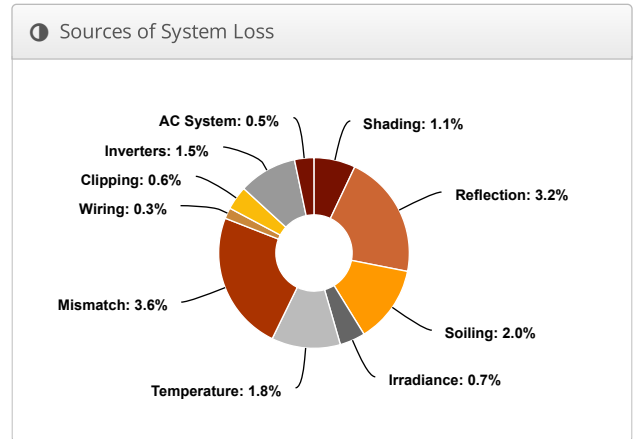
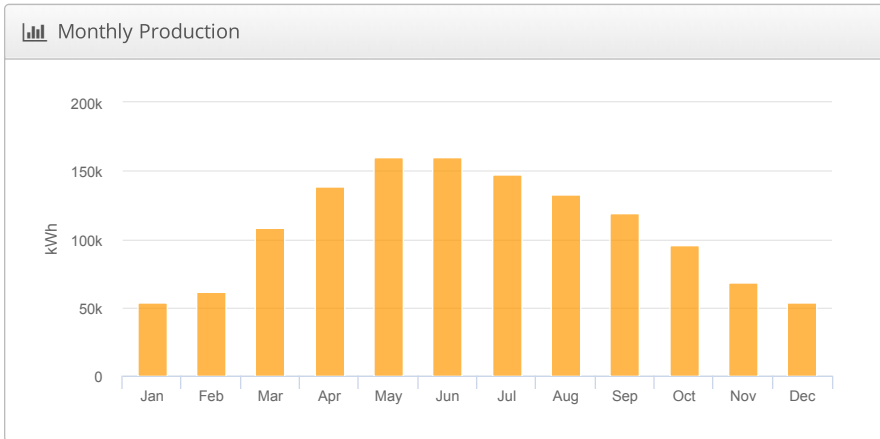
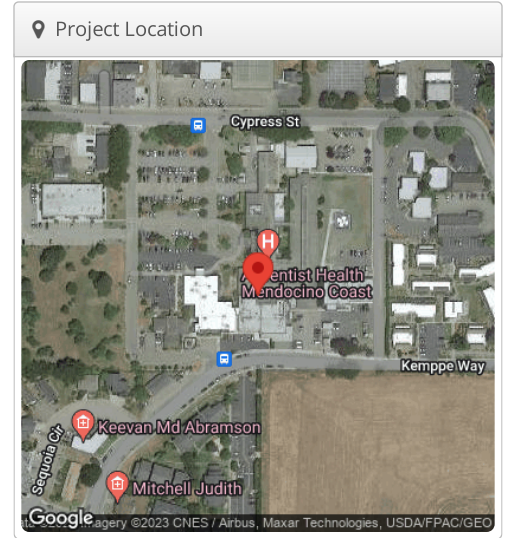


CP + GM Adventist - Mendocino Coast, 700 River Dr, Fort Bragg, CA 95437

Report	
Project Name	Adventist - Mendocino Coast
Project Address	700 River Dr, Fort Bragg, CA 95437
Prepared By	Theo Bosch theo.bosch@engie.com

System Metrics	
Design	CP + GM
Module DC Nameplate	894.8 kW
Inverter AC Nameplate	840.0 kW Load Ratio: 1.07
Annual Production	1,297 GWh
Performance Ratio	85.8%
kWh/kWp	1,450.0
Weather Dataset	TMY, 10km Grid (39.45,-123.85), NREL (prospector)
Simulator Version	c702a04a44-42c6a77408-18de5da4bc-6436713101



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,550.4	
	POA Irradiance	1,690.6	9.0%
	Shaded Irradiance	1,672.4	-1.1%
	Irradiance after Reflection	1,618.8	-3.2%
	Irradiance after Soiling	1,586.4	-2.0%
	Total Collector Irradiance	1,586.4	0.0%
Energy (kWh)	Nameplate	1,420,424.7	
	Output at Irradiance Levels	1,411,056.4	-0.7%
	Output at Cell Temperature Derate	1,385,927.0	-1.8%
	Output After Mismatch	1,335,865.2	-3.6%
	Optimal DC Output	1,332,101.0	-0.3%
	Constrained DC Output	1,323,925.0	-0.6%
	Inverter Output	1,303,944.3	-1.5%
		Energy to Grid	1,297,424.6
Temperature Metrics			
	Avg. Operating Ambient Temp		14.2 °C
	Avg. Operating Cell Temp		22.3 °C
Simulation Metrics			
	Operating Hours	4651	
	Solved Hours	4651	

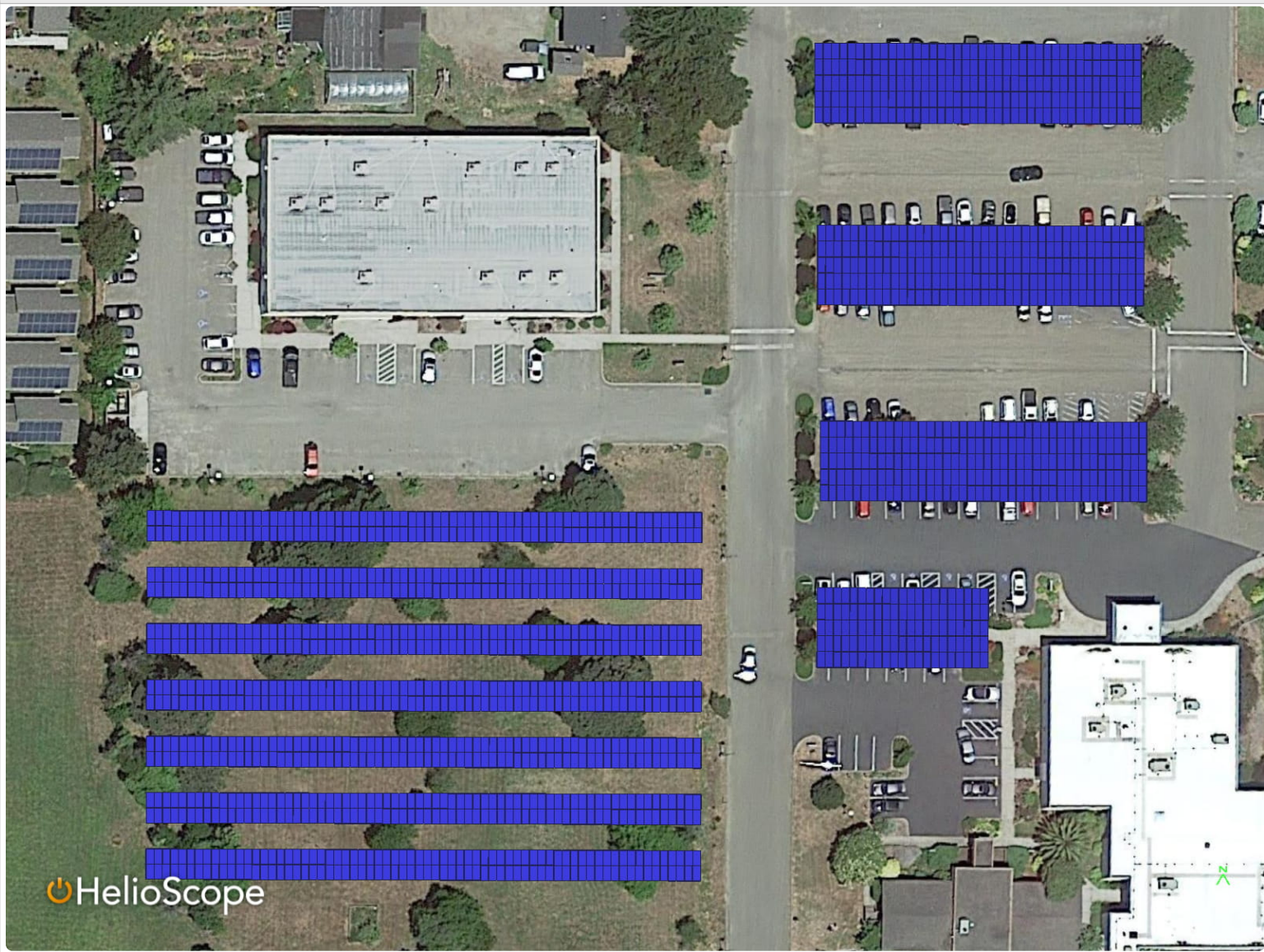
☁ Condition Set												
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid (39.45,-123.85), NREL (prospector)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a	b	Temperature Delta								
	Fixed Tilt	-3.56	-0.075	3°C								
	Flush Mount	-2.81	-0.0455	0°C								
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	0.50%											
Module Characterizations	Module						Uploaded By		Characterization			
	CS6W-540MS (Canadian Solar)						HelioScope		Spec Sheet Characterization, PAN			
Component Characterizations	Device		Uploaded By				Characterization					

📦 Components		
Component	Name	Count
Inverters	CPS SCA60KTL-DO/480 (Chint)	14 (840.0 kW)
Home Runs	12 AWG (Copper)	4 (179.9 ft)
Combiners	2 input Combiner	2
Combiners	4 input Combiner	2
Strings	10 AWG (Copper)	98 (12,266.2 ft)
Module	Canadian Solar, CS6W-540MS (540W)	1,657 (894.8 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	12	14-19	Along Racking
Wiring Zone 2	-	14-19	Along Racking
Wiring Zone 3	-	14-19	Along Racking
Wiring Zone 4	-	14-19	Along Racking
Wiring Zone 5	-	14-19	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
CP-A.2	Carport	Portrait (Vertical)	7°	180.19423°	0.0 ft	1x1	200	200	108.0 kW
CP-A.1	Carport	Portrait (Vertical)	7°	180.19423°	0.0 ft	1x1	200	200	108.0 kW
CP-A.2 (copy)	Carport	Portrait (Vertical)	7°	180.19423°	0.0 ft	1x1	200	200	108.0 kW
CP-A.2 (copy 1)	Carport	Portrait (Vertical)	7°	180.19423°	0.0 ft	1x1	105	105	56.7 kW
Field Segment 5	Fixed Tilt	Portrait (Vertical)	20°	180.19423°	12.0 ft	2x1	476	952	514.1 kW

Detailed Layout



Mendocino Coast District Hospital

Overview Presentation | 11.08.2022

Devenney
GROUP

SPC & NPC Updates

Mendocino Coast District Hospital

GENERAL

BUILDINGS ON CAMPUS RANKED BETWEEN 2-4 FOR SPC & NPC BY HCAI (CALIFORNIA DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION)

BUILDINGS REQUIREMENTS TO BE MET BY **JAN. 1, 2030:**

SPC < 2 UPGRADED TO SPC 4D

NPC < 2 UPGRADED TO NPC 4/5

SPC

STRUCTURAL PERFORMANCE CATEGORY

REQUIREMENTS INCLUDE: UPGRADING STRUCTURAL ELEMENTS INCLUDING FOUNDATION, COLUMNS, ETC

NPC

NON-STRUCTURAL PERFORMANCE CATEGORY

REQUIREMENTS INCLUDE: INFRASTRUCTURE BRACING AND EQUIPMENT ANCHORAGE ALONG WITH UPGRADING WATER & FUEL STORAGE TANKS ON CAMPUS

MCDH Seismic Site Plan

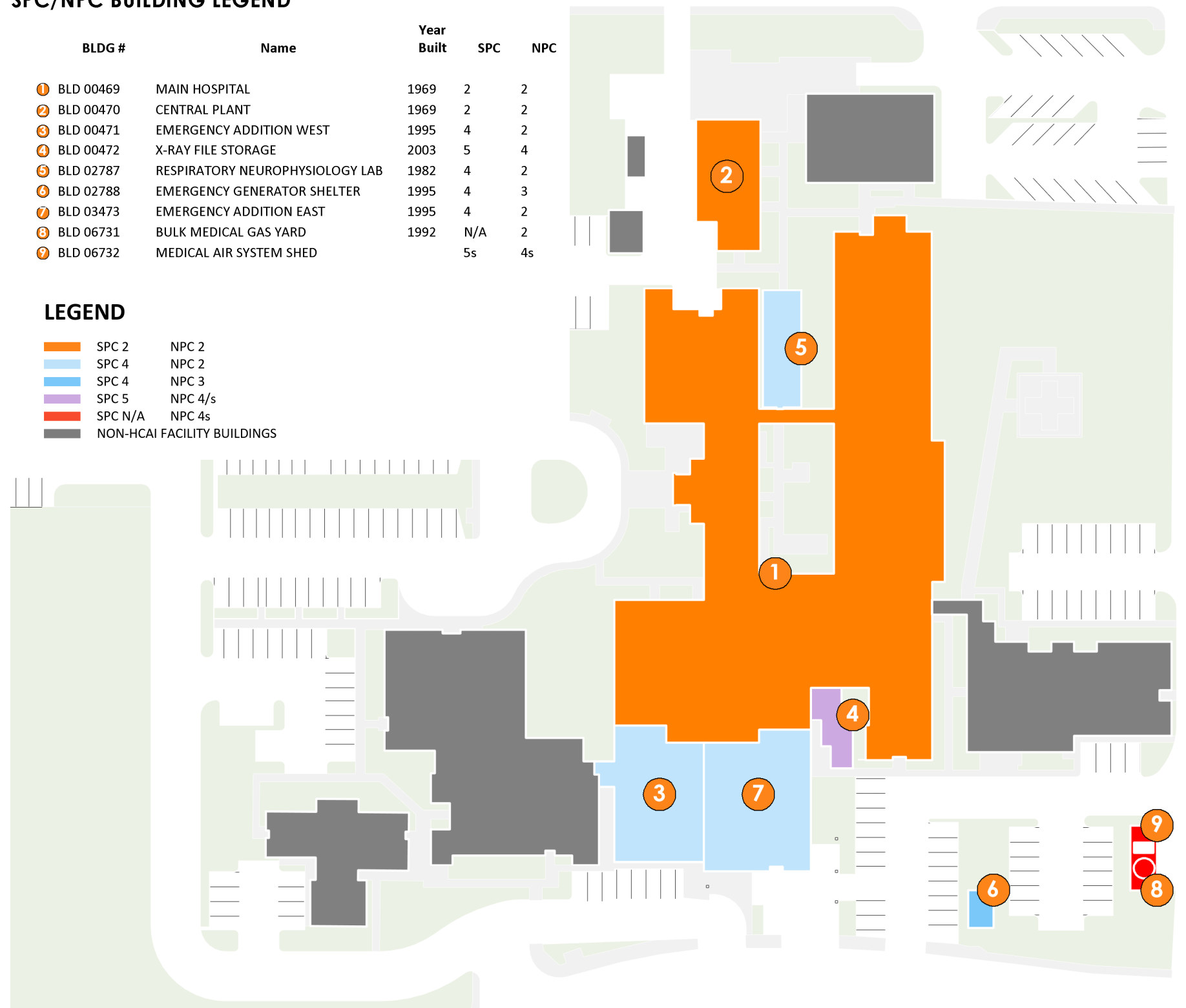
Mendocino Coast District Hospital

SPC/NPC BUILDING LEGEND

BLDG #	Name	Year Built	SPC	NPC
1 BLD 00469	MAIN HOSPITAL	1969	2	2
2 BLD 00470	CENTRAL PLANT	1969	2	2
3 BLD 00471	EMERGENCY ADDITION WEST	1995	4	2
4 BLD 00472	X-RAY FILE STORAGE	2003	5	4
5 BLD 02787	RESPIRATORY NEUROPHYSIOLOGY LAB	1982	4	2
6 BLD 02788	EMERGENCY GENERATOR SHELTER	1995	4	3
7 BLD 03473	EMERGENCY ADDITION EAST	1995	4	2
8 BLD 06731	BULK MEDICAL GAS YARD	1992	N/A	2
9 BLD 06732	MEDICAL AIR SYSTEM SHED		5s	4s

LEGEND

Orange	SPC 2	NPC 2
Light Blue	SPC 4	NPC 2
Blue	SPC 4	NPC 3
Purple	SPC 5	NPC 4/s
Red	SPC N/A	NPC 4s
Grey	NON-HCAI FACILITY BUILDINGS	



OVERALL (HCAI) CAMPUS:



2030 SPC NON-COMPLIANT:



2030 NPC NON-COMPLIANT:



Case Study – Wood Structures

Mendocino Coast District Hospital

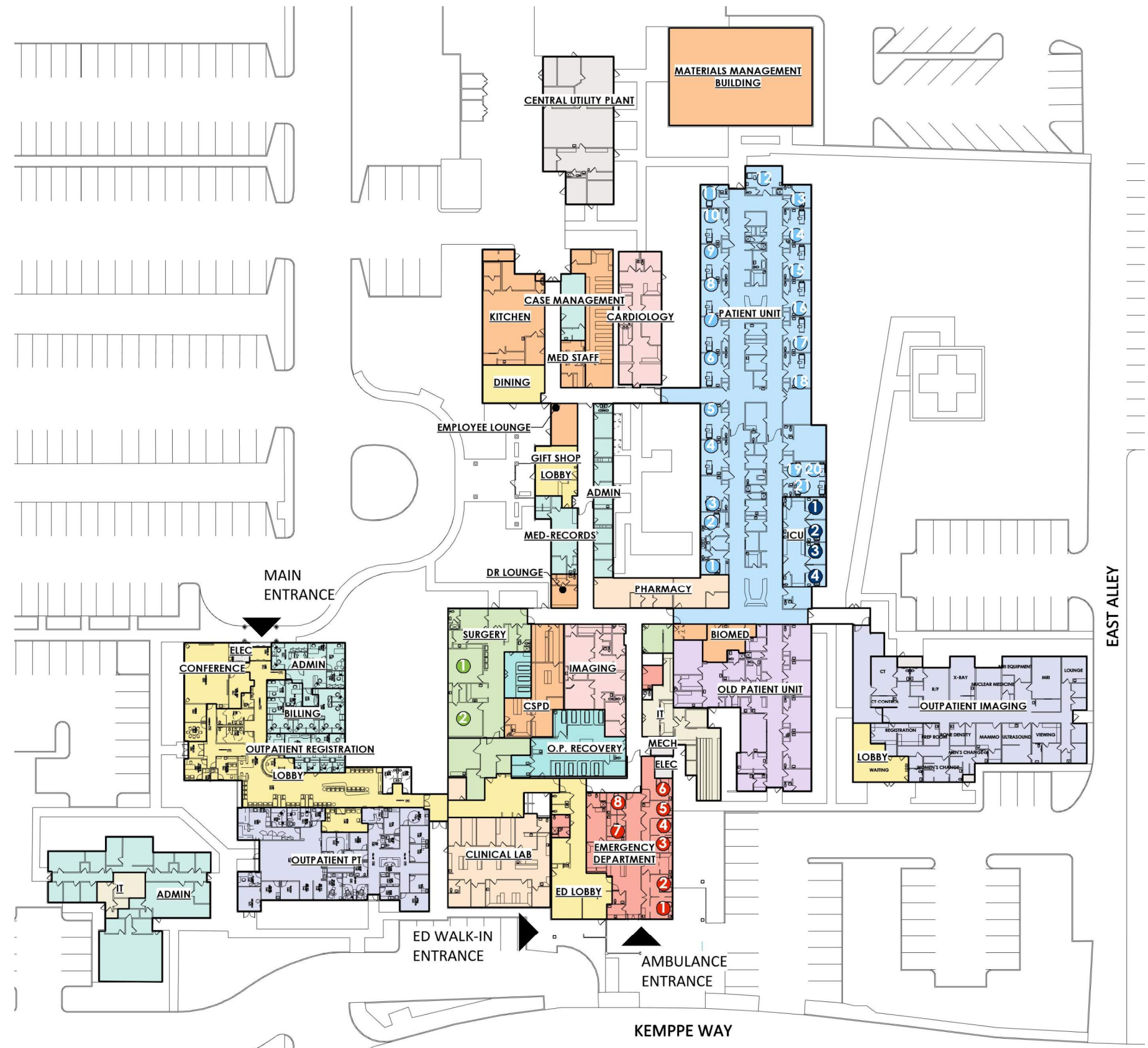
- ANALYSIS HAS RESULTED IN REDUCED IMPACTS ON PAST PROJECTS
 - REDUCE PLYWOOD SHEAR WALL STRENGTHENING BY UTILIZING NON-STRUCTURAL WALLS TO REDUCE DEMANDS ON SHEAR WALLS
 - ALTERNATE APPROACH TO EXISTING HOLDOWNS ALLOWS REDUCED IMPACTS
 - RECENT HCAI UNDERSTANDING OF WOOD STRUCTURE ANALYSIS FOR IMPACT OF NON-STRUCTURAL MEMBERS
 - RECENT HCAI UNDERSTANDING OF WOOD STRUCTURE ANALYSIS FOR IMPACT ON FOUNDATION
 - REDUCTION OF MTCAP TESTING REQUIREMENTS



Impact to Operations

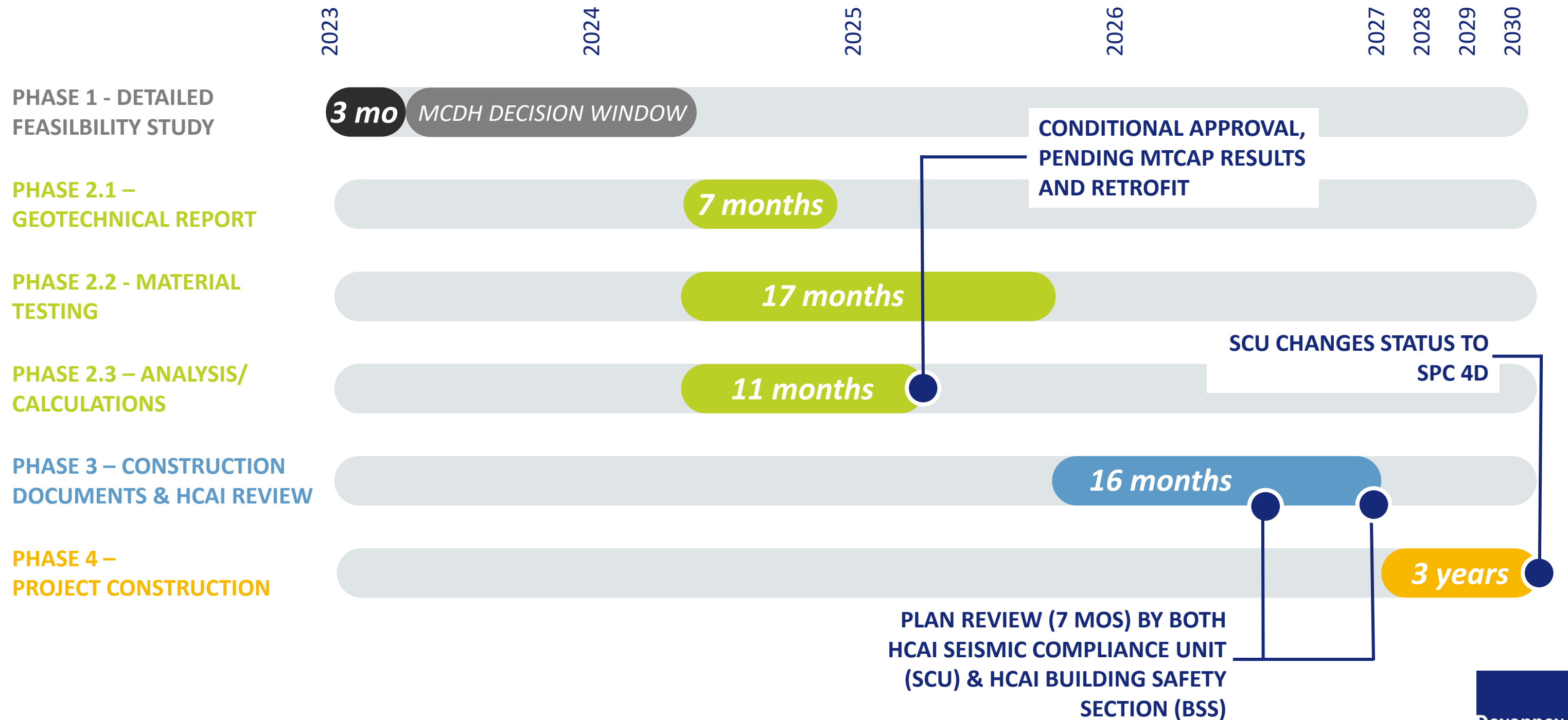
Mendocino Coast District Hospital

- STRENGTHENING ELEMENTS
 - FOUNDATION UPGRADES
 - SHEAR WALL STRENGTHENING OR BRACING
 - ROOF SYSTEM STRENGTHENING
 - EQUIPMENT ANCHORAGE
 - PIPING AND DUCT WORK SYSTEM ANCHORAGE
- IMPACT TO FACILITY (NOT FULLY KNOWN UNTIL IMPACT STUDY COMPLETED)
 - LONG AND NUMEROUS PHASES TO LIMIT DOWNTIME TO CORE SERVICES
 - ISOLATED ROOMS TO LARGE ZONES DEPENDING ON ANALYSIS



Seismic Upgrade Process – Phase 1 & 2

Mendocino Coast District Hospital



Projections and Future Program Projections

Mendocino Coast District Hospital

FUTURE PROJECTED PROGRAM (2031)	RECOMMENDED PROJECTIONS
BEDS – ICU	4
BEDS – GENERAL ACUTE	12 - 20
ED BAYS	14 - 16
SURGERY – OPERATING ROOMS	2
CT	1
RAD/FLUORO	2
ULTRASOUND	1
MRI/NM	MOBILE
ENDO	2
TOTAL NEW BUILDING GROSS SQUARE FEET	54,000 – 66,100 BGSF

Existing Site Analysis

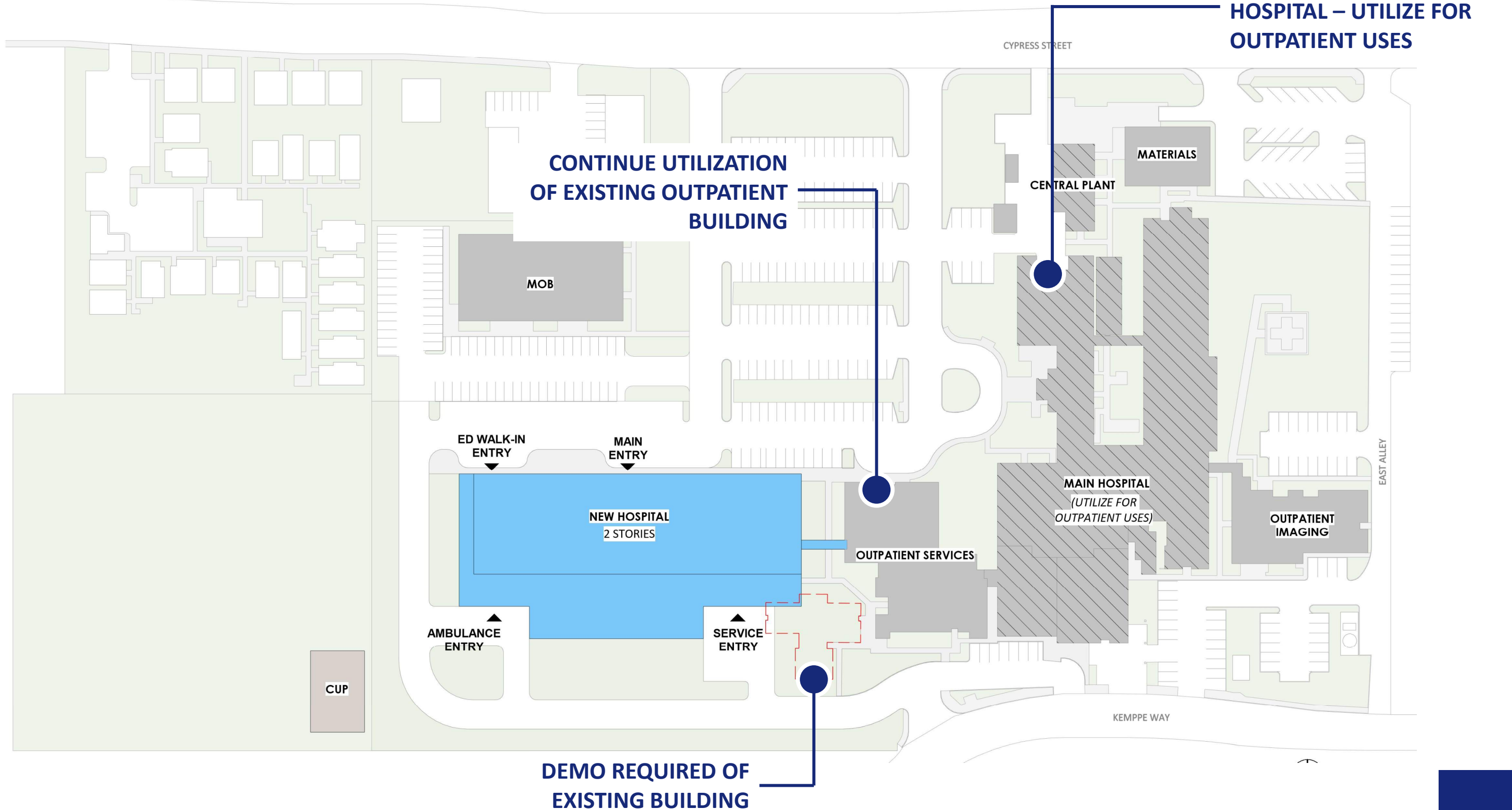
Mendocino Coast District Hospital

- 1. ZONING: CO IN COASTAL DISTRICT
- 2. SITE SETBACKS: 10 – 20 FEET
- 3. BUILDING HEIGHT: 25 FEET, 35 FEET WITH VARIANCE
- 4. FLOOR AREA RATIO: 40% OF SITE



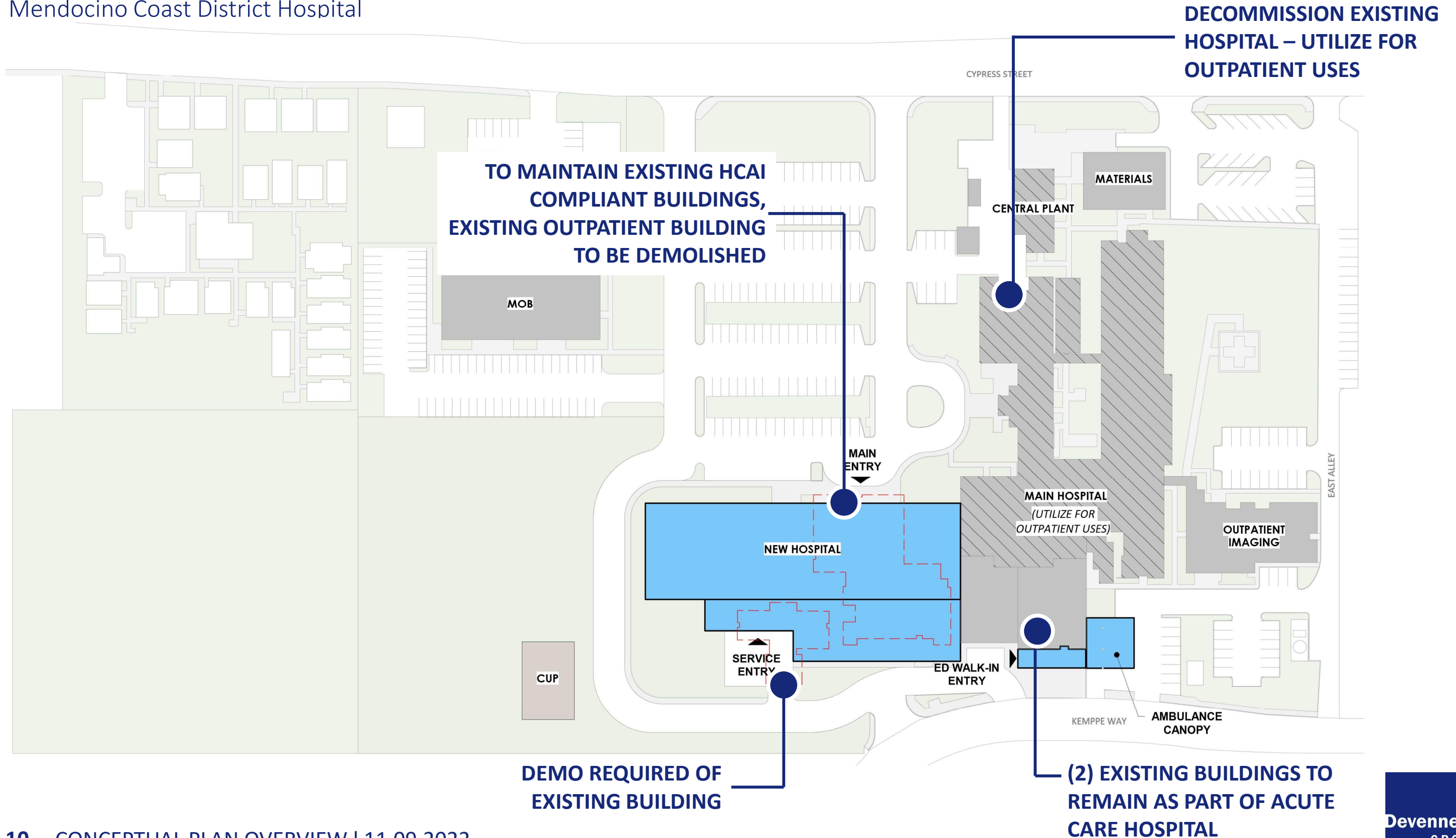
Future Site Plan – Diagram Option 1

Mendocino Coast District Hospital



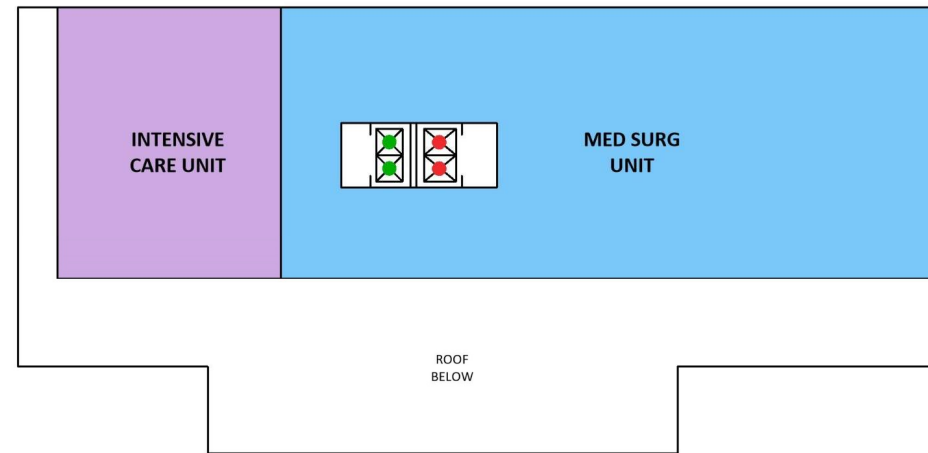
Future Site Plan – Diagram Option 2

Mendocino Coast District Hospital

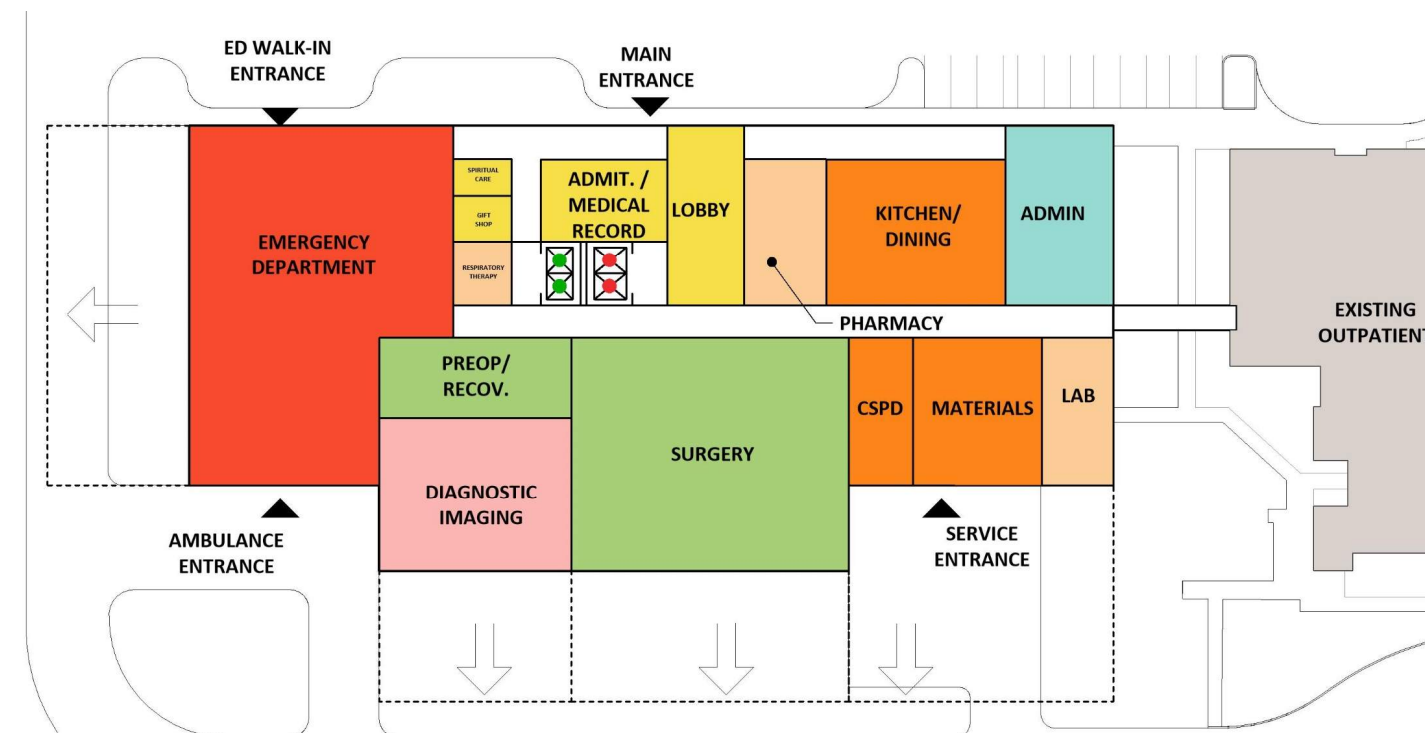


Preliminary Future Floor Plans

Mendocino Coast District Hospital



OPTION 1 – LEVEL 2



OPTION 1 – LEVEL 1

Next Steps

Mendocino Coast District Hospital

1. ONGOING REUSE EVALUATION OF EXISTING FACILITY
 - ENGAGE STRUCTURAL ENGINEER TO DO SPC 4D ANALYSIS (STRUCTURAL ENGINEER REQUIRED)
 - DEVELOP ARCHITECTURAL IMPACT OVERLAY OF EXISTING FACILITY TRIGGERED BY SEISMIC RETROFIT
2. UPDATE NEEDS ANALYSIS BASED ON ADDITIONAL DATA REQUEST
3. REVISE ARCHITECTURAL PROGRAM AND PLANNING
4. MOVE FORWARD WITH COST ANALYSIS OF BOTH SCENARIOS



