclosure. Cabling requirements will include: all CAT6 cabling & connectors, site cable management including conduit, plenum cable, Wall-boxes, cable ports, pull strings, etc. between all equipment locations, network cables etc. The site/customer will be responsible for all cosmetic remediation for the all facility work.
- In all rooms power and LV (CAT 6) will need to be located where unit will be placed, if existing solution is not CAT 6 it needs to be replaced with CAT 6 cable.
- For exact specs or measurements please review the latest Facilities Preparation Document and the latest install document.
- Caregility preferred recommendation is to place new data and power to separate more viable locations
- Recommendation of button to be GREEN, although FDA Class I registration allows for Green and Blue.
- Recommendations based on assumption all rooms are similar. This report is prepared assuming remaining ICU rooms are identical to the room we were able to visit during onsite visit
- Please note that all documented component locations and heights are standard reference locations. Actual locations and selected components will be based on actual site conditions and the preferences documented on the Room Readiness Report and should be adjusted accordingly. Diagrams are not necessarily to scale.
- In all rooms eAlert button will be stay at its current location (underneath the UHE endpoint), all button will be RED as per customer
- For the footwalls with gas lines if customer wants Caregility to install mounting brackets, customer will have to place a backboard where the units will be secured and give us lengths so Caregility can bring proper mounting fasteners
- All rooms will have UHE endpoints off the center to the patient bed due to room layout
- Highly suggested to have spare kit at site

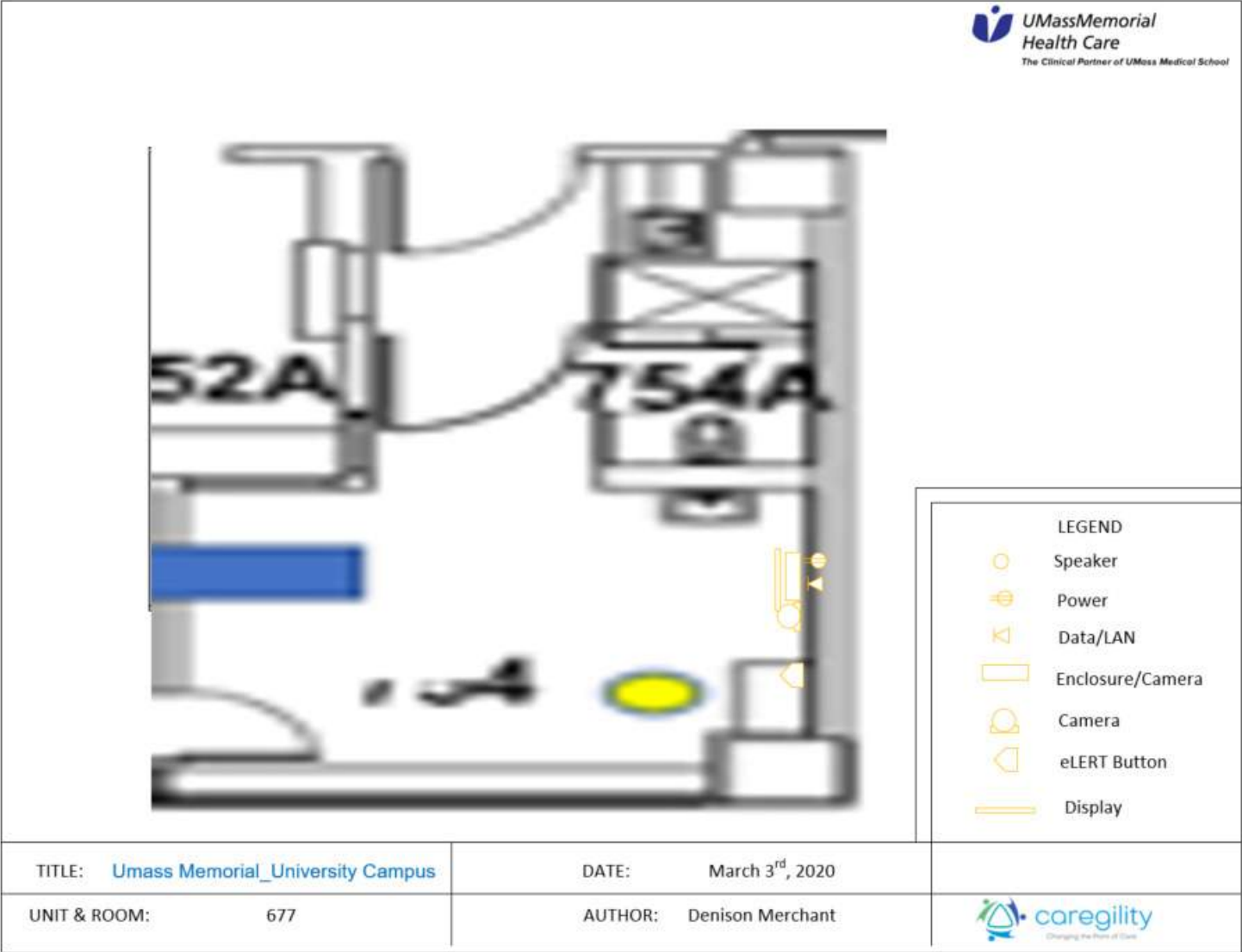## 4.1 UMass Memorial - University Medical Center, 6ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

LEGEND

○   Speaker

⊝   Power

◁   Data/LAN

▭   Enclosure/Camera

◠   Camera

◁   eLERT Button

—   Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020	
UNIT & ROOM:	662	AUTHOR:	Denison Merchant	caregility

Unit Name: **6ICU**	Ceiling Type: ⊠ Drop ☐ Hard	Equipment: ⊠ New ☐ Retro	⊠ ProCon ☐ Axxis	☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C
Room Name: ICU 662				

UHE Model	☐ UHE24	⊠ UHE22	☐ GEN2	Power:	⊠ New	☐ Exists	Data:	⊠ New	☐ Exists

Enclosure Location:	⊠ Wall	⊠ Ceiling	The enclosure will be located on the foot wall, above to door when open 20" clearance.

Camera:	☐ Wall ⊠ Enclosure ☐ Ceiling	Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed

Speaker:	⊠ ENC ☐ Remote	Enclosure Mounted

Microphone	⊠ ENC ☐ Remote	Enclosure Mounted

Alert:	☐ Green Button ⊠ Red Button	RED eLert button will be located at the same location

Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**

Other room(s):	Similar: 663, 664 Mirrored: Flipped: Mirror flipped:

Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.

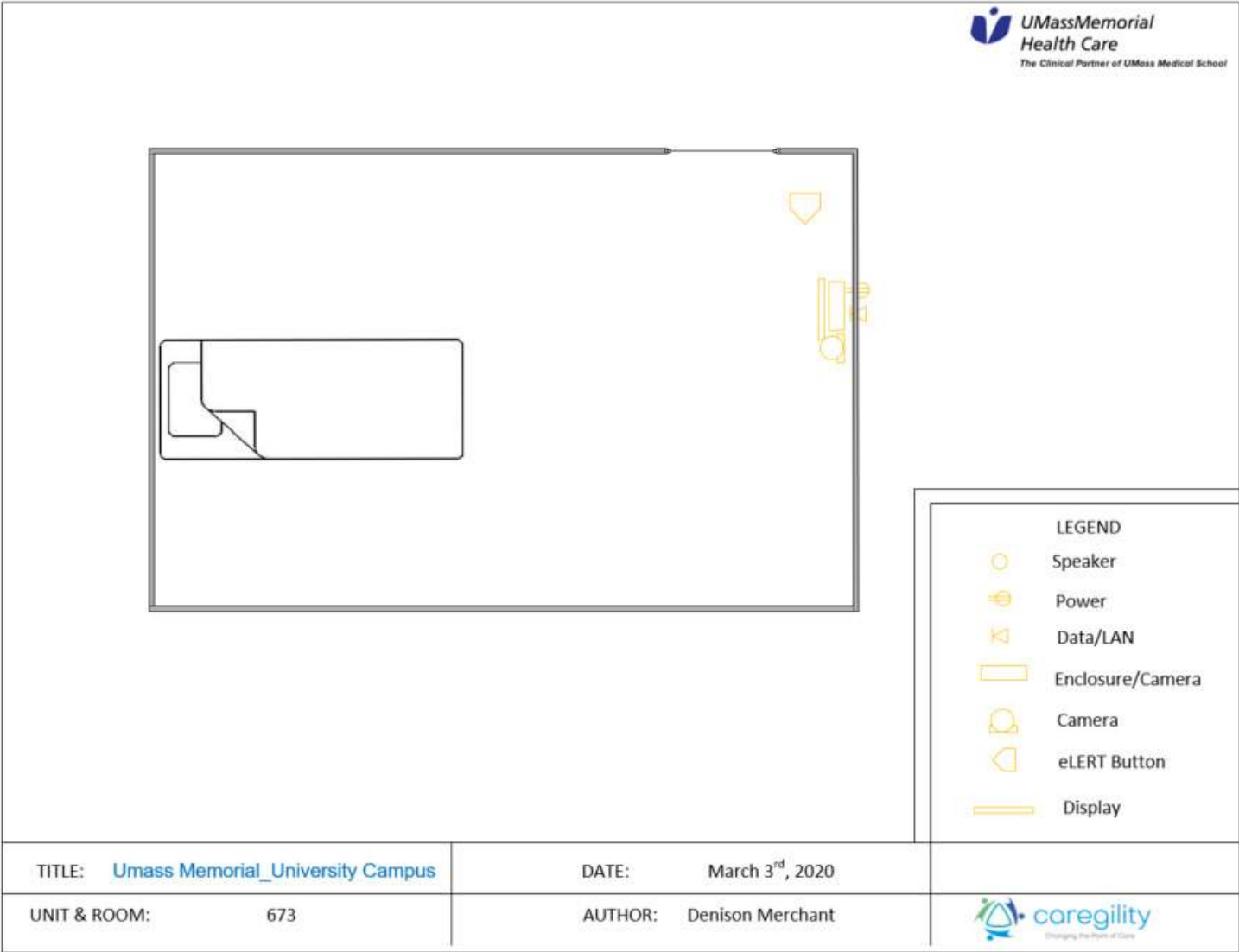## 4.2 UMass Memorial - University Medical Center, 6ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

LEGEND

○	Speaker
⊝	Power
◁	Data/LAN
▭	Enclosure/Camera
◯	Camera
◁	eLERT Button
▭	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020	
UNIT & ROOM:	660	AUTHOR:	Denison Merchant	caregility

Unit Name: **6ICU** Room Name: ICU 660	Ceiling Type: ☒ Drop ☐ Hard		Equipment: ☒ New ☐ Retro		☒ ProCon ☐ Axxis		☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C	
UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists

Enclosure Location:	☒ Wall	☐ Ceiling	The enclosure will be located on the side wall.
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling		Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed
Speaker:	☒ ENC ☐ Remote		Enclosure Mounted
Microphone	☒ ENC ☐ Remote		Enclosure Mounted
Alert:	☐ Green Button ☒ Red Button		RED eLert button will be located at the same location
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**		
Other room(s):	Similar: 661 Mirrored: Flipped: Mirror flipped:		
Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided. • Very challenging room, no place on the wall to mount the enclosure un-restricted. • Both ICU rooms were occupied – couldn't see the room. • UHE cart could be an option, discuss with customer if someone can go in the room and take the measurements. Similar layout as 3ICU room 360 and 361		

4.3 UMass Memorial - University Medical Center, 6ICU - Specific Room Details

LEGEND

○	Speaker
⊖	Power
◁	Data/LAN
▭	Enclosure/Camera
◠	Camera
◁	eLERT Button
▬	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020
UNIT & ROOM:	677	AUTHOR:	Denison Merchant

Unit Name: **6ICU** Room Name: ICU 677	Ceiling Type: ⊠ Drop ☐ Hard		Equipment: ⊠ New ☐ Retro		⊠ ProCon ☐ Axxis		☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C	
UHE Model	☐ UHE24	⊠ UHE22	☐ GEN2	Power:	⊠ New	☐ Exists	Data:	⊠ New	☐ Exists

Enclosure Location:	⊠ Wall	⊠ Ceiling	The enclosure will be located on the foot wall.
Camera:	☐ Wall ⊠ Enclosure ☐ Ceiling		Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed
Speaker:	⊠ ENC ☐ Remote		Enclosure Mounted
Microphone	⊠ ENC ☐ Remote		Enclosure Mounted
Alert:	☐ Green Button ⊠ Red Button		RED eLert button will be located at the same location
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**		
Other room(s):	Similar: Mirrored: Flipped: Mirror flipped:		
Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • Customer will move the wall clock and patient chart to make room for the UHE enclosure. • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.		

4.4 UMass Memorial - University Medical Center, 6ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

LEGEND

○	Speaker
⊸	Power
◁	Data/LAN
▭	Enclosure/Camera
◠	Camera
◁	eLERT Button
▭	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020
UNIT & ROOM:	673	AUTHOR:	Denison Merchant

caregility

Unit Name: **6ICU** Room Name: ICU 673	Ceiling Type: ☒ Drop ☐ Hard	Equipment: ☒ New ☐ Retro	☒ ProCon ☐ Axxis	☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists
Enclosure Location:	☒ Wall	☒ Ceiling		The enclosure will be located on the foot wall.					
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling		Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed						
Speaker:	☒ ENC ☐ Remote			Enclosure Mounted					
Microphone	☒ ENC ☐ Remote			Enclosure Mounted					
Alert:	☐ Green Button ☒ Red Button		RED eLert button will be located at the same location						
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**								
Other room(s):	Similar: 674, 675, 676, 665, 672 Mirrored: Flipped: Mirror flipped:								
Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.								

4.5 UMass Memorial - University Medical Center, 6ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

670

671

LEGEND
○ Speaker
⊖ Power
◁ Data/LAN
▭ Enclosure/Camera
◠ Camera
◁ eLERT Button
— Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3ʳᵈ, 2020	
UNIT & ROOM:	671/670	AUTHOR:	Denison Merchant	caregility

Unit Name: **6ICU** Room Name: ICU 671	Ceiling Type: ☒ Drop ☐ Hard		Equipment: ☒ New ☐ Retro		☒ ProCon ☐ Axxis		☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C	

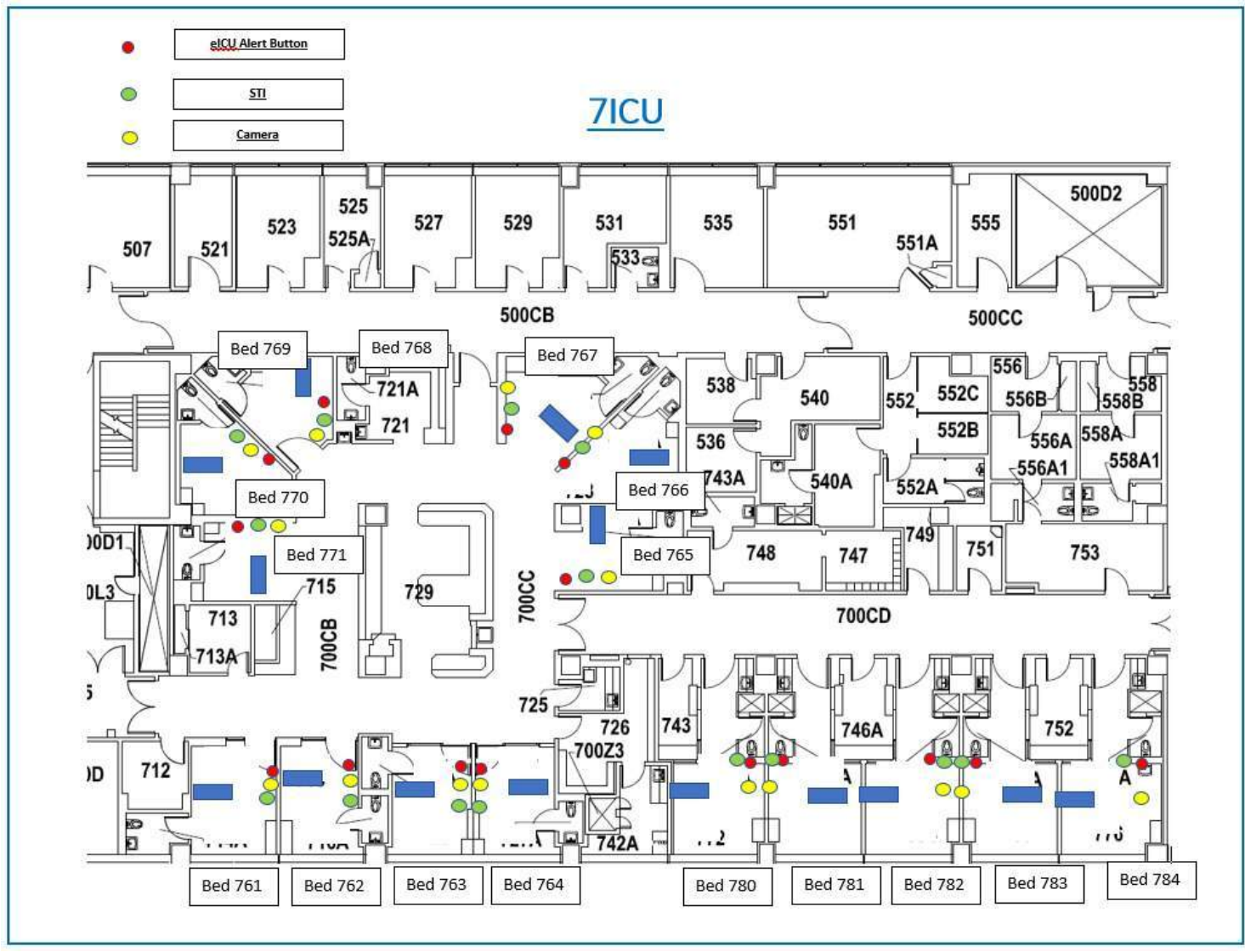| UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists
Enclosure Location:	☒ Wall	☐ Ceiling		The enclosure will be located on the right-side wall, left the wall clock. Angled side wall, there is curtain on the foot side of the bed.					
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling		Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed						
Speaker:	☒ ENC ☐ Remote		Enclosure Mounted						
Microphone	☒ ENC ☐ Remote		Enclosure Mounted						
Alert:	☐ Green Button ☒ Red Button		RED eLert button will be located at the same location						
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**								
Other room(s):	Similar: 670, 668, 667 Mirrored: Flipped: Mirror flipped:								
Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.								

5   UMass Memorial - University Medical Center
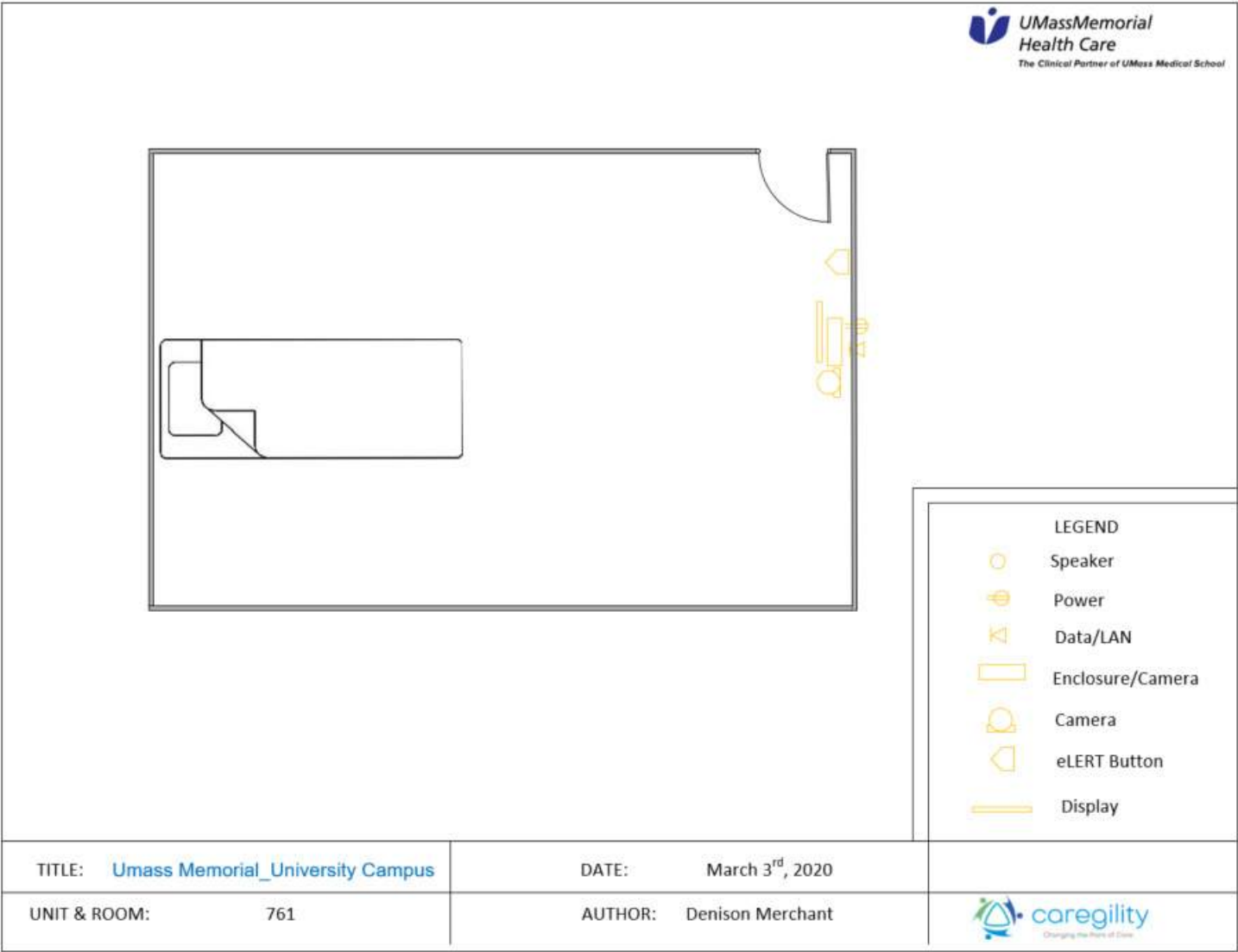
7ICU Unit Floorplan Overview

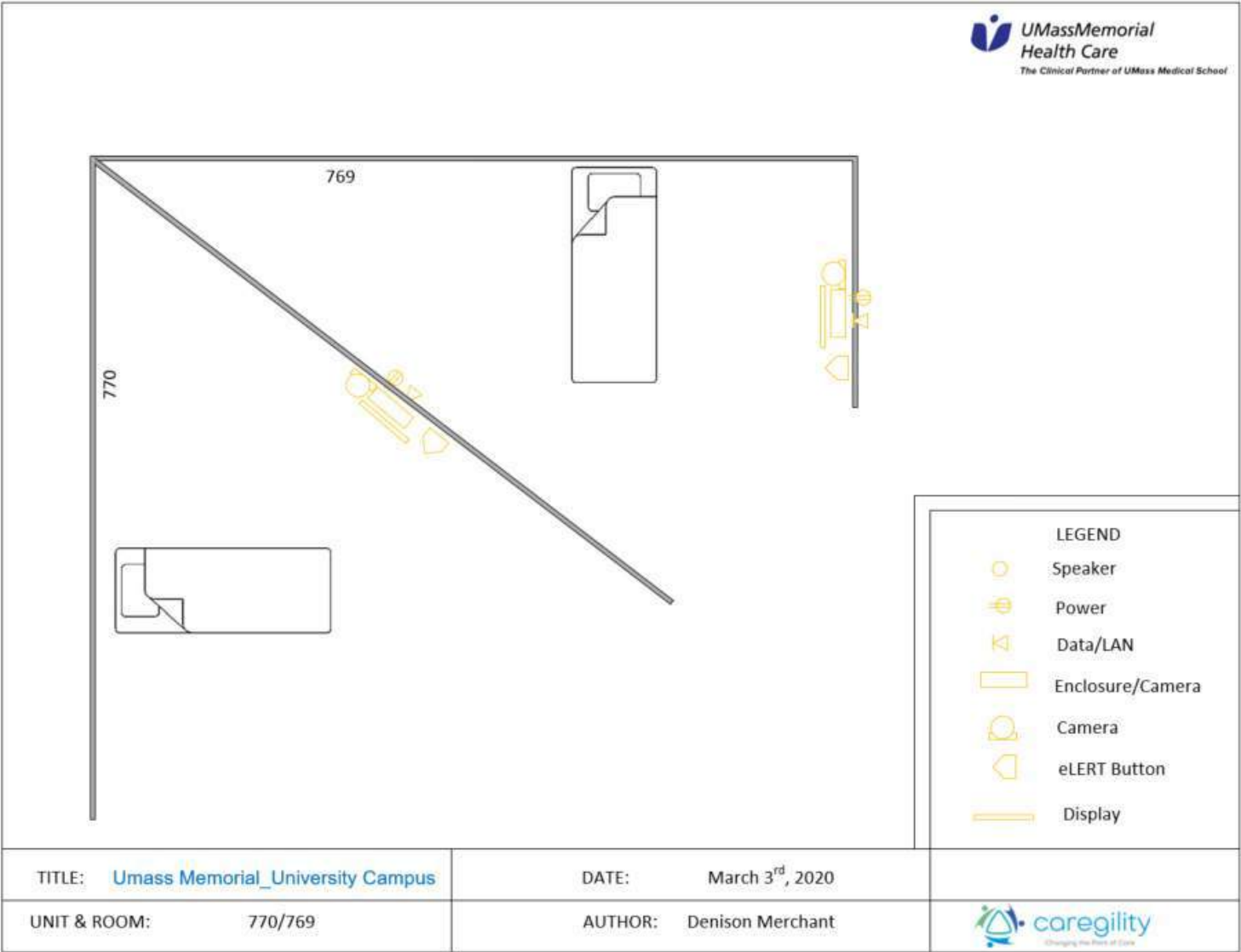# UMass Memorial - University Medical Center, 7ICU

GENERAL COMMENTS

- In support of the Philips eCare solution, Caregility will be installing Univago Healthcare Edition (UHE) endpoints that will be installed in patient rooms. One endpoint will be installed for each patient bed.   This solution will include the UHE Wall Solution, and in some cases a ceiling mounted remote camera.
- There are some basic power, network, cabling, and facility requirements that must be completed by the site/customer facilities to ensure the operation of the Telehealth Enclosure.   Cabling requirements will include: all CAT6 cabling & connectors, site cable management including conduit, plenum cable, Wall-boxes, cable ports, pull strings, etc. between all equipment locations, network cables etc.   The site/customer will be responsible for all cosmetic remediation for the all facility work.
- In all rooms power and LV (CAT 6) will need to be located where unit will be placed, if existing solution is not CAT 6 it needs to be replaced with CAT 6 cable.
- For exact specs or measurements please review the latest Facilities Preparation Document and the latest install document.
- Caregility preferred recommendation is to place new data and power to separate more viable locations
- Recommendation of button to be GREEN, although FDA Class I registration allows for Green and Blue.
- Recommendations based on assumption all rooms are similar. This report is prepared assuming remaining ICU rooms are identical to the room we were able to visit during onsite visit
- Please note that all documented component locations and heights are standard reference locations. Actual locations and selected components will be based on actual site conditions and the preferences documented on the Room Readiness Report and should be adjusted accordingly. Diagrams are not necessarily to scale.
- In all rooms eAlert button will be stay at its current location (underneath the UHE endpoint), all button will be RED as per customer
- For the footwalls with gas lines if customer wants Caregility to install mounting brackets, customer will have to place a backboard where the units will be secured and give us lengths so Caregility can bring proper mounting fasteners
- All rooms will have UHE endpoints off the center to the patient bed due to room layout
- Highly suggested to have spare kit at site

5.1 UMass Memorial - University Medical Center, 7ICU - Specific Room Details

LEGEND

Symbol	Description
○	Speaker
⊕	Power
◁	Data/LAN
▭	Enclosure/Camera
◒	Camera
◁	eLERT Button
▬	Display

TITLE:	Umass Memorial_University Campus	**DATE:**	March 3rd, 2020
UNIT & ROOM:	761	**AUTHOR:**	Denison Merchant

UMassMemorial Health Care
The Clinical Partner of UMass Medical School

caregility
Changing the Point of Care

Unit Name: **7ICU**	Ceiling Type: ☒ Drop ☐ Hard	Equipment: ☒ New ☐ Retro	☒ ProCon ☐ Axxis	☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C
Room Name: ICU 761				

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists

Enclosure Location:	☒ Wall	☒ Ceiling	The enclosure will be located on the foot wall.

Camera:	☐ Wall ☒ Enclosure ☐ Ceiling	Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed

Speaker:	☒ ENC ☐ Remote	Enclosure Mounted

Microphone	☒ ENC ☐ Remote	Enclosure Mounted

Alert:	☐ Green Button ☒ Red Button	RED eLert button will be located at the same location

Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**

Other room(s):	Similar: 762, 763, 764,780, 781, 782, 783, 784, 7xx, 7xx Mirrored: Flipped: Mirror flipped:

Notes and Pictures:	- UHE Enclosures will be mounted off the patient bed as per customer. - Customer will run new data and power - As per customer gas lines are not running through the foot wall. - All other ICU rooms were occupied - Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.

5.2 UMass Memorial - University Medical Center, 7ICU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

769

770

LEGEND

○	Speaker
⊖	Power
◁	Data/LAN
▭	Enclosure/Camera
◠	Camera
◁	eLERT Button
▬	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020	
UNIT & ROOM:	770/769	AUTHOR:	Denison Merchant	caregility

Unit Name: **7ICU** Room Name: ICU 770	Ceiling Type: ☒ Drop ☐ Hard		Equipment: ☒ New ☐ Retro		☒ ProCon ☐ Axxis		☐ Vidyo: ☐ HD100 ☐ HD40A ☐ HD40C	
UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data: ☒ New	☐ Exists

Enclosure Location:	☒ Wall	☐ Ceiling	The enclosure will be located on the side wall.
Camera:	☐ Wall ☒ Enclosure ☐ Ceiling	Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed
Speaker:	☒ ENC ☐ Remote	Enclosure Mounted
Microphone	☒ ENC ☐ Remote	Enclosure Mounted
Alert:	☐ Green Button ☒ Red Button	RED eLert button will be located at the same location
Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**	
Other room(s):	Similar: 769,757,766 Mirrored: Flipped: Mirror flipped:	
Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided. • Very challenging room, no place on the wall to mount the enclosure un-restricted. • ICU 361 was occupied – couldn't see the room. • UHE cart could be an option.	

6   UMass Memorial - University Medical Center
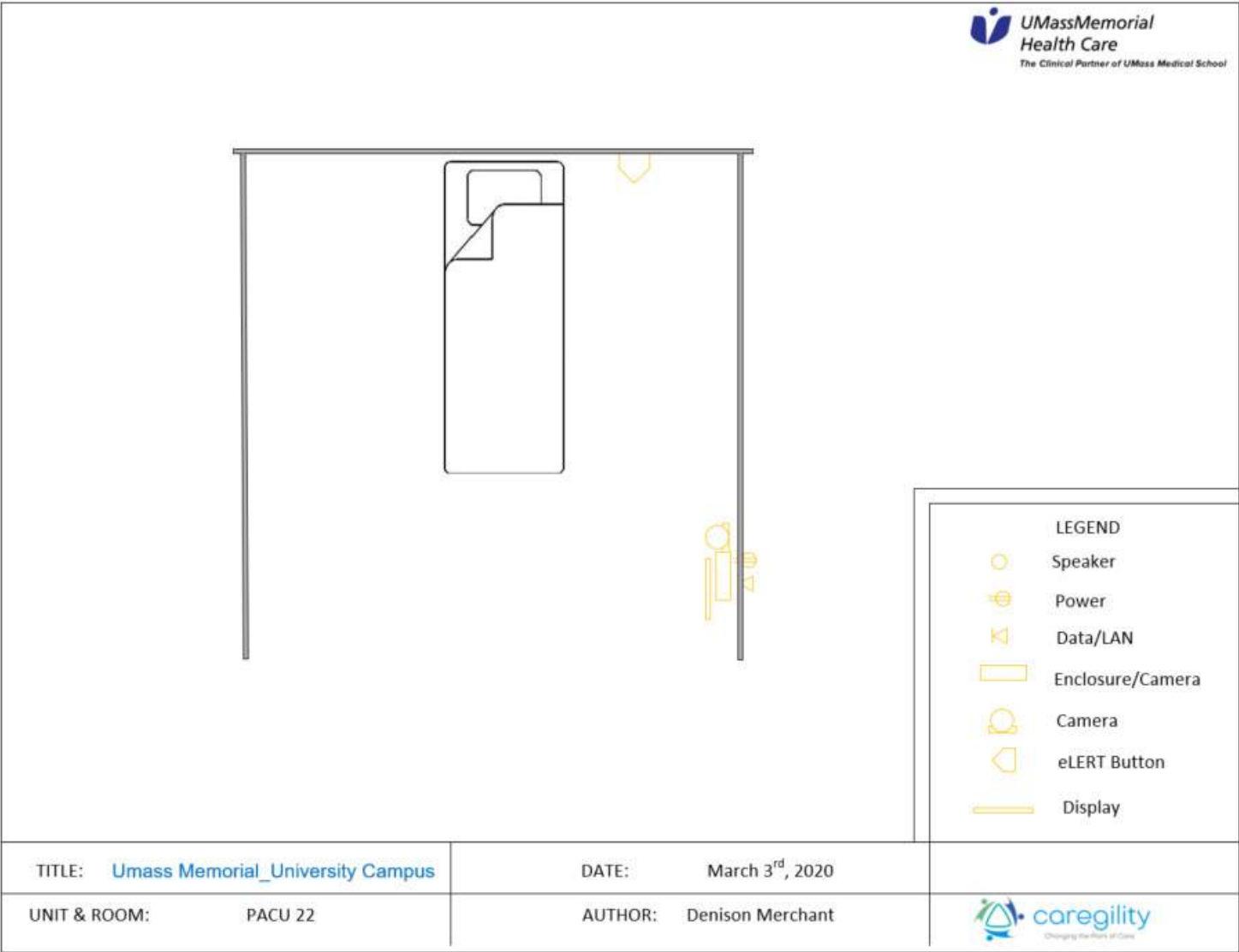
PACU Unit Floorplan Overview

UMass Memorial - University Medical Center, ICU 2nd Floor

GENERAL COMMENTS

- In support of the Philips eCare solution, Caregility will be installing Univago Healthcare Edition (UHE) endpoints that will be installed in patient rooms. One endpoint will be installed for each patient bed.   This solution will include the UHE Wall Solution, and in some cases a ceiling mounted remote camera.
- There are some basic power, network, cabling, and facility requirements that must be completed by the site/customer facilities to ensure the operation of the Telehealth Enclosure.   Cabling requirements will include: all CAT6 cabling & connectors, site cable management including conduit, plenum cable, Wall-boxes, cable ports, pull strings, etc. between all equipment locations, network cables etc.   The site/customer will be responsible for all cosmetic remediation for the all facility work.
- In all rooms power and LV (CAT 6) will need to be located where unit will be placed, if existing solution is not CAT 6 it needs to be replaced with CAT 6 cable.
- For exact specs or measurements please review the latest Facilities Preparation Document and the latest install document.
- Caregility preferred recommendation is to place new data and power to separate more viable locations
- Recommendation of button to be GREEN, although FDA Class I registration allows for Green and Blue.
- Recommendations based on assumption all rooms are similar. This report is prepared assuming remaining ICU rooms are identical to the room we were able to visit during onsite visit
- Please note that all documented component locations and heights are standard reference locations. Actual locations and selected components will be based on actual site conditions and the preferences documented on the Room Readiness Report and should be adjusted accordingly. Diagrams are not necessarily to scale.
- In all rooms eAlert button will be stay at its current location (underneath the UHE endpoint), all button will be RED as per customer
- For the footwalls with gas lines if customer wants Caregility to install mounting brackets, customer will have to place a backboard where the units will be secured and give us lengths so Caregility can bring proper mounting fasteners
- All rooms will have UHE endpoints off the center to the patient bed due to room layout
- Highly suggested to have spare kit at site

6.1 UMass Memorial - University Medical Center, PACU - Specific Room Details

UMassMemorial
Health Care
The Clinical Partner of UMass Medical School

LEGEND

○	Speaker
⊝	Power
◁	Data/LAN
▭	Enclosure/Camera
○	Camera
◁	eLERT Button
▬	Display

TITLE:	Umass Memorial_University Campus	DATE:	March 3rd, 2020	
UNIT & ROOM:	PACU 22	AUTHOR:	Denison Merchant	caregility

Unit Name: **PACU**	Ceiling Type:		Equipment:		☒ ProCon		☐ Vidyo:
	☒ Drop		☒ New		☐ Axxis		☐ HD100
Room Name: PACU 22	☐ Hard		☐ Retro				☐ HD40A
							☐ HD40C

UHE Model	☐ UHE24	☒ UHE22	☐ GEN2	Power:	☒ New	☐ Exists	Data:	☒ New	☐ Exists

Enclosure Location:	☒ Wall	☒ Ceiling	The enclosure will be located on the side wall in all units except. Unit 26 – enclosure will be on the foot wall.

Camera:	☐ Wall ☒ Enclosure ☐ Ceiling	Camera will be mounted on the Left or right side of the enclosure closest in alignment with center of patient bed

Speaker:	☒ ENC ☐ Remote	Enclosure Mounted

Microphone	☒ ENC ☐ Remote	Enclosure Mounted

Alert:	☐ Green Button ☒ Red Button	RED eLert button will be located at the same location

Additional Notes:	Review the Facilities Requirements document to provide guidance on the power location and specifications, the data location and specifications, and the height specifications. **Please, note the camera side of the enclosure will need minimum 3" from the nearest obstruction such TV's cabinets or walls.**

Other room(s):	Similar: 23,24,25,26 Mirrored: Flipped: Mirror flipped:

Notes and Pictures:	• UHE Enclosures will be mounted off the patient bed as per customer. • Customer will run new data and power • As per customer gas lines are not running through the foot wall. • All other ICU rooms were occupied • Customer is advised to verify required clearance by placing UHE 22" enclosure template on the wall, most of the rooms were occupied, best estimate provided.

7   Totals

Enclosure Type	
ICU 24" UHE Enclosures:	**00**
ICU 22" UHE Enclosure:	84

Alert Button	
RED Alert Button:	**84**
Blue Alert Button:	

Camera Mounts	
Enclosure Mounts:	**84**
Remote Mounts (VSC_CM_55_C-10):	0
Remote Ceiling Bracket (VSC_DCM-101):	0

8   Introduction

In support of the ICU Monitoring solution, Caregility will be installing Univago Healthcare Edition (UHE) endpoints that will be installed in patient rooms. One endpoint will be installed for each patient bed.   This solution will include the UHE Wall Solution, and in some cases a ceiling mounted remote camera.

There are some basic power, network, cabling, and facility requirements that must be completed by the site/customer facilities to ensure the operation of the Telehealth Enclosure.   Cabling requirements will include: all CAT6 cabling & connectors, site cable management including conduit, plenum cable, Wall-boxes, cable ports, pull strings, etc. between all equipment locations, network cables etc.   The site/customer will be responsible for all cosmetic remediation for the all facility work.

Please note that all documented component locations and heights are standard reference locations. Actual locations and selected components will be based on actual site conditions and the preferences documented on the Room Readiness Report and should be adjusted accordingly.   Diagrams are not necessarily to scale.

9   Caregility UHE Telehealth Enclosure Form Factor

The UHE Enclosure component is configured to house the system components in a compact, durable enclosure.   It is designed to be wall-mounted and located across from the patient location on the patient footwall.   Caregility will provide the enclosure, its components, and all internal enclosure wiring.

Component Type	Main Characteristics

24" UHE Enclosure
(YCS-UHE36-W01-R1-MFG-PKG)
 	
	- Rugged Metal Assembly
	   (Main Enclosure) 25.10" Wide x 26.32" High x 5.65" Deep
	     (With Camera) 31.5" Wide x 26.32" High x 11.17" Deep - Textured White Finish - AC powered Enclosure (200 Watt Power Supply) 3' hospital grade power cord. - All in One (AIO) PC, Hardened Linux appliance. - Display: 24" 1080P HD resolution - CPU: I5-6500TE VPro 6th Generation 2.3Ghz Quad Core. 8GB of RAM, 128GB SDD. - Cable port "punch outs" on either side, in case Cat5e or Power needs to be extended. - Includes Speaker and MIC attached to enclosure. - Night View Infrared Lights - Call Resolution: Up to 720p/30 - Audio Output: 20 Watt Mono Channel, 8 x 1 Voice Optimized Speaker Array. - Microphone: 1 x Cardioid Boundary - Bandwidth: 1.2Mbps 59 Lbs. to 65 Lbs., based on configuration. 60601 FDA Registered Class I Medical Device (PENDING)

|	Rugged Metal Assembly
	(Main Enclosure) 25.10" Wide x 19 ¾"" High x 5.65" Deep
	(With Camera) 31.5" Wide x 26.32" High x 11.17" Deep
	Textured White Finish
	AC powered Enclosure (200 Watt Power Supply)
	3' Medical Center grade power cord.
	All in One (AIO) PC, Hardened Linux appliance.
	Display: 22" 1080P HD resolution
	CPU: I5-6500TE VPro 6th Generation 2.3Ghz Quad Core.
	8GB of RAM, 128GB SDD.
	Cable port "punch outs" on either side, in case Cat5e or Power needs to be extended.
	Includes Speaker and MIC attached to enclosure.
	Night View Infrared Lights
	Call Resolution: Up to 720p/30
	Audio Output: 20 Watt Mono Channel, 8 x 1 Voice Optimized Speaker Array.
	Microphone: 1 x Cardioid Boundary
	Bandwidth: 1.2Mbps
	43 Lbs. to 57 Lbs., based on configuration.
	60601 FDA Registered Class I Medical Device (PENDING)

22 Inch Wall System

System Weights
The system is a modular design for simplified mounting and servicing. The following is a list of the component weights:
Overall System (without mounting plate): 53.6 lbs. (24.31 Kg)
• Computer/Display: 16.55 lbs. (7.5 Kg)
• Upper Enclosure assembly: 18.95 lbs. (8.6 Kg)
• Lower Electronics Compartment: 11 lbs. (5.0 Kg)
• Camera with bracket assembly: 5 lbs. (2.3 Kg)
• Speaker with bracket assembly: 2.10 lbs. (1 Kg)
• Standard wall mounting plate: 3.55 lbs (1.6 Kg)
• Optional VESA (200mm) Mounting Plate: 12 lbs. (5.4 Kg)

System Dimensions
Note: The camera bracket can be mounted on either the left or right side of the upper enclosure. The Speaker will be mounted on the opposite side of the camera.
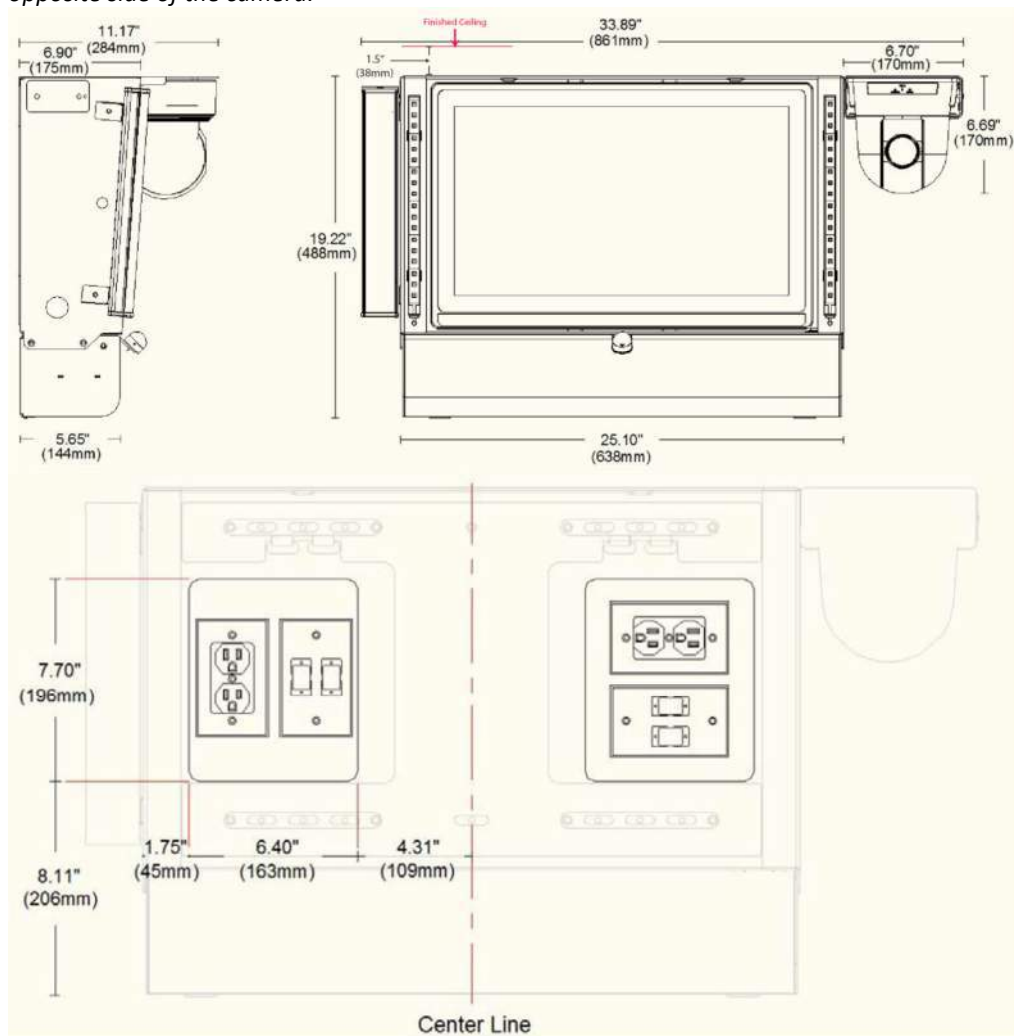
10   ICRA Requirements

The customer site will be responsible for conducting an ICRA (Infection Control Risk Assessment) for the rooms that the Univago HE Wall Solutions will be installed into. All information that impacts the enclosure installation will be shared with Caregility as a part of this proposal planning process.

The Caregility installation technicians will be required to follow the ICRA requirements.

> For this customer site, the ICU rooms are considered:
>
> > Type A Environment-Inspection and Non-Invasive Activities
> >
> > Type B Environment – Small Scale Short Duration Activities
>
> For this installation, the required ICRA support components could include:
>
> > Ceiling Containment Tent for installing the Speakerphone and/or camera
> >
> > HEPA Filter Ventilation System for filtering the air during the installation
> >
> > Vacuum w/HEPA Filter for cleaning up debris
> >
> > Basic ICRA Management Kit
> >
> > > Door Guard (Plastic Sheeting, Zipper Kit, Tape)
> > >
> > > Debris/Walk-Off Mats in front of the ICU door for collecting contaminants from shoes and equipment
>
> A determination will be made during the proposal planning process if the site/customer or Caregility will provide the ICRA materials and will manage their deployment for each room during Caregility's installation.

9   Customer Facility Requirements

The following are the site requirements for the Enclosure Units.   Refer to Site Planning Diagrams for each system and option type.

a.   The Enclosure Location will be located per the Room Readiness Report.   Usually at the customer footwall. (All Configurations)

   a.   The bottom of the Enclosure will be located 80" above the finished floor and will have a minimal clearance of 6" from the finished ceiling from its top component.

   b.   Any existing wall or ceiling obstructions will need to be moved for the installation of the enclosure. Verification is required that there will not be any obstructions between the enclosure, display, camera, and speakerphone.   This includes a minimum clearance of 6" around the perimeter of the enclosure and monitor.   Obstructions can include any clinical or room objects as well as clearance from any room/cabinet door swings, (privacy) curtains, or any room feature.

   c.   Verification will be required that the wall surface will be flat and not have any obstructions with the (2) enclosure ventilation fans.

   d.   The Customer will verify that the wall can support the weight of the enclosure.   The customer will reinforce the wall if needed, attach the enclosure mounting bracket to the structural members of the wall, and will provide all mounting hardware.

      i.   The Univago HE Wall Enclosure weighs up to 59 to 65 lbs, depending on the solution type.

      ii.   Standard Drywall mounting requirements are 4-6 (3/16" x 3") toggle bolts that are rated at 287 Lbs. Site specific requirements or material may change this requirement.

   e.   There are no requirements to attach the Enclosure to the building ground.

   f.   If the monitor will be mounted on the Enclosure, it will need to follow the monitor placement guidelines placed in a location where the patient can see the monitor while lying in the bed. When mounting, please avoid any interference of curtains, open doors or other objects that would block the field of sight.

b.   A duplex critical/hospital grade power outlet will be required near the bottom right corner of the enclosure. (All Configurations)

   a.   This outlet will be within the Univago HE I bracket locations, per Facilities Document if customer is looking to ensure the power is protected within the solution.

   b.   This will be an 115V – 60HZ- 15A outlet.

   c.   The Enclosure power draw will be a maximum of 150 Watts

      i.   It is recommended that all Enclosure Outlets and Monitors are powered by (a) dedicated circuit(s).

      ii.   It is strongly recommended that the power outlet is on Facility Emergency Power per local requirements. (UPS, Generator)

c.   Enclosure Interface Plate (Customer/Site Provided)

a. This will be located also within the I bracket of the UnivagoHE Enclosure.

b. This will be a single gang wall box

c. Includes an interface plate with (2) Cat6 Keystone Female Jacks. One for the LAN connectivity and the other for the button connectivity.

d. Ports will be terminated per the T568B wiring standard

d. A single LAN data port will be required for the Univago HE Wall System data connection. (All Configurations)

   a. Customer network team will provide all required bandwidth and QoS network infrastructure to all network demarcation points, and network carried services between all network locations.

   b. This will include all network components, wiring, and configuration including firewall for all UDP and TCP port and all DNS & NTP and possibly additional integration.

   c. Customer will connect the port to the network and test before equipment is installed.

   d. The main Interface Plate Port will be labeled **LAN**.

e. Alert Button

   a. Customer will provide and run (1) Shielded CAT6 cable from the main interface plate and terminated it with an RJ45 male connector at the Alert button side.   (Cable Run A) This cable should have an ID Label of N3004, as well as any site required IDs.

   b. The main Interface Plate Port will be labeled **Alert**.

   c. (1) 2.5" Deep Single Gang wall plate will be required to house the Alert button. This will be located 48" above the finished floor per the location determined by the survey.   Usually on a side wall.

   d. A blank plate should be placed on the wall box until the installation of the system.

   e. Cable will Include a label labelled per the Caregility Drawing.

   f. Should be located in similar locations in each room for staff familiarity.

f. Speaker and Microphone

   a. The speaker on the 24" model is located on the top of the Upper Assembly of the enclosure.

   b. The speaker on the 22" model is located to the right or left Upper Assembly wall opposite of the camera mount.

g. Camera (Enclosure)

   a. The camera will be located on the camera mount which can be mounted either on the left or the right of the Univago HE Wall Enclosure depending on the most direct view of the patient foot of the bed.

   b. The camera will be located where specified per room on the Room Readiness Report.

h. Camera (Remote)

   a. The camera will be located in the ceiling or the wall per the Room Readiness Report. Caregility will provide the mounting kit. It should be located close to the enclosure, but it should not block the display.

   b. This solution requires the YCS-UHE-CAMEXT-HDD-R1-PKG kit in order to successfully extend the camera into the ceiling.

   c. Customer will provide a single gang box with a faceplate and rubber grommet to place the kits HDMI cable and Custom Power and control cable thru for a straight A to B connection front eh enclosure to the remote camera location.

10   Customer Responsibilities

In order to provide timely, quality service, Caregility requires input and cooperation from Customer, as follows:

1. Identify customer representative who will be the authorized Single-Point-of-Contact ("SPOC") between Customer and Caregility for this project. This person will be available to participate in the project-start discussion, and for all of the following: scheduling milestone checkpoints, overseeing Customer's pre-installation responsibilities and site prep, providing network information, resolving implementation issues, and approving the final Test and Acceptance Plan. This will include, but is not limited to, all coordination and providing contact information with the IT staff, clinical staff, and the local site contact.

2. All Network materials and implementation.

3. Provide a secure location for storing any spare Enclosure(s) or maintenance components. This will include providing any testing accounts, network, and location for testing and accepting the spare unit prior to storage.

4. Provide, manage, and apply all customer property asset tags to the Enclosure(s). Any tags should be placed where they will not impede any of the Enclosure's functionality or cover the Caregility ID tags.

5. Customer will receive the equipment that is shipped to site. This will require that the site can receive palletized deliveries.   Customer is responsible to ensure that equipment is not unpacked prior to the arrival of Caregility engineering personnel. The customer will inspect the boxes and delivery containers to ensure that there is no physical damage. Failure to do so may result in delays and additional costs.

6. Provide adequate storage/warehouse space and arrange for the on-site security of the shipped Enclosure after receipt from shipping company. Any damage or theft of components may result in delays and additional costs.

7. Verify room availability for scheduled Enclosure set-up dates, commissioning, and orientation. Notify Caregility about any rescheduling requirements.

8. Provide full access to all areas where Caregility will need to support the Enclosure equipment for the scheduled setup dates.

9. Customer will provide all ladders, ceiling lifts, or other devices that are needed for Caregility technicians to complete their ceiling installations.

10. Customer will coordinate any local permits or inspections of A/V or Low Voltage equipment and cabling as required. The cost for such permits will be the responsibility of Customer.

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