SEARHC

NEW ALICIA ROBERTS MEDICAL CENTER

SCHEMATIC PRICING NARRATIVE | SEPTEMBER 28, 2026

HKS ARCHITECTS ALASKA

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01

EXECUTIVE SUMMARY

HKS

BRIAN ZEALLEAR

ANTHONY MONTALTO

JOSIE BRIGGS

MARK GESINGER

SHELLY LOCKE

LAUREN OSBORN

ANH TRAN

ANA KREKMAN

BRIANNA WARKENTIN

ALI MACKIE

AMC

JOHN LACKEY

MATT OLSEN

KEITH CONFER

MARK LANGBERG

KEN RATCLIFFE

TAMARA HAMLER

ARCHITECTS ALASKA

KATHLEEN BENOIT

BETHANY MURRAY

PND

BRIAN NIELSEN

RESPEC

KEVIN PUUSTINEN

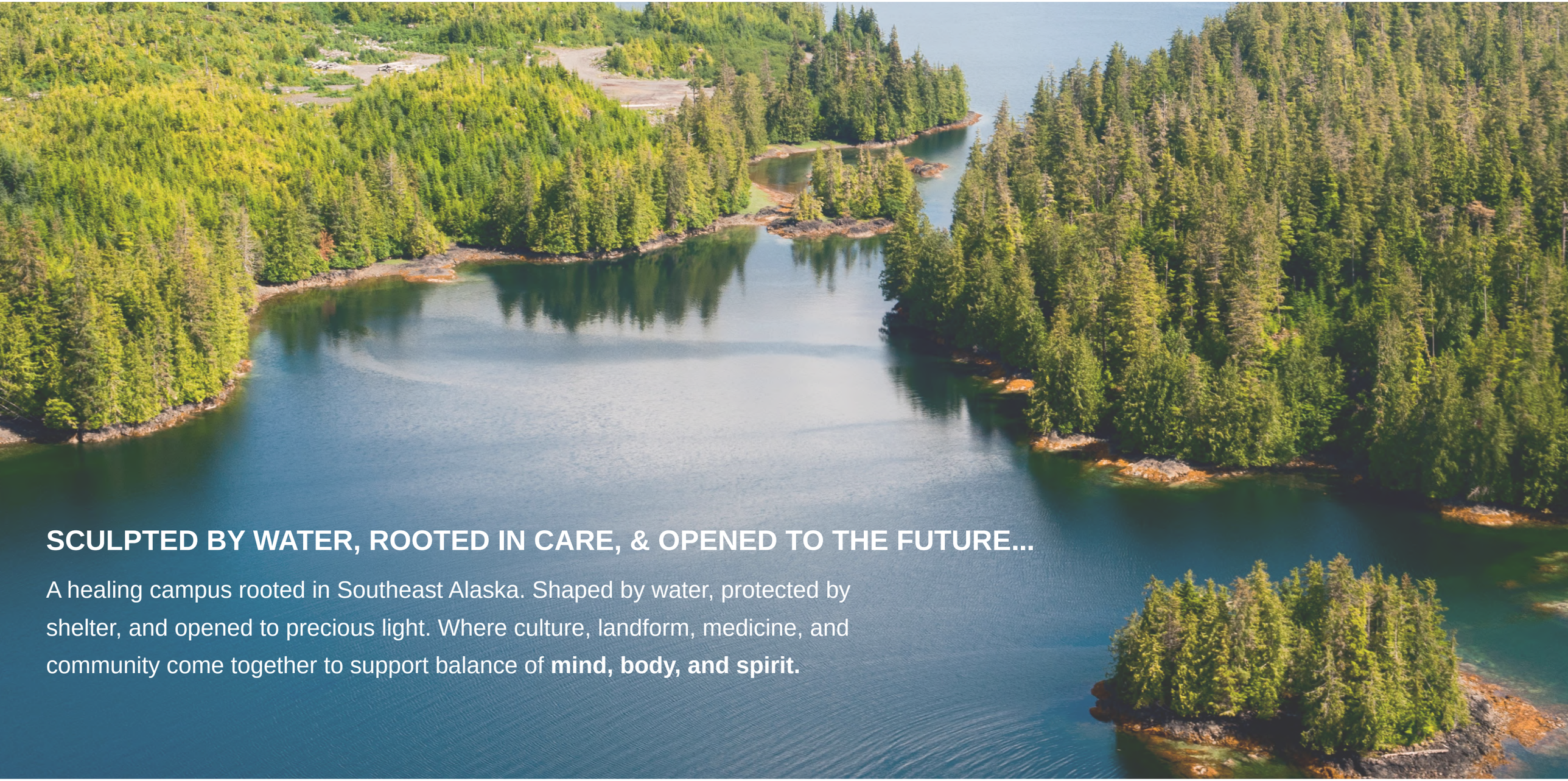
SITE WORKSHOP

JIM KELLER

SARAH CANEPA

I was thinking about the forest one day and it came to me -
our stories,
our songs,
our names,
our history,
our memories,
are not lost.

excerpt from The Spoken Forest by Ernestine Hayes



SCULPTED BY WATER, ROOTED IN CARE, & OPENED TO THE FUTURE...

A healing campus rooted in Southeast Alaska. Shaped by water, protected by shelter, and opened to precious light. Where culture, landform, medicine, and community come together to support balance of **mind, body, and spirit.**

1.3 PROJECT NARRATIVE PROGRAM ELEMENTS & MASTERPLAN REFINEMENTS

The program elements for the new Alicia Roberts Medical Center build upon the most recent work completed by SEARHC and are tailored to the existing site conditions in Klawock. Since the masterplan, the room sizes and configurations have been refined to align with the latest project being implemented in Haines.

Emergency, imaging, acute care, and long-term care functions are combined within the hospital wing to the south, supported by laundry, kitchen, and sterile processing.

Clinics, laboratory, pharmacy, and physical rehabilitation are combined within the outpatient wing to the north, adjacent to materials, IT, mechanical, electrical, staff, and administration.

The central lobby circulation space connects and organizes the inpatient and outpatient wings, providing a place to arrive, check in, and offer opportunities for visit patients in acute or long-term care. This space opens spatially toward views eastward of trees on the site. Views beyond the mouth of the Klawock River to the distant hills and mountains can be seen through the foreground tree canopy.

Daylight and views provided in the main lobby are carried through the planning to punctuate and guide the wayfinding experience through the ends of the clinic and hospital corridors. Finely tuned daylighting strategies carry natural light deep into the building, supporting a wellness-focused environment. Patient rooms and administrative offices are located on the exterior with access to an outdoor east-facing gathering space that is the focal point of the long-term care lobby and extends the dining and living spaces into the landscape.

1.4 PHASING OVERVIEW

Project Phasing Scenarios
The phasing for the new Alicia Roberts Medical Center has yet to be determined but in general there are 3 scenarios being considered. In all scenarios, the existing Alicia Roberts Medical Center will need to stay operational throughout construction of the new facility.

Scenario 1 – Two Phases of Construction
This scenario accounts for two distinct phases of construction. Phase 1 would consist of core & shell and full build out of:

- Ambulatory care and administration to the plan north
- Including loading and service yard
- Main public lobby and circulation
- Acute care, emergency department, and imaging to the plan south
- Associated site work

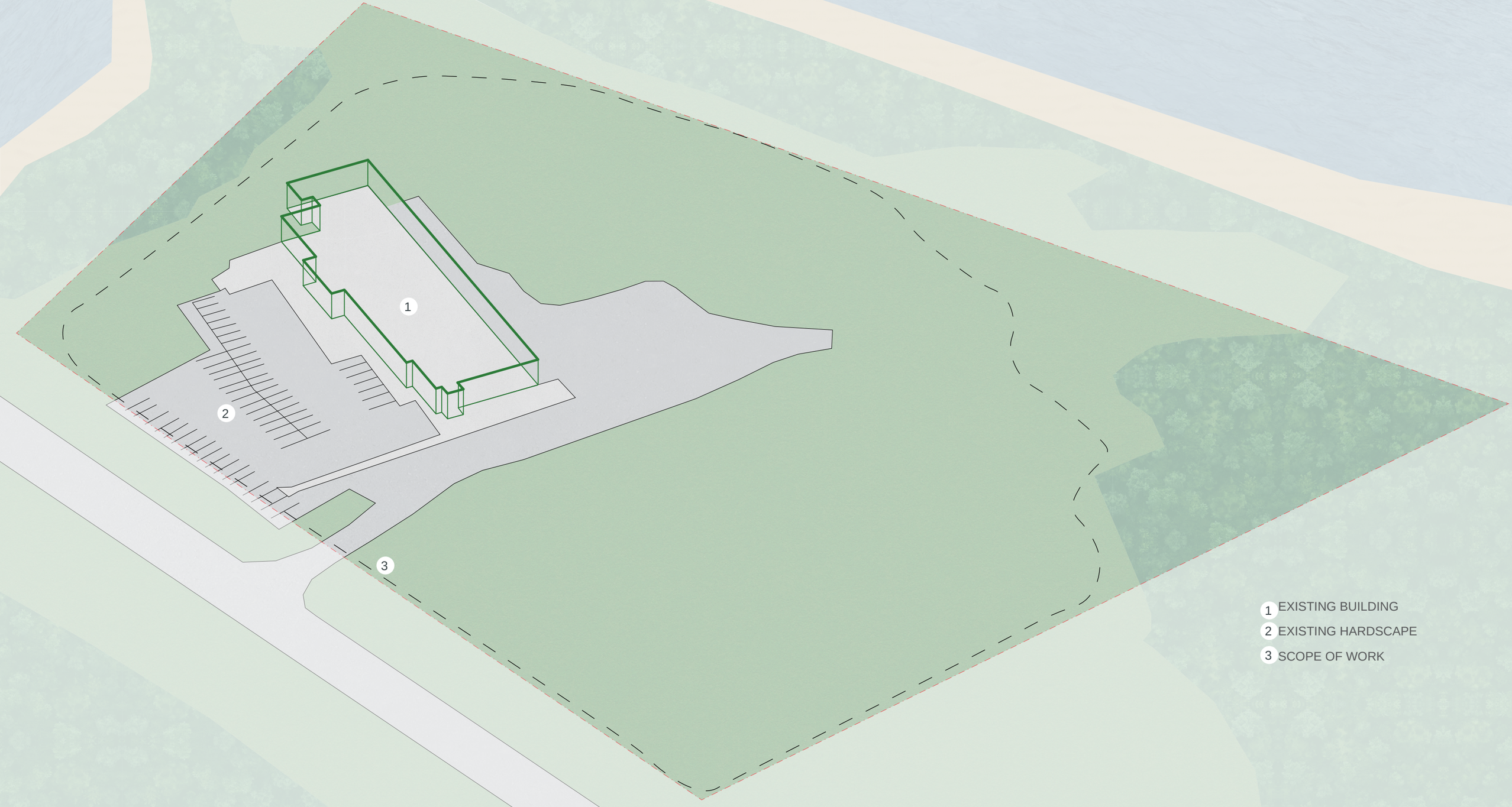
Phase 2 would consist of the core & shell and full build out of the long term care program to the east of acute care portion in Phase 1. At this time, the existing medical center will be demolished and remainder of site work will be completed.

Scenario 2 – Full Core & Shell with Shelled Space
Scenario 2 would allow for the full core & shell of the facility to be constructed with the initial build out of:

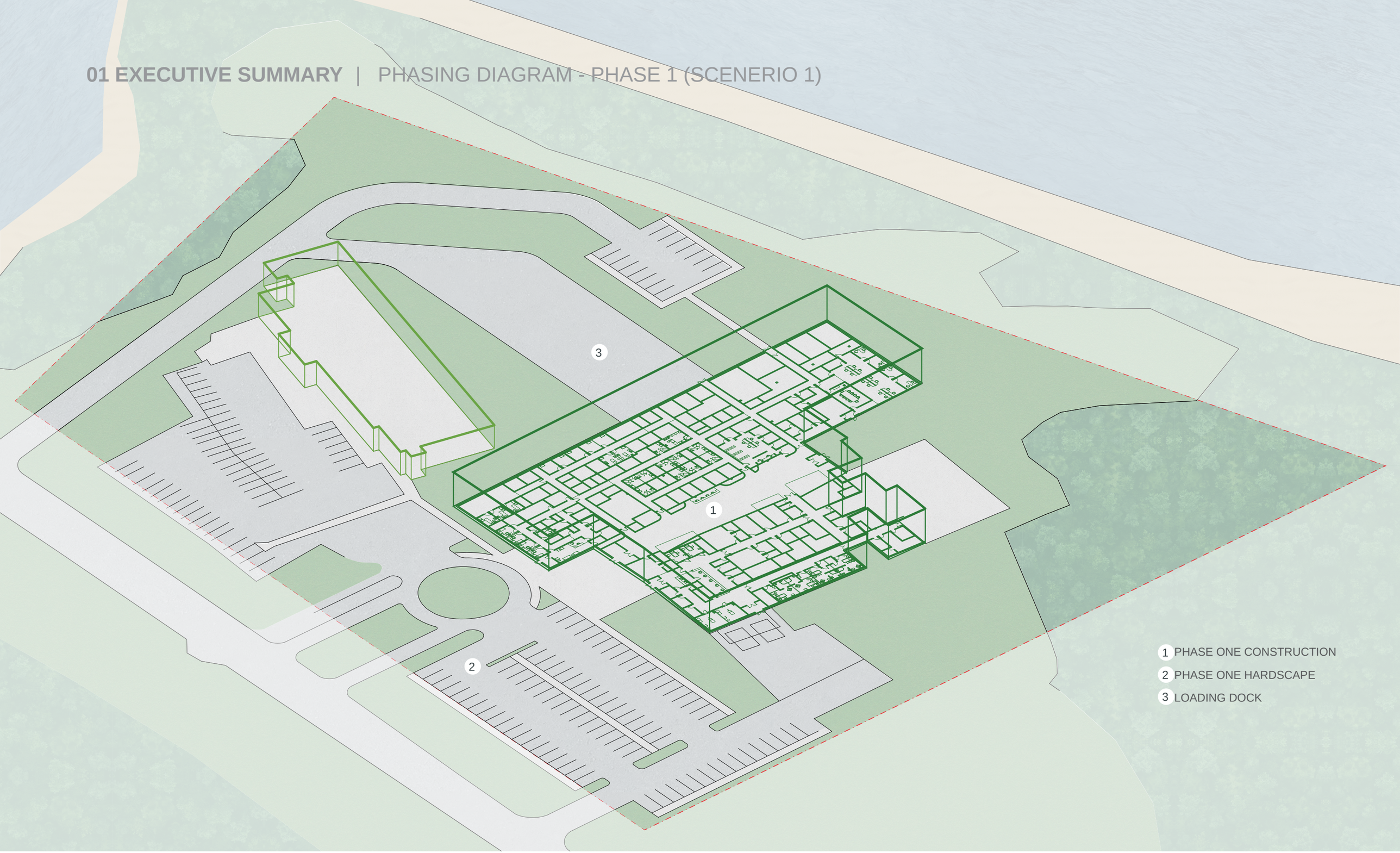
- Ambulatory care and administration to the plan north
- Including loading and service yard
- Main public lobby and circulation
- Acute care, emergency department, and imaging to the plan south
- Associated site work

After the new facility is open for care, the existing facility will be demolished, and remainder of the site work will be completed. The future long term care space would be warm-shelled for a Phase 2 tenant improvement for long term care.

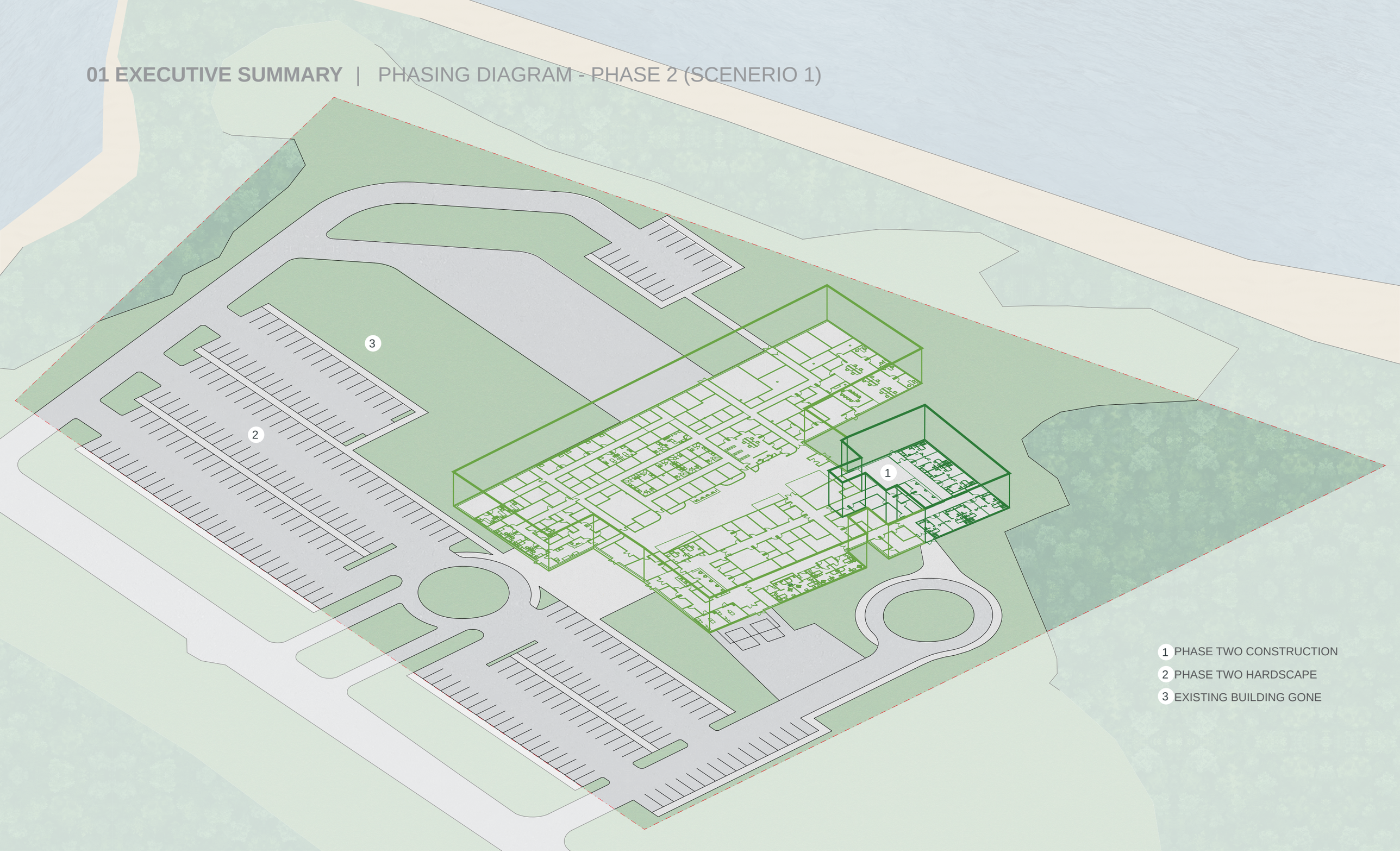
Scenario 3 – Single Phase of Construction
The last scenario would consist of a single phase of core & shell and build out of the entire facility, including site work and demolition of the existing facility after the new facility is operational.



1 EXISTING BUILDING
2 EXISTING HARDSCAPE
3 SCOPE OF WORK



1 PHASE ONE CONSTRUCTION
2 PHASE ONE HARDSCAPE
3 LOADING DOCK



1 PHASE TWO CONSTRUCTION

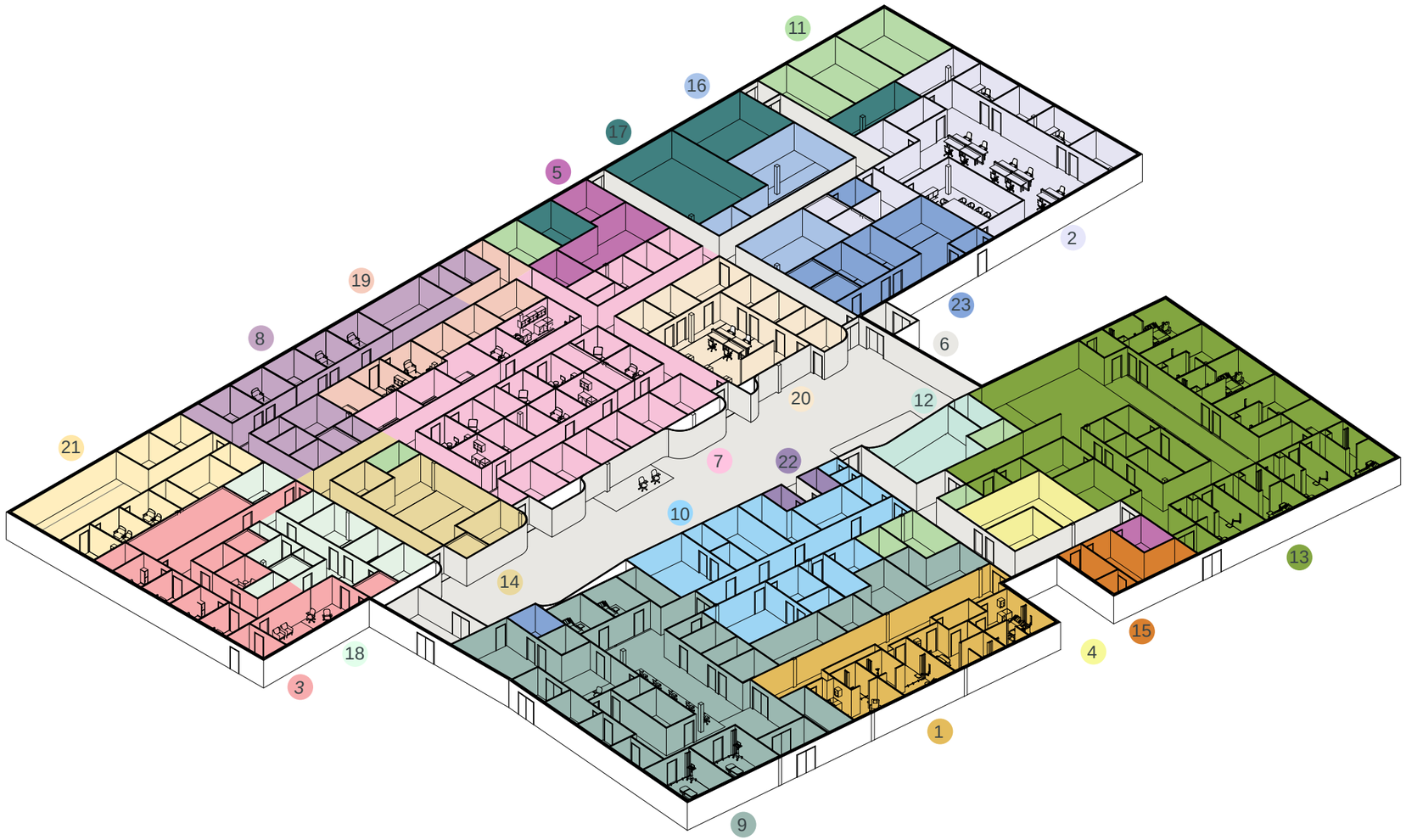
2 PHASE TWO HARDSCAPE

3 EXISTING BUILDING GONE

02

PLANNING

DEPARTMENT		DGSF
ACUTE	1	2355 SF
ADMIN	2	3652SF
BEHAVIORAL HEALTH	3	2583 SF
CENTRAL STERILE	4	684 SF
CENTRAL SUPPLY	5	770 SF
CIRCULATION	6	7,061 SF
PRIMARY CARE CLINICS	7	5729 SF
DENTAL	8	2687 SF
EMERGENCY	9	6224 SF
IMAGING	10	3086 SF
IT	11	1,879 SF
DIETARY	12	736 SF
LONG TERM CARE	13	6832 SF
LAB	14	1513 SF
LAUNDRY	15	703 SF
MATERIALS / FACILITIES	16	611 SF
MECHANICAL	17	1,767 SF
OPIOID TREATMENT	18	1267 SF
OPTOMETRY	19	1128 SF
PHARMACY	20	1805 SF
PHYSICAL REHAB	21	1997 SF
PUBLIC AREAS	22	988 SF
STAFF AREAS	23	969 SF





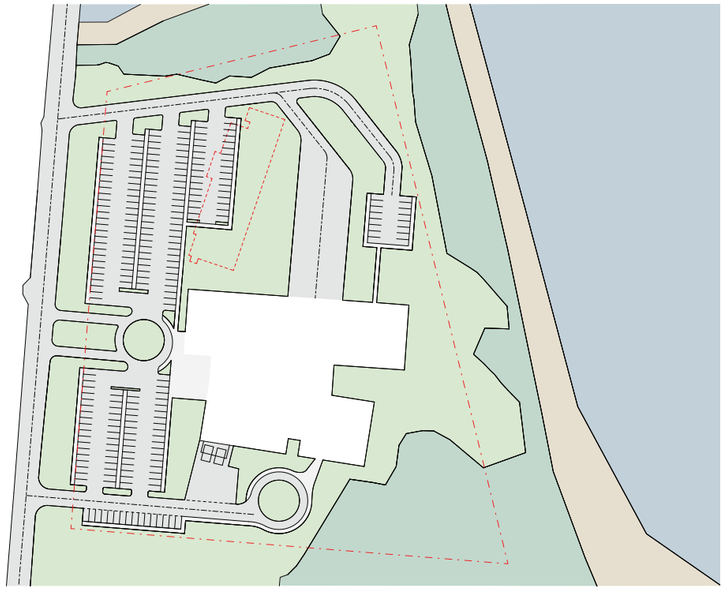
1. MAIN ENTRY
2. PATIENT, VISITOR AND STAFF PARKING
3. AMBULANCE DRIVEWAY AND ENTRY
4. LONG TERM CARE ENTRY DRIVE
5. LOADING DOCK
6. SERVICE EQUIPMENT YARD
7. ADDITIONAL STAFF PARKING
8. STAFF ENTRY
9. OUTDOOR GATHERING COURT
10. SOUTH GARDEN VIEW COURT
11. NORTH GARDEN VIEWS
12. OUTLINE OF EXISTING CLINIC BUILDING

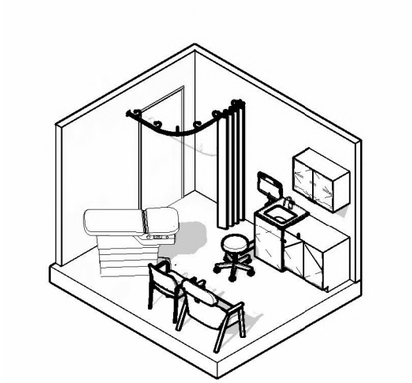
0' 25' 50' 100' 200'

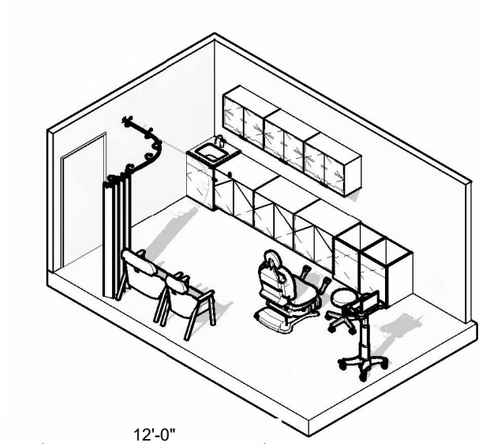

STAFF VEHICLE
STAFF PEDESTRIAN
SERVICE VEHICLE
PATIENT VEHICLE
PATIENT PEDESTRIAN
AMBULANCE VEHICLE
LONG TERM CARE VEHICLE
LONG TERM CARE PEDESTRIAN
0' 25' 50' 100' 200'

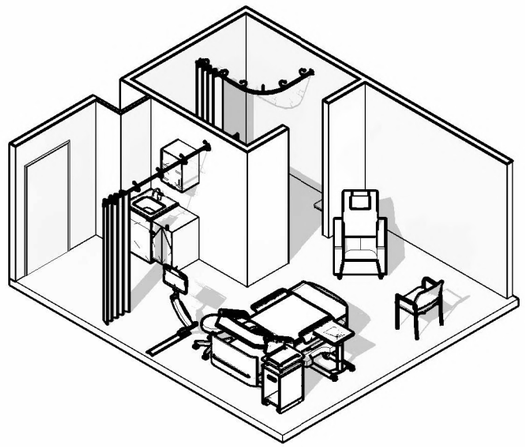


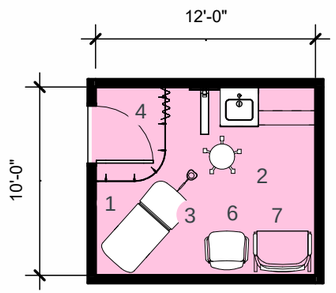
- ACUTE
- ADMIN
- BEHAVIORAL HEALTH
- CENTRAL STERILE
- CENTRAL SUPPLY
- CIRCULATION
- PRIMARY CARE CLINICS
- DENTAL
- EMERGENCY
- IMAGING
- IT/ELECTRICAL
- DIETARY
- LONG TERM CARE
- LAB
- LAUNDRY
- MATERIALS / FACILITIES
- MECHANICAL
- OPIOID TREATMENT
- OPTOMETRY
- PHARMACY
- PHYSICAL REHAB
- PUBLIC AREAS
- STAFF AREAS

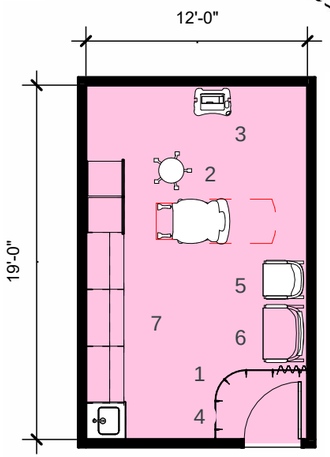


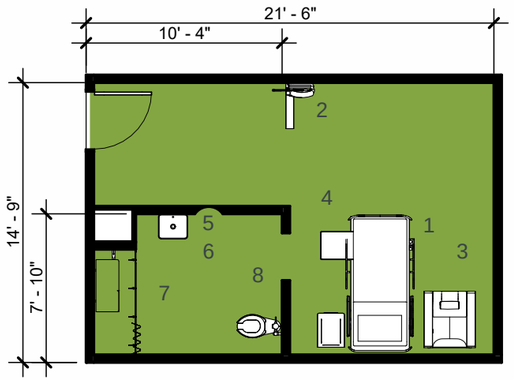












PC1 - TYPICAL CLINIC EXAM

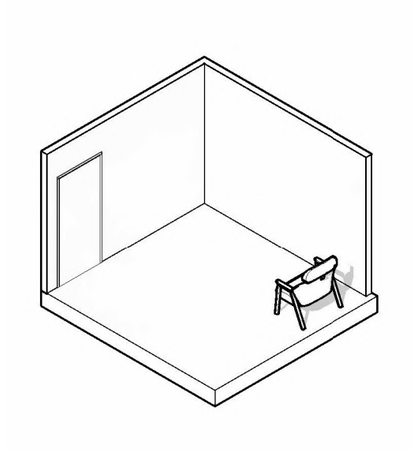
1. EXAM CHAIR
2. STOOL
3. WALL MOUNTED DISPLAY
4. PRIVACY CURTAIN
5. BARIATRIC CHAIR
6. GUEST CHAIR
7. HANDWASH STATION

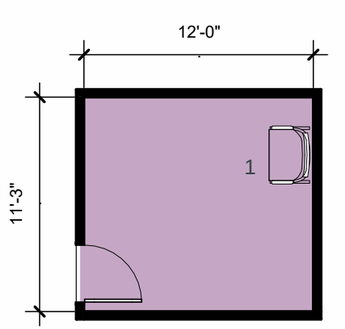
PC2 - TYPICAL CLINIC TREATMENT

1. TREATMENT CHAIR
2. STOOL
3. DISPLAY MONITOR
4. PRIVACY CURTAIN
5. BARIATRIC CHAIR
6. GUEST CHAIR
7. FULL WALL CASEWORK

LTC1 - TYPICAL LONG TERM CARE ROOM

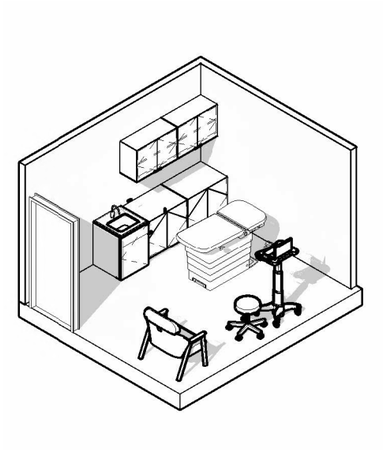
1. PATIENT BED
2. WALL MOUNTED DISPLAY
3. PATIENT RECLINER
4. BEDSIDE TABLE
5. SINK
6. FAUCET
7. ADA SHOWER SEAT
8. TOILET

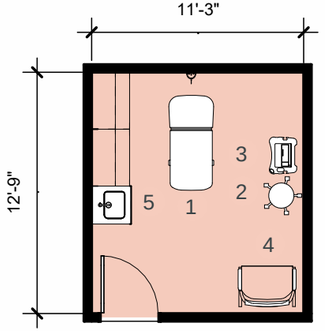




OP1 - TYPICAL DENTAL EXAM

1. BARIATRIC CHAIR

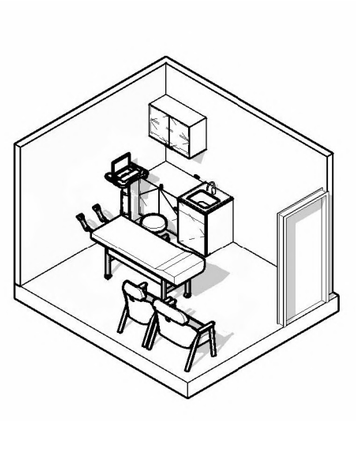


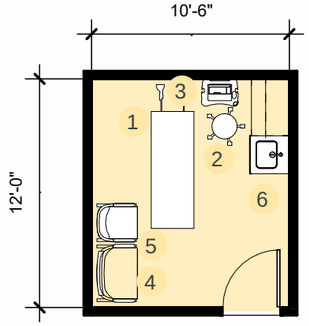


OP2 - TYPICAL EYE LANE EXAM

1. EYE EXAM CHAIR
2. STOOL
3. WALL MOUNTED DISPLAY
5. BARIATRIC CHAIR

HANDWASH STATION

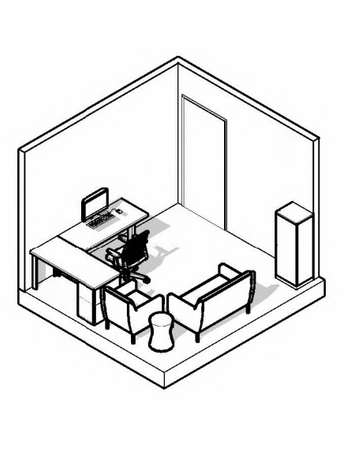


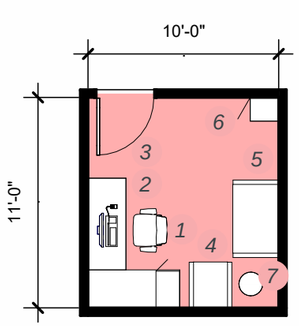


OP3 - TYPICAL REHAB TREATMENT

1. TREATMENT TABLE
2. STOOL
3. MOBILE NOTE STATION
4. BARIATRIC CHAIR
5. GUEST CHAIR

HANDWASH STATION

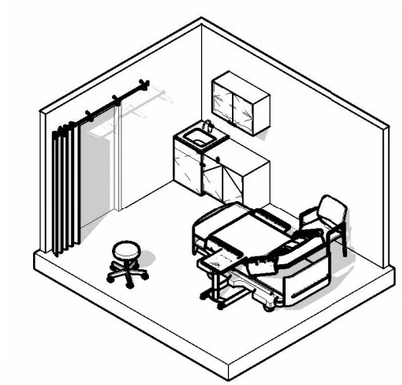


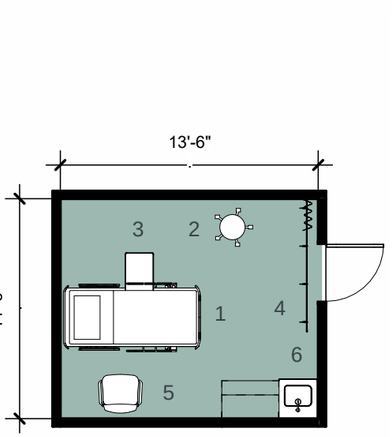


OP4 - TYPICAL BEHAVIORAL HEALTH OFFICE

1. DESK CHAIR
2. DESK
3. MONITOR
4. LOUNGE CHAIR
6. LOUNGE SOFA
7. STORAGE

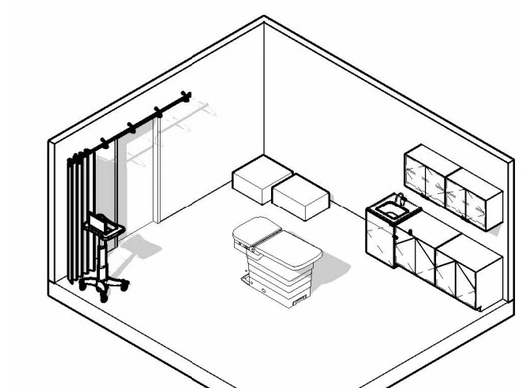
SIDE TABLE

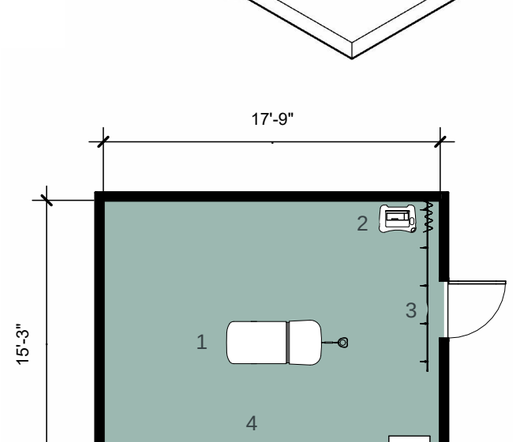




CAH1 - TYPICAL EMERGENCY EXAM

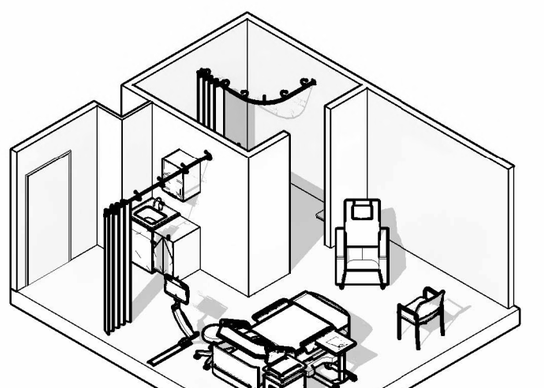
1. PATIENT BED
2. STOOL
3. OVERBED TABLE
4. PRIVACY CURTAIN
5. GUEST CHAIR
6. HANDWASH STATION

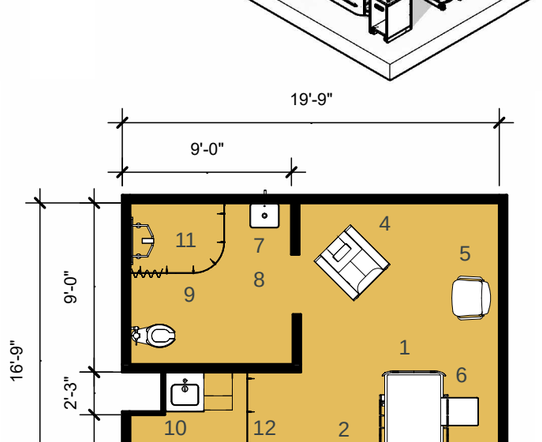




CAH2 - TYPICAL TRAUMA BAY

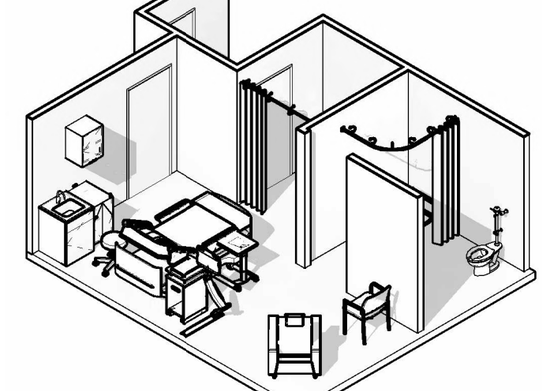
1. EXAM CHAIR
2. DISPLAY MONITOR
3. PRIVACY CURTAIN
4. HANDWASH STATION

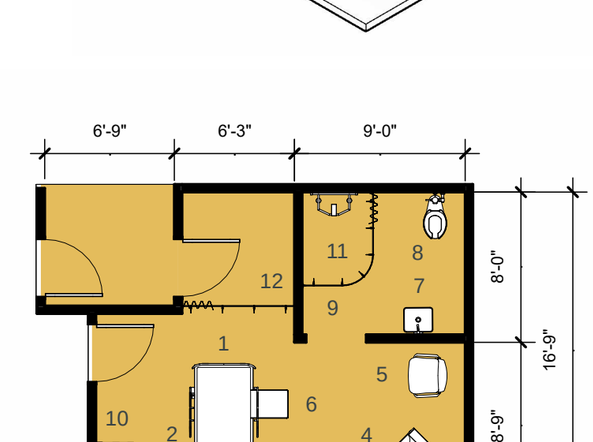




CAH3 - TYPICAL ACUTE PATIENT

1. PATIENT BED
2. STOOL
3. WALL MOUNTED DISPLAY
4. PATIENT RECLINER
5. GUEST CHAIR
6. BEDSIDE TABLE
7. SINK
8. FAUCET
9. TOILET PRIVACY CURTAIN
10. HANDWASH STATION
11. ADA SHOWER
12. PRIVACY CURTAIN





CAH4 - TYPICAL ACUTE PATIENT ANTE

03

ARCHITECTURAL

03 Architectural

3.1 Design Narrative

Location
The proposed SEARHC facility in Klawock, on Prince of Wales Island in Southeast Alaska will respond to its forested setting through a site-inspired architectural expression featuring inviting and sheltered entries, use of durable and low-maintenance exterior finishes and capturing of the site's wealth of generous views. The enclosure design will address wind-driven rain, prolonged wetting and winter condensation, with drainage paths and material transitions coordinated throughout the walls, glazing and roof.

Exterior Architectural vision
Set within the forested, rocky landscape of Prince of Wales Island, the design for the new Alicia Roberts Medical Clinic draws inspiration from the rugged elemental character of Southeast Alaska to deliver a welcoming landmark critical infrastructure facility for community health and wellness. The building's roof planes and deep, protective canopies evoke fractured coastal rock formations and the region's glacially shaped terrain, while dark standing-seam metal recalls rain-darkened stone and the shadowed evergreen forest. Wood-look inspired, timber-toned soffits, rhythmic vertical fins, and expansive glazing bring a contrasting sense of warmth and shelter. Façade articulation frames views of the surrounding landscape and draws Alaska's ever-changing northern latitude light deep into the building. The single-story facility brings together primary care, emergency and acute care, imaging, long-term care, pharmacy, dental, specialty care, and rehabilitation within a unified, intuitive healing environment. Rooted in its place yet forward-looking in expression, the clinic creates a resilient civic presence that embodies SEARHC's mission of Alaska Native People working in partnership to provide the best healthcare for their communities.

The building enclosure will combine highly durable wood-look rainscreen panels, or alternatively a wood-look fiber cement panel alternate, over a wall sheathing externally applied continuous insulation thermal envelope supported by steel-framed walls. Standing-seam metal panels over continuous polyisocyanurate insulation provide a timeless and protective roof, and thermally broken aluminum framed windows with double-glazed insulating glass units complete the building's exterior envelope. The lobby is articulated with a generous, glazed curtain wall with a horizontal mullion aligned with the entrance door-head datum. A VELUX Commercial Pinnacle Single Pitch skylight will provide a continuous strip of overhead daylight enabling natural light to enter deeply within the building's interior. The assemblies establish the basis for design coordination and pricing; final member sizes and performance will be verified during engineering and specification development.

Architectural Concept
The exterior options share a sloping roof and a vertical rhythm of wood-look surfaces and glass. Broad overhangs emphasize the entrance and extend shelter beyond the building's enclosure. Natural wood-look veneer, or the selected concrete-look fiber cement alternate, will bring warmth and textural subtleties to the solid wall areas, while dark aluminum window framing and clear glazing will define and offer openness to the public spaces. The material palette will be developed consistently across either exterior option, allowing the roof geometry and facade proportions to retain their architectural character.

Construction Criteria
The project code analysis will establish the governing jurisdiction, occupancy classifications, construction type and healthcare requirements. Alaska's 2021 IBC adoption excludes Chapter 13 and specified IECC references, and DOE reports no statewide commercial energy code. For this insulation check, the 2018 Alaska BEES commercial amendments provide a conditional benchmark: Prince of Wales is Zone 6; Table C-A402.2 The design is not required to follow the prescriptive path option that IECC provides, the design follows the U-Value approach alternatively and creates an assembly that prevents wall cavity condensation. Complete-assembly thermal performance will account for framing, thermal clips and secondary framing, anchors and perimeter conditions. Structural design will establish wind pressures, snow and drift loads, seismic movement and allowable deflections. Moisture analysis will use the proposed interior temperature and humidity conditions, including any humidified clinical areas.

3.2 Building Enclosure Systems

Entries
The main entrance will be expressed by the taller lobby glazing beneath the projecting roof. Door thresholds, approach paving and roof drainage will be coordinated to support accessible arrival and keep runoff away from the entry. The glazed entrance assembly will maintain the wall and roof air-barrier connections while accommodating movement of the supporting structure.

Exterior Wall Assembly
Opaque exterior walls will use a ventilated rainscreen of Parklex Prodema wood-look-veneer phenolic panels over continuous mineral wool insulation and a cold-formed steel stud backup wall. Nichiha Vintage concrete-look fiber cement panels are an alternate for one exterior design option, with locations to be identified on the elevations. The preliminary Parklex wall build-up is approximately 14 inches from the interior gypsum face to the exterior panel face, subject to the final attachment system and structural framing.

Interior Finish and Framing
From the interior, the wall will begin with 5/8-inch Type X gypsum board, with additional layers where required by the selected fire-rated assembly. The backup framing will initially be based on 6-inch galvanized steel studs at 16 inches on center. A 600S162-54 section, with a 1-5/8-inch flange and 54-mil thickness designation, may be carried as an initial pricing allowance. This designation corresponds to nominal 16-gauge framing.

Stud depth, steel thickness, spacing, bracing, jamb reinforcement and deflection tracks will be selected for the actual wall heights and loads.

The stud cavities will contain 6-inch mineral wool batts sized for steel framing, such as ROCKWOOL comfortbatt, with a published insulation value of R-24. Batts will fit closely around framing and services without gaps or overcompression. The exterior face of the studs will receive 5/8-inch glass-mat gypsum sheathing with joints and penetrations prepared for the selected membrane system.

Exterior Insulation and Rainscreen
A continuous, vapor-permeable air and water barrier will be applied over the exterior sheathing and connected to opening flashings, adjacent glazing, the roof air barrier and the base-of-wall waterproofing. The membrane will resist the exposure associated with the final panel joints. Flashings will drain outward at heads, sills, terminations and changes in material.

Outboard of this membrane, 5” thickness mineral wool provides a U-Value of 0.0476, which exceeds 2021 IECC required U-Value of U-0.049 for climate Zone 6, with an additional 2” of internal cavity stickpin supported mineral wool batt insulation to further enhance the wall system. Thermally improved clips and rails will support the cladding through the insulation and transfer loads to the framing. The wall U-factor will include those thermal bridges; the cavity and exterior insulation values will not be represented as the effective R-value of the complete wall. Both cladding options require this attachment review.

At Parklex-clad areas, the cladding will be separated from the insulation by a nominal 1-inch clear drained and ventilated cavity, increased where required by the selected installation system. The basis of design is Parklex Prodema NATURCLAD-W F, or an approved equivalent exterior-grade phenolic laminate panel with a natural wood-look veneer finish. These have 8 to 10 mm panel thickness, with final thickness, support spacing and fastening established by panel dimensions, wind pressures and manufacturer requirements. Panel joints and fixed and sliding attachment points will accommodate movement.

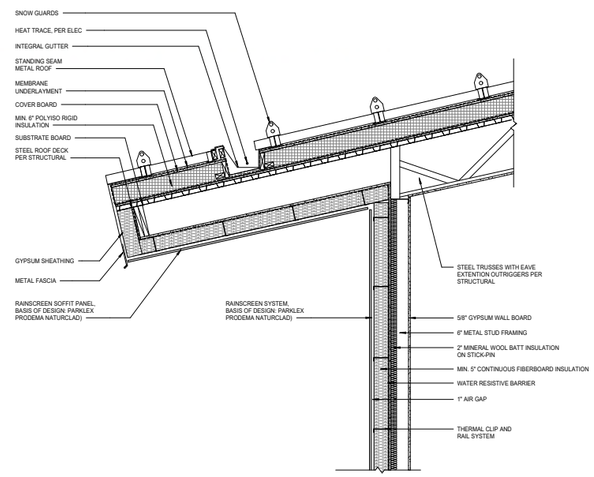
Openings at the cavity base and top will provide drainage and ventilation with insect protection. Fire blocking and cavity barriers will follow the approved wall assembly. The fire-retardant Parklex panel grade and complete wall construction will be verified for the building construction type, including NFPA 285 compliance where applicable. A panel surface-burning classification does not establish noncombustibility or approval of the complete exterior wall.

Alternate Fiber Cement Cladding
For the alternate exterior design, provide Nichiha Vintage Wood-look AWP 3030 in the Cedar finish at designated solid wall areas in lieu of Parklex Prodema panels. The panels are factory-finished fiber cement with an embossed wood-look grain surface, 5/8 inch (16 mm) thick and 17-7/8 inches by 119-5/16 inches (455 by 3030 mm). Install the panels vertically to emphasize the facade rhythm. Final finish will be confirmed with physical samples. The shorter AWP 1818 format is limited to horizontal installation and is not the basis for these vertical areas.

The steel stud backup, interior finish, sheathing, vapor-control approach, exterior air and water barrier, and 5-inch exterior of wall sheathing continuous mineral wool insulation will remain the assembly basis. Support the Nichiha system on engineered metal furring anchored through the insulation to the structural framing. Carry minimum 18-gauge horizontal shaped steel furring at maximum 16 inches on center, with minimum 18-gauge horizontal hat-channel support at the vertical starter tracks. Thermally improved attachments will be coordinated with structural loads and the wall thermal analysis.

Use Nichiha Ultimate Clips and Vertical Starter Tracks. The attachment system provides a 10 mm, approximately 3/8-inch, drained and back-ventilated space behind the panels; the panel and clip depth is approximately 1 inch outboard of the furring face. The starter tracks carry the vertical panels' gravity loads. Design furring and anchors for a minimum 5 psf cladding-system dead load, project wind loads and anticipated building movement. Recalculate the overall wall depth and coordinate window returns, trims and material transitions for this alternate.

Nichiha requires a Technical Design Review for vertical panels over continuous insulation; obtain review of the proposed assembly before completing specifications. Seal cut panel edges and provide manufacturer-required joints, flashings and clearances. Use corrosion-resistant fasteners suited to the project exposure. Verify the complete wall assembly against project fire-performance requirements, including NFPA 285 where applicable. Projecting fins remain separately detailed architectural elements with their own attachments. Any use at soffits or angled walls will follow the applicable Nichiha installation details.



01 TYPICAL EAVE WITH INTEGRAL GUTTER DETAIL

Roof Assembly
The sloping roof will use PAC-CLAD PAC-150 180-degree standing-seam roofing, or an approved equivalent, over continuous rigid insulation and an engineered truss and deck system. The assembly will keep the truss space within the conditioned enclosure. Non penetrative snow retention rails will ensure that snow does not slide or curl from the eaves.

Roofing and Water Protection
The roofing will have mechanically closed 180-degree seams approximately 1-1/2 inches high and concealed clips. Carry 24-gauge steel with a PVDF finish for pricing; evaluate 0.032-inch aluminum against coastal exposure and warranty conditions. Standing-seam roof planes will have a minimum slope of 1:12, with steeper slopes as indicated on the roof plan. This meets the published minimum slope for PAC-150. Coordinate transitions and valley drainage with the selected system. [6] The roof plane supporting the parallel skylight must also satisfy the skylight slope limits described below.

A full-coverage, high-temperature self-adhered underlayment will provide secondary water protection over a 5/8-inch glass-mat gypsum roof cover board. Primers, material compatibility and flashings will follow an assembly accepted by the roofing and membrane manufacturers.

The concept is an unvented “hot” roof. Petersen states that PAC-CLAD HT is not designed for full-coverage use over unvented roofs. Before specification, a compatible underlayment accepted for this configuration will be selected, or the assembly will be revised to incorporate a manufacturer-approved ventilated over-roof.

Insulation and Air Control
The selected insulation is 6 inches of roof-grade polyisocyanurate in two staggered 3-inch layers. Hunter H-Shield publishes a long-term thermal resistance of R-17.4 per layer, giving R-34.8. This exceeds the conditional BEES above-deck benchmark of R-30. R-34.8 must not be rounded up to satisfy an R-35 minimum if the governing standard requires one. Final product and thickness will be confirmed against that standard, attachment thermal bridges and cold-weather performance. Insulation will be kept dry during storage and installation.

A continuous air and vapor-control membrane will be located below the insulation on its warm side. Carry a 5/8-inch gypsum substrate board over steel decking to support the membrane. Seal penetrations and connect to the wall air barrier. Both gypsum board layers and the foam insulation will be coordinated with the required roof fire classification and fire-resistance rating.

Decking and Attachment
The preliminary assumption is steel trusses supporting profiled steel deck, directly or through purlins. Structural design will establish deck depth, gauge, spans and attachment. Roof clips will fasten through the cover board and insulation into structural support. The cover board will not provide screw withdrawal resistance. Clip bearing, insulation compression, fastener length and uplift resistance will be verified.

If wood trusses are selected, carry 23/32-inch, nominal 3/4-inch, structural plywood as an initial deck allowance, subject to span rating and loads. Widely spaced trusses require intermediate support. Any upper plywood nailbase will require a separately approved attachment configuration compatible with the building construction type.

Eaves, valleys and gutters will drain away from entrances and walkways. Snow retention, where required, will be engineered for the selected panels and supporting structure. Roof edges and penetrations will accommodate panel movement without interrupting the air, thermal and water-control layers.

Integral Double Gutters and Heat Trace
Provide integral double gutters along the two long outer roof edges indicated on the Option 1 roof plan. Recess the gutter troughs into the main roof near the perimeter, inboard of the fascia, and support them from the roof framing to preserve the continuous roof-edge profile. The double-gutter concept is a primary metal gutter over a separately drained, watertight secondary catch pan that protects the construction below if the primary gutter leaks.

Carry formed stainless steel for the primary gutter, with sealed or welded watertight joints and engineered expansion provisions. Provide a durable secondary waterproofing system beneath the gutter, turned up at the sides and ends and integrated with roof flashings. Isolate dissimilar metals and confirm compatibility with the roofing, membranes and heat-trace system. Maintain the roof insulation and continuous air and vapor-control layers around the recess wherever it adjoins conditioned space.

Slope primary gutters and secondary pans to dedicated outlets. Coordinate sumps and concealed rainwater leaders with the structure and plumbing design. Provide an independent emergency overflow route, with inlets below vulnerable flashing heights and discharge at visible, safe exterior locations clear of entrances and walkways. Secondary leak collection does not replace emergency overflow capacity. Gutter sections, slopes, outlet spacing and overflow elevations will be sized for tributary roof areas, design rainfall, blocked primary drainage and structural ponding limits.

Provide a listed, self-regulating roof-and-gutter deicing system, such as RAYCHEM IceStop or approved equal, with automatic temperature and moisture controls and ground-fault equipment protection. Trace the gutter flow paths, sumps, outlets and freeze-exposed leader segments to a freeze-protected discharge; include secondary outlets and overflow paths where exposed to freezing. Cable routing, output, circuit lengths and material compatibility will follow manufacturer engineering and product listings. Provide accessible controls and maintenance access for debris removal, gutter inspection and cable replacement. Heat tracing will supplement passive drainage and overflow protection.

Window and Glazing Assembly
Typical exterior glazing will use Kawneer 1600UT System 1, or an approved equivalent thermally broken aluminum curtain-wall system, detailed with gravity support at the floor slab or other designated base structure. This curtain-wall family will provide a common visual and thermal basis for the typical glazed walls and lobby. Framing will have nominal 2-1/2-inch sightlines and a consistent factory finish.

The selected glazing is double-glazed insulating glass with a low-E coating, argon-filled cavity and warm-edge spacer. Nominal 1-inch overall IGU thickness is the preliminary basis. Glass will be sized for the actual design pressures and support conditions, with heat treatment and safety-glazing construction selected as required. Where thicker glass or laminated components are needed, the overall IGU thickness and compatible framing details will be revised.

Typical glass widths will be limited to 4 feet, with heights reaching approximately 16 feet. Carry a 10-1/2-inch overall frame depth for the tall openings, corresponding to the deep 1600UT configuration with nominal 1-inch infill. This is a coordination allowance rather than a verified span capacity. Final mullion sections, reinforcement, setting blocks, glass chairs and anchors will be checked for wind, glass dead load and deflection. Kawneer offers optional steel reinforcement; special configurations will require manufacturer review.

Base anchors will transfer gravity loads to the slab or supporting structure. Head connections will provide lateral restraint while accommodating vertical building movement. Perimeter seals and flashings will connect to the adjacent wall air and water barrier and discharge water to the exterior. Whole-system U-factor, solar heat gain, visible transmittance and interior surface temperatures will be coordinated with energy and condensation analysis. Double glazing is the selected cost basis, with compliance established through the required system performance.

Lobby Curtain Wall Assembly
The lobby will use the same thermally broken Kawneer 1600UT System 1 family at overall glazed heights reaching approximately 20 feet. One horizontal mullion will be aligned with the entrance door-head datum to divide the elevation into shorter upper and lower IGUs. The exact mullion elevation and resulting glass cut sizes will be coordinated with the entrance design. Glass width will remain limited to 4 feet, and both glazed zones will use the selected double-glazed low-E construction.

The lobby framing will initially reserve the same 10-1/2-inch depth, subject to structural verification. The horizontal mullion will be designed to support the upper glass dead load and transfer it to the vertical framing. Dividing the glass reduces individual unit size and simplifies handling and replacement; it does not reduce the vertical mullion span unless the horizontal is connected to supporting building structure. The verticals will therefore be evaluated for the full unsupported height, with reinforcement or supplemental support where required.

A compatible thermally broken entrance system will be integrated below the transom. The header, jambs and supporting members will be designed for the glazing and entrance loads, including door operation and any automatic-door equipment. Lobby head anchors will accommodate truss and roof deflection while maintaining lateral restraint. Thresholds, perimeter flashings and seals will continue the enclosure control layers, and glass replacement access will be coordinated with the roof overhang and entrance canopy.

Skylight Assembly
The basis of design is a VELUX Commercial Pinnacle Single Pitch fixed glass skylight, nominally 5 feet wide by 80 feet long. The continuous assembly will be elevated on an insulated structural curb, with the glazing parallel to the supporting roof plane. Final drawings will distinguish the clear roof opening, outside curb dimensions and overall skylight size. The manufacturer will confirm the configuration and supporting conditions for the project loads.

Geometry and Framing
Pinnacle Single Pitch has a published installation range of 15 to 60 degrees from horizontal. A parallel installation therefore requires a roof slope at the skylight of at least 15 degrees, approximately 3.22:12. Confirm the actual roof pitch and the orientation of the 80-foot run before final detailing. A roof plane outside this range will require a manufacturer-approved custom configuration or revised geometry.

Thermally enhanced aluminum framing will divide the strip into replaceable glazed bays. Approximately twenty nominal 4-foot bays may be carried for layout and pricing, subject to the roof drainage direction and manufacturer engineering. Rafter depth, purlins, reinforcement, anchors and perimeter supports will be selected for glass dead load, snow and drift loads, wind pressure and uplift. An 80-foot-long opening does not represent an 80-foot unsupported structural span. Framing splices and movement joints will accommodate thermal expansion and building movement.

Glazing and Thermal Performance
The initial glazing basis is double-glazed insulating glass with a low-E coating, argon-filled cavity and warm-edge spacer, using a tempered exterior lite and a laminated safety-glass interior lite suitable for overhead glazing. Glass thickness, laminate

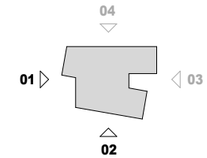
construction, overall IGU thickness and edge support will be established by the glass supplier and skylight manufacturer for the actual loads. Whole-system U-factor, solar heat gain, visible transmittance and interior surface temperatures will be verified for the project energy and condensation criteria.

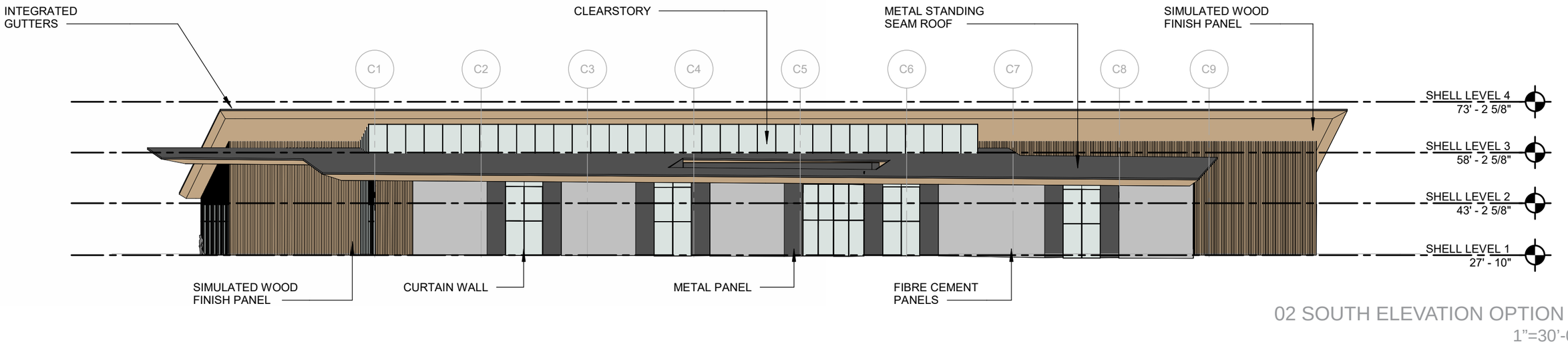
Curb and Roof Integration
The curb and its attachments will transfer loads to engineered roof framing around the opening. Continuous curb insulation and thermally isolated connections will limit thermal bridging. Curb height above the finished metal roofing will satisfy manufacturer flashing requirements and the project snow and drainage conditions. The roof air and vapor-control layer will seal continuously to the curb and skylight perimeter, with compatible transition membranes connecting the water-control layers.

Coordinate the PAC-CLAD standing-seam roofing with manufacturer-approved head, side and sill flashings, counter flashings and upslope crickets or diverters where needed. Runoff will pass around the curb without ponding or blocking roof drainage. Integral skylight drainage and condensation paths will remain open to their intended outlets. Roof-panel movement will be accommodated independently of the curb, and access will be provided for cleaning, inspection and individual IGU replacement.

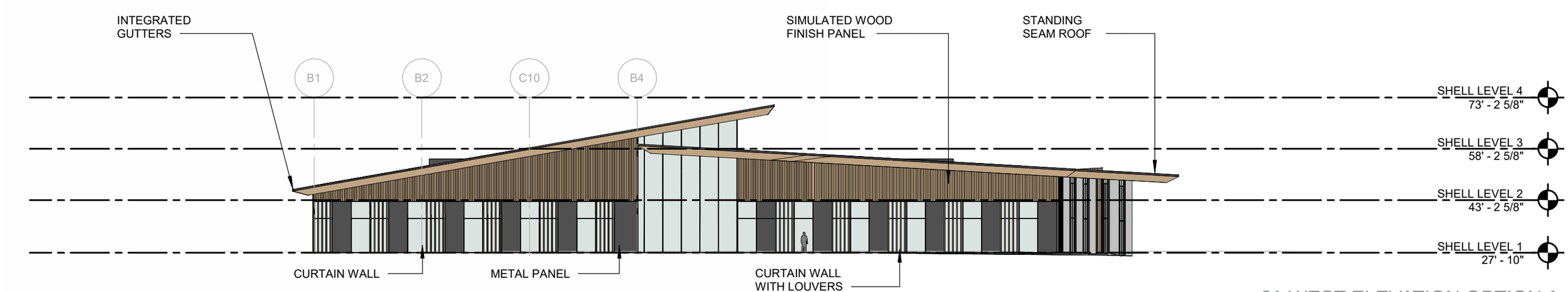
*** NOTE: QUANTITIES ARE APPROXIMATE**

OPT 1 (sf)								
ROOF	WOOD SOFFIT	LOBBY GLASS	PHENOLIC WOOD VENEER PANELS	CURTAIN WALL	CURTAIN WALL WITH LOUVER	METAL PANEL	CONCRETE	CLEARSTORY GLASS
78700	33000	1080	16490	7490	1730	3060	2870	1650





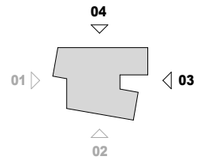
02 SOUTH ELEVATION OPTION 1
1”=30’-0”

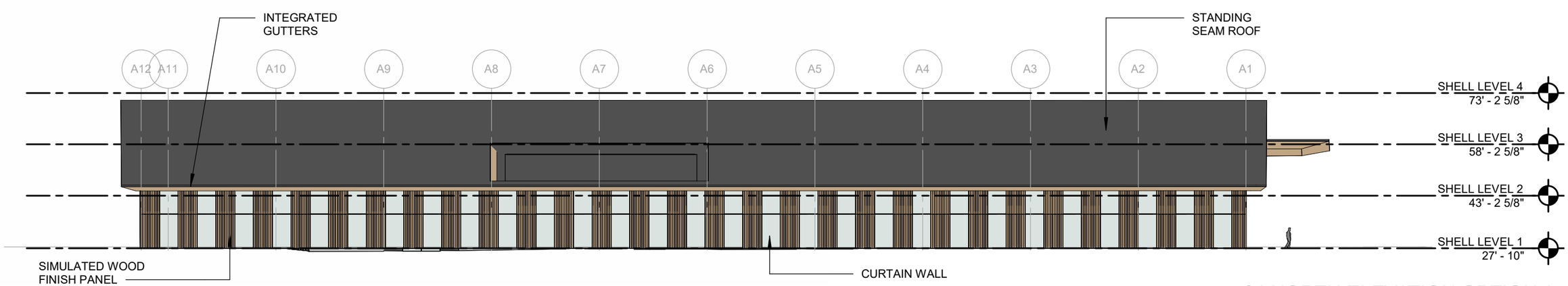


01 WEST ELEVATION OPTION 1
1”=30’-0”

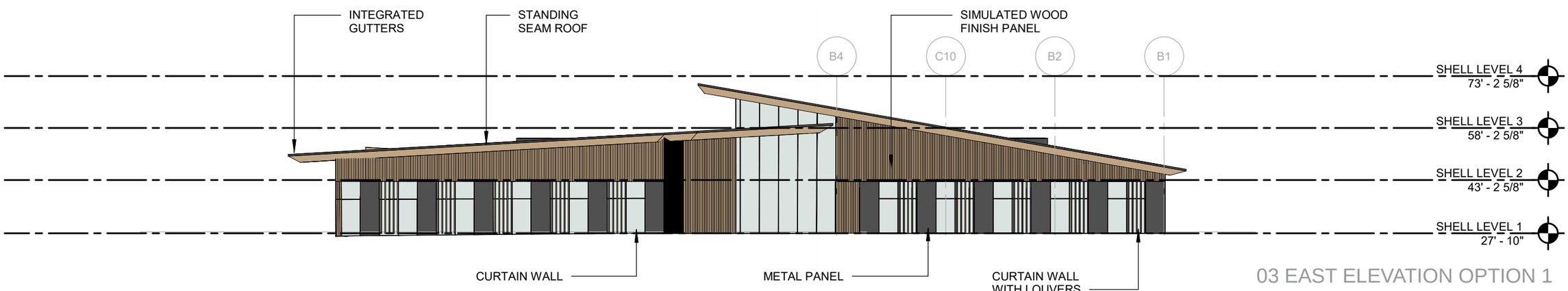
*** NOTE: QUANTITIES ARE APPROXIMATE**

OPT 1 (sf)								
ROOF	WOOD SOFFIT	LOBBY GLASS	PHENOLIC WOOD VENEER PANELS	CURTAIN WALL	CURTAIN WALL WITH LOUVER	METAL PANEL	CONCRETE	CLEARSTORY GLASS
78700	33000	1080	16490	7490	1730	3060	2870	1650





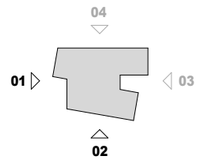
04 NORTH ELEVATION OPTION 1
1”=30’-0”

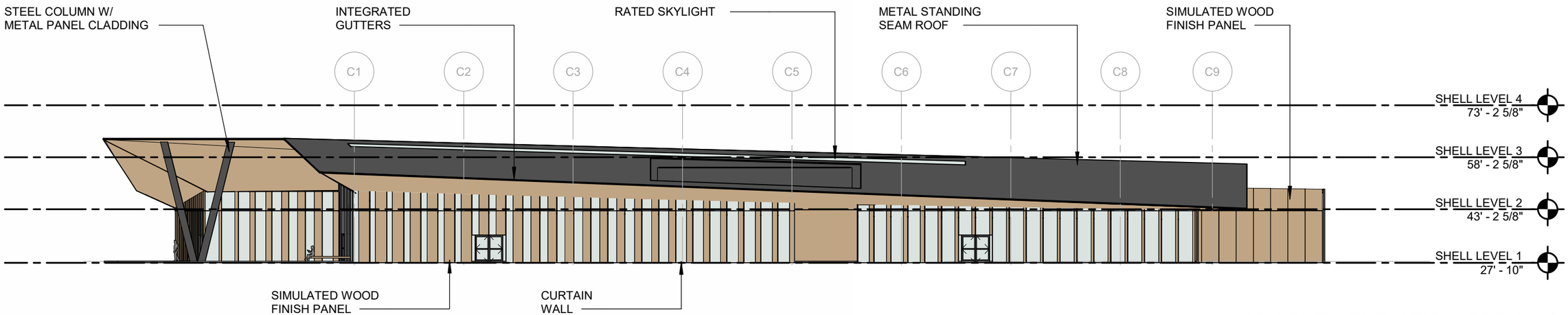


03 EAST ELEVATION OPTION 1
1”=30’-0”

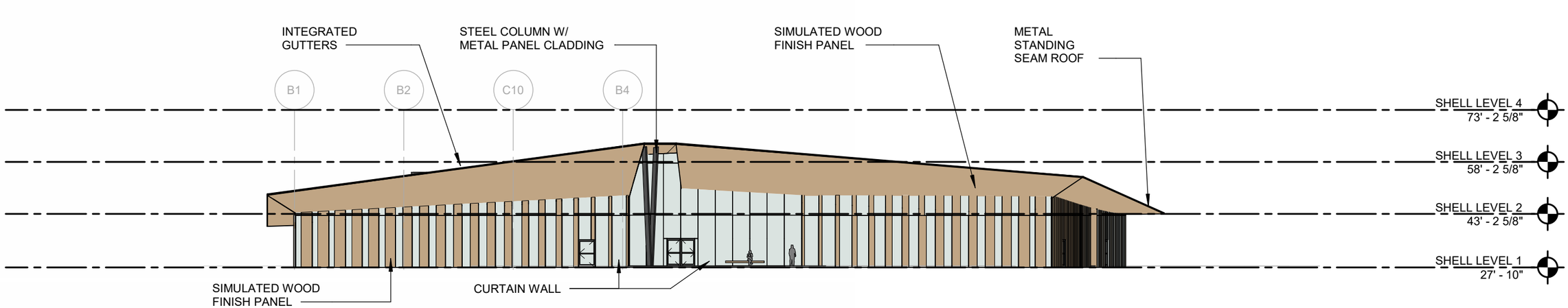
*** NOTE: QUANTITIES ARE APPROXIMATE**

OPT 2 (sf)					
ROOF	WOOD SOFFIT	LOBBY GLASS	PHENOLIC WOOD VENEER PANELS	CURTAIN WALL	SKYLIGHT
62738	21750	2923	12312	16862	1835





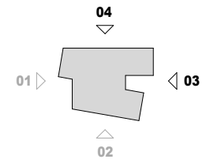
02 SOUTH ELEVATION OPTION 2
1”=30’-0”

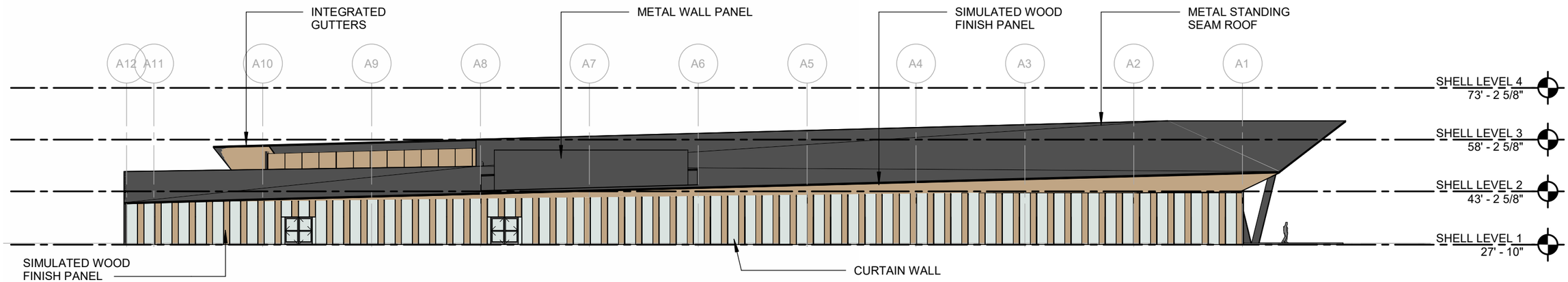


01 WEST ELEVATION OPTION 2
1”=30’-0”

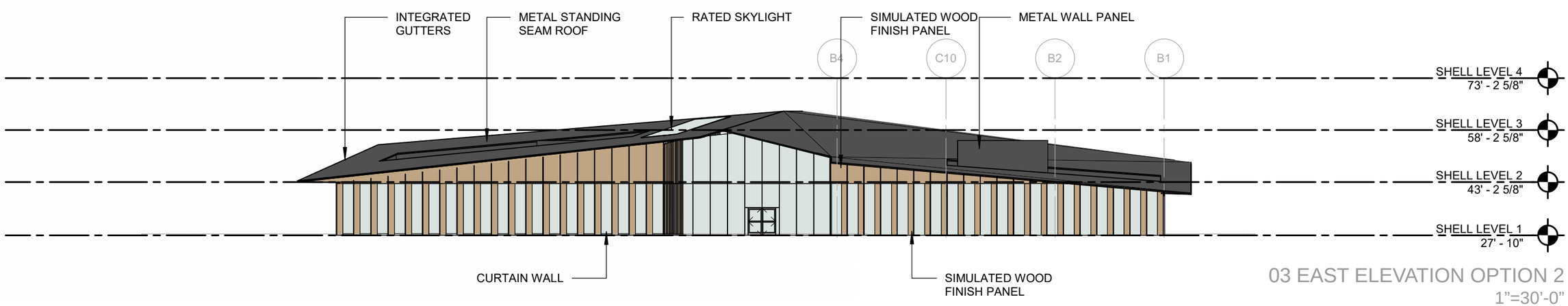
*** NOTE: QUANTITIES ARE APPROXIMATE**

OPT 2 (sf)					
ROOF	WOOD SOFFIT	LOBBY GLASS	PHENOLIC WOOD VENEER PANELS	CURTAIN WALL	SKYLIGHT
62738	21750	2923	12312	16862	1835





04 NORTH ELEVATION OPTION 2
1”=30’-0”



03 EAST ELEVATION OPTION 2
1”=30’-0”



EXTERIOR ENTRY - SOUTHWEST



ENTRY FACADE - WEST



ENTRY FACADE - SOUTHWEST



ENTRY FACADE - FRONT VIEW







ENTRY FACADE - SOUTHWEST



ENTRY FACADE - WEST



ENTRY FACADE - WEST

ENTRY FACADE - SOUTHWEST



ENTRY FACADE - SOUTHWEST



ENTRY FACADE - NORTHWEST



ENTRY

3.3 Codes and Standards

2021 National Fire Protection Association (NFPA) 101 Life Safety Code

2012 National Fire Protection Association (NFPA) as adopted by CMS

2021 NFPA 99 Health Care Facilities Code

2010 Americans with Disabilities Act (ADA) Standards for Accessible Design

2022 Facility Guidelines Institute (FGI) Guidelines for Design and Construction of Outpatient Facilities and Hospitals

2021 International Building Code (IBC)

2021 International Fire Code (IFC)

2017 International Code Council (ICC) A117.1 Accessible and Usable Buildings and Facilities

2021 International Mechanical Code (IMC)

2020 National Electrical Code

International Energy Conservation Code (IECC) – *Note: Although the State of Alaska has not formally adopted the IECC, the design team utilizes the IECC as a baseline standard for energy efficiency and environmental performance.*

Occupancy:	Group I-2 Condition 2 Group B Group H-3 (med gas storage)
Construction Type:	II-B Construction (non-combustible, unprotected) if <60,000SF

Building Area (floor plate): 59,500 BGSF *(If II-B, floor plate area = max 60,000SF)*

** Note: penthouse does not contribute to building area or number of stories per IBC 1511.1. Limitations: 18 feet max height above roof deck as measured to the average height of the roof of the penthouse*

Building Height: 38 feet (single story)

Sprinklers: Group I-2 occupancies require automatic fire sprinkler systems be installed throughout in accordance with NFPA 13 (IBC 903.2.6)

<u>Automatic Sprinkler System</u>

- Group I-2 occupancies require an automatic fire sprinkler system installed throughout in accordance with NFPA 13 (IBC 903.3.1 & 903.2.6). Non-sprinklered facilities are not permitted for new I-2 medical facilities.
    - No Size or Occupant Exemption:
        - Group I-2 requires sprinkler protection throughout the entire building, regardless of size or level count
- Group I-2 Condition 2 occupancies (IBC 807.5.3.3):
    - Combustible decorative materials placed on walls are limited to 30% max of the wall area it is attached to
        - Group I-2 Condition 1 refers to facilities providing nursing and medical care without emergency services
        - Group I-2 Condition 2 includes facilities that require assisted staff response and have additional safety measures like smoke detection and barriers. The key difference lies in the level of assistance required for occupants during emergencies

<u>Separated Occupancies Group B & I-2 (508.4 IBC 2021 Separated Occupancies)</u>

- 2-hour

<u>Means of Egress & Travel Distance Limits</u>

- Max Exit Access Travel Distance:
    - Max 200’ in an NFPA 13 sprinklered I-2 facility (IBC Table 1017.2)
- Common Path of Egress Travel:
    - Max 75’ (IBC Table 1006.2.1)
- Dead-End Corridors (IBC 1020.5 Dead Ends):
    - Group I-2 occupancies: In Group I-2, Condition 2 occupancies, the length of dead-end corridors that do not serve patient rooms or patient treatment spaces shall not exceed 30’
        - Exceptions:
            - NONE. 50’ dead-end corridors <u>do not</u> apply to Group I-2. A corridor serving both outpatient Group B areas and Group I-2 patient-care areas should not be treated as eligible for the Group B exception just because it part of the corridor serves Group B. Apply the more restrictive I-2 condition unless the egress paths are clearly separated and independently classified
    - 407.4.1 Direct Access to a Corridor
        - Habitable rooms in Group I-2 occupancies shall have an exit access door leading directly to a corridor.
    - Group-B occupancies: Where more than one exit or exit access doorway is required, the exit access shall be arranged such that dead-end corridors do not exceed 20’ in length.
        - Exceptions:
            - A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor

Corridor & Doorway Widths

- Corridor Clear Width:
  - Min 8’ (96”) in patient care areas where patients are moved on beds, stretchers, or gurneys (IBC 1020.3)
- Non-Patient Corridors:
  - Min 44” for administrative/staff areas with occupant loads > 50 (IBC 1020.3)
- Door Width:
  - Min 41.5” clear opening width for doors serving bed/stretcher movement in patient treatment rooms and sleeping rooms (IBC 1010.1.1)

Minimum Number of Exits & Exit Separation

- Exits per level:
  - Min 2 exits per level for occupant loads up to 500 (IBC Table 1006.3.3)
- Exit Separation Distance:
  - Exits must be separated by at 1/3 the diagonal dimension of the overall area served when fully sprinklered (IBC 1007.1.1)

Smoke Compartments (IBC 407.5)

- Subdivision into Smoke Compartments:
  - Every story with Group I-2 care areas must be divided into a min of two smoke compartments.
- Compartment Size Limit:
  - No single smoke compartment can exceed 22,500 SF in floor area.
- Travel Distance to Smoke Barrier Door:
  - Max 150’ from any point in a smoke compartment to a smoke compartment barrier door
- Refuge Area:
  - Each smoke compartment must provide sufficient refuge area (min net 30 SF per care patient) to accommodate occupants evacuated from an adjacent compartment during a defend-in-place scenario.

Group I-2: 1-Hr Fire Ratings (IBC TABLE 509.1 INCIDENTAL USES)

- Furnace rooms in Group E, I, and R-1, R-2, R-3, and R-4 occupancies regardless of Btu input, and furnace rooms of all other occupancies where the largest piece of equipment is over 400,000 Btu per hour input
  - 1 hour or provide automatic sprinkler system
- In Group I-2 occupancies, laboratories not classified as Group H
  - 1 hour and provide automatic sprinkler system
- In ambulatory care facilities, laboratories not classified as Group H
  - 1 hour or provide automatic sprinkler system
- In Group I-2, laundry rooms over 100 square feet
  - 1 hour
- In ambulatory care facilities or Group I-2 occupancies, waste and linen collection rooms with containers that have an aggregate volume of 10 cubic feet or greater
  - 1 hour
- In other than ambulatory care facilities and Group I-2 occupancies, waste and linen collection rooms over 100 square feet
  - 1 hour or provide automatic sprinkler system
- In ambulatory care facilities or Group I-2 occupancies, storage rooms greater than 100 square feet
  - 1 hour

Group H-3 (Med gas storage: 307.1 High-Hazard Group H)

- Group H-3 requires a 2-hour fire barrier

Group B (IBC TABLE 509.1 INCIDENTAL USES)

- Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower: 1-hour fire barrier or automatic sprinkler system

3.3.2 Occupancy, Area, and Egress Basis

- Occupancy I-2 facilities providing 24-hour medical care to more than five persons who are incapable of self-preservation
- Occupancy Group B (Business) outpatient clinic, no overnight stays or general anesthesia assumed
- Occupancy Group H-3 (High-Hazard Group) areas containing materials that readily promote combustion or pose a physical hazard (e.g.; medical gas storage)

3.3.3 Campus Parking, Alaska DCCED (Adopted 1981), Section 8.24.075 Parking:

						80 Estimated Staff Count		
	Building or Space	Factor	BGSF	Required Parking Spaces	(1/2) one-half space per employee for offices and professional buildings (per DCCED Section 8.24.075)	Standard parking spaces	ADA (1) one accessible space per 25 total	(1) one in (6) six accessible spaces to be van-accessible
	Phase 1							
1	Critical Access Hospital	300	52,434	175	40	215	9	2
	Subtotal Phase 1			175	40	215	9	2
	Phase 2							
2	Long Term Care	300	7,066	24	0	24	1	1
	Subtotal Phase 2			24	0	24	1	1
	Totals		**59500**	**199**	**40**	**239**	**10**	**3**
							Total Spaces	249

No vehicle shall be parked within twenty (20) feet of any intersection

3.3.4 Authority Having Jurisdiction (AHJ)

The Authority Having Jurisdiction (AHJ) for this project is the State of Alaska Division of Fire and Life Safety, Office of the State Fire Marshal, with jurisdiction exercised through its Anchorage office. All fire and life safety code compliance, plan review, and inspection requirements for this facility shall be coordinated with and approved by the State Fire Marshal's office prior to construction and occupancy.

3.3.5 Plumbing Fixture Counts

NORTH WING:
Group B Occupancy:
37,148 / 150 gross = 248 total / 2 = 124 men & 124 women
- 3 WCs for men, 2 Urinals (req) + provide 3 additional urinals (or WC) per note #3
- 8 WCs for women
- 3 Lavs for men
- 3 Lavs for women
- Drinking Fountains: 248 / 150 = 2 drinking fountain
- Other: 1 service sink or laundry tray

SOUTH WING:
Group I-2 Occupancy *OUTPATIENT* (Emergency Area)
4,669 / 100 gross = 47 total / 2 = 24 men & 24 women

Waiting Room
- 1 WC per waiting room
- 1 Lav per waiting room
- 1 Drinking fountain per waiting room
-

Staff Areas
- 2 WCs for men, provide 1 additional urinal (or WC) per note #3
- 3 WCs for women
- 1 Lavs per 40 men = 1 Lavs for men
- 1 Lavs per 40 women = 1 Lavs for women
- Drinking Fountains: not required
- Other: not required

Group I-2 Occupancy *OUTPATIENT* (Imaging, Sterile, Dietary, Laundry)
8,644 / 100 gross = 87 total / 2 = 44 men & 44 women
- 1 WCs for men, 1 urinal (req), provide 1 additional urinal (or WC) per note #3
- 3 WCs for women
- 1 Lavs for men
- 1 Lavs for women
- Drinking Fountains: 1 per 150 = 1 drinking fountain
- Other: 1 service sink or laundry tray

Group I-2 Occupancy *INPATIENT* (Acute Area)
1,627 / 240 gross = 7 total / 2 = 4 men & 4 women
- 1 WC per patient room
- 1 Lav per patient room
- 1 bathtub or shower per patient room
- 1 drinking fountain per 150 persons = 1 drinking fountain

Group I-2 Occupancy *INPATIENT* (LTC area NOT INCL PATIENT ROOMS)
4,175 / 240 gross = 18 total / 2 = 9 men & 9 women
- 1 WC for men (staff)
- 1 WC for women (staff)
- 1 Lav per 40 men (staff) = 1 Lav
- 1 Lav per 40 women (staff) = 1 Lav

Group I-2 Occupancy *INPATIENT* (LTC PATIENT ROOMS)
- 1 WC per patient room
- 1 Lav per patient room
- 1 bathtub or shower per patient room
- 1 drinking fountain per 150 persons = 1 drinking fountain

3.4 Life Safety Plans



LIFE SAFETY LEGEND

- 1-HOUR SMOKE BARRIER
- 1-HOUR FIRE BARRIER
- 2-HOUR SMOKE BARRIER
- GROUP I-2 OCCUPANCY
- GROUP B OCCUPANCY
- GROUP H-3 OCCUPANCY
- EXIT

VISION AND CONCEPT - Mind, Body, and Spirit

The interior of the Alicia Roberts Medical Center will support SEARHC's vision of balancing **mind, body and spirit**. Surrounded by a remarkable natural landscape, the interior environment will create meaningful connections to nature, engage the senses, celebrate the people and culture of the region while supporting the delivery of exceptional clinical care.



Mind – create clarity, support brain health and reduce stress.

Wayfinding - a warm welcome and intuitive visual cues will help people orient themselves and find their way through the building with ease.

Brain Health - spaces for focus, collaboration, learning, rest and social connection will support cognitive health and overall well-being.

Visual Order - visual clutter and unnecessary distractions will be minimized to create calm, understandable environments and reduce underlying stress.

Neurodiversity + Neuroaesthetics – inclusive environments will recognize different ways people perceive and experience space, considering the senses and creating opportunities for choice, comfort and belonging.

Body – support movement, comfort, health and the physical experience of space

Mobility - spaces will support people of varying ages and abilities, allowing them to move throughout the building with east.

Ergonomics - design decisions will consider how the body interacts with space at every scale.A variety of seating and postures will accommodate bodies of all shapes, size and age, while thoughtful dimensional detail will support everyday movements—from reaching and bending to sitting, standing and turning.

Infection Control - materials, details and spatial decisions will support environments that are easy to maintain and contribute to the health and well-being of patients, families and caregivers.

Spirit - create belonging through culture, craft and connection to place.

Beauty – the beauty of the people and the place can be found everywhere and will be reflected throughout the experience.

Tradition – design will carry meaning and purpose rooted in history, legacy and the people of the region, while SEARHC's vision will inform a contemporary healthcare environment.

Craft - built alongside tradition, local methodologies, materials and hands will shape the environment. Lines that swell, contract, bend, curve and join will express the character of traditional art.

Nature - connection to the surrounding landscape will strengthen a sense of place and connection to the human spirit. Materials grounded in place will take on new life within the building, creating an environment that feels authentic, familiar and enduring.

Together, these principles create a healthcare environment designed for the whole person and supporting **mind, body and spirit.**

SCULPTED BY WATER AND GROUNDED IN PLACE

The architecture creates a strong connection to the surrounding landscape, drawing views through the building to the trees and water beyond. From arrival, openness and framed views establish a relationship between interior and exterior, while exterior wood eaves extend into the building, creating a seamless connection between the two. Inspired by the movement of water and its ability to shape the landscape, soft curves are carved into thresholds and entry points. These forms also reference formline art, where lines swell, contract, bend, curve and join. Sculpted moments mark transition and movement, creating an intuitive architectural language that guides people through the building.

Materials emerge from the character of the site and region. Stone grounds the lobby in the surrounding landscape, with opportunities to incorporate site stone as sculptural boulders, tables or benches. Regional wood species bring warmth, texture and sensory connection to the forests of Southeast Alaska. Authentic wood will be used where appropriate, balanced with durable materials supporting healthcare cleaning and infection prevention.

Traditional relationships with wood, stone, shell and bone create opportunities to connect architecture with the history, craft and culture of the region. Against these natural materials, color becomes restrained and purposeful—providing identity, supporting wayfinding and creating moments of artistry and cultural expression. Together, the architecture is **grounded in the land and sculpted by water**—rooted in the materials, landscape and culture of Southeast Alaska while shaped by the movement and enduring influence of water.



Western Red Cedar | Yellow Cedar | Western Hemlock | Sitka Spruce | Douglas Fir



PRICING AND METHODOLOGY

This pricing narrative uses the **SEARHC Master Manual Interior Specifications** as the basis for pricing. Where a room type or required information is not addressed in the manual, supplemental information has been provided and identified as new information.

Rooms with similar finish requirements have been grouped and identified as a **Room Type**. Each Room Type identifies floor, wall, ceiling and casework finishes, along with applicable accessories and decorative lighting. A **Room Type Plan** is included to identify the location of each Room Type within the project.

The **Lobby** is considered a special Room Type. Due to the unique nature of this space, descriptive notes are included on the drawing to communicate the intended materials, finishes and design character for pricing.



ROOM TYPE KEY

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LEGEND
Proposed Standard - Not included in standard finish packet
● Discontinued Material - Price comparable material
\+ Recommended Finish Modification - Added to Standard

All material finishes shall conform to the SEARHC Master Manual, Interior Specifications.

1. LOBBY CIRCULATION
Ceiling: WD-1
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish
Hardware: H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: Overall lighting to be concealed in ceiling and wash light on surfaces from above. Provide concealed lighting in alcoves.
Base: Resilient Base 4”H
Flooring: Carpet Tile; Resilient Sheet Flooring
Applicable Rooms: Lobby Circulation

2. LOBBY RECEPTION
Ceiling: WD-1
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish
Hardware: H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: Similar to “Lightart - Elements Chandelier” - Custom Shaped.
Base: Resilient Base 4”H
Flooring: Carpet Tile; Resilient Sheet Flooring
Applicable Rooms: Lobby Reception

3. VESTIBULES
Ceiling: WD-1
Walls: Paint - Eggshell Finish
Base: Resilient Base 4”H
Flooring: Walk Off Mat
Applicable Rooms: Emergency, Behavioral Health, Long Term Care, BOH, Staff Area, and Main Vestibules

4. EMERGENCY WAITING
Ceiling: + 30% Gypsum Board; + 70% Wood Veneer Plank
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish; Corner Guards; Acoustic Wall Paneling
Accessories: Resin Paneling; Roller Shades
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: + Similar to “LightArt - Cloudform. Ceiling Mounted
Base: Resilient Base 4”H
Flooring: ● Walk Off Mat; ● Carpet Tile; ● Resilient Sheet Flooring
Applicable Rooms: Emergency Waiting, Emergency Admin
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Inpatient Design Standards section, Page VIII-5, for the Waiting rendering and finish palette.

5. PUBLIC WAITING
Ceiling: + 10% Gypsum Board; + 15% GWB; 75% Armstrong Optima Plank
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Rigid Wall Protection; Paint - Eggshell Finish; Corner Guards, Acoustic Wall Paneling
Accessories: Resin Paneling; Roller Shades
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: + Concealed linear lighting, indirect.
Base: Resilient Base 4”H
Flooring: Resilient Sheet Flooring; ● Carpet Tile, Walk Off Mat
Applicable Rooms: Public Waiting
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long-Term Care Design Standards section, Page VIII-4, for the Reception | Waiting finish palette.

6. BEHAVIORAL HEALTH & ADMIN WAITING
Ceiling: + 30% Gypsum Board; + 70% Wood Veneer Plank
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish; + Corner Guards, Rigid Wall Protection, CSI Creative Green Walls Preserved Moss
Accessories: Resin Paneling; Roller Shades
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: + Similar to “LightArt - Cloudform. Ceiling Mounted
Base: Resilient Base 4”H
Flooring: ● Resilient Sheet Flooring; ● Carpet Tile, ● Walk Off Mat
Applicable Rooms: Behavioral Health Waiting Room and Reception, Administration Waiting
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Behavioral Health Outpatient Design Standards section, Page I-6, for the Waiting finish palette, and Page I-5, for the Entry | Reception finish palette.

LEGEND
Proposed Standard - Not included in standard finish packet
● Discontinued Material - Price comparable material
\+ Recommended Finish Modification - Added to Standard

All material finishes shall conform to the SEARHC Master Manual, Interior Specifications.

7. OUTPATIENT CIRCULATION
Ceiling: +Gypsum Board Soffits; +Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 9/16” Grid
Walls: Rigid Wall Protection; Paint - Eggshell Finish; +Corner Guards
Accessories: Roller Shades
Decorative Lighting: L-6; see Page VIII-41 in the Appendix for details
Base: Resilient Base 4”H
Flooring: Resilient Sheet Flooring; Carpet Tile
Applicable Rooms: Primary Care, Rehab, Dentistry, Long Term Care, Administration, Optometry Circulation
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-11, for the Corridor finish palette.

8. INPATIENT CIRCULATION
Ceiling: Gypsum Board Soffits; Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 9/16” Grid
Walls: Rigid Wall Protection; Paint - Eggshell Finish; Corner Guards; Crash Rails; Wall Guards
Accessories: N/A
Hardware: N/A
Fixtures: N/A
Decorative Lighting: L-6; see Page VIII-41 in the Appendix for details
Base: Resilient Sheet Flooring - Integral Base 6”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Emergency, Imaging, Lab, and Acute Circulation

9. CONSULT & BEHAVIORAL HEALTH CIRCULATION
Ceiling: +Gypsum Board Soffits; +Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 9/16” Grid
Walls: Rigid Wall Protection; Paint - Eggshell Finish; +Corner Guards
Accessories: Roller Shades
Decorative Lighting: +L-6; See Page VIII-41 in the Appendix for details
Base: Resilient Base 4”H
Flooring: ●Carpet Tile
Applicable Rooms: Behavioral Health and Opiod Circulation, Consult
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Behavioral Health Outpatient Design Standards section, Page I-8, for the Corridor finish palette.

10. LONG TERM CARE PATIENT ROOMS
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry
Walls: Paint - Eggshell Finish; Wallcovering
Accessories: ●Curtain
Hardware: H-1; H-2; H-12; See Page VIII-32-34 in the Appendix for details
Decorative Lighting: L-4; L-5; see Page VIII-40-41 in the Appendix for details
Base: Resilient Base 4”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Long Term Care Patient Rooms
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-5, for the Resident Sleep Room finish palette.

11. LONG TERM CARE DINING/ACTIVITY ROOM
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Rigid Wall Protection; Paint - Eggshell Finish; Acoustic Wall Paneling
Hardware: H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: L-7; see Page VIII-41 in the Appendix for details
Base: Resilient Base 4”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Long Term Care Dining/Activity Room
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-7, for the Dining Room finish palette & Page VIII-13, for the Physical Therapy | Activity Room finish palette.

12. COUNSELING OFFICES
Ceiling: +Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Walls: Paint - Eggshell Finish
Accessories: Roller Shades; A-11; A-12; See Page I-19 in the Appendix for details
Base: Resilient Base 4”H
Flooring: ●Carpet Tile
Applicable Rooms: Behavioral Health MBH Rooms, VTC Room, Therapist Office, PCC Office
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Behavioral Health Outpatient Design Standards section, Page I-9, for the Counseling Office finish palette.

LEGEND
Proposed Standard - Not included in standard finish packet
● Discontinued Material - Price comparable material
\+ Recommended Finish Modification - Added to Standard

All material finishes shall conform to the SEARHC Master Manual, Interior Specifications.

13. SUPPORT SPACES
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish
Accessories: Roller Shades; A-9; See Page II-19 in the Appendix for details
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Base 4”H
Flooring: ● Carpet Tile
Applicable Rooms: Mother’s Room, Behavioral Health Group Room, Wellness Room
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Outpatient Design Standards section, Page II-7, for the Mother’s Room finish palette & Behavioral Health Outpatient Design Standards, Page I-9, for the Small Group Space finish palette.

14. SUPPORTIVE CARE
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Rigid Wall Protection; Paint - Eggshell Finish
Hardware: H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Base 4”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Open Gym, Long Term Central Bathing
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-13, for the Physical Therapy | Activity Room finish palette.

15. EXAM ROOMS
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Wallcovering; Paint - Eggshell Finish
Accessories: Privacy Curtain and Curtain Track; Roller Shades
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Sheet Flooring - Integral Base 6”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Primary Care Exam Rooms, Eye Lane, Exam Specialty
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Outpatient Design Standards section, Page II-6, for the Exam Room rendering and finish palette.

16. OPERATORY ROOMS
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish
Accessories: Resin Paneling; Dental Chair Upholstery
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Sheet Flooring - Integral Base 6”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Operatory Rooms, Open Operatory Room
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Dental Treatment Areas Design Standards section, Page II-32, for the Dental Treatment Areas finish palette.

17. TREATMENT ROOMS
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Wall: Rigid Wall Protection; Paint - Eggshell Finish
Accessories: Privacy Curtain and Curtain Track
Hardware: H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Sheet Flooring - Integral Base 6”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Rehab Treatment and Specialty Treatment Rooms, Primary Care Treatment Room, Opiod Treatment Room
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-12, for the Exam finish palette.

18.PROCEDURE & IMAGING ROOMS
Ceiling: 10% Gypsum Board; 90% Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Solid Surface Countertop
Wall: Rigid Wall Protection; Paint - Eggshell Finish; Corner Guards
Base: Resilient Sheet Flooring - Integral Base 6” H
Flooring: Resilient Sheet Flooring
Applicable Rooms: CT, Procedure Room, U/S, X-Ray, Mammo, Dexa, Biomed, Ceph Arm
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Inpatient Design Standards section, Page VIII-9, for the Procedure Room finish palette.

LEGEND
Proposed Standard - Not included in standard finish packet
● Discontinued Material - Price comparable material
\+ Recommended Finish Modification - Added to Standard

All material finishes shall conform to the SEARHC Master Manual, Interior Specifications.

19. TRAUMA BAYS
Ceiling: Gypsum Board – Epoxy Paint
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Rigid Wall Protection; Epoxy Paint; Corner Guards
Accessories: Privacy Curtain and Curtain Track
Hardware: H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Sheet Flooring - Integral Base 6” H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Trauma Bay

20. NURSE STATIONS
Ceiling: + 30% Gypsum Board; + 70% Wood Veneer Plank see page 14 for details
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Wall: Rigid Wall Protection; Paint - Eggshell Finish; Acoustic Wall Paneling; Corner Guards
Accessories: Resin Paneling
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: + Metal cylinder pendant provided at each seat
Base: + Resilient Sheet Flooring - Integral Base 6” H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Nurse Stations, EMS Work
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Inpatient Design Standards section, Page VIII-8, for the Nurse Station finish palette.

21. RESTROOMS
Ceiling: + Gypsum Board - Epoxy Paint
Millwork: + Solid Surface Countertop
Walls: Wall Tile - Full Height
Accessories: N/A
Hardware: + H-3-H-8; see Page VIII-32-33 in the Appendix for details
Fixtures: F-1; F-2; F-7; F-14; see Pages VIII-26-28 in the Appendix for details
Decorative Lighting: L-1; L-2; L-3; see Page VIII-40-41 in the Appendix for details
Base: Tile Base 6”H
Flooring: Floor Tile
Applicable Rooms: Staff & Public Restrooms, Patient Restroms, Specimen Toilet, On Call Restroom
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-12, for the Public | Staff Restroom finish palette.

22. LONG TERM CARE RESIDENT BATHROOM
Ceiling: + Gypsum Board - Epoxy Paint
Millwork: + Solid Surface Countertop
Walls: Wall Tile – Full Height
Accessories: A-3; see Page VIII-30 in the Appendix for details
Hardware: H-3-H-10; H-12; see Page VIII-32-34 in the Appendix for details
Fixtures: F-1-F-7; F-13; see Pages VIII-26-28 in the Appendix for details
Decorative Lighting: L-1; L-2; L-3; see Page VIII-40-41 in the Appendix for details
Base: Tile Base 6”H
Flooring: Floor Tile
Applicable Rooms: Long Term Resident Bathrooms
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-5, for the Resident Bathroom finish palette.

23. INPATIENT RESTROOMS
Ceiling: + Gypsum Board - Epoxy Paint
Millwork: + Solid Surface Countertop
Walls: Wall Tile – Full Height
Accessories: Privacy Curtain; + A-3; see Page VIII-30 in the Appendix for details
Hardware: + H-2; H-3-H-10; H-12; see Page VIII-32-34 in the Appendix for details
Fixtures: + F-1-F-7; F-13; see Pages VIII-26-28 in the Appendix for details
Decorative Lighting: + L-1; L-2; L-3; see Page VIII-40-41 in the Appendix for details
Flooring: ● Floor Tile
Applicable Rooms: Acute Patient Room Restrooms
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Inpatient Design Standards section, Page VIII-9, for the Restroom finish palette.

24. SHOWER ROOM
Ceiling: Gypsum Board – Epoxy Paint
Millwork: Solid Surface Countertop
Walls: Wall Tile – Full Height
Accessories: A-3; see Page VIII-30 in the Appendix for details
Hardware: H-3-H-10; H-12; see Page VIII-32-34 in the Appendix for details
Fixtures: F-1-F-7; F-13; see Pages VIII-26-28 in the Appendix for details
Decorative Lighting: L-1; L-2; L-3; see Page VIII-40-41 in the Appendix for details
Flooring: Floor Tile
Applicable Rooms: Staff Shower Room

LEGEND
Proposed Standard - Not included in standard finish packet
● Discontinued Material - Price comparable material
\+ Recommended Finish Modification - Added to Standard

All material finishes shall conform to the SEARHC Master Manual, Interior Specifications.

25. BEHAVIORAL HEALTH BATHROOMS
Ceiling: + Gypsum Board - Epoxy Paint
Millwork: + Solid Surface Countertop
Walls: Wall Tile; Paint - Eggshell Finish
Accessories: N/A
Hardware: + H-3-H-8; see Page VIII-32-33 in the Appendix for details
Fixtures: + F-1; F-2; F-7; see Page VIII-26/27 in the Appendix for details
Decorative Lighting: + L-1; L-2; L-3; see Page VIII-40 in the Appendix for details
Base: Resilient Base 4”H
Flooring: ● Floor Tile
Applicable Rooms: Opiod and Behavioral Health Bathroom
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Behavioral Health Outpatient Design Standards section, Page I-8, for the Bathroom finish palette.

26. ACUTE EXAM & PATIENT ROOMS
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: N/A
Walls: Rigid Wall Protection; Paint - Eggshell Finish; Corner Guards
Accessories: Privacy Curtain and Curtain Track
Base: Resilient Sheet Flooring - Integral Base 6” H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Acute Patient Rooms, Emergency Exam Rooms, Anterooms, Flex Hold Room

27. CLINICAL SUPPORT & SUPPLY
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Rigid Wall Protection; Paint - Eggshell Finish; Corner Guards
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting:
Base: Resilient Base 4”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Clean, Supply, Clean Supply, Medication Rooms, Receiving Room, Non HZ Compounding, Dispensary, Frame Display, Test, CW Nutrition
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Inpatient Design Standards section, Page VIII-11, for the Meds Room finish palette.

28. EQUIPMENT & STORAGE
Ceiling: Gypsum Board
Walls: Rigid Wall Protection; Paint - Eggshell Finish; Corner Guards
Base: Resilient Base 4”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Clean Storage, Storage, Equipment, DME Storage, MDF Entrance/Facility, Med Gas Cylinder Storage, BOH Circulation

29. KITCHEN
Ceiling: Gypsum Board – Epoxy Paint
Millwork: Plastic Laminate Cabinetry with Stainless Steel Countertop
Walls: Stainless Steel Wall Protection - Full Height; Corner Guards; Epoxy Paint
Base: Poured Epoxy Floor - Integral Base 6”H
Flooring: Poured Epoxy Floor – Non-Slip
Applicable Rooms: Kitchen

30. EVS & WASTE
Ceiling: Gypsum Board
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Epoxy Paint; Corner Guards, Rigid Wall Protection
Hardware: H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Sheet Flooring - Integral Base 6” H
Flooring: Resilient Sheet Flooring
Applicable Rooms: EVS, Housekeeping, Soiled, Waste/Hold, Red Bag

LEGEND
Proposed Standard - Not included in standard finish packet
● Discontinued Material - Price comparable material
+ Recommended Finish Modification - Added to Standard

All material finishes shall conform to the SEARHC Master Manual, Interior Specifications.

31. ALCOVES
Ceiling: Gypsum Board
Walls: Paint – Eggshell Finish; Corner Guards; Rigid Wall Protection
Base: Resilient Base 4”H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Alcoves

32. STERILE & CONTROL
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Epoxy Paint; Corner Guards; Rigid Wall Protection
Hardware: H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Sheet Flooring - Integral Base 6” H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Sterile, Control

33. LABS
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Rigid Wall Protection; Paint - Eggshell Finish
+ Epoxy Finish
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Sheet Flooring - Integral Base 6” H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Lab, Tech Lab, Wet Lab, Lab/Supply, Lab Collection, Tech/Open Lab, Blood Draw
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Behavioral Health Outpatient Design Standards section, Page I-7, for the Lab | Infusion finish palette.

34. BODY STORAGE & DECONTAMINATION
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Walls: Epoxy Paint; Corner Guards; Rigid Wall Protection
Base: Poured Epoxy Floor - Integral Base 6”H
Flooring: Poured Epoxy Floor
Applicable Rooms: Body Storage, Decontamination Room

35. LAUNDRY
Ceiling: + Gypsum Board
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish; Rigid Wall Protection
Accessories: N/A
Hardware: H-1; see Page VIII-32 in the Appendix for details
Fixtures: N/A
Decorative Lighting: N/A
Base: Resilient Sheet Flooring - Integral Base 6” H
Flooring: Resilient Sheet Flooring
Applicable Rooms: Laundry, Dryer
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-13, for the Utility | Laundry finish palette.

36. FACILITIES & BUILDING SERVICES
Ceiling: Exposed
Walls: Paint - Eggshell Finish
Base: Resilient Base 4”H
Flooring: Sealed Concrete
Applicable Rooms: All Electrical and Mechanical Rooms, Boiler Room, IDF, Warehouse, Facilities

37. STAFF SUPPORT SPACES
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry
Walls: Paint - Eggshell Finish, Corner Guards
Accessories: Roller Shades
Hardware: + H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Base 4”H
Flooring: ● Resilient Sheet Flooring
Applicable Rooms: Imaging Dressing, Men’s and Women’s Lockers, On Call Room
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Inpatient Design Standards section, Page VIII-12, for the Locker | Dressing finish palette.

38. BREAKROOMS
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Wall Tile; Paint - Eggshell Finish
Fixtures: F-8; F-9; see Page VIII-27-28 in the Appendix for details
Hardware: H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: L-7; see Page VIII-41 in the Appendix for details
Base: Resilient Base 4”H
Flooring: ● Resilient Sheet Flooring
Applicable Rooms: Resident Kitchen, Staff Breakroom
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-8, for the Kitchenette & Staff Break Room finish palette.

LEGEND
Proposed Standard - Not included in standard finish packet
● Discontinued Material - Price comparable material
\+ Recommended Finish Modification - Added to Standard

All material finishes shall conform to the SEARHC Master Manual, Interior Specifications.

39. INPATIENT OFFICES
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Walls: Paint - Eggshell Finish
Accessories: Privacy Film; Roller Shades, Corner Guards
Base: Resilient Base 4”H
Flooring: ● Carpet Tile
Applicable Rooms: Emergency, Acute & Imaging Department Offices, Imaging Tech/Work, Dictation, Report, Tech Work, Security
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Inpatient Design Standards section, Page VIII-11, for the Office finish palette.

40. OUTPATIENT OFFICES
Ceiling: + Armstrong OPTIMA Plant-Based Acoustical Ceiling Tile, Tegular Edge, 15/16” Grid
Millwork: Plastic Laminate Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish
Accessories: Roller Shades
Hardware: H-1; see Page VIII-32 in the Appendix for details
Base: Resilient Base 4”H
Flooring: ● Carpet Tile
Applicable Rooms: Typical Office Space Throughout, Staff Work Rooms, Office/Break, IT Workroom, Work/Mail, Administrative Offices, Flex/Huddle, PRS Lead
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Long Term Care Design Standards section, Page VIII-10, for the Office | Admin finish palette.

41. BOARDROOM
Ceiling: + 25% GWB; 25% Wood Veneer Plank; 50% Armstrong Ceilings Optima Acoustic Ceiling 6’ Plank
Millwork: Wood Veneer Cabinetry with Solid Surface Countertop
Walls: Paint - Eggshell Finish, Wall Paneling
Accessories: Window Film, Roller Shades
Hardware: H-1; see Page VIII-32 in the Appendix for details
Decorative Lighting: + Linear Direct / Indirect Fixtures. Dimmable
Base: Resilient Base 4”H
Flooring: Carpet Tile
Applicable Rooms: Boardroom
*Reference Standard: Refer to SEARHC Master Manual Interior Specifications, Executive & Administrative Offices Standards section, Page II-5, for the Boardroom rendering and finish palette.



1. WOOD CEILING - Acoustic wood-look ceiling material extends the exterior wood expression into the interior, creating a strong connection between the outside and inside.

2. DEPARTMENTAL ENTRANCES - Preformed curved panels define and mark the entrance to each department.

3. WALL APPLICATION - Walls incorporating “carved” alcoves are finished with stretched acoustic fabric panels.

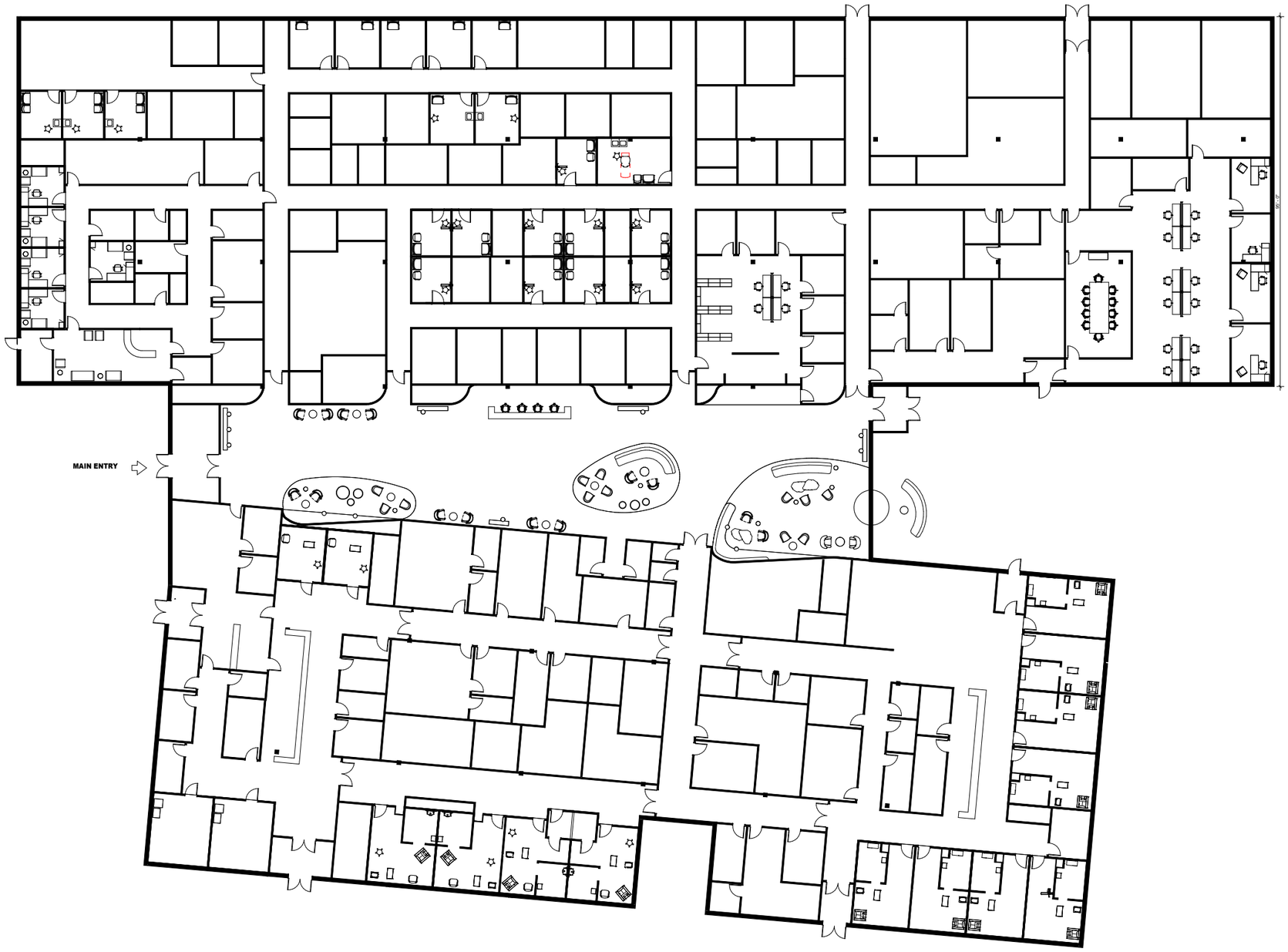
4. CARPET - Acoustic wood-look ceiling material extends the exterior wood expression into the interior, creating a strong connection between the outside and inside.

5. FLOOR TILE - Large-format stone tile with a honed finish.

6. RECEPTION DESK - Engineered solid surface material at the shroud and transaction top; acrylic solid surface material at the work surface.

7. LARGE ACCENT LIGHT FIXTURE - Decorative pendant fixtures surrounded by a locally commissioned art ceiling element. See Appendix for artwork detail.

8. VERTICAL STORY TELLING ELEMENT - Commissioned art installation telling the sory of Alicia Roberts and SEARHC through timeline, history and legacy.



0' 3' 9' 18' 32'

04

CONSULTANT TEAM

4.1 General

SEARHC is designing a new medical center to replace the existing Alicia Roberts Medical Center (ARMC) in Klawock, Alaska. The new facility will be constructed on the existing medical center campus, which comprises Lots A-1, A-2, and A-3 of SEARHC Subdivision II, as shown on Plat 2015-30 in the Ketchikan Recording District. Together, the three lots encompass 13.77 acres. The existing ARMC occupies Lot A-2, and the new medical center will be constructed southeast of the existing building on the same lot. Lot A-1 primarily serves as a greenbelt along the northern and eastern site boundaries, with little to no development planned. A new maintenance shop was recently constructed in the southeast corner of Lot A-3 to service the medical center campus. The SEARHC Subdivision II boundary is shown below in Figure 1.

The project site is accessed from Craig-Klawock Highway, which runs along its western boundary. The highway is owned and maintained by the State of Alaska Department of Transportation and Public Facilities (ADOT&PF). The Klawock River Estuary lies north and east of the site, and an active rock quarry is located immediately to the south.

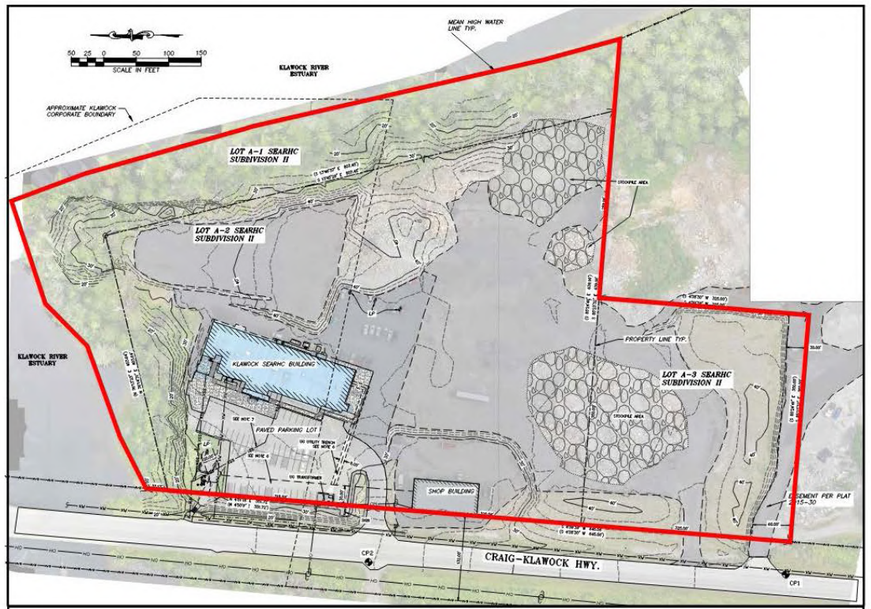


Figure 1:
SEARHC Subdivision II

4.2 Civil

- Grading and Earthwork: The project site occupies a former rock quarry. Although no geotechnical investigation has been performed, bedrock is assumed to predominantly underlie the site. The new medical center will be located south and east of the existing ARMC building, with a finished floor elevation approximately 1 foot higher than that of the existing medical center. Rock excavation is anticipated to construct the new medical center foundation. Parking lots and access driveways will generally slope away from the new medical center and drain to the open ditch within the ADOT&PF right-of-way.
- Pavement: New parking lots and driveways will consist of 2-inch-thick asphalt pavement over a 6-inch crushed aggregate base course layer, while pedestrian sidewalks will consist of 4-inch-thick concrete over a 6-inch crushed aggregate base course layer. A variable depth subbase layer will be installed as needed to achieve final grades.
- Driveways: New connections to Craig-Klawock Highway will be designed and constructed in accordance with ADOT&PF requirements, and each connection will require an ADOT&PF driveway permit. ADOT&PF typically limits each property to two driveways and requires at least 330 feet between adjacent driveways. The current plan proposes three driveway connections to Lot A-2, spaced 230 to 280 feet apart. Because the proposed number and spacing of driveways do not meet these typical requirements, the project team will need to coordinate with ADOT&PF to determine if a waiver is feasible.
- Stormwater Management: Because the project will disturb more than 1 acre, a Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented. During construction, stormwater Best Management Practices (BMPs) will be used to minimize erosion and sediment discharge from the site. Klawock is in a wet maritime climate that receives around 95 inches of precipitation per year on average.

  Post-construction runoff from asphalt-paved parking lots and driveways, concrete walkways, and rooftops will be collected by a new underground storm drain system and routed to the open ditch within the highway right-of-way. Because this ditch discharges directly to the Klawock River immediately north of the project site, all collected site runoff should pass through oil-water separator manholes before discharge.

4.2.1 Utilities

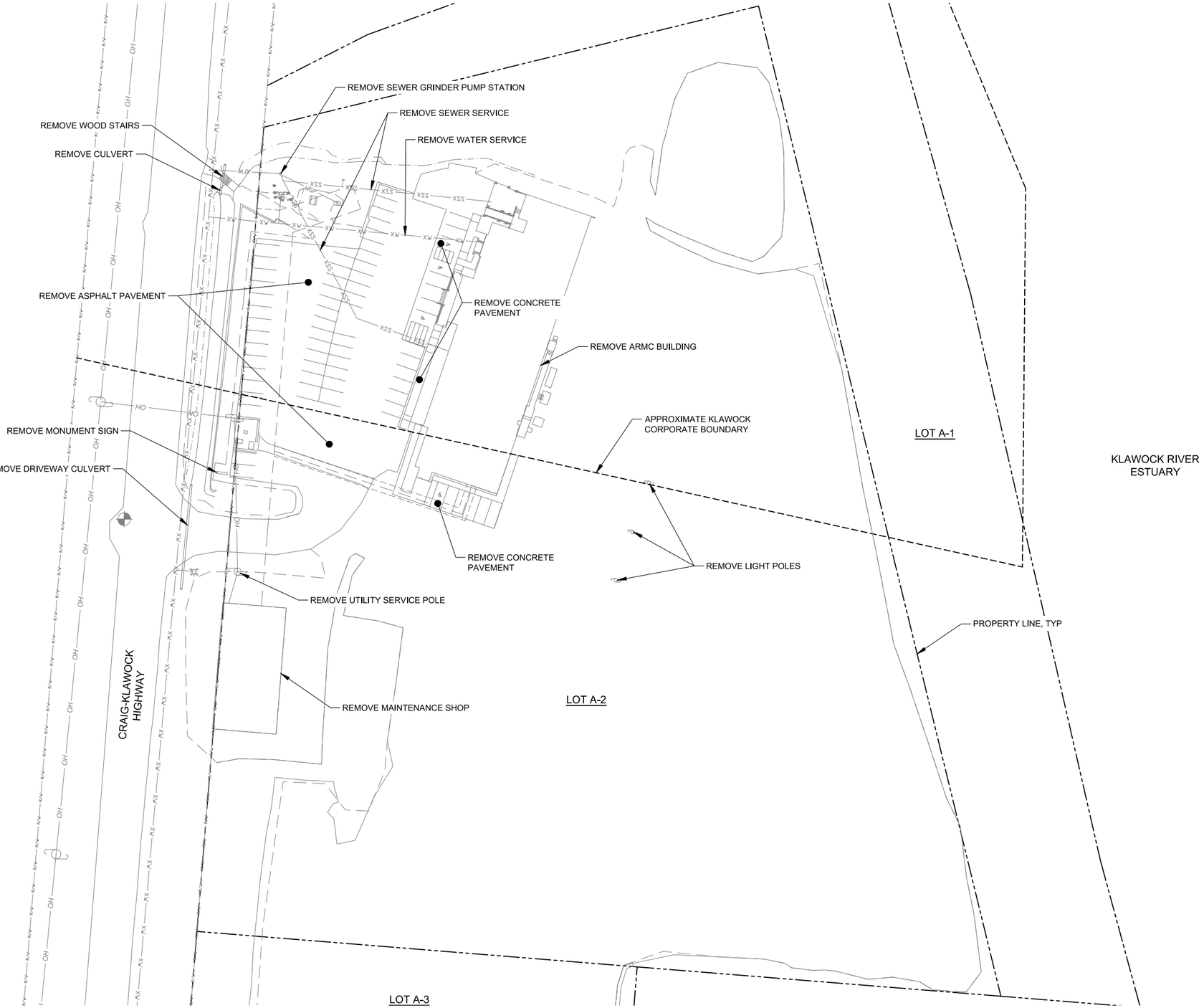
- Trenching: Rock excavation will likely be required when trenching for installation of the new underground water, sewer, and storm utilities.
- Domestic Water: Potable water for the new medical center will be supplied through a new service line connected to the existing City of Klawock-owned 10-inch ductile iron water main within the Craig-Klawock Highway right-of-way. A recent topographic survey of the SEARHC site indicates that the existing water main lies beneath the highway's east shoulder, approximately 7 feet outside the pavement

limits. Therefore, installation of the new water service is not expected to require cutting or patching the highway's asphalt pavement.

The new water service to the site should be an 8-inch SDR-11 HDPE line connected to the existing water main approximately 30 feet south of the existing driveway. This connection location will minimize disruption to the existing ARMC during construction of the new medical center. Near the new medical center, the 8-inch line will be reduced to a 6-inch HDPE line to serve the building.

- Fire Protection: Two existing fire hydrants serve the project site. One is immediately south of the existing site driveway, and the other is near the existing sewer pump station in the northwest corner of the site. Two additional hydrants should be installed to provide adequate fire protection coverage: one north of the new medical center near the loading dock access driveway and one south of the medical center near the new maintenance shop.
- Sanitary Sewer: Sanitary sewer service for the new facility will connect to the City of Klawock sewer collection system in the Craig-Klawock Highway right-of-way. State of Alaska 1989 as-built drawings for the Klawock River Bridge replacement show a 3-inch sewer force main crossing the river along the east side of the bridge. The force main is believed to extend south to a high point in the highway near the southernmost project-site driveway. From that point, wastewater is believed to flow by gravity to the treatment facility on Klawock Island, approximately 0.5 miles from the project site.

Wastewater generated from the new medical center will flow by gravity through a new onsite collection system consisting of 6-inch PVC sewer pipe, manholes, and cleanouts as necessary. The system will convey wastewater to a duplex grinder pump station near the southwest corner of the project site. From there, wastewater will be pumped into the City of Klawock sewer collection system. The connection location within the right-of-way has not yet been determined and may require cutting and patching the highway asphalt pavement.


REMOVE SEWER GRINDER PUMP STATION
REMOVE SEWER SERVICE
REMOVE WATER SERVICE
REMOVE WOOD STAIRS
REMOVE CULVERT
REMOVE ASPHALT PAVEMENT
REMOVE CONCRETE PAVEMENT
REMOVE ARMC BUILDING
APPROXIMATE KLAWOCK CORPORATE BOUNDARY
LOT A-1
KLAWOCK RIVER ESTUARY
REMOVE MONUMENT SIGN
REMOVE DRIVEWAY CULVERT
REMOVE CONCRETE PAVEMENT
REMOVE LIGHT POLES
REMOVE UTILITY SERVICE POLE
PROPERTY LINE, TYP
CRAIG-KLAWOCK HIGHWAY
REMOVE MAINTENANCE SHOP
LOT A-2
LOT A-3
0' 20' 40' 80' 160'

4.3 Landscape

4.3.1 Landscape Design Narrative

Existing Landscape Preservation

- Protect existing forested areas outside site limits of work. Do not allow storage of construction equipment, erosion or compaction to occur within protection zones.
- Recycle all green waste
- Re-use existing site rock

Landscape Clearing and Sub Soil Preparation
The existing site is cleared for mining operations and it is assumed there is no existing soil profile. Drainage improvement strategies may be needed under areas of import soil to provide healthy planting environments.

Pedestrian Hardscapes
Major circulation routes will be ADA accessible with rest points provided throughout the site. A hierarchy of paving types and finishes will be used, with specialty finishes at high visibility paved areas. Materials will include:

- Type 1 Paving: Cast-in-place concrete with natural color, broom finish and tooled joints, typical at sidewalks and pedestrian walkways.
- Type 2 Paving: Decorative cast-in-place concrete with exposed aggregate or sandblast finish and sawcut joints. For use at entry courts and dining/healing garden plaza.
- Vehicular Asphalt (Ref. Civil): Asphalt paving at vehicular drives and utility areas.
- Crushed Stone Aggregate Surfacing: Stone aggregate surfacing to be used at healing garden trails.
- Wood Chip Trail/Boardwalk: Trail with drainage culverts and small sections of boardwalk as needed to create path through existing forest to the east and north of site. Primary trail material wood chip surfacing.

Site Walls and Screens

- Where applicable, retaining and site walls will be used to mitigate steep grades, expand usable site area, and ensure site engineering strategies. These walls will be:

  Wall Type A: Rockery wall (less than 4 feet). Use of on site rock preferred.

  Wall Type 2: Cast-in-place concrete wall with form finish, 6-8” width.
- Screening fence and gates at mechanical yard: 6’ ht. screening fence with CIP concrete footings. Screen color and pattern to complement architectural exterior cladding systems. Basis of design product option 1, metal screening: Omega Unik perforated panels. Basis of design product option 2, aluminum with wood grain finish: Knotwood Aluminum Fencing.

Landscape Irrigation Systems
No irrigation is proposed.

Landscape Soils
The majority of the proposed planting areas will be installed on top of an existing gravel/rock mining site and it is assumed that there is no existing soil profile. All planting areas will require import soil to support the growth of new plantings.

- **Coastal Meadow:** 12” depth bioretention soil mix, typical. At parking lot islands with shrubs and trees, 3’ depth bioretention soil. 3” sand mulch.
- **Eco Lawn:** 12” depth bioretention soil mix.
- **Rocky Ridge:** 12-24” depth 50:50 mix of bioretention soil mix amended with 1/4-3/8” clean crushed rock to create the planting media.
- **Perched Wetland:** 18” depth bioretention soil mix. 4” wood chip mulch.
- **Forested Edge:** Bioretention soil mix, depth of import dependent on presence of existing soil profile and to achieve a minimum depth of 24”. 4” wood chip mulch.

Landscape Planting
The campus planting design is defined by 5 distinct planting zones, described below, which will be planted with species native to the southeast Alaska coastline and will require minimal maintenance.

- **Coastal Meadow:** Native meadow consisting of 60-70% annual and perennial forbs and 30-40% grasses will be used in the planting area between the Klawock Hollis Hwy and the parking lot, and within parking lot planting islands. Forbs and grasses to be 4” pot minimum. Trees to be included in parking lot islands, deciduous trees to be 2” caliper minimum and evergreen trees to be 8-12’ tall minimum. Native seed mixes may be used to supplement meadow planting areas.
- **Eco Lawn:** Lawn seed mix suitable to the Klawock climate will be used for mowed lawn areas at entry plazas and high visibility areas around the building. Lawn to be hydroseeded.
- **Rocky Ridge:** At pedestrian plaza spaces at main entry drive/drop-off and outdoor dining area boulders and large cobbles will be placed in planting beds, with native grasses, forbs and low woody vegetation planted in between to create low maintenance rock gardens. The re-use of on-site rock is preferred. Shrubs to be 1 gallon minimum. Forbs and grasses to be 4” pot minimum.
- **Perched Wetland:** Native grasses, sedges, rushes, and perennial forbs will be used in planting areas collecting stormwater runoff from the parking lot and roof. Grasses, sedges, and rushes to be 1 gallon minimum. Forbs to be 4” pot minimum.
- **Forested Edge:** The existing native forest on the north and east sides of the site will be preserved and protected, with some restoration improvements proposed. Selective removal of trees on the eastern edge of the site is proposed to create views to the estuary from the building and eastern garden spaces. Trails through the forest will have minimal impact on the existing landscape but some restoration using native understory plantings around construction of trails should be assumed. Understory shrubs to be 1 gallon minimum.

Site Furnishings

- Bicycle racks will be provided on site.
- Outdoor furnishings, including patio tables and chairs, benches, and bear-proof garbage and recycling receptacles, will be accommodated in the landscape design. Assume powder coated steel furnishings.
- Bollards to be provided at dropoff areas and other locations where there are flush conditions between vehicular and pedestrian pavements. Assume both removeable 8” diameter decorative bollard and security bollard (to be specified by Civil) to be used.

4.3.2 Landscape Site Plan

4.3.3 Outline Specifications

01 56 39 Tree and Plant Protection

05 73 00 Decorative Metal Railings and Metal Fabrications

12 93 00 Site Furnishings

32 13 20 Concrete Finishes

32 15 40 Crushed Rock Paving

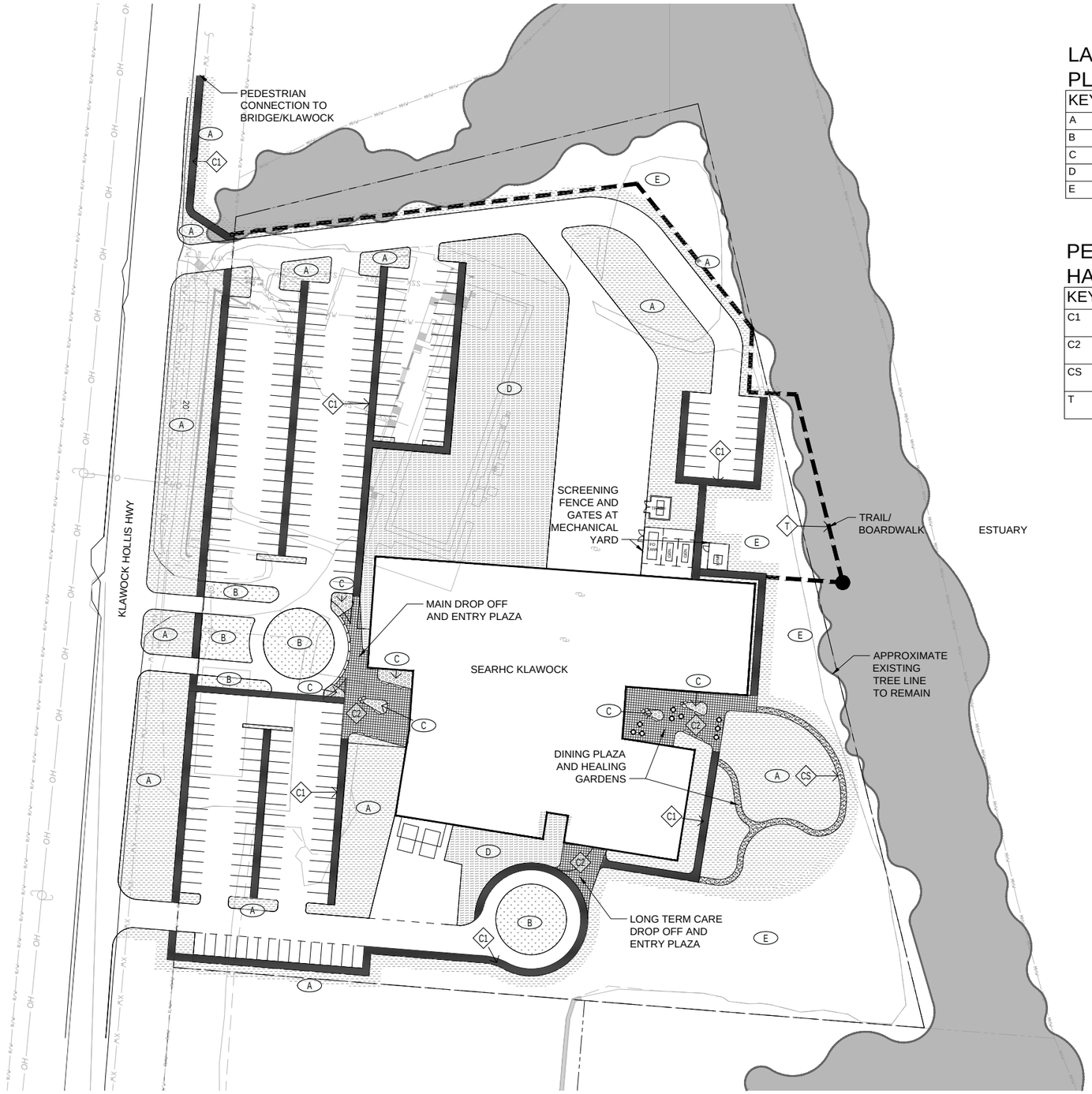
32 31 19 Decorative Metal Fences and Gates

32 91 13 Soil Preparation

32 92 00 Turf and Grasses

32 92 15 Landscape & Specialty Stones

32 93 00 Landscape Planting



LANDSCAPE PLANTING ZONES

KEY	DESCRIPTION
A	COASTAL MEADOW
B	ECO LAWN
C	ROCKY RIDGE
D	PERCHED WETLAND
E	FORESTED EDGE

PEDESTRIAN HARDSCAPES

KEY	DESCRIPTION
C1	TYPE 1 CONCRETE PAVING
C2	TYPE 2 CONCRETE PAVING
CS	CRUSHED STONE AGGREGATE TRAIL
T	WOOD CHIP TRAIL/BOARDWALK

4.4 Structural Design Criteria

Code: 2021 International Building Code
Structural Risk Category IV

Loads:

Snow Load:

Ground Snow Load:	P_G = 40 psf
Exposure Coefficient:	C_E = 1.0 (Partially Exposed)
Thermal Coefficient:	C_T = 1.1 (Vented Cold Roof)
Snow Importance Factor	I_S = 1.2
Flat Roof Snow Load:	37 psf

Floor Live Loads:

Lobbies and Corridors:	100 psf
Patient Rooms:	40 psf
Offices:	50 psf
Operating Rooms and Laboratories:	60 psf
Assembly Areas:	100 psf
Mechanical and Electrical Rooms:	125 psf
Kitchen:	150 psf

Wind Loads:

Ultimate Wind Speed:	165 miles per hour
Exposure C	

Seismic Loads:

S_S = 0.44g S_{DS} = 0.30g
S_1 = 0.35g S_{D1} = 0.23g
Seismic Design Category D
Site Class B (To be verified by Owner's Geotechnical Engineer)

4.4.1 Foundation

A geotechnical report has not been provided. The site conditions are believed to consist of imported shot rock over shallow bedrock (typically less than 10 feet below existing grade). Assuming a friction angle of 38 degrees, unit weight of 130 pounds per cubic foot, modulus of elasticity of 1,000,000 pounds per square foot, and neglecting a water table, shallow foundations have been estimated utilizing an allowable bearing pressure of 6,000 pounds per square foot. This value has been increased by 33% when considering transient loads from wind and seismic forces. These values will need to be verified by the owner's geotechnical engineer.

Foundation will consist of a conventional reinforced concrete shallow foundation with isolated spread footings at columns and 12" thick x 16" wide continuous strip footings at 8" thick perimeter exterior foundation walls. Spread footings are estimated to be 6''-0" x 6'-0" x 24" thick at typical gravity columns where spaced at 31'-6" on center. Spread footings at lateral load resisting system will likely be much larger and will be determined during latter phases of design.

Where possible, rock anchors may be utilized at column foundations with large uplift loads to reduce the size of spread footings. Perimeter foundations will be buried to the frost depth, which has been estimated to be 24". Frost depth will need to be verified by owner's geotechnical engineer.

The foundation concrete quantity is estimated at 550 cubic yards.

4.4.2 Materials

Concrete:

Concrete will be a mix with a 28-day strength of 4,000 psi and if concrete is exposed to freeze thaw cycles it will be air entrained. Rebar will conform to ASTM A615 Grade 60.

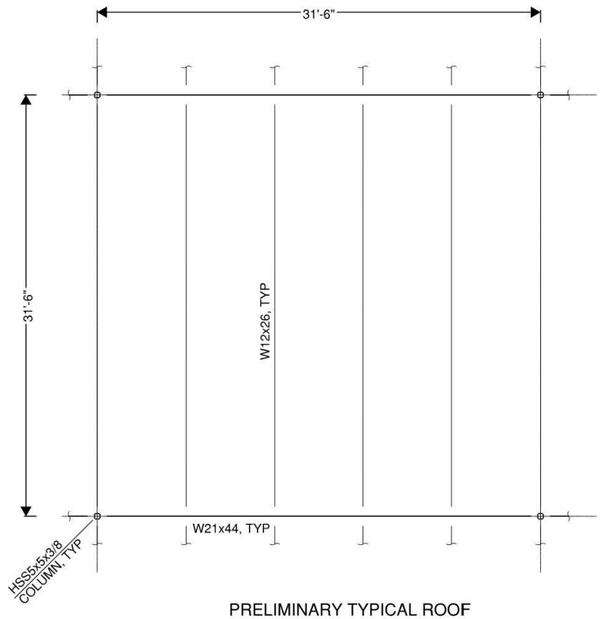
There is limited availability of concrete in Klawock, which results in a higher-than-normal cost. Therefore, it is recommended to limit the amount of concrete, especially vertical concrete (walls).

4.4.3 Structural Systems and Components

Gravity system:

The superstructure will consist of structural steel columns, roof beams, roof girders, and untopped metal roof deck (1½" deep x 20 GA, Type B standard roof deck). Where there are rooftop mechanical units, the metal deck will have a 4½" concrete topping (6" total thickness). At mechanical penthouse, the deck will be a composite floor deck with 4½" concrete topping (6" total thickness). Rooftop chillers will be supported on galvanized structural steel platforms raised above the roof.

For the typical 31'-6" on center column grid in the proposed architectural floor plan, a typical framing plan is shown below:



PRELIMINARY TYPICAL ROOF
BAY FRAMING PLAN

The ground floor will consist of a 4" thick concrete slab-on-grade, with thickened slabs and/or housekeeping pads at heavily loaded areas and mechanical equipment.

Due to the very high wind speed at the building site, intermediate wall girts may be required at tall curtain wall/storefront.

Lateral load resisting system:

Three lateral load resisting system types that will be evaluated during subsequent design phases include the following:

1) Steel Brace Frames
    a. Option 1 – Standard brace frames with bolted connections
    b. Option 2 – Buckling restrained brace frames with bolted connections
2) Steel Moment Frames
    a. Option 1 – Frames with end plate bolted moment connections
    b. Option 2 – Frames with SidePlate bolted moment connections
3) Concrete shear walls

Pros and cons for the options include the following:

- The steel brace frames will likely be the most efficient system if brace frame locations can be designated without affecting programming. A preliminary brace frame layout is shown below. The brace frame locations are only diagrammatic and have not been coordinated with the rest of the design team. If moment frames are utilized, approximately one and a half times the number of frames will be needed.
- The steel buckling restrained brace frames are likely not the most cost-effective system for this short of a building.
- The steel brace frames could be configured in numerous geometries (chevron, inverted chevron, or X-brace) to allow for doors, hallways, mechanical ducting, windows, etc.
- The steel moment frame systems will have larger columns and roof beams that may impact programming and mechanical duct layout.
- The steel moment frames will provide the most flexibility for future renovations.
- Concrete shear walls are not recommended due to the limited availability of concrete in Klawock and the additional time of installation.
- Concrete shear walls can be difficult to locate without affecting programming and provide less flexibility for future renovations.

The superstructure structural steel quantity is estimated as:

- 400 tons tons for brace frames.
- 475 tons for moment frames.
- 325 tons for concrete shear walls.



Phasing:

Our system recommendations and quantities are based on the entire building, or at least the core and shell of the building, being completed in a single phase. Phasing of the core and shell presents the following potential issues:

- Increase in material quantities (steel and concrete) noted above, potentially by a significant amount.
- Limit the type of lateral load resisting system that can be used. Moment frames may be the only option for the lateral load resisting system with a phased construction.
- Double columns may be required at phase lines.
- Field welded connections may be required at phase lines.
- Complicate the structural design.

These concerns are a result of ensuring occupied portions of the building have a complete gravity and lateral load resisting system.

4.5 Mechanical

4.5.1 General

- The mechanical systems include plumbing, fuel oil, medical gases, heating, ventilation, air conditioning, and building automation systems.
- The mechanical systems will be designed with the end user in mind, keeping health, safety and comfort as top priorities and to meet the Owner's Project Requirements (OPR) and risk assessment criteria. The mechanical systems will be developed to meet the OPR requirements and to provide the requested features. Key issues will include functionality, constructability, reliability, and maintainability.
- Critical systems where equipment redundancy and reliability are required will be identified and equipment will be designed for redundancy. Equipment and systems will be selected with consideration for campus phasing and future growth.

4.5.2 Code and Standards

Work will be in accordance with applicable national, state, and local codes, including the following:

- 2021 International Building Code - IBC
- 2021 International Mechanical Code - IMC
- 2021 International Fire Code - IFC
- 2018 Uniform Plumbing Code - UPC

American Society of Heating Refrigerating and Air Conditioning Engineers – ASHRAE

- 2025 ASHRAE 170 Ventilation of Health Care Facilities
- 2022 ASHRAE 62.1 Ventilation and Acceptable Indoor Air Quality

Facilities Guidelines Institute – FGI

- 2022 FGI Guidelines for Design and Construction Hospitals
- 2022 FGI Guidelines for Design and Construction Outpatient Facilities
- 2022 FGI Guidelines for Design and Construction Residential Health, Care, and Support Facilities

National Fire Protection Association – NFPA

- 2019 NFPA 13 Automatic Fire Suppression
- 2019 NFPA 24 Standard for Installation of Private Fire Service Mains and Their Appurtances
- 2021 NFPA 30 Flammable and Combustible Liquids Code
- 2020 NFPA 70 National Electrical Code – NEC
- 2012 and 2021 NFPA 99 Health Care Facilities Code
- 2012 and 2021 NFPA 101 Life Safety Code

United States Pharmacopeia - USP.

- USP 797 Pharmaceutical Compounding – Sterile Preparations
- USP 800 Hazardous Drugs – Handling in Healthcare Settings

4.5.3 Facility Design and Climatic Conditions

- The Medical Center will be in a rain forest area and near the ocean in Southeast Alaska on Prince of Wales Island, in the town of Klawock. Frequent rain, fog, and high levels of outdoor moisture contribute to accelerated aging of equipment and materials, including corrosion of metallic finishes and hardware.
- Outdoor Design Conditions: The building mechanical design will use outdoor design data from the 2021 ASHRAE weather data for Klawock.

Winter 99.6% Annual Heating Condition: 17.5 degree F
Dehumidification 0.4% Annual Condition: 58.9 degree F DP, 62.1 degree F MCWB
Humidification 99.6% Annual Condition: 6.4 grains/# dry air; 23.4 DB
Cooling 0.4% Annual Condition: 70.7 degree F DB, 59.2 degree F WB

- Indoor Design Conditions: Indoor design conditions will comply with 2025 ASHRAE 170, IBC, Owner directed or equipment design requirements.

Area Type	Temperature (degree F)
Office areas, Lobby, other areas not listed	68-75
Outpatient areas	70-75

Emergency Department	70-75
Patient Rooms	70-75
Procedure/Treatment Rooms	70-75
Radiology Waiting room	70-75
Class 1 Imaging rooms	72-78
Lab	70-75
Pharmacy	65-75
Sterile Processing Clean room	68-73
Sterile Processing Soiled room	60-73
Long Term Care	72-78
Telecom rooms	70-75
Mechanical and Electrical rooms	70-80

- Areas requiring Humidity control include:

Area	Relative Humidity range (% RH)
Emergency Department (ED) Trauma	20-60%
ED Procedure/Treatment Rooms	20-60%
Class 1 Imaging rooms	60% Max, minimum per Imaging equipment requirements
Airborne Infection Isolation (AII) room	60% Max
Radiology Waiting room	60% Max
Emergency Department Waiting room	65% Max
Medication room	60% Max
Pharmacy	60% Max
Sterile Processing Clean room	60% Max

- SEARHC uses Factory Mutual Global (FMG) insurance and has requested that the design be reviewed by FMG. SEARHC will decide how to respond to any FMG review comments.

4.5.4 Site Mechanical Utilities

Water:

- Domestic water and water for fire protection will be provided by the local city water utility.
- New water line sizing, fire hydrant locations, and fire water flow rates will need to meet local utility, NFPA 24, and IFC as minimum requirements.
- Based 2018 hydrant flow test information on fire protection drawings, dated 10/18/2018, for the existing medical center, a 6-inch diameter HDPE combination fire water and domestic water service pipe is recommended, and a fire pump is not required.
- A utility flow rate and pressure test at the closest fire hydrant to the project is required and needed at the next design phase to confirm utility flowrate and residual pressure along with available static pressure. This would allow for space planning if a fire pump is required as it requires a dedicated room.

Sanitary Sewer:

- A 6” sanitary sewer waste main from the building will be connected by gravity line to the site sanitary sewer connection by Civil.

Storm Water:

- Building roof sheet-flow and rain leaders will be connected by gravity lines to the site’s underground storm drainage and dispersal system by Civil. Storm water flow will be handled at the site and maximum roof drainage flowrate is estimated at 390 GPM, requiring an 8” single main pipe size out. The drainage can be distributed to multiple dispersal areas as required.

Fuel Oil:

- A fuel oil system will be provided as the energy source for the emergency electrical generators and the two fuel oil heating boilers. An 8,000 gallon above ground UL-142 listed Type 1 double-wall welded steel tank with secondary containment, located adjacent to the building, is sized to provide for code required 96 hours runtime for a generator and approximately a two week fuel storage for both fuel oil fired boilers at winter design conditions.

- The tank exterior will be coated with a corrosion resistant paint system suitable for a maritime coastal climate.

- Separate supply drop pipes will be provided for the generators and the boilers, with the boiler drop pipe located above the required fuel storage for the generators. Tank level monitoring will be provided and will alert maintenance staff of the need for fuel delivery to keep adequate boiler fuel oil supply.

- Dependent upon fuel tank location, underground fuel transfer piping may be required. The underground fuel transfer piping system will be double-wall supply and return piping housed within a secondary access pipe and provided with transition sump(s) as required to transition to above grade piping.

- An automatic tank gauging (ATG) system is planned to monitor fuel levels and interstitial space leak detectors. The building automation system (BAS) will connect and monitor fuel levels and alarms

- A 200-gallon fuel oil daytank equipped with rupture basin, duplex supply and simplex overfill return pump, and level controls will be located in the Boiler room next to the boilers. The daytank volume will support two boilers firing 100% for about 7 hours. A single wall daytank with rupture basin and a manual fill pump is planned.

- Two generators with subbase fuel tanks are planned. Level controls and supply and return pumps provided by the generator supplier are planned to maintain subbase tank fuel level.

4.5.5 Fire Protection System

- The facility will be protected by a hydraulically designed water-based fire protection system in accordance with NFPA 13 with review by FM Global, as required for SEARHC's insurance. Two wet system risers, a dry system riser, and a double interlock preaction system riser to serve the CT Imaging room are assumed. The main sprinkler riser location will be in a Level 1 mechanical room near the water service entry. No standpipes are required. All sprinkler systems and control valves will be monitored by the fire alarm system.

- A 2018 hydrant flow test indicates 62 psig static pressure and 750 GPM at 25 psig residual pressure measured at the hydrant closest to the existing clinic. Based on this information and with a new 6" SDR11 HDPE water utility connection, no fire pump is assumed to be required. A more current hydrant flow test, required by NFPA 13, will be needed to validate this assumption as the design effort continues.

- A wet pipe fire sprinkler system with quick response sprinkler heads will be provided for the interior heated building areas. Sprinkler piping will have an installed wall thickness with a corrosion resistance ration (CRR) of 1.0 or larger. Unheated exterior canopies and garage areas will be protected by a dry-pipe fire sprinkler system. Dry pipe sprinkler lines will be sloped to drain. Concealed type sprinkler heads will be used in areas requiring cleanable ceilings. Sprinkler heads with flex connections will be used for non-structural ceilings to meet seismic requirements.

4.5.6 Plumbing Systems

Domestic Water:

- Domestic water will be provided by the local water utility. No water pressure booster pump system will be required for building service. Cross connection protection will be provided at the incoming utility water piping with a reduced pressure backflow preventor as well as any other non-potable water pollution and health hazard connection points.

- Provisions for meeting ASHRAE recommendations for mitigation of waterborne pathogen risks, including Legionellosis, will be coordinated with the Owner. Provisions may include system design for high temperature flushing or chemical treatment of the domestic water system, continuous hot water circulation, as well as elimination of "dead legs".

- A stand-alone water purification (reverse osmosis) system is assumed to be needed for laboratory functions.

- Domestic water piping will be Type L copper with lead free fittings, devices, and valves. Plumbing fixture groups will be provided with isolation valves to facilitate maintenance.

- Sterile processing department water systems will be coordinated with medical equipment and requirements and program requirements. A water purification system may be needed to comply with the current AAMI ST108:2023 requirements.

Domestic Hot Water:

- Domestic hot water will be generated by two 200-gallon storage tank type water heaters equipped with both indirect heating coils and electric heating elements as a backup source of heat. Tanks will be sized for 60% of total peak demand load

to provide partial redundancy in the event that one water heater is down for maintenance.

- Booster water heater(s) will be required for Kitchen/Dietary and Laundry area equipment where higher water temperatures are required.

- Water will be stored at 140-160 degrees F to prevent legionella growth and will be tempered down to 120 degrees F for distribution. Hot water availability will be maintained at remote fixtures by pumped circulation. The hot water recirculation pump will be located in the Level 1 mechanical room.

Plumbing Fixtures:

- Plumbing fixtures will be vitreous china, stainless steel, or solid surface sink basins as applicable. Full backing and appropriate wall carriers will be provided for wall hung fixtures. Bariatric toilets will be floor mounted.

- Fixtures will be coordinated with architectural and program requirements. Sensor "hands free" operated flush valves and faucets will be used where appropriate. Water conserving fixtures will be selected where practical. Waterless urinals will not be considered. ADA handicapped accessible and bariatric fixtures will be provided as needed.

- "Hydration station" combination drinking fountains and bottle fillers are anticipated as a sustainability feature to reduce plastic water bottle waste. Floor drains and floor sinks with automatic trap primers will be provided for the boiler and fan rooms, toilet and janitor rooms, kitchens, laundry and as otherwise applicable per program requirements.

- Exterior hose bibbs will be non-freezing, automatic draining type, with vacuum breakers and have accessible interior isolation valves for seasonal drain-down. Hose bibbs located in janitor closets and mechanical spaces will be equipped with vacuum breakers.

Sanitary Sewer:

- Sanitary sewer drain piping will be cast iron pipe with no-hub fittings. Vent piping aboveground will be cast iron or DWV copper. Corrosion resistant waste and vent piping will be provided where needed. The sanitary sewer main service pipe size is estimated at 6 inches.

- An interior grease interceptor is planned for the Kitchen.

Storm Water:

- Roof drainage and rain leader piping will be cast iron with no-hub fittings. Hot roofs will have roof drains and overflow drains connected to rain leaders. Building roof drainage by sheet flow will be diverted to area swells or collection wells for site dispersal and absorption.

4.5.7 Medical/Dental Plumbing Systems

Medical Gases

- Piped medical gases systems will meet NFPA 99 Category 1 as minimum requirements. Distributed piped medical gas systems will include oxygen (O2), medical air (MA), and medical vacuum (MV).

- Medical gas source equipment will include medical air compressors and medical vacuum pump systems. Medical source equipment alarms, master alarms, and area alarms will meet NFPA 99 requirements.

- Oxygen will be piped from two cryogenic storage containers along with back-up compressed gas cylinders connected to an automatic switchover manifold system. A 150 SF room with an exterior wall will be required.

- The need for instrument air (IA) supplied by an instrument air compressor or compressed gas cylinders will be explored during the next design phase. At this schematic design phase, a local air compressor provided with the sterilizing equipment is assumed for the Sterile Processing area. An instrument air system or SPD air system may be needed for air pistol blower nozzles; this will be coordinated with SEARHC to meet user needs and program requirements.

- Piped medical gases will be provided to Emergency Department procedure, trauma, and exam rooms, patient rooms, and Class 1 imaging rooms.

Dental Gases

- Piped dental gas systems will meet NFPA 99 Category 3 as minimum requirements. Distributed piped dental gas systems will include dental air (DA), dental vacuum (DV), and nitrous oxide (N2O). Dental gas source equipment will include dental air compressors and dental vacuum pump systems. N2O will be piped from compressed gas cylinders connected to an automatic switchover manifold system. A 150 SF room with an exterior wall will be required.

- It is assumed nitrous oxide will be used in two closed dental operatories, each of which will be supplied with ventilation that complies with IHS Technical Handbook for Environmental Health and Engineering Volume III Part 21-4.9 Dental Ventilation criteria.

4.5.8 Heating System

- The central heating source equipment will include two oil-fired and one electric boiler. Heating system operation would utilize either the two oil fired boilers, each sized for 60% of the maximum heating load, or the electric boiler, sized for 100% of the heating load. Schematic design level calculations estimate the total required heating plant capacity at 2,400,000 BTUH, with oil fired boilers sized at 1,500 MBH each and the electric boiler at 720 kW. Dedicated constant speed boiler circulation pumps are planned for each boiler.

- A primary/secondary loop heating system arrangement is planned. Water with corrosion inhibitor additives will be utilized and will be circulated throughout the building via redundant secondary loop circulation pumps (lead/standby) equipped with variable speed drives. A bypass filter/chemical feeder piped across the pumps to facilitate maintenance of heating fluid testing is planned. Terminal units will include air handling unit (AHU) heating coils, variable air volume (VAV) air terminal unit reheat coils, unit heaters, cabinet unit heaters, and radiant ceiling panels. Heating of the occupied spaces is primarily via the ventilation system

- For freeze protection at the AHU heating coils, a 40% propylene glycol/water system with a heat exchanger, redundant glycol circulation pumps, air separator, and an expansion tank is planned in each penthouse fan room. Depending upon further evaluation of expected AHU mixed air temperatures during detailed design, one or both glycol systems may prove to be unnecessary.

- Hydronic piping under 4 inches will be Type L copper with soldered or brazed connections or mechanical press fittings. Larger diameter piping will be Schedule 40 welded steel with welded or flanged connections.

Terminal Heating Units:

- VAV air terminal units will be provided with hydronic reheat coils.

- Cabinet unit heaters or fan coil units are planned at each entrance vestibule.

- Mechanical and electrical equipment and storage spaces will be heated with hydronic unit heaters.

- Radiant ceiling panels may be considered in the LTC resident toilet rooms located on exterior walls.

- Perimeter fintube may be considered for use in the large Lobby as a way to reduce ventilation to the space during unoccupied periods in the winter months.

- Radiant floor heating is not planned.

4.5.9 Cooling Systems

Economizer Cooling

- Economizer cooling will be provided by central air handling systems to save energy by utilizing outdoor air for ‘free cooling’ when outdoor air conditions are suitable.

Chilled Water System

- A chilled water system will be necessary for dehumidification and comfort cooling. Generally, the system is expected to operate when outside air temperatures are greater than 45 deg F.

- The chilled water plant will consist of two exterior air-cooled chillers located on the roof. Total required cooling capacity is estimated to be 127 tons. The two air cooled chillers, each sized for 60% required capacity, will allow for some redundancy if a single chiller fails or requires maintenance. A 40% propylene glycol/water solution is planned to provide freeze protection of outdoor equipment and piping exposed to freezing conditions. The cooling fluid will be piped to each air handling unit cooling coil to cool air when outdoor temperatures do not allow for economizer cooling or when dehumidification is required.

- The chillers are conservatively sized at this schematic design phase for dehumidification capacity for both air handling units to maintain spaces at a maximum of 60% RH.

- Hydronic piping under 4 inches will be Type L copper with soldered or brazed connections or mechanical press fittings. Larger diameter piping will be Schedule 40 welded steel with welded or flanged connections.

Telecom and Electrical Room Cooling

- Telecom and Electrical rooms requiring year round cooling will be cooled by dedicated fan coil units with air cooled or glycol cooled direct expansion (DX) refrigeration systems depending upon load. Cooling units are assumed for the main Electrical room and the main IDF room.

- Standalone DX systems with wall or roof mounted condensing units are assumed for the main electrical rooms.

4.5.10 Ventilation Systems

- Mechanical ventilation systems will distribute conditioned air to the normally occupied areas of the building providing required air changes, differential air pressure relationships, humidity control, indoor air quality, odor control, process

make-up air, and heating/cooling air. An adequate supply of conditioned outside air will be provided to meet FGI, IMC, and ASHRAE requirements.

- Fan systems will operate 24 hours per day where required to provide continuous ventilation and maintain required space pressure relationships to meet FGI and ASHRAE-170 criteria. Where feasible, fan systems will operate on an occupancy schedule and be turned off during unoccupied hours for energy savings.

AHU Equipment:

- Custom central air handling units (AHU) will have supply and return fans equipped with variable speed drives (VSDs). Multiple-fan systems (fan arrays) will be used for redundancy, to reduce electrical consumption, to reduce AHU space requirements, and to increase controllability. The AHUs will be equipped with a return fan array, mixing box, MERV-8 pre-filter bank (summer position), cooling coil, MERV-8 pre-filter bank (winter position), supply fan array, silencer bank (if needed), heating coil, and MERV-14 final filter bank.

- The number of AHUs is minimized to reduce first cost and maintenance costs. AHU systems serving areas on an occupancy schedule may be turned off during unoccupied hours to reduce energy consumption where feasible. Two main AHU systems are planned.

- AHU-1: Inpatient areas including Acute Care, Emergency Department (ED), and Sterile Processing, along with areas requiring maximum humidity limits including Imaging, Laboratory, and Pharmacy areas will be served by AHU-1 (nominal 25,000 CFM). The AHU-1 system will be a fully ducted system and be provided with dehumidification capability.

- AHU-2: The Administrative, Biomedical and Facilities areas, along with outpatient areas including Primary Clinic, Rehab, Behavioral Health, Physical Therapy, Optometry, Opiod Clinic, and Dental will be served by AHU-2 (nominal 25,000 CFM). The AHU-2 system will have ducted supply and partially ducted return, with the above ceiling spaces used as a return air plenum. Areas served by AHU-2 do not require humidity control, however the AHU arrangement will position the cooling coil in front of the heating coil, to allow for future dehumidification capability.

- The Long Term Care (LTC) area is planned for Phase 2 construction. Ventilation capacity for LTC could be included with AHU-1 as all areas operate 24/7 and are geographically close, if possible.

- Kitchen ventilation system will consist of a roof mounted make-up air unit (nominal size 3,000 CFM estimated), a type I kitchen hood with roof mounted upblast exhaust fan (3,000 CFM) and a general exhaust fan. Makeup air units (MAU) will be 100% outdoor air units and will contain a MERV-8 (summer) pre-filter bank, heat coil, MERV-8 (winter) pre-filter bank and fan array.

Exhaust Ventilation

- Acute Care airborne infection isolation (AII) rooms will have a dedicated exhaust system with required discharge height and separation from building openings and outside air intakes. Room pressure monitors will be provided.

- General exhaust air will be provided for toilet rooms, lab areas, locker rooms, janitor rooms, emergency and radiology waiting rooms, soiled utility and laundry rooms, closed dental operatories using nitrous oxide, and other similar spaces per FGI and IMC criteria.

- General exhaust fans serving areas on an occupancy schedule may be turned off during unoccupied hours to reduce energy consumption where feasible.

Humidity Control

- Standard ASHRAE-170 prescribes minimum and maximum humidity criteria for hospital, outpatient, and residential occupancies. Imaging and lab processing equipment generally have specific temperature and humidity requirements to maintain equipment operating parameters and warranty. The areas requiring humidity control include:

Area	Relative Humidity range (% RH)
Emergency Department Trauma	20-60%
Procedure/Treatment Rooms	20-60%
Class 1 Imaging rooms	60% Max, minimum per Imaging equipment requirements
Airborne Infection Isolation (AII) room	60% Max
Radiology Waiting room	60% Max
Emergency Department Waiting room	65% Max
Medication room	60% Max
Pharmacy	60% Max
Sterile Processing Clean room	60% Max

- To maintain maximum humidity requirements, air handling unit(s) serving these areas will be provided with dehumidification capability to limit maximum humidity levels to 60%. Dehumidification is achieved by providing sufficient cooling coil capacity to sub cool ventilation air down to a low dewpoint, effectively removing moisture from the air. The air is then heated to a minimum of 55 degrees F and distributed to the building.

- Areas requiring minimum humidity limits including ED Trauma and Treatment rooms, and Imaging rooms will be humidified by local electric steam generators coupled with duct mounted steam dispersion panels. Steam and condensate lines will be routed from the steam generators to the humidification grids. Use of de-ionized or reverse osmosis water for electric humidifier steam generators is planned to reduce maintenance requirements.

4.5.11 Building Automation System (BAS) Controls

- The building HVAC systems will be controlled using a Direct Digital Control (DDC) building automation system (BAS). For maintenance cost savings, a BAS system with internet connectivity allowing remote notification and access for BAS technician troubleshooting assistance is planned. Custom BAS programing and graphic displays, indicating equipment and system setpoints and operating conditions as well as alarms and monitoring points for local and internet interfacing, will be provided. A BAS operator workstation will be provided.

- The air cooled chillers will have packaged controls. The BAS system will connect to the packaged controls and enable/disable the system and monitor chiller operation.

- Pressurization: Building air pressure will be controlled to be slightly positive relative to ambient to control building infiltration, except where other differential air pressure relationships are required for specific occupancies or applications.

4.5.12 Acoustic and Vibration Control

- Mechanical systems will be designed and specified to maintain background noise in compliance with the program requirements and recommended ASHRAE and FGI design sound levels.

- The need for sound attenuation will be evaluated and provided if needed to minimize sound power levels at the source.

- Fans will be spring isolated where practical to reduce transmission of equipment vibration. Attention will be paid to breakout transmissions and transmissions radiated through the structure.

- Housekeeping pads will be provided under rotating equipment to reduce vibration transmissions where practical.

- For spaces where ceiling return air plenums are utilized, acoustical return and transfer air elbows will be provided to minimize sound transmission between occupied spaces.

- Sound and vibration isolation will be provided at the mechanical rooms to isolate the equipment from adjacent occupied spaces.

4.5.13 Seismic

- Klawock is a seismically active area. Building non-structural components, including mechanical, plumbing, fuel oil, and fire protection systems will require seismic restraint in accordance with the IBC, NFPA, and ASCE standard 7.

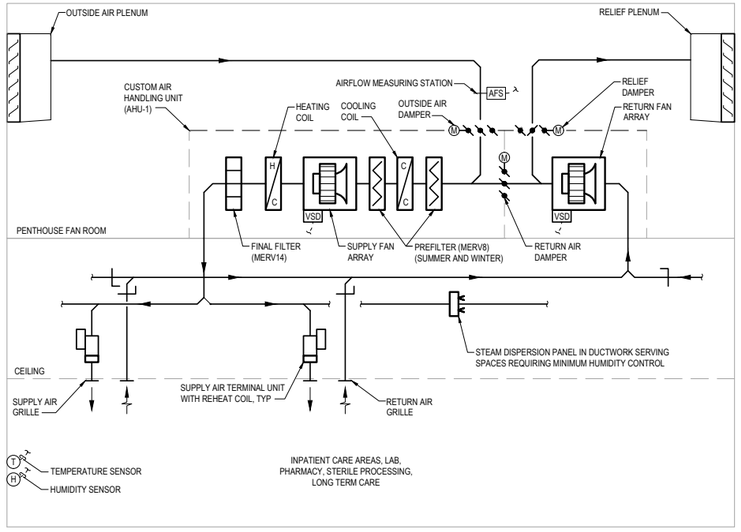
- Mechanical and electrical equipment seismic importance factor (Ip) is equal to 1.5 for essential facilities; defined as buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind, snow, or earthquakes.

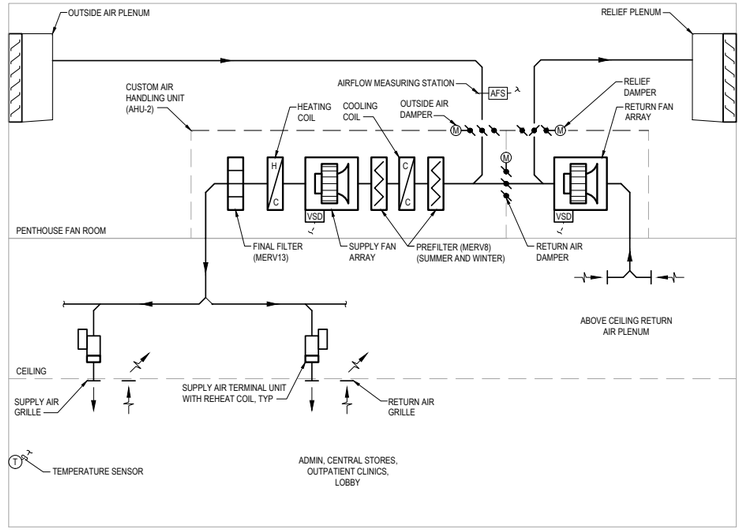
- Critical mechanical systems equipment will be specified for seismic certification via shake table testing where feasible; this equipment is anticipated to include air handling units, fans, chillers, VSDs, and medical gas source equipment.

4.5.14 Outline Specifications

- 20 0000 - Mechanical General Requirements
- 20 0513 - Common Motor Requirements
- 20 0529 - Mechanical Hangers and Supports
- 20 0548 - Vibration and Seismic Control
- 20 0553 - Mechanical Identification
- 20 0556 - Interior Trench Excavation and Backfill
- 20 0700 - Mechanical Insulation
- 21 1000 - Water Based Fire Suppression Systems
- 22 1100 - Domestic Water Piping and Specialties
- 22 1300 - Sanitary Waste and Vent Piping and Specialties
- 22 1400 - Storm Drainage Piping and Specialties
- 22 3300 - Electric Water Heaters
- 22 4000 - Plumbing Fixtures
- 22 6300 - Medical Gas Systems
- 23 0131 - Duct Cleaning
- 23 0593 - Testing, Adjusting and Balancing
- 23 1113 - Fuel Oil Piping and Specialties
- 23 2113 - Hydronic Piping and Specialties

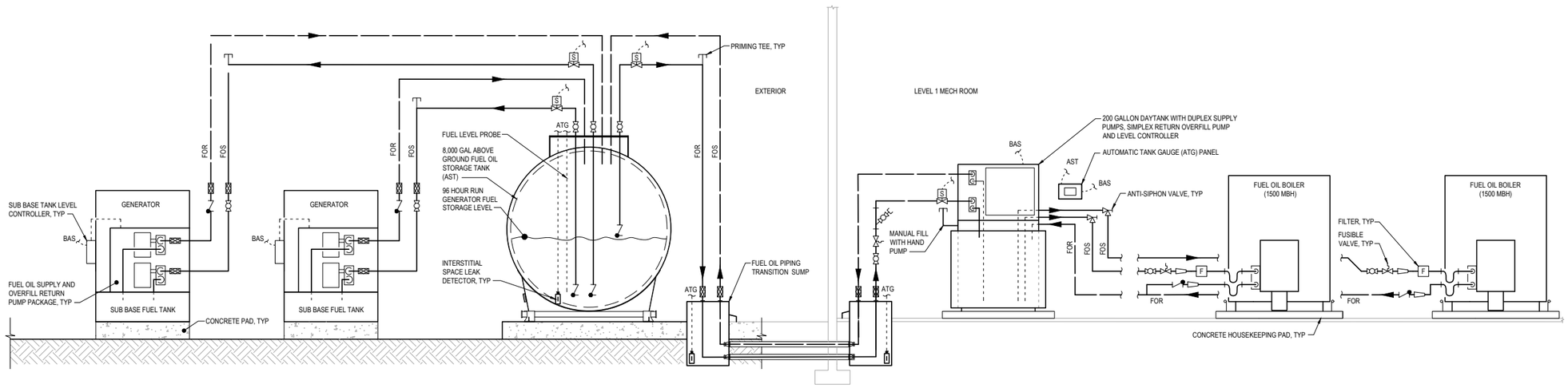
- 23 2123 - Hydronic Pumps
- 23 2200 - Steam and Condensate Piping and Specialties
- 23 3100 - Ducts and Accessories
- 23 3400 - HVAC Fans
- 23 3600 - Air Terminal Units
- 23 3700 - Air Outlets and Inlets
- 23 3813 - Commercial Kitchen Ventilation Systems
- 23 5213 - Electric Boilers and Accessories
- 23 5223 - Cast Iron Boilers and Accessories
- 23 6400 - Packaged Water Chillers
- 23 7300 - Central Air Handling Units
- 23 7423 - Packaged Makeup Air Units
- 23 8123 - Dedicated Air-Conditioning Units
- 23 8200 - Terminal Heating and Cooling Units
- 23 8400 - Humidity Control Equipment
- 25 3000 - Building Automation System Field Devices
- 25 4000 - Variable Speed Drives
- 25 5000 - Building Automation System
- 25 9000 - Sequences of Operation





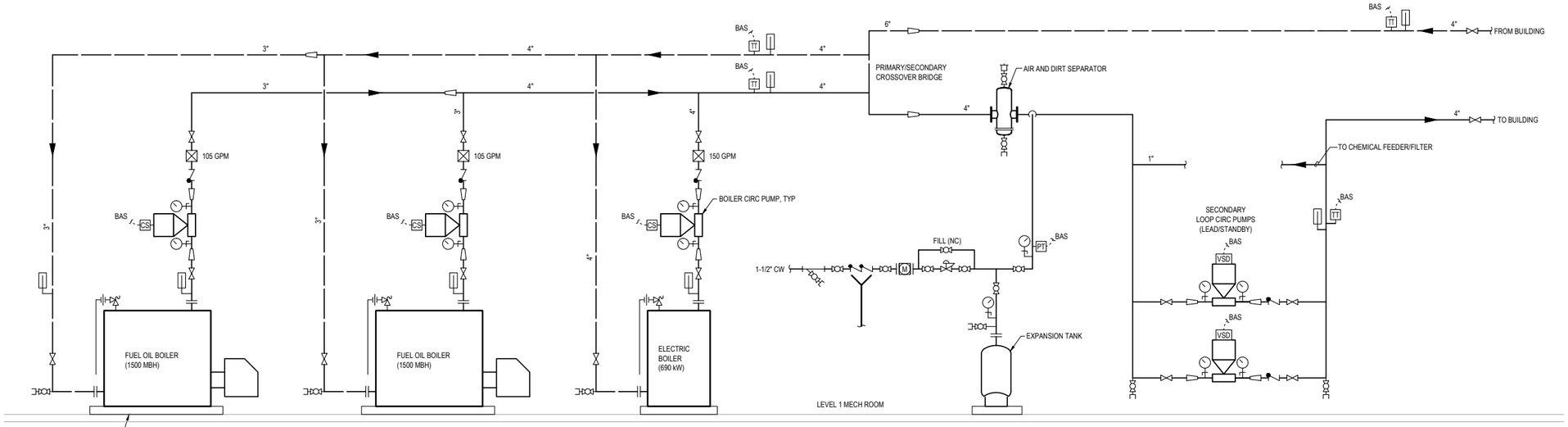
01 DIAGRAM - CENTRAL VENTILATION SYSTEMS

NONE



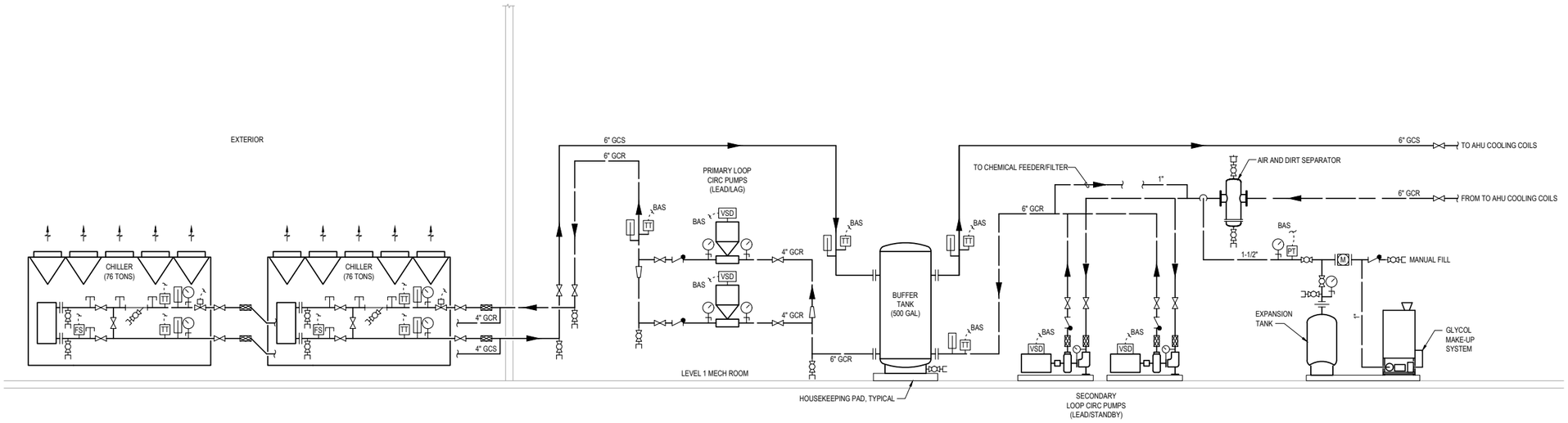
02 DIAGRAM - FUEL OIL DISTRIBUTION SYSTEM

NONE



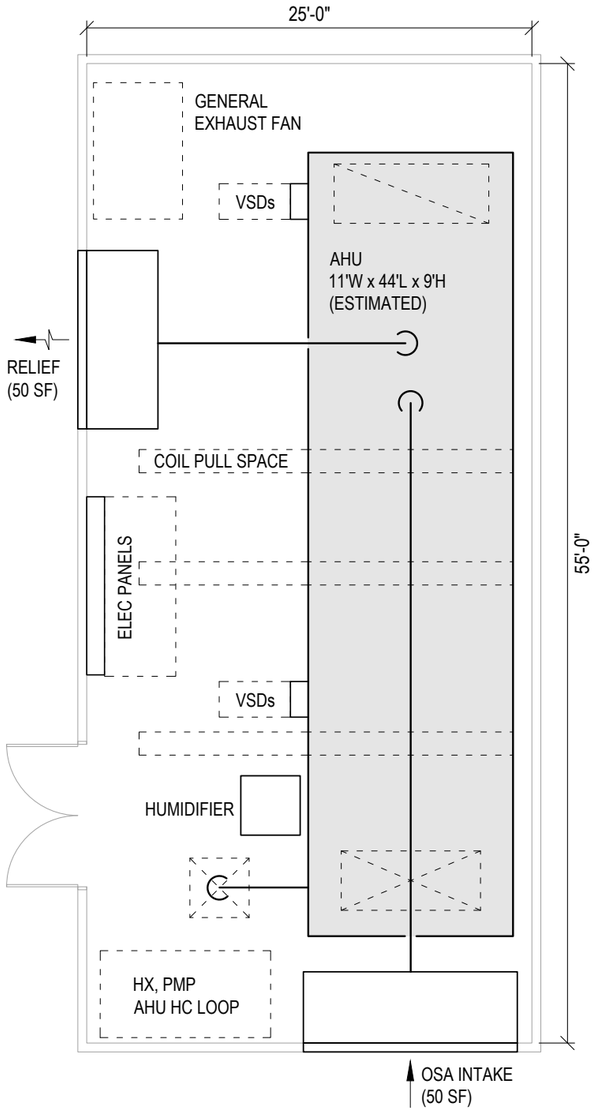
03 DIAGRAM - CENTRAL HEATING SYSTEM

NONE

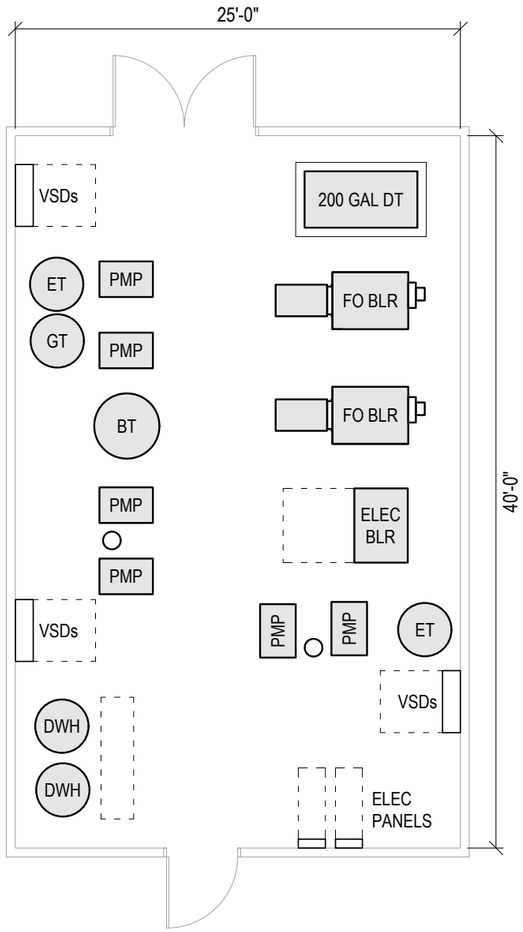


04 DIAGRAM - CHILLED WATER SYSTEM

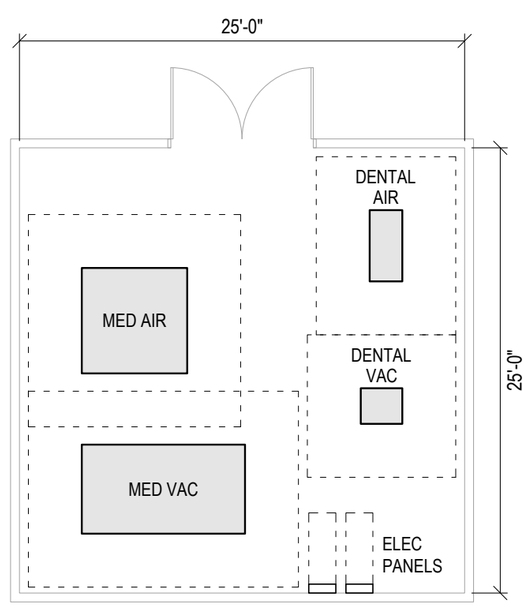
NONE



05 PENTHOUSE FAN ROOM LAYOUT
NONE



06 LEVEL 1 MECHANICAL ROOM
NONE



07 LEVEL 1 MEDICAL GAS SOURCE ROOM
NONE

4.6 Electrical

4.6.1 Electrical

- Building Total Electrical Load: Electrical service loads will be calculated in accordance with NEC Article 220. At this stage of the design, calculations are based on estimated Building Gross Square Footage (BGSF) and use typical values for VA/square foot for each building occupancy type. Preliminary electrical load calculations for each building are as follows:
-

Area	Square Feet (SF)	VA/SF	Total VA
Acute Care	2,419 SF	15	36,285 VA
Admin	3,594 SF	10	35,940 VA
Behavioral Health	3,685 SF	10	36,850 VA
Biomed Facilities	1,394 SF	10	13,940 VA
Boiler (Electric)	N/A	N/A	720,000 VA
Central Supply	1,757 SF	10	17,570 VA
Dental	3,099 SF	10	30,990 VA
Dietary	1,089 SF	20	21,780 VA
Emergency Department	5,288 SF	20	105,760 VA
Imaging	3,342 SF	20	66,840 VA
Lab	1,110 SF	15	16,650 VA
Laundry	698 SF	20	13,960 VA
Lobby	6,500 SF	5	32,500 VA
Long Term Care (Phase 2)	8,400 SF	10	84,000 VA
Mechanical	4,242 SF	10	42,420 VA
Optometry	824 SF	10	8,240 VA
Pharmacy	1,764 SF	10	17,640 VA
Primary Clinic	5,240 SF	10	52,400 VA
Rehab	2123	10	21,230
Staff	1,054 SF	10	10,540 VA
Sterile	445 SF	20	8,900 VA
	58,067 SF		1,394,435 VA

- Breakdown of Electrical Loads: Electrical loads can be divided into major categories for the facility. At this stage in the design, it is not possible to accurately estimate the percentage of the total building load for each load category. because power consumption for each load category can vary widely, depending on the type of mechanical systems selected, building construction type, building footprint, and other factors. Below is a list of anticipated major load categories for the facility:
  - Lighting
  - Receptacle (plug loads)
  - Motors (Pumps, fans, etc.)
  - Cooling
  - Heating
  - Kitchen equipment
  - Imaging equipment
  - Miscellaneous continuous electrical loads
  - Miscellaneous non-continuous electrical loads
- Electric Utility and Service
  - The new facility will be served by Alaska Power and Telephone (AP&T). The intent is to serve the Clinic/CAH from a medium voltage; overhead utility line located on west side of the Klawock-Hollis Highway. There already exists a tap from the line that crosses the Klawock-Hollis Highway and serves the existing Alicia Robert Medical Clinic (ARMC) from a pad mounted, oil filled, utility transformer. AP&T will extend this medium voltage line underground to serve the new facility.
  - The new facility will be served by a 2,000 Amp, 480Y/277 Volt, 3 phase, 4 wire service. The service will be fed from a 1,500 kVA, 12.47kV:480Y/277 Volt service transformer. The main service switchboard will be single ended, switchboard construction, configured with a main circuit breaker and required distribution sections.
- Generator Power System
  - Two 400kW, 480V exterior generators in skintight, sound attenuated enclosures will provide backup power for the new facility. Generators are sized in accordance with NEC 517.31(D) such that each generator can support the full actual demand likely to be produced by the connected load. This provides N+1 redundancy for the generator system.
  - The generators will serve a 1,200 Amp, 480Y/277 Volt, 3 phase, 4 wire paralleling switchgear lineup. Each generator will feed a separate section of the switchboard, and the switchgear control system will automatically control generator paralleling operations. Multiple distribution sections will be provided to serve each branch of the Essential Electrical System (EES) and nonessential loads as required.
  - The intent is that all building loads except for electric boilers are served by the generators as part of the EES or as nonessential loads.
- Building Power Distribution:
  - The Critical Access Hospital (CAH) is classified under NEC 517/NFPA 99 as a hospital with critical care (Category 1) and general care (Category 2) spaces and therefore is required to have a Type 1 Essential Electrical System per NEC 517.
  - The Clinic area is classified under NEC 517 / NFPA 99 as a Medical Office Building with only basic care (Category 3) spaces. Although not required,

the Clinic areas will be served from the same Essential Electrical System as the CAH as allowed by NEC Article 517.

- Distribution of power to building loads will be divided into branches. The distribution system for generator backup power will be designed in accordance with the applicable code requirements listed below. Power system branches and shedding priorities for the facility are as follows:
  - Life Safety (NEC 517.33): Priority 1 (non-sheddable)
  - Critical (NEC 517.34): Priority 2 (non-sheddable)
  - Equipment (NEC 517.35): Priority 3 (sheddable)
  - Optional Standby (NEC 702): Priority 4 (sheddable)
  - Electric Boiler: Not backed up by generator
- The Life Safety Branch, Critical Branch and Equipment Branch power systems are required by Code to be in a separate electrical room from the optional standby and normal power electrical gear. We estimate that this Emergency Electrical Room will require approximately 540 square feet of floor space (18' x 30').
- The Normal power electrical room will be separate from the Emergency Electrical Room as required by Code. We estimate the Normal power electrical room to require 360 square feet of floor space (12' x 30').
- Three satellite electrical rooms will be required to serve the facility. The satellite electrical room in the southwest quadrant of the building will be approximately 144 square feet (8' x 18') while the other two satellite electrical rooms will be approximately 100 square feet (8' x 12'). The satellite electrical room located in the southeast quadrant will be dedicated to the Long Term Care area. Provisions to extend the electrical system to the Long Term Care area will be provided if it is constructed as a second phase.

- Automatic Transfer Switches:
  - Closed Transition Transfer Switches (CTTSs) are recommended for all branches to allow the generator system to be tested with no interruption of power to loads. CTTSs transfer in a make before break mode when both sources of power are available and within acceptable parameters. The use of CTTSs will require approval by the local utility.
  - It is also recommended that all CTTSs be equipped with Bypass/Isolation features to allow the transfer switch to be inspected, tested, and maintained without interrupting power to the load. They also provide a redundant method of manual power transfer if the CTTS is disabled or removed from service.
  - Transfer switches will also be equipped with Touch Display Interface (TDIs) Technology Packages with Local Graphical Color Touch Interface panels and integral power meters.

- Isolated power panels will be provided in locations deemed as "wet locations" by NFPA 99 and the Owner. These are anticipated to include wet location, invasive procedure areas such as Operating Rooms, Interventional Radiology Rooms, and Catheterization Labs.
- Surge Protective Devices (SPDs) will be provided to limit transient voltage disturbances. SPDs will be provided in Main Switchboard, Distribution Switchboards, selected Distribution Panels, and selected Branch Circuit Panels as determined during design.
- CTTSs, circuit monitors, enhanced energy meters, and electronic trip units will be networked back to remote personal computer workstations (PCWs) located in the maintenance office. The PCWs will be equipped with critical power monitoring software to facilitate data analysis.

- Uninterruptible Power Supply (UPS) system
  - A centralized UPS and associated distribution system will not be provided.
  - Uninterrupted power for telecommunications equipment will be provided by rack mounted UPSs in each of the telecom rooms.
  - Other equipment requiring uninterrupted power will be provided with point of use UPSs.
  - SEARHC may elect to order full sized UPSs with some imaging equipment. These UPSs will be provided by the imaging equipment manufacturer. UPSs requirements for imaging equipment will be coordinated in future design stages.
- Lighting Systems
  - Healthcare facilities carry high expectations for lighting systems. Reliability is crucial, but so is patient perception. The environment of a healthcare facility can have a major impact on the mood and outlook of patients, visitors, and staff. Lighting and controls play a key role in enabling staff to execute tasks at the highest level while also supporting a comfortable patient experience, both critical to achieving the best outcomes.
  - Thoughtful healthcare lighting design promotes a sense of wellbeing. Clinical lighting fixtures and the general purpose lighting for healthcare facilities must be flexible. Illumination sources will allow tailoring for intensity, color temperature, color rendering and distribution, with flexibility to adapt to the ever changing needs of a dynamic healthcare environment.
  - Ultimately, the goals of a healthcare lighting system should align with the diverse but complementary goals of patients, caregivers, and staff.
  - Lighting concepts and specific fixture types in the various building areas will be determined during future design phases. LED fixtures will be utilized throughout the new facilities.
  - Lighting levels will be in accordance with the recommendations of the latest edition of the IES Lighting Handbook and Owner preferences.

- Emergency/Exit Lighting: Selected fixtures will be "emergency night lights" and will be connected to life safety branch panels. Emergency lighting units with battery backup will be provided in operating rooms, invasive procedure rooms, stairwells, mechanical, and electrical rooms. Exit signs will be LED type.
- Lighting Power Density (LPD) for each type of room will be minimized by using high efficiency LED fixtures, efficient fixture layouts and targeted lighting distributions. LPD calculations for each type of room will be provided in subsequent design phases. A comparison will be provided listing calculated LPD vs. ASHRAE 90.1 requirements.

- Lightning Protection System
  - A simple lightning protection risk assessment was performed in accordance with NFPA 780 and due to the extremely low occurrence of lightning strikes in Klawock, a lighting protection system is not recommended for this facility.
- Power System Grounding
  - The grounding and bonding system will be specified to meet the requirements of NFPA 70, NFPA 99 and the local Authority Having Jurisdiction. An Equipment Grounding Conductor (EGC) will be installed in each feeder and branch circuit raceway, whether metallic or not, to form a complete and continuous ground path. Ground bars will be provided in each electrical room and in each telecom room.

4.6.2 Communications

- Telecommunications Distribution System
  - A comprehensive structured cabling system will be provided for the facility. The system will include backbone infrastructure and a uniform horizontal cabling system to deliver services to end user devices.
  - The structured cabling systems will be designed in accordance with ANSI/TIA Standards (American National Standards Institute/Telecommunications Industries Association) and the BICSI (Building Industry Consulting Service International) Telecommunications Distribution Methods Manual (TDMM).
  - The site infrastructure will include Unshielded Twisted Pair (UTP) copper and optical fiber cabling for delivery of regulated telephone and data services from AP&T.
  - The systems will also support Local and Wide Area Networks (LANs and WANs).
  - The backbone infrastructure will include copper and both multimode and single mode optical fiber cabling to support Local Area Networks (LANs), broadband television, multi-drop networks, video surveillance (CCTV) and telephone (PABX, Centrex or VoIP) systems.
  - Backbone cabling will be extended from satellite telecom rooms located strategically throughout the facility back to the facilities' Main Telecom Room.
  - The horizontal cabling system will consist primarily of high performance UTP cabling (Category 6A minimum) and multi-port outlets. The same cabling will be used to support services ranging from telephone to high-speed LAN services. Category 6A cabling is recommended and will form the basis of design.
  - Horizontal cabling will homerun back to the local Telecom Rooms (IDFs). Telecom Rooms will be located no more than 460 feet apart so that no telecommunications outlet is more than 230 feet (straight line distance) from a Telecom Room. The maximum allowable distance for horizontal cabling runs is approximately 295 feet. The 230 feet distance allows for offsets, elevation changes, etc., in routing cabling back to the IDFs.
  - Telecommunication outlets will be provided in the ceiling space throughout the facility for Owner Furnished, Owner Installed (OFOI) Wireless Access Points (WAPs) to provide wireless network connectivity.
  - Telecommunications cable will be routed in cable trays wherever practical to maximize future flexibility and to minimize future costs associated with system modifications.
  - MDF and IDF Room Area Requirements:
    - A MDF (Main Telecom Room) will be provided in the facility that should be preliminarily sized at 224 square feet with finished dimensions of approximately 17 feet by 12 feet. The Main Telecom Room will also serve as the facilities Entrance Facility, where outside telecom system providers enter the facility with their cables. The Main Telecom Room will also service telecom systems and outlets within its reach. Only one (1) Main Telecom Room for the facility will be required.
    - An IDF (satellite telecom room) will be provided to serve the areas not served by the MDF. We anticipate that a single IDF along with the MDF will be adequate to serve the entire facility. The IDF should be preliminarily sized at 132 square feet, with finished dimensions of approximately 14 feet by 11 feet. If the telecom rooms are less than optimally located within the building footprint, additional satellite telecom rooms may be required.
  - MDF and IDF Room Power Requirements:
    - An electrical branch circuit panelboard will be provided in each MTR and TR, to provide power for dedicated telecommunications loads in those rooms. These electrical branch circuit panelboards will be served from the critical branch of the EES.
  - IT System Grounding Requirements:

        - The telecommunications systems and rooms will be bonded and grounded in accordance with the requirements of ANSI/TIA- 607-E – Generic Telecommunications Bonding and Grounding for Customer Premises. A Primary Bonding Busbar (PBB) will be provided in the MDF in the facility.
        - Secondary Bonding Busbars (SBB) will be provided in each IDF in the facility. SBBs will be bonded to the PBBs via building steel and/or a Telecommunication Bonding Busbar (TBB) in accordance with ANSI/TIA-607-E.
- Nurse Call System
    - A Nurse Call System will be provided in the in the critical access hospital area in accordance with NFPA 99 and FGI Guidelines. The critical access hospital system will be UL1069 listed.
    - Anticipated critical access hospital nurse call equipment and devices include, but is not limited to, the following:
        - Patient Stations
        - Bath Stations
        - Staff Assistance Stations
        - Emergency Call Stations
        - Nurse Master Stations
        - Duty Stations
    - A separate Nurse Call System will be provided in the long term care area in accordance with NFPA 99 and FGI guidelines. The long term care area nurse call system will be UL2560 listed.
    - Anticipated long term care nurse call equipment and devices include, but is not limited to, the following:
        - Wireless Pendants
        - Bed Stations
        - Bath Stations
        - Nurse Master Stations
    - Nurse call equipment requirements and device layouts will be further developed in subsequent design phases.
- Paging/Public Address
    - SEARHC does not desire to have paging or public address in this facility.
- Distributed Antenna System(s) (DAS)
    - Depending on the building's construction, occupant cell phone coverage may be problematic. Performance specifications will be developed to test system coverage in the facility and provide a DAS if coverage appears as though it will be an issue. We do not anticipate that a DAS will be required for this facility.
- Emergency Responder Radio Communication System (ERRCS)
    - Depending on the building's construction, first responder radio coverage may be problematic. Performance specifications will be developed to test system coverage in the facility and provide an ERRCS if coverage appears as though it will be an issue. We do not anticipate that an ERRCS will be required for this facility.
- Synchronized Clock System(s)
    - A wireless synchronized GPS clock system will be implemented in select areas in the facility, such as procedure rooms, as determined by the Owner during subsequent design phases. This wireless synchronized GPS clock system will be designed around products and systems available from Primex. Battery powered clocks will be provided, utilizing Bluetooth wireless technology for synchronization. The low energy wireless Bluetooth technology allows for clock battery life of up to 5 years.
    - The synchronized clock system(s) will meet applicable requirements by Underwriters Laboratories Inc. and/or the Factory Mutual System.

4.6.3 Electronic Safety and Security

- Access Control System (ACS)
    - An Access Control System (ACS) will be provided in the facility. The ACS system will include the following minimum features:
        - Card readers, door position switches, requests to exits, electrical power transfer devices, etc. as determined during subsequent detailed design phases.
    - A fully electronic, S2 NetBox access control system will be provided. The system will be "zoned" to separate "front of house" from "back of house" activities and to limit access to key areas such as pharmacies, operating room areas, etc., to those users with the correct credentials.
    - Card readers will be 13.56 MHz, contactless, smart cards.
- Video Surveillance System(s)
    - A Video Surveillance System (VSS) and monitoring system will be provided in the facility. The VSS will include the following minimum features:
        - Multi-megapixel interior cameras will be provided in select areas in the building as determined by the Owner during subsequent design phases. These select areas will include central points; all entries, waiting areas, stairwells, parking areas, warehouse or large storage spaces (asset protection) and all pharmacies.
        - Multi-megapixel exterior cameras will be provided to provide general coverage of parking lots, and to cover all entries into the facility.
        - Recording frame rates, video quality, and video retention time will be coordinated with the Owner during subsequent design phases.

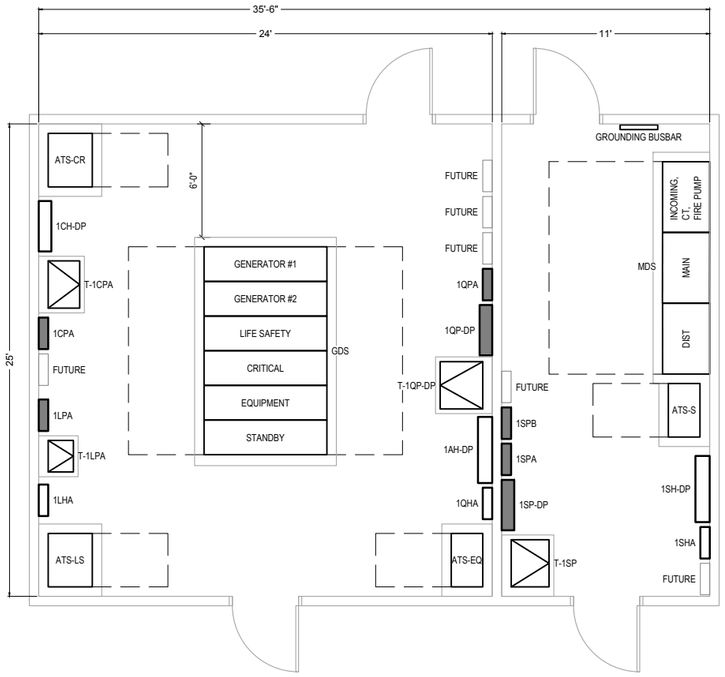
The video surveillance system will be integrated with the ACS so that video is automatically called up for select doors, should those doors go into alarm.

  - The Video Management System (VMS) software will be by Milestone which is the SEARHC preferred VMS.

- Fire Alarm System
  - An electrically operated, electrically supervised analog addressable fire alarm system will be provided for the facility. The system will comply with the applicable provisions of the current NFPA Standard 72 National Fire Alarm and Signaling Code, local building codes, and meet all requirements by Underwriters Laboratories Inc. and/or the Factory Mutual System. The system will operate as a low voltage, voice evacuation fire alarm, and mass notification system.
  - Automatic smoke detection, emergency voice /alarm communications, and a fire department communications system will be provided in accordance with International Building Code (IBC) and International Fire Code (IFC) requirements.
  - The system will include features as required by Code and the local Authority Having Jurisdiction.
  - Alarms will be annunciated at alphanumeric displays, located as determined during detailed design.
  - Panel communications as well as detection and notification appliance circuits will be configured as fault tolerant circuits. Both audible and visual alarms will be provided to meet the requirements of the International Fire Code, NFPA 72, and other applicable Codes. Voice evacuation speakers and strobes will be provided in public and patient areas as determined during detailed design. In non-patient areas, audio-visual horn/strobe units, with combination horn and flashing alarm strobes, will be utilized where appropriate (mechanical/electrical rooms, etc.).
  - Manual pull stations will be provided at every exit, from every level, and additional pull stations will be provided as required to ensure the travel distance to the nearest pull station does not exceed 200 feet, per the International Fire Code (IFC).
  - Smoke and heat detection will be provided as required by Code, or the AHJ, as determined during detailed design. Smoke detectors provided will be intelligent analog addressable type to provide detection accuracy and early response to all types of fires.
  - Smoke detectors will be provided for local release of any required coiling fire doors in accordance with NFPA 72 requirements.
  - Smoke detectors will be provided for local door release of any required smoke control doors in accordance with NFPA 72 requirements.
  - Smoke detectors will be installed in mechanical return air ducts in accordance with International Building Code (IBC), International Mechanical Code (IMC), and International Fire Code (IFC) requirements.
  - Smoke detectors will be provided for activation of smoke/fire dampers in accordance with International Building Code (IBC) requirements.
  - Monitoring of sprinkler flow, tamper, and pressure switches will be provided.

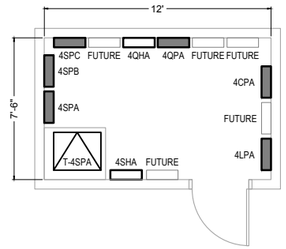
4.6.4 Electrical Specifications Sections

- 26 0000 - Electrical General Requirements
- 26 0519 - Low Voltage Electrical Power Conductors and Cables
- 26 0526 - Grounding and Bonding for Electrical Systems
- 26 0529 - Hangers and Supports for Electrical Systems
- 26 0533 - Raceway and Boxes for Electrical Systems
- 26 0553 - Identification for Electrical Systems
- 26 0919 - Enclosed Contactors
- 26 0923 - Lighting Control Devices
- 26 2011 - Hospital Isolated Power Systems
- 26 2200 - Low Voltage Transformers
- 26 2300 - Low Voltage Switchgear
- 26 2413 - Switchboards
- 26 2416 - Panelboards
- 26 2726 - Wiring Devices
- 26 2800 - Low Voltage Circuit Protective Devices
- 26 2816 - Enclosed Switches and Circuit Breakers
- 26 2900 - Low Voltage Controllers
- 26 3213 - Diesel Engine Driven Generator Sets
- 26 3623 - Automatic Transfer Switches (ATS)
- 26 4300 - Surge Protective Devices
- 26 5000 - Lighting Fixtures
- 27 0536 - Cable Trays for Communications Systems
- 27 2010 - Telecom Distribution System
- 27 2020 - Telecom Optical Fiber Distribution
- 27 5223 - Nurse Call System
- 28 1000 - Access Control
- 28 2000 - Video Surveillance
- 28 4600 - Fire Detection and Alarm



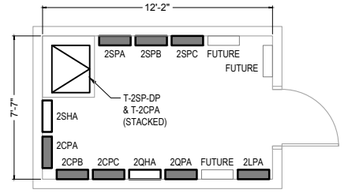
01 MAIN ELECTRICAL ROOM AND EMERGENCY ELECTRICAL ROOM
1/4" = 1'-0"

0 2' 4' 8'



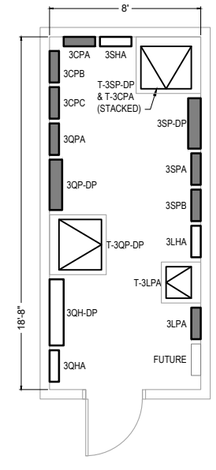
04 SATELLITE ELECTRICAL ROOM
1/4" = 1'-0"

0 2' 4' 8'



02 SATELLITE ELECTRICAL ROOM
1/4" = 1'-0"

0 2' 4' 8'



03 SATELLITE ELECTRICAL ROOM
1/4" = 1'-0"

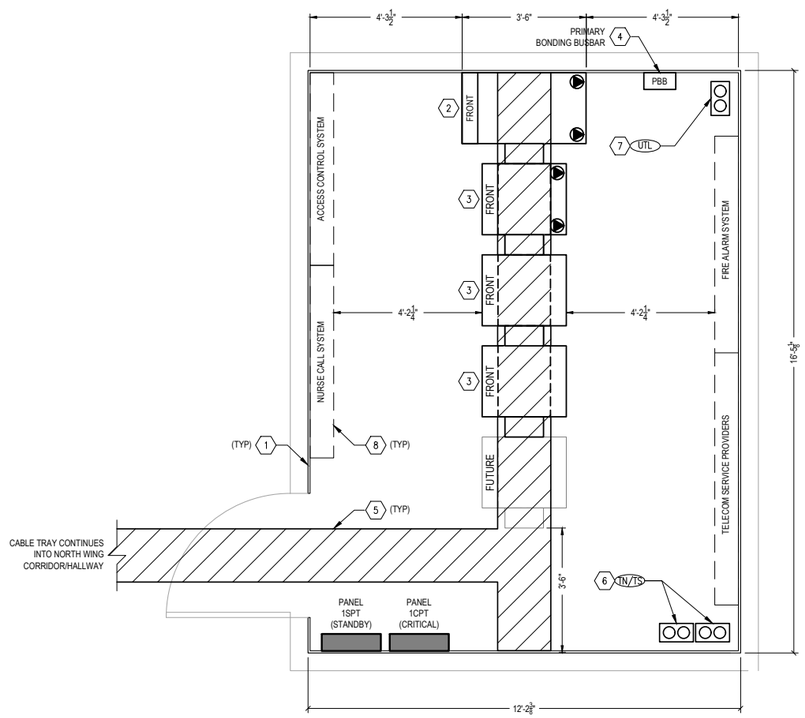
0 2' 4' 8'

GENERAL NOTES

1. REFER TO THE TELECOM ONE-LINE DIAGRAM FOR CABLE PATHWAY AND CABLE DESCRIPTIONS.

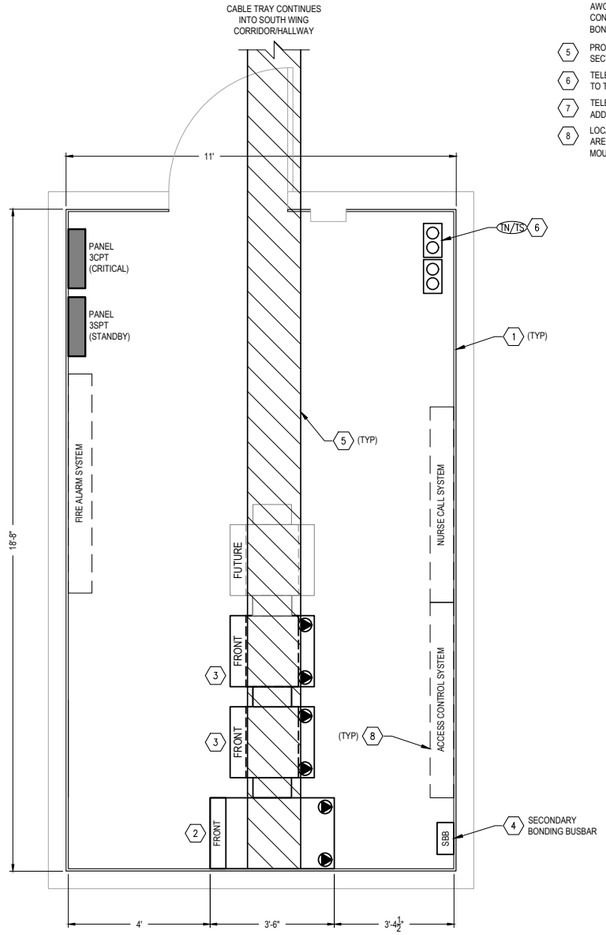
SHEET NOTES

1. PROVIDE TELECOM BACKBOARD IN ACCORDANCE WITH SPECIFICATION SECTION 27 2010.
2. PROVIDE TELECOM CABINET IN ACCORDANCE WITH SPECIFICATION SECTION 27 2010.
3. PROVIDE TELECOM RACK IN ACCORDANCE WITH SPECIFICATION SECTION 27 2010.
4. PROVIDE TELECOM PRIMARY OR SECONDARY GROUNDING BUS BAR (PBB) AS DESIGNATED PER TELECOM SPECIFICATIONS. WALL MOUNT AT +7'-0" TO CENTER, AFF. CONNECT PBB TO THE MAIN ELECTRICAL SERVICE GROUND IN THE MAIN ELECTRICAL ROOM WITH #2/0 AWG TELECOM BONDING BACKBONE CONDUCTOR IN 1 INCH ALUMINUM CONDUIT. CONNECT TO THE SBB IN THE SATELLITE TELECOM ROOM WITH #2/0 AWG TELECOM BONDING BACKBONE CONDUCTOR IN 1 INCH ALUMINUM CONDUIT.
5. PROVIDE CABLE TRAY MOUNTED AT 7'-6" AFF IN ACCORDANCE WITH SPECIFICATION SECTION 27 2010.
6. TELECOM BACKBONE CONDUITS TO SATELLITE TELECOM ROOM IN SOUTH WING. REFER TO THE TELECOM ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
7. TELECOM BACK BONE CONDUITS TO UTILITY. REFER TO TELECOM ONE-LINE FOR ADDITIONAL INFORMATION.
8. LOCATE WALLS AND EQUIPMENT SUCH THE THE INDICATED CLEARANCE REQUIREMENTS ARE ATTAINED WITH DEDICATED 8 INCH DEPTH OF WALL MOUNTED EQUIPMENT CABINET MOUNTING SPACE.



01 MAIN TELECOM ROOM (NORTH WING)
1/2" = 1'-0"

0 1' 2' 4'

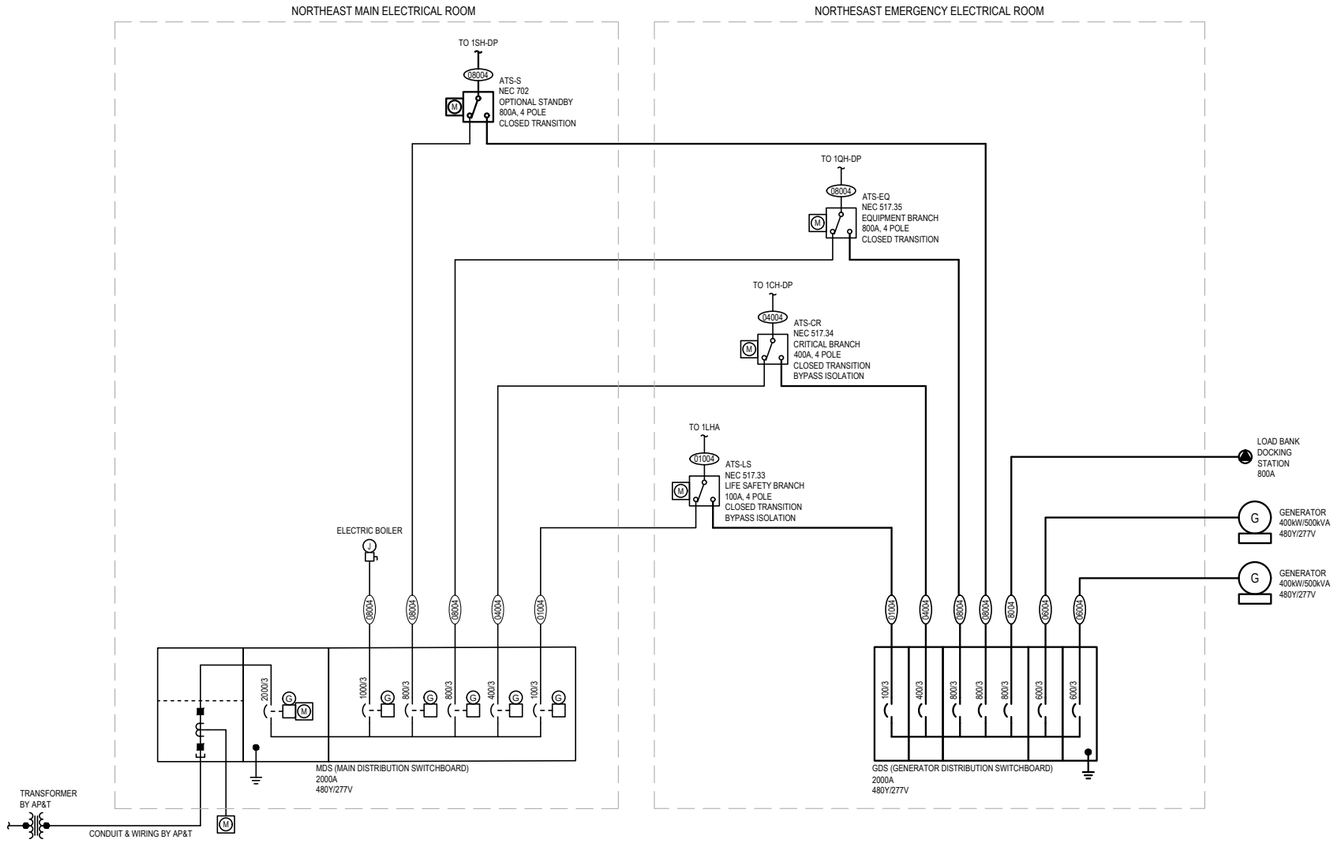


02 SATELLITE TELECOM ROOM (SOUTH WING)
1/2" = 1'-0"

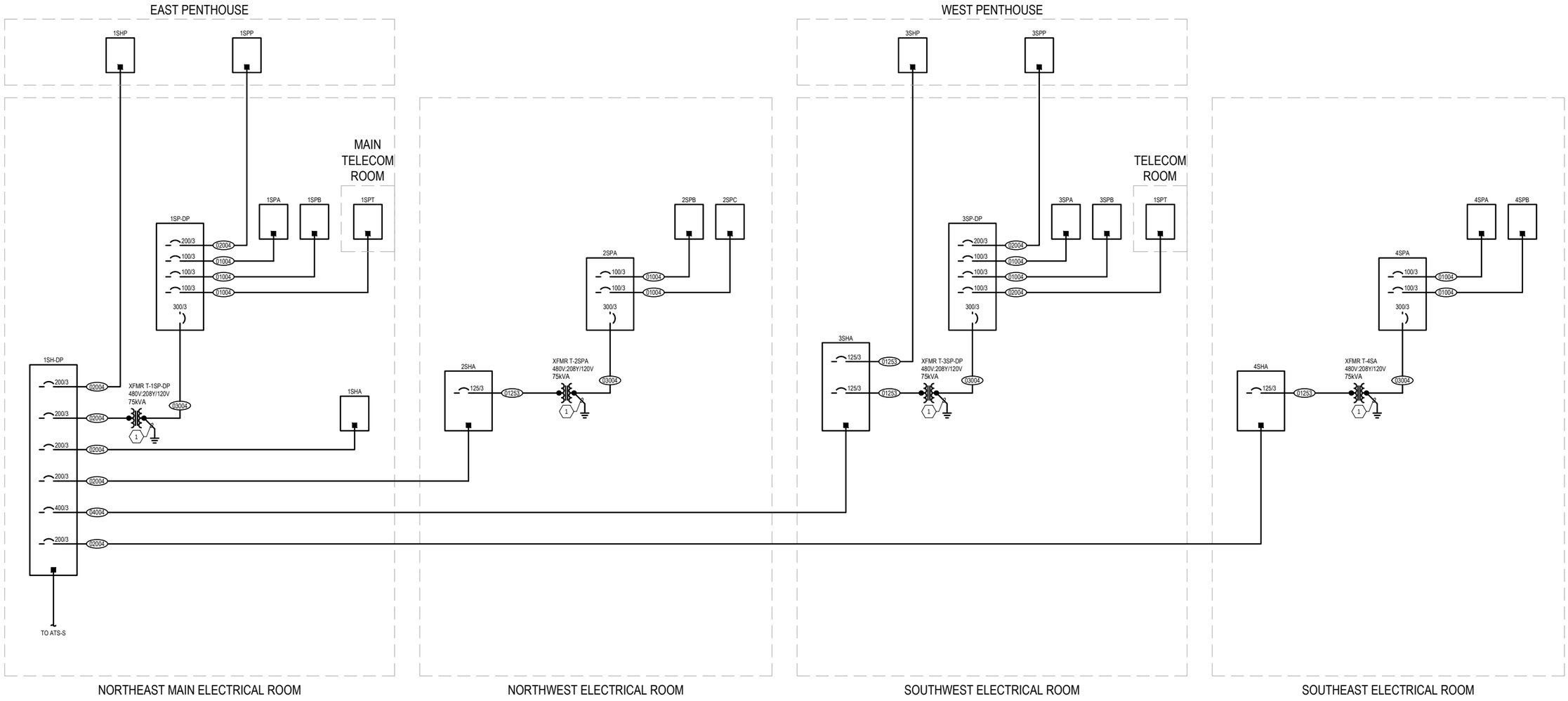
0 1' 2' 4'

GENERAL NOTES

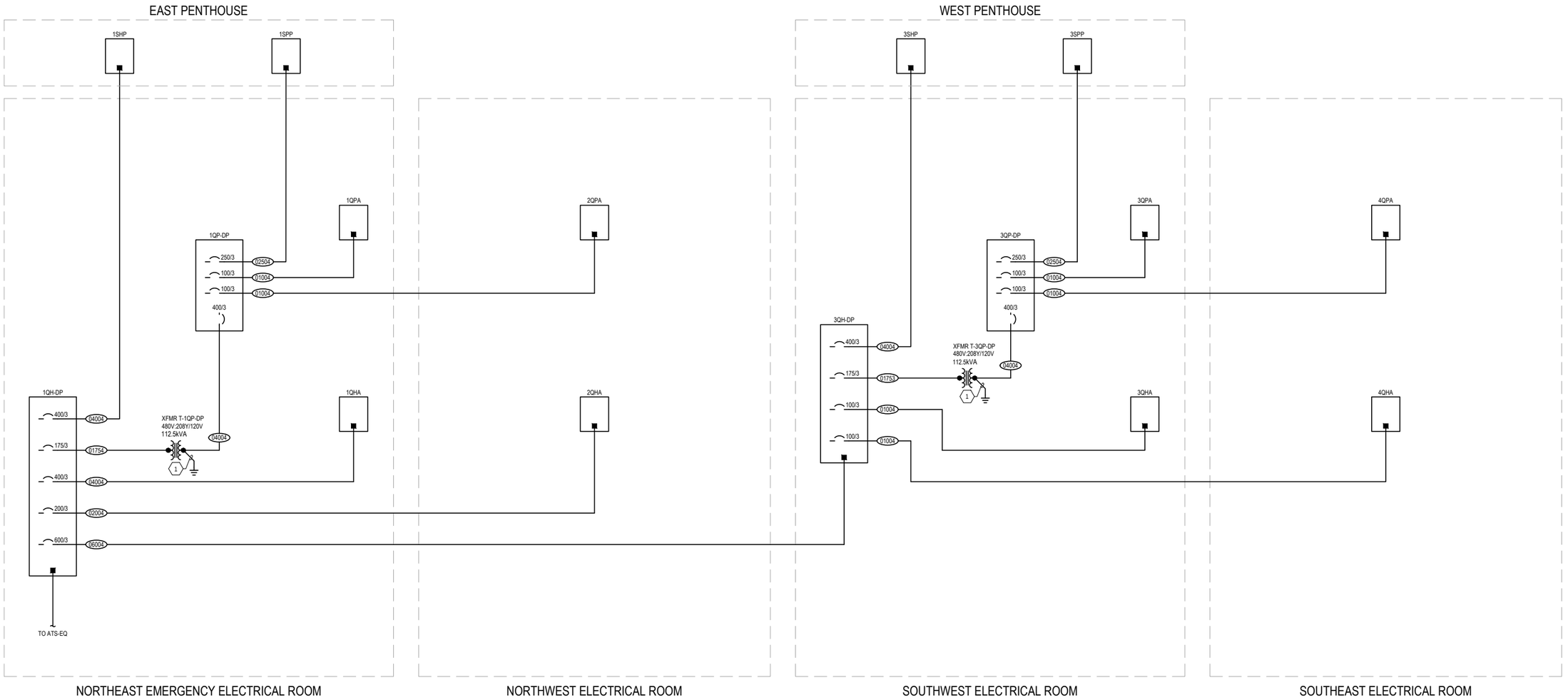
1. PROVIDE INTEGRAL SPD IN SWITCHGEAR, SWITCHBOARDS, DISTRIBUTION PANELS, AND BRANCH CIRCUIT PANELS.
2. BOND GROUNDING BUSES OF BRANCH CIRCUIT PANELBOARDS SERVING THE SAME PATIENT CARE LOCATION WITH MINIMUM #10 AWG COPPER CONDUCTOR IAW NEC ARTICLE 517.



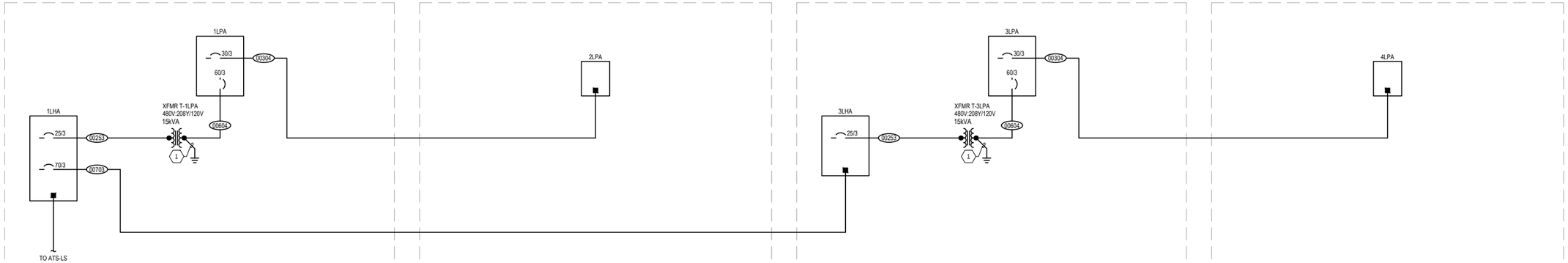
01 POWER ONE LINE DIAGRAM - MAIN DISTRIBUTION
NONE



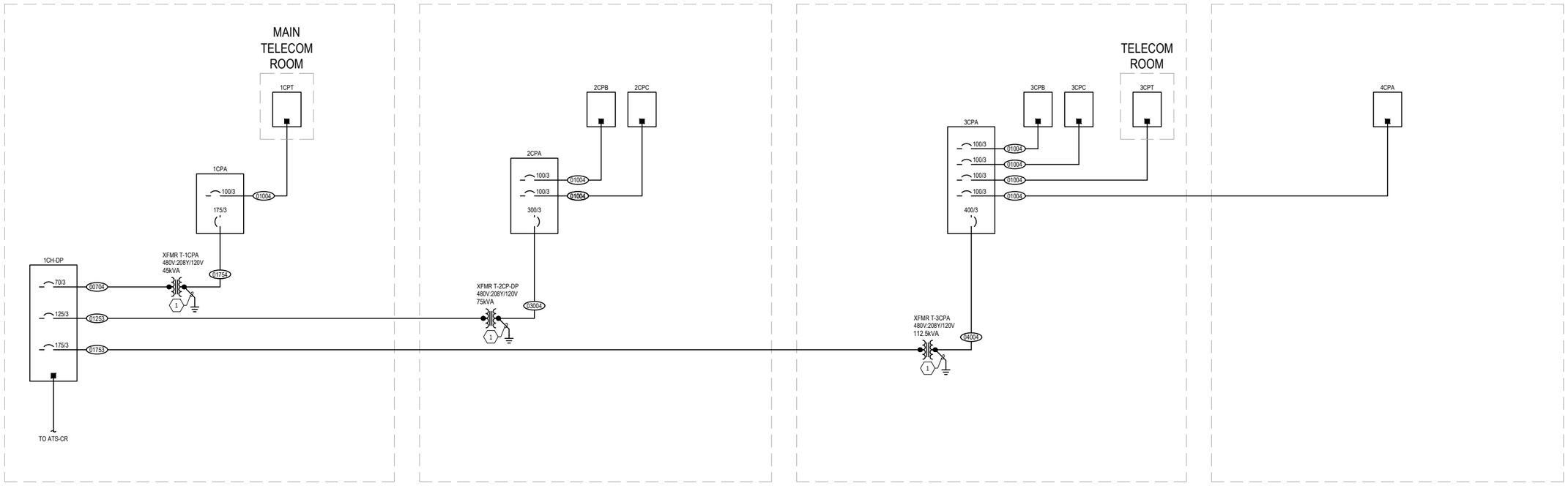
01 POWER ONE-LINE DIAGRAM - OPTIONAL STANDBY BRANCH
NONE



01 POWER ONE-LINE DIAGRAM - EQUIPMENT BRANCH
NONE



02 POWER ONE-LINE DIAGRAM - LIFE SAFETY BRANCH
NONE



01 POWER ONE-LINE DIAGRAM - CRITICAL BRANCH
NONE

GENERAL NOTES

1. HORIZONTAL PATHWAYS SHOWN ARE DIAGRAMMATIC REPRESENTATIONS OF TYPICAL PATHWAY CONFIGURATIONS. PROVIDE TELECOM CABLES ROUTED TO THE TELECOM ROOMS DIRECTLY IN CONDUIT, IN "J-HOOKS", AND/OR VIA AVAILABLE HORIZONTAL CABLE TRAYS.
2. REFER TO THE SPECIFICATIONS AND THE ENLARGED TELECOM ROOM DETAILS FOR ADDITIONAL INFORMATION.
3. PROVIDE BLOCKED OUT OR CORE-DRILLED FLOOR PENETRATIONS TO ACCOMMODATE CONDUIT AND/OR CABLE TRAY PENETRATIONS. GROUT OR SEAL AROUND CONDUITS AND/OR CABLE TRAY WITH APPROPRIATE FIRESTOP TO MAINTAIN FIRE RATING OF FLOOR ASSEMBLY.

SHEET NOTES

1. PROVIDE RACK MOUNTED FIBER OPTIC CABLE PATCH PANELS IAW SPECIFICATION SECTION 27 2020. PROVIDE PATCH PANELS IN SUFFICIENT QUANTITY TO TERMINATE FIBER OPTIC CABLES PROVIDED UNDER THIS CONTRACT. REFER TO TELECOM ROOM RACK ELEVATIONS FOR ADDITIONAL INFORMATION.
2. PROVIDE RACK MOUNTED HORIZONTAL TELECOM CABLE PATCH PANELS SPECIFICATION SECTION 27 2010. PROVIDE PATCH PANELS IN SUFFICIENT QUANTITY TO TERMINATE HORIZONTAL TELECOM CABLES PROVIDED UNDER THIS CONTRACT. REFER TO TELECOM ROOM RACK ELEVATIONS FOR ADDITIONAL INFORMATION.
3. OWNER FURNISHED, OWNER INSTALLED (OFOI) NETWORK EQUIPMENT.
4. ROUTE TELECOM BACKBONE CONDUIT UNDERSLAB BETWEEN TELECOM ROOMS.
5. PROVIDE 36 INCH LONG x 24 INCH WIDE x 12 INCH DEEP TELECOM PULLBOX TO FACILITATE PULLING OF TELECOM HORIZONTAL CABLES BETWEEN THE PENTHOUSES AND THE TELECOM ROOMS.

TELECOM ONE-LINE DIAGRAM LEGEND

SYMBOL	DESCRIPTION
LEC	LOCAL EXCHANGE CARRIER (TELEPHONE COMPANY)
X	CROSS-CONNECT
TBB	TELECOMMUNICATION BONDING BACKBONE
OF	OPTICAL FIBER CABLE
MP	MODULAR PATCH PANEL
IDC	INSULATION DISPLACEMENT CONNECTOR BLOCK
PHONE (COLOR)	TELEPHONE CONNECTING HARDWARE (110 BLOCKS) LABEL COLOR AS INDICATED QUANTITY TO MATCH CONNECTED CABLES
DATA (COLOR)	DATA/TELEPHONE CONNECTING HARDWARE (110 BLOCKS) LABEL COLOR AS INDICATED QUANTITY TO MATCH CONNECTED CABLES
DATA/PHONE (COLOR)	DATA CONNECTING HARDWARE (110 BLOCKS) LABEL COLOR AS INDICATED QUANTITY TO MATCH CONNECTED CABLES

CABLE DESCRIPTIONS

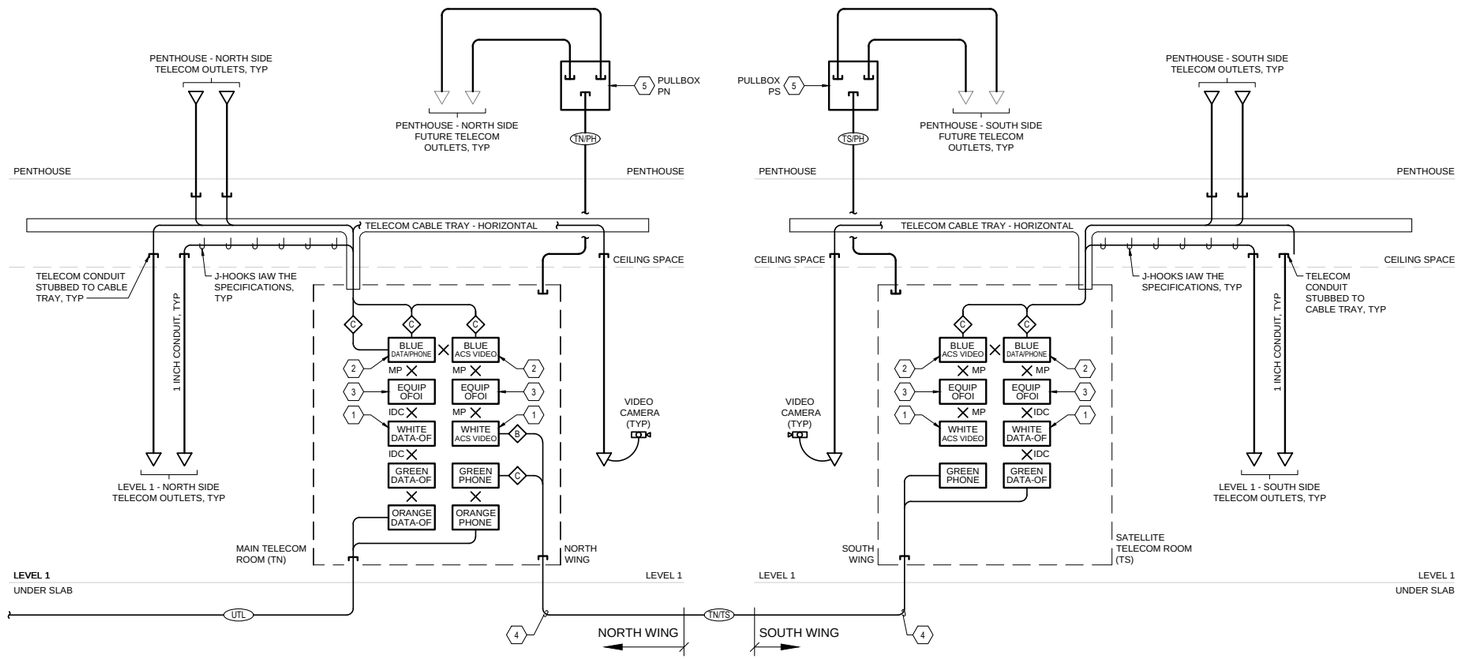
SYMBOL	DESCRIPTION
A	PROVIDE 1@ 12 STRANDS OF MULTIMODE AND 12 STRANDS OF SINGLEMODE FIBER OPTIC CABLE IAW THE TELECOM SPECIFICATIONS. (FOR GENERAL PURPOSE TELECOM USE)
B	PROVIDE 1@ 6 STRANDS OF MULTIMODE AND 6 STRANDS OF SINGLEMODE FIBER OPTIC CABLE IAW THE TELECOM SPECIFICATIONS. (FOR ACCESS CONTROL AND VIDEO USE)
C	PROVIDE 25 PAIR COPPER VOICE BACKBONE IAW THE TELECOM SPECIFICATIONS.
D	PROVIDE CATEGORY 6A HORIZONTAL TELECOM CABLES IAW THE TELECOM SPECIFICATIONS. REFERENCE SPECIFICATIONS FOR CABLING BUNDLING LIMITATIONS.

NOTES: 1. REFERENCE APPLICABLE SPECIFICATION SECTIONS FOR EACH SYSTEM CABLE TYPE, MAKE, MODEL, AND FOR MORE SPECIFIC REQUIREMENTS AND/OR INFORMATION.

PATHWAY DESCRIPTIONS

SYMBOL	FROM	TO	CONDUIT	INNERDUCT	CONTENTS
UTL	PROPERTY LINE (EAST)	TN (MTR)	4 INCH	4 EACH 1"	FOR TELECOM UTILITY SERVICE CABLES (TO BE DETERMINED)
			4 INCH		SPARE (TO BE DETERMINED)
TN/TS	TN (MTR)	TS (STR)	4 INCH	1 CELL	1 EACH TYPE A
				1 CELL	1 EACH TYPE B
				7 CELLS	SPARE
			4 INCH	7 CELLS	SPARE
			4 INCH	NONE	SPARE
			4 INCH	NONE	SPARE
TN/PH	TN	PH PULLBOX PN	3 INCH	NONE	DEDICATED FOR PENTHOUSE TELECOM CABLES
			3 INCH	NONE	DEDICATED FOR PENTHOUSE TELECOM CABLES
TS/PH	TN	PH PULLBOX PS	3 INCH	NONE	DEDICATED FOR PENTHOUSE TELECOM CABLES
			3 INCH	NONE	DEDICATED FOR PENTHOUSE TELECOM CABLES

NOTES: ID = INNERDUCT, CELL = FABRIC INNERDUCT CELL (SEE SPECIFICATIONS)



01 DIAGRAM - TELECOM DISTRIBUTION SYSTEM ONE-LINE
NONE