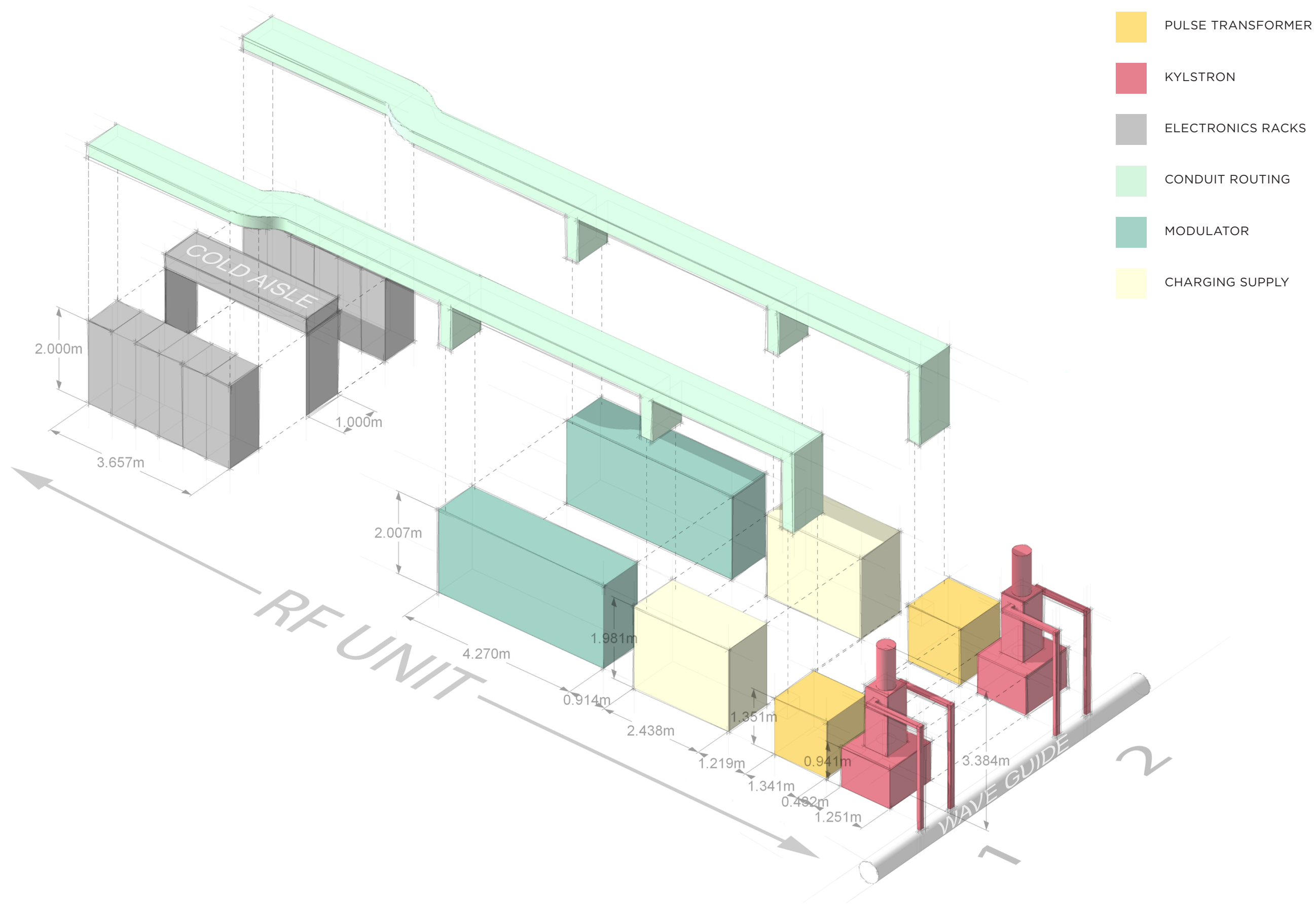
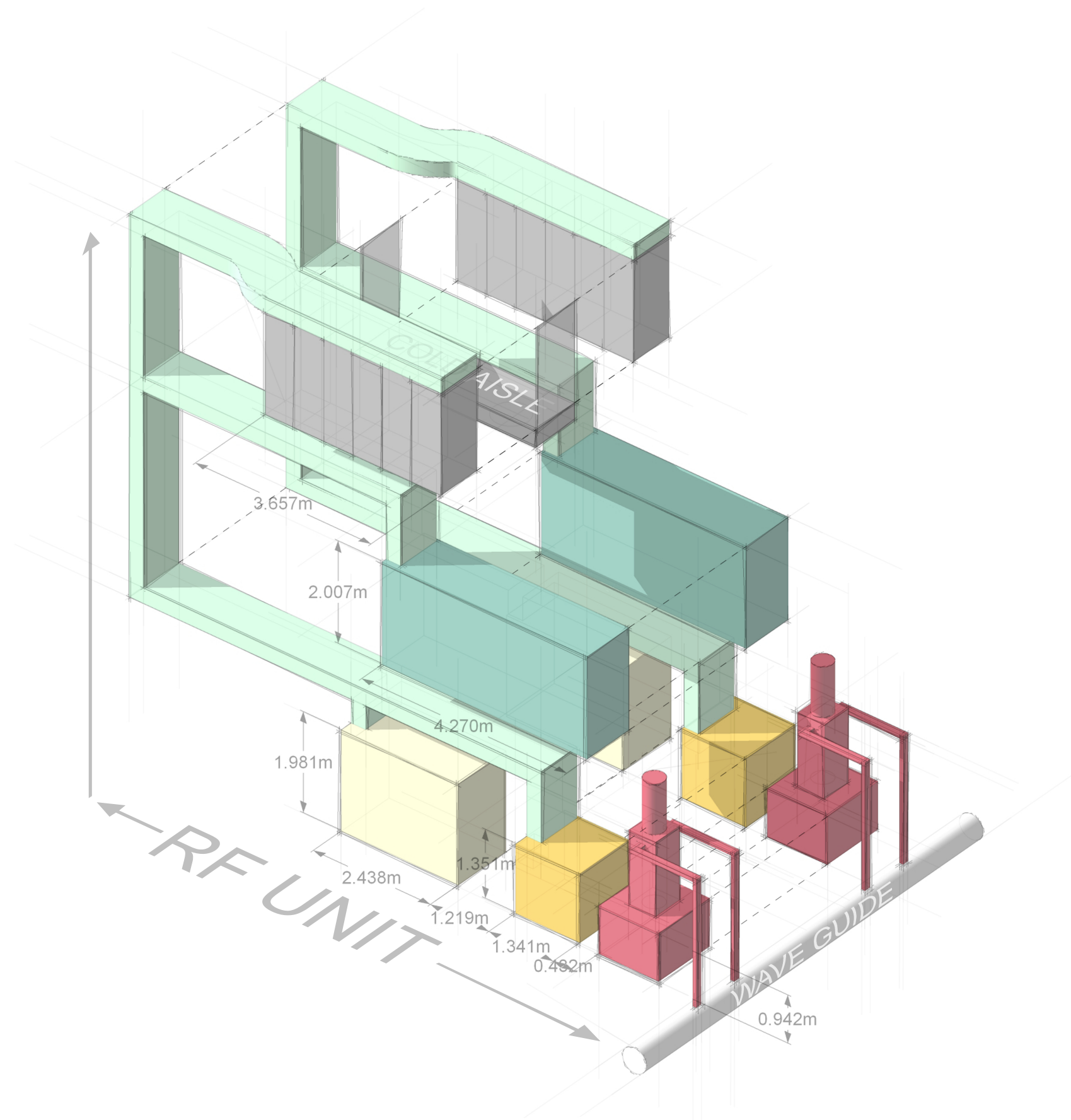

FERMILAB ILC
Programming Study

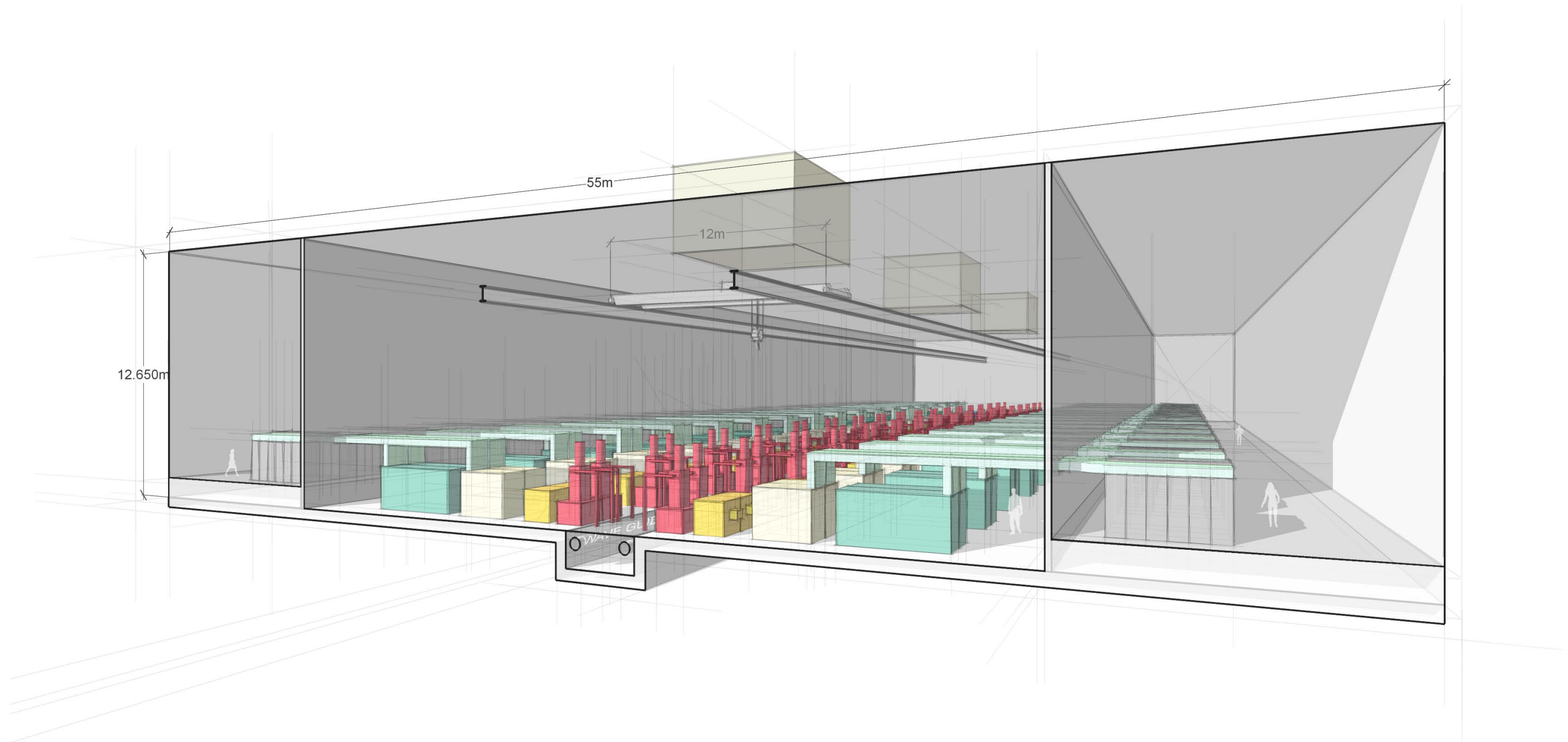
DRAFT // 07.28.10





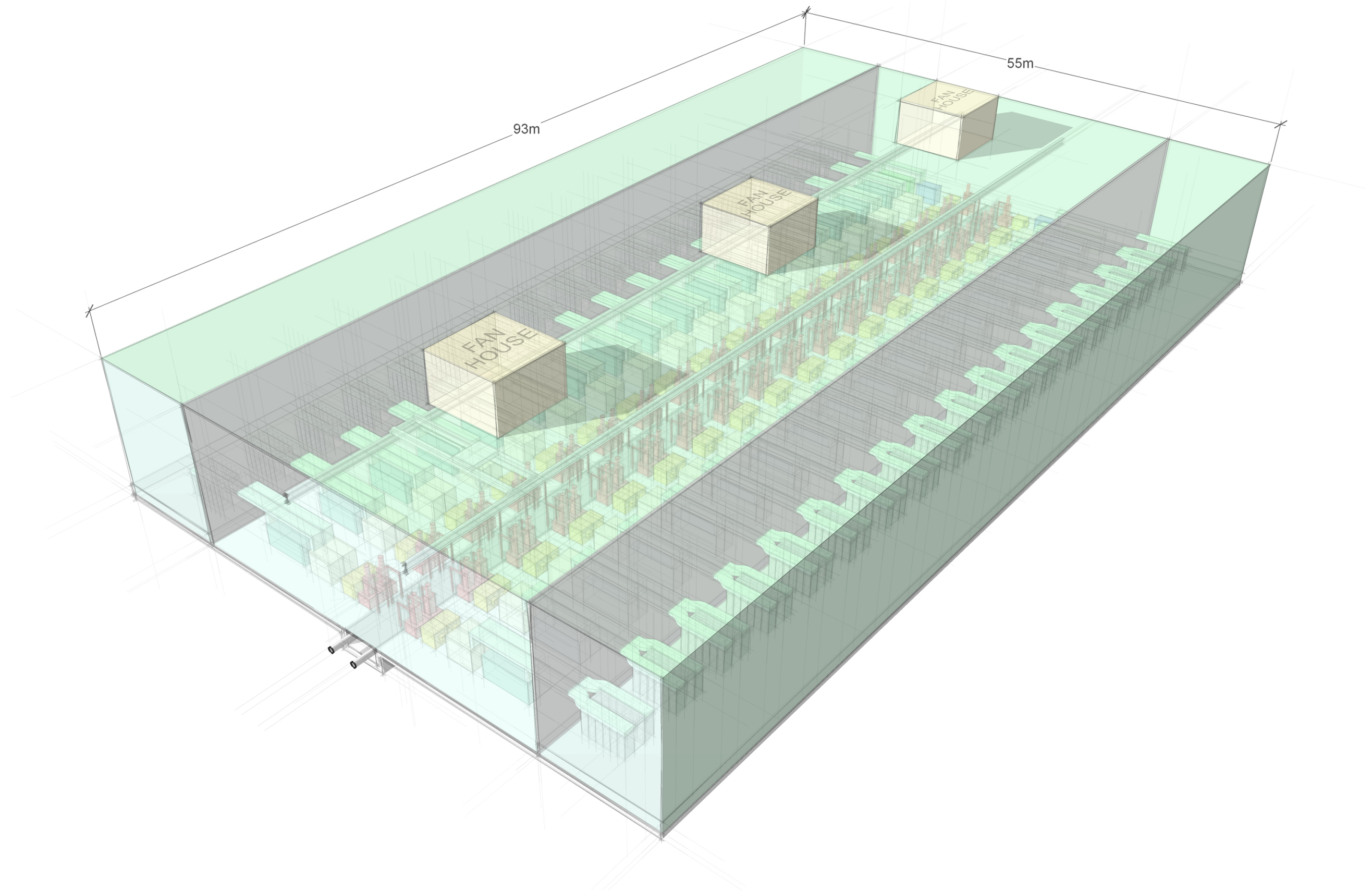
- PULSE TRANSFORMER
- KYLSTRON
- ELECTRONICS RACKS
- CONDUIT ROUTING
- MODULATOR
- CHARGING SUPPLY

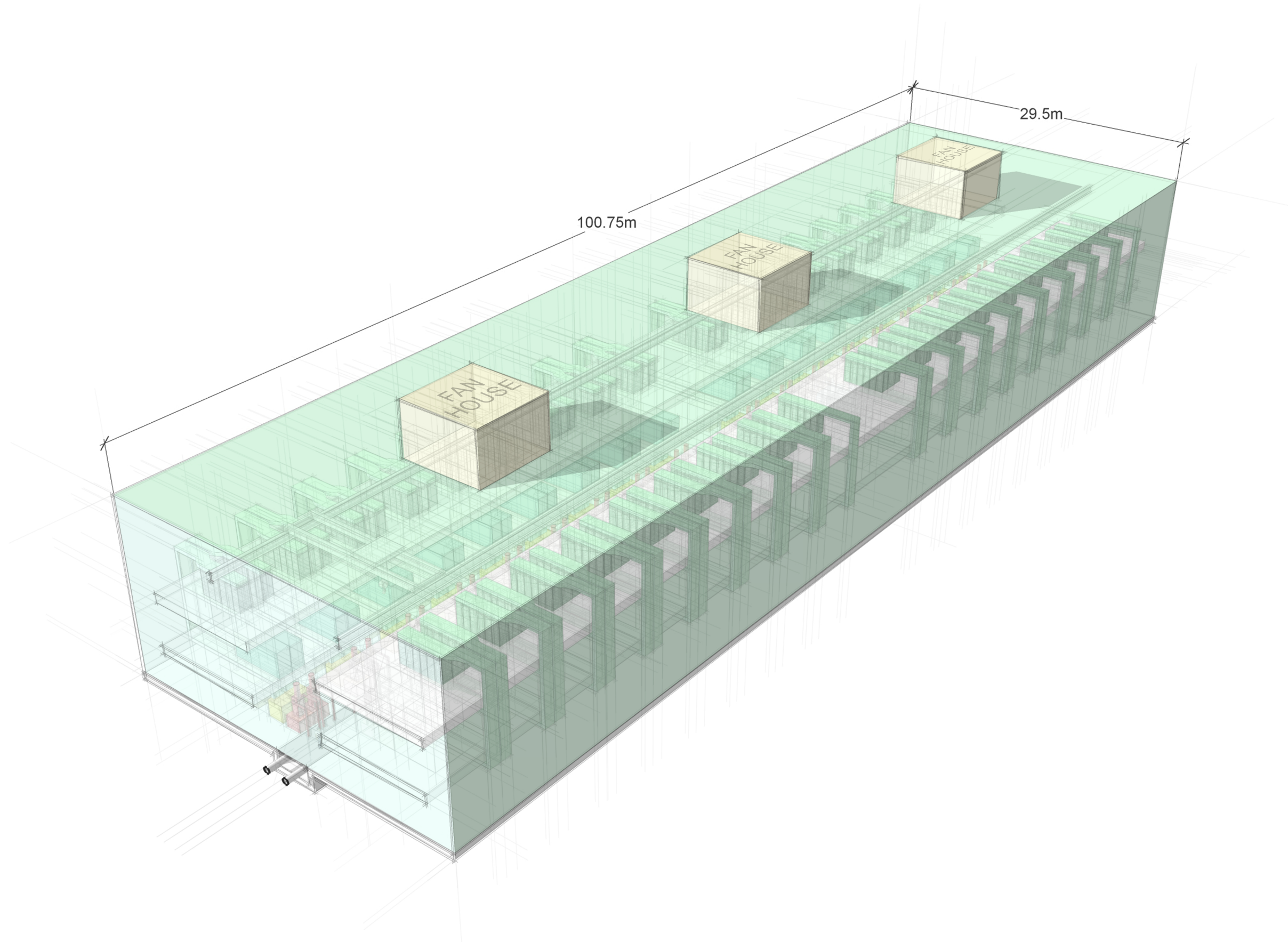
- CONDUIT ROUTING
- MODULATOR
- CHARGING SUPPLY
- PULSE TRANSFORMER
- KYLSTRON
- ELECTRONICS RACKS

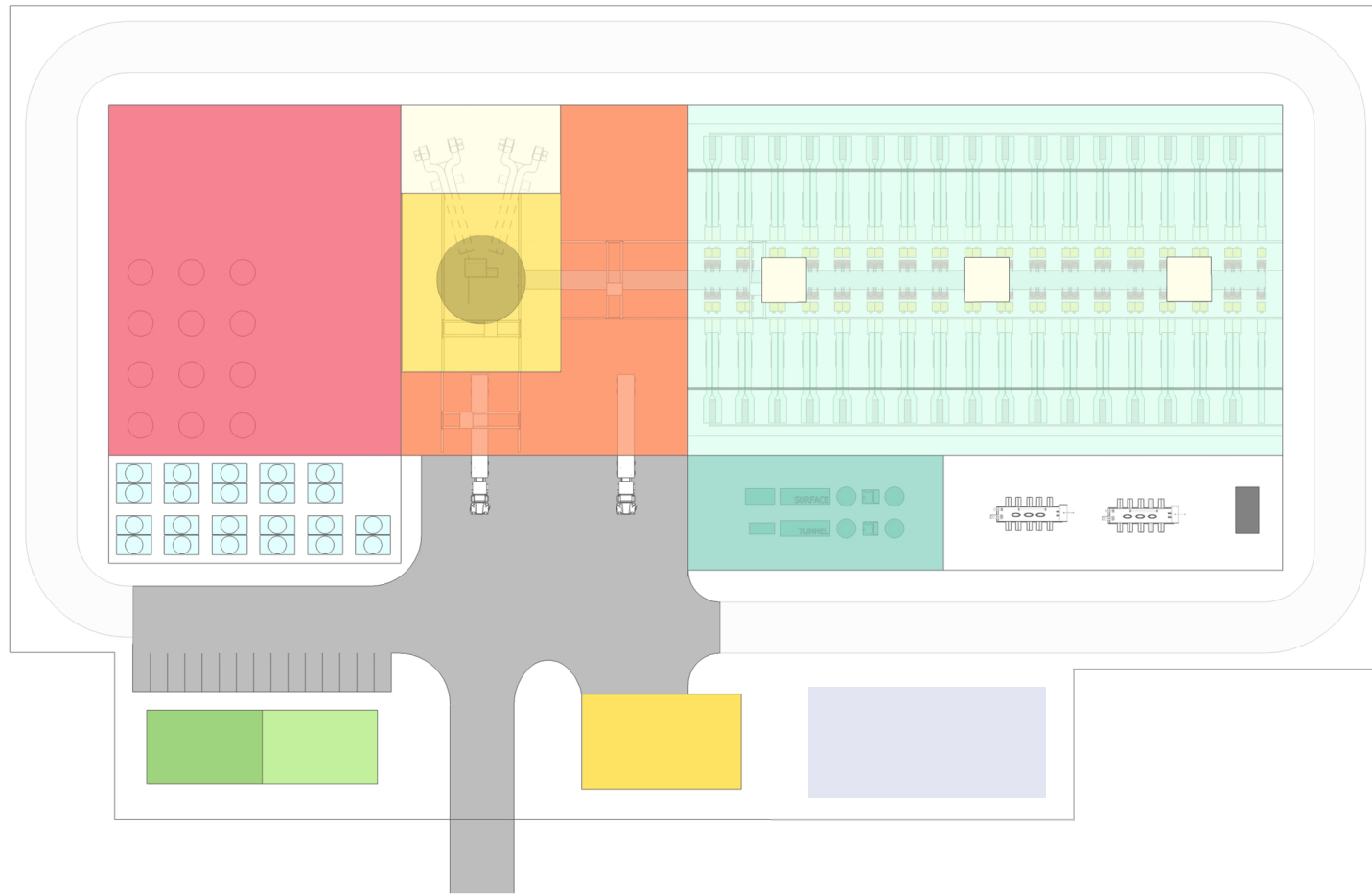




- PULSE TRANSFORMER
- KYLSTRON
- ELECTRONICS RACKS
- CONDUIT ROUTING
- MODULATOR
- CHARGING SUPPLY

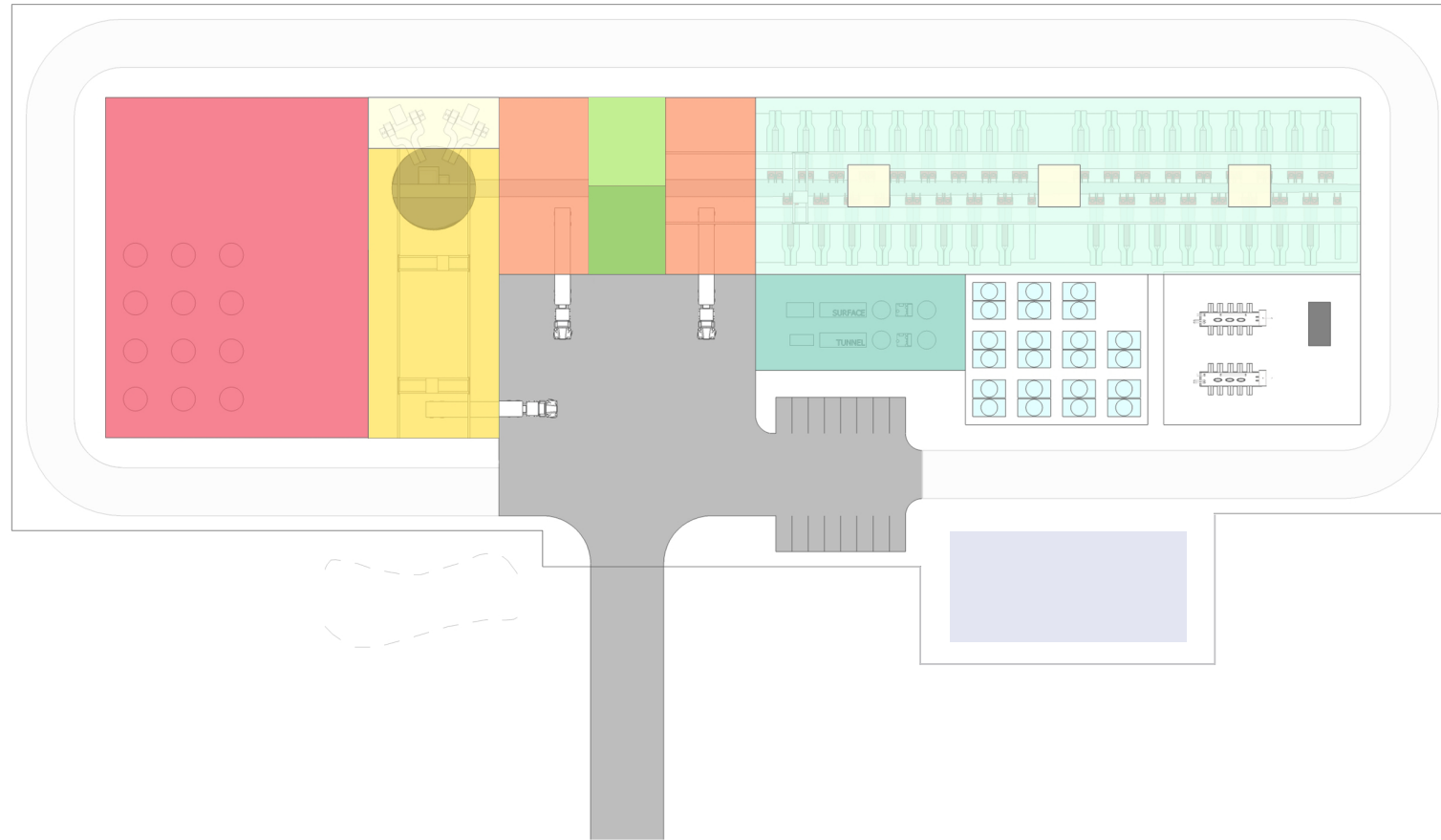






SITE AREA // 24,799.446 M²
2.48 HECTARES
6.128 ACRES

Building	Dims (m)			Area (m ²)	Area (sf)	Volume (m ³)
	L	W	H			
RF Unit Bldg	93.00	55.00	12.65	5,115.00	55,057.40	64,704.75
RF Bldg Fan-house (x3)	7.00	7.00	4.50	147.00	1,582.29	220.50
Surface Process Cooling DI Plant	40.00	18.00	6.33	720.00	7,750.02	4,554.00
Cryo Building	55.00	46.00	12.65	2,530.00	27,232.69	32,004.50
Shaft Access Building	28.00	25.00	12.65	700.00	7,534.74	8,855.00
Fan House	25.00	13.91	12.65	347.78	3,743.42	4,399.35
Support	18.10	11.50	4.00	208.15	2,240.51	832.60
Admin	18.10	11.50	4.00	208.15	2,240.51	832.60
Workshop	25.00	15.00	10.00	375.00	4,036.47	3,750.00
Loading Bay - RF Unit Building	varies	varies	12.65	1,423.00	15,317.04	18,000.95
Cooling Tower Enclosure	45.79	16.97	n/a	776.92	8,362.69	N/A
Transformer Enclosure	53.14	18.04	n/a	958.89	10,321.45	N/A
Retention Pond	30.00	16.00	1.50	480.00	5,166.68	720.00
ENCLOSED BUILDING TOTALS				11,774.08	126,735.09	138,154.25



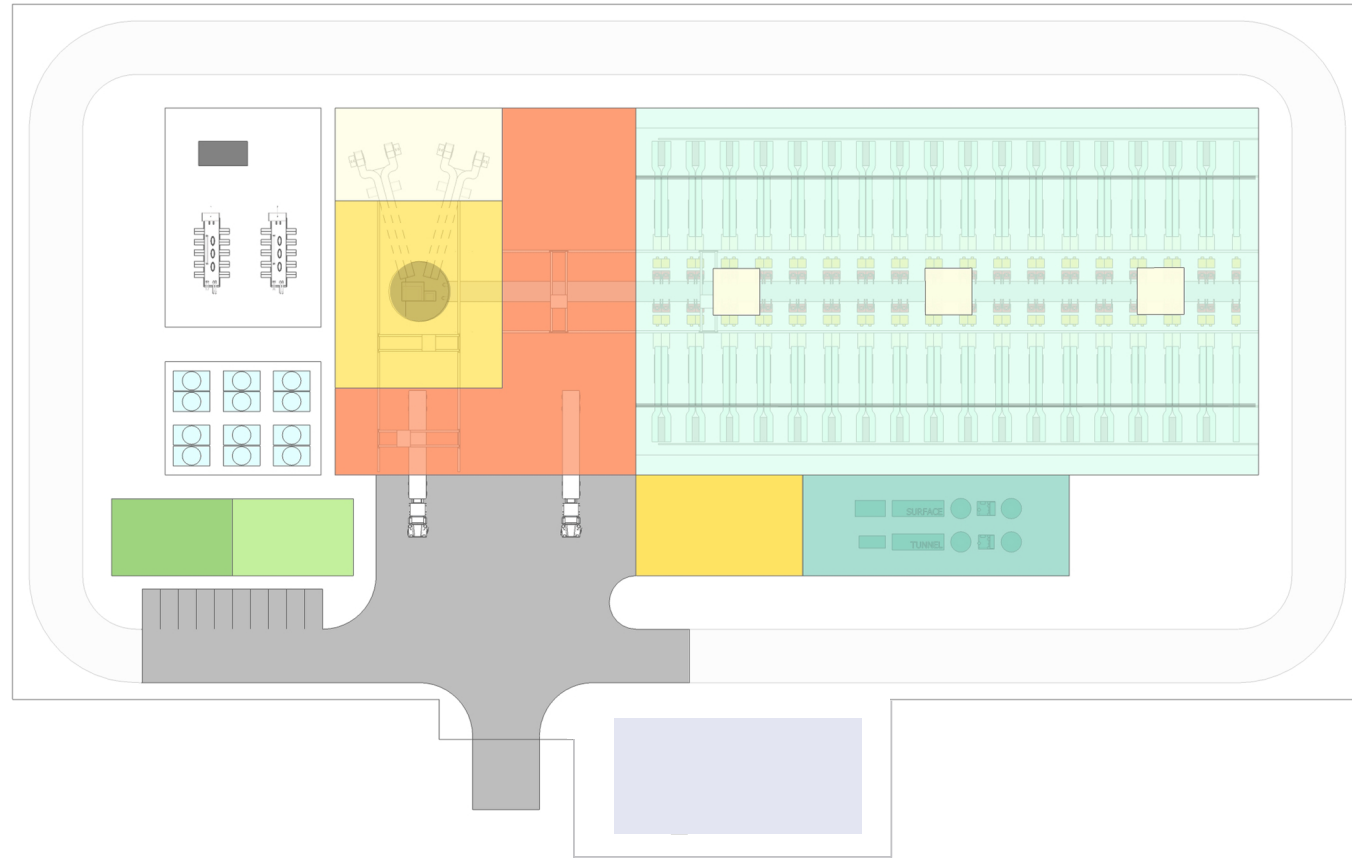
SITE AREA // 21,624.66 M²
2.162 HECTARES
5.344 ACRES

Building	Dims (m)			Area (m ²)	Area (sf)	Volume (m ³)
	L	W	H			
RF Unit Bldg	100.825	29.48	14.15	2,972.12	31,991.63	42,055.49
RF Bldg Fan-house (x3)	7.00	7.00	4.50	147.00	1,582.29	220.50
Surface Process Cooling DI Plant	35.00	16.00	6.33	560.00	6,027.79	3,542.00
Cryo Building	56.71	43.79	14.15	2,483.11	26,727.99	35,136.03
Shaft Access Building	47.00	21.77	14.15	1,023.28	11,014.54	14,479.47
Fan House	9.08	21.77	14.15	197.56	2,126.55	2,795.51
Support	14.74	12.77	4.22	188.25	2,026.27	793.84
Admin	14.74	12.77	4.22	188.25	2,026.27	793.84
Workshop	29.48	12.77	9.93	376.49	4,052.54	3,739.71
Loading Bay - RF Unit Building	29.48	15.00	14.15	442.17	4,759.48	6,256.71
Loading Bay - Shaft Access Bldg	29.48	15.00	14.15	442.17	4,759.48	6,256.71
Cooling Tower Enclosure	30.38	25.08	n/a	761.93	8,201.29	N/A
Transformer Enclosure	32.80	25.08	n/a	822.54	8,853.76	N/A
Retention Pond	30.00	16.00	1.50	480.00	5,166.68	720.00
ENCLOSED BUILDING TOTALS				9,020.40	97,094.82	116,069.79



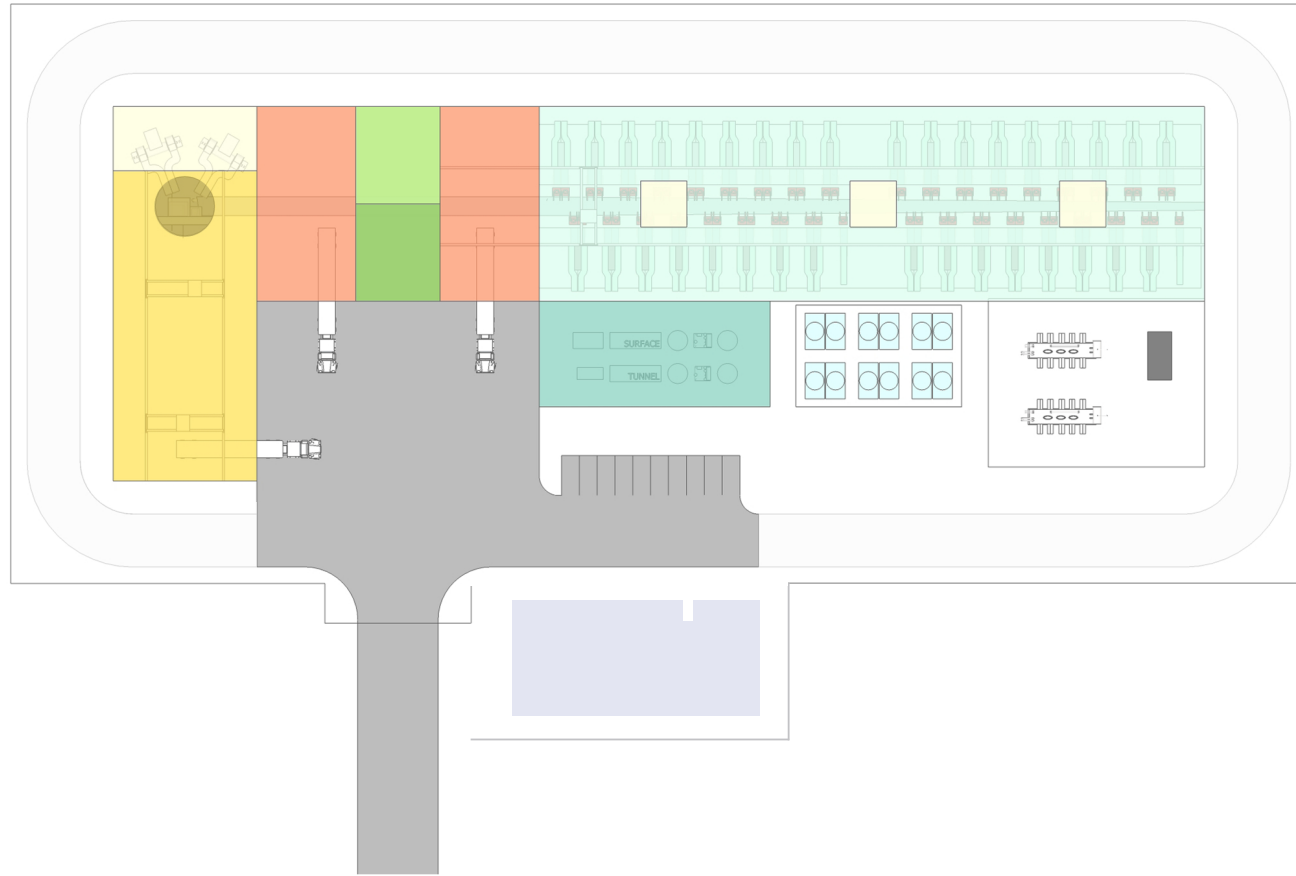
- RF UNIT BUILDING
- SURFACE PROCESS COOLING DI PLANT
- FAN-HOUSE
- CRYO BUILDING
- SHAFT ACCESS BUILDING
- SUPPORT
- ADMIN
- WORKSHOP
- LOADING BAY





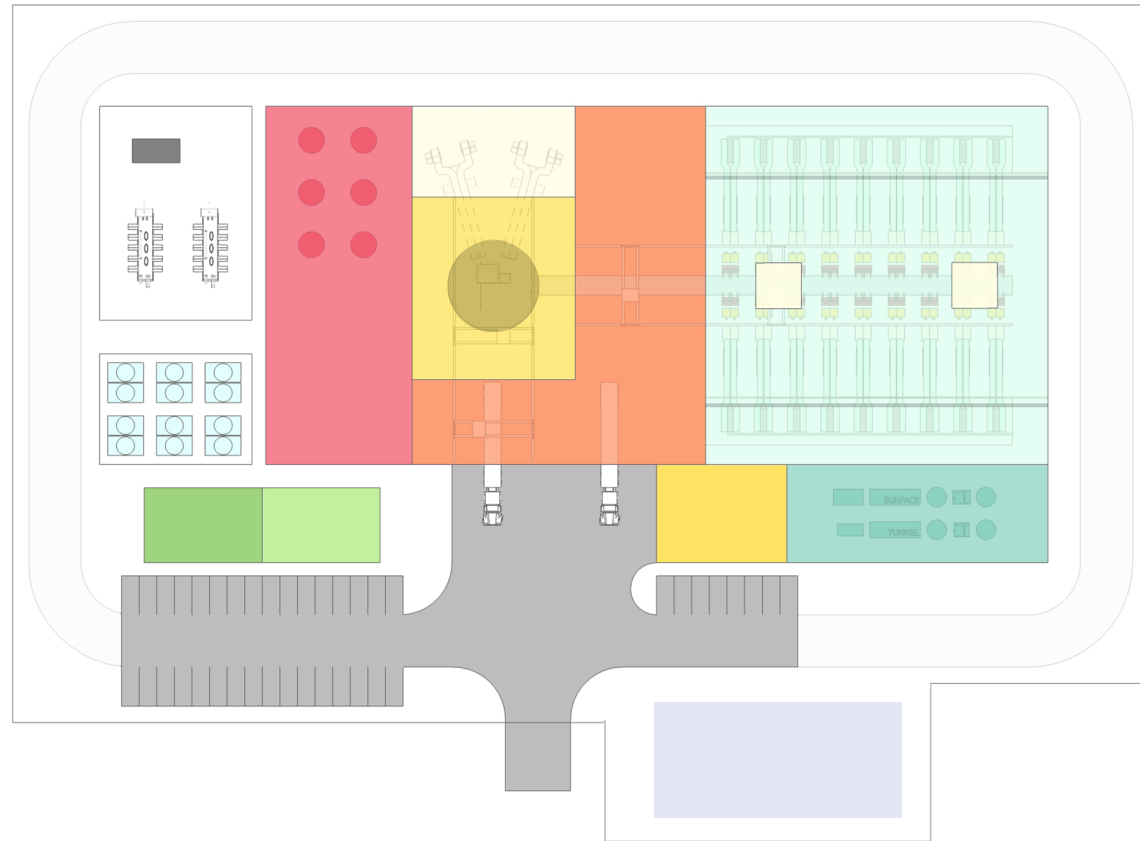
Building	Dims (m)			Area (m ²)	Area (sf)	Volume (m ³)
	L	W	H			
RF Unit Bldg	93.00	55.00	12.65	5,115.00	55,057.40	64,704.75
RF Bldg Fan-house (x3)	7.00	7.00	4.50	147.00	1,582.29	220.50
Surface Process Cooling DI Plant	40.00	15.04	6.33	601.76	6,477.29	3,806.13
Shaft Access Building	28.00	25.00	12.65	700.00	7,534.74	8,855.00
Fan House	25.00	13.91	12.65	347.78	3,743.42	4,399.35
Support	18.10	11.50	4.00	208.15	2,240.51	832.60
Admin	18.10	11.50	4.00	208.15	2,240.51	832.60
Workshop	25.00	15.00	10.00	375.00	4,036.47	3,750.00
Loading Bay - RF Unit Building	varies	varies	12.65	1,423.00	15,317.04	18,000.95
Cooling Tower Enclosure	23.33	16.97	n/a	395.87	4,261.15	N/A
Transformer Enclosure	32.80	23.33	n/a	765.24	8,237.01	N/A
Retention Pond	30.00	16.00	1.50	480.00	5,166.68	720.00
ENCLOSED BUILDING TOTALS				9,125.84	98,229.67	105,401.89

SITE AREA // 21,109.812 M²
2.111 HECTARES
5.216 ACRES



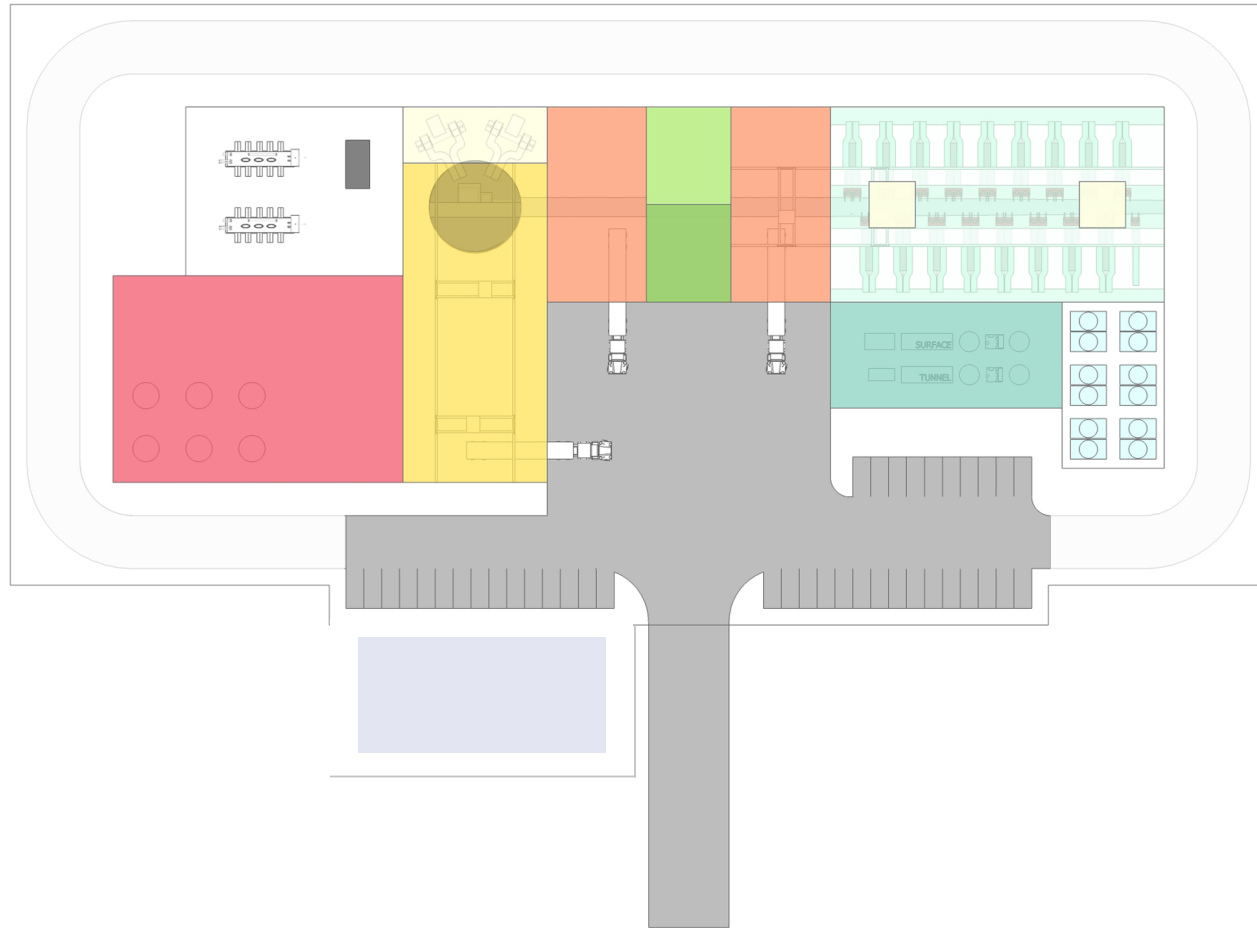
SITE AREA // 17,347.55 M²
1.735 HECTARES
4.287 ACRES

Building	Dims (m)			Area (m ²)	Area (sf)	Volume (m ³)
	L	W	H			
RF Unit Bldg	100.825	29.48	14.15	2,972.12	31,991.63	42,055.49
RF Bldg Fan-house (x3)	7.00	7.00	4.50	49.00	527.43	220.50
Surface Process Cooling DI Plant	35.00	16.00	6.33	560.00	6,027.79	3,542.00
Shaft Access Building	47.00	21.77	14.15	1,023.28	11,014.54	14,479.47
Fan House	9.08	21.77	14.15	197.56	2,126.55	2,795.51
Support	14.74	12.77	4.22	188.25	2,026.27	793.84
Admin	14.74	12.77	4.22	188.25	2,026.27	793.84
Workshop	29.48	12.77	9.93	376.49	4,052.54	3,739.71
Loading Bay - RF Unit Building	29.48	15.00	14.15	442.17	4,759.48	6,256.71
Loading Bay - Shaft Access Bldg	29.48	15.00	14.15	442.17	4,759.48	6,256.71
Cooling Tower Enclosure	25.08	15.41	n/a	386.44	4,159.63	N/A
Transformer Enclosure	32.80	25.46	n/a	834.94	8,987.21	N/A
Retention Pond	30.00	16.00	1.50	480.00	5,166.68	720.00
ENCLOSED BUILDING TOTALS				6,439.29	69,311.96	80,933.76



SITE AREA // 18,675.043 M²
1.868 HECTARES
4.615 ACRES

Building	Dims (m)			Area (m ²)	Area (sf)	Volume (m ³)
	L	W	H			
RF Unit Bldg	52.50	55.00	12.65	2,887.50	31,080.79	36,526.88
RF Bldg Fan-house (x2)	7.00	7.00	4.50	98.00	1,054.86	220.50
Surface Process Cooling DI Plant	40.00	15.04	6.33	601.76	6,477.29	3,806.13
Cryo Building	55.00	22.46	12.65	1,235.03	13,293.70	15,623.07
Shaft Access Building	28.00	25.00	12.65	700.00	7,534.74	8,855.00
Fan House	25.00	13.91	12.65	347.78	3,743.42	4,399.35
Support	18.10	11.50	4.00	208.15	2,240.51	832.60
Admin	18.10	11.50	4.00	208.15	2,240.51	832.60
Workshop	20.00	15.04	10.00	300.88	3,238.65	3,008.80
Loading Bay - RF Unit Building	varies	varies	12.65	1,423.00	15,317.04	18,000.95
Cooling Tower Enclosure	23.33	16.97	n/a	395.87	4,261.15	N/A
Transformer Enclosure	32.80	23.33	n/a	765.24	8,237.01	N/A
Retention Pond	30.00	16.00	1.50	480.00	5,166.68	720.00
ENCLOSED BUILDING TOTALS				8,010.24	86,221.51	92,105.88



SITE AREA // 17,292.85 M²
1.729 HECTARES
4.273 ACRES

Building	Dims (m)			Area (m ²)	Area (sf)	Volume (m ³)
	L	W	H			
RF Unit Bldg	50.442	29.48	14.15	1,486.93	16,005.17	10,520.02
RF Bldg Fan-house (x2)	7.00	7.00	4.50	98.00	1,054.86	220.50
Surface Process Cooling DI Plant	35.00	16.00	6.33	560.00	6,027.79	3,542.00
Cryo Building	43.79	31.25	14.15	1,368.31	14,728.32	9,680.77
Shaft Access Building	47.00	21.77	14.15	1,023.28	11,014.54	14,479.47
Fan House	9.08	21.77	14.15	197.56	2,126.55	2,795.51
Support	14.74	12.77	4.22	188.25	2,026.27	793.84
Admin	14.74	12.77	4.22	188.25	2,026.27	793.84
Workshop	29.48	12.77	9.93	376.49	4,052.54	3,739.71
Loading Bay - RF Unit Building	29.48	15.00	14.15	442.17	4,759.48	6,256.71
Loading Bay - Shaft Access Bldg	29.48	15.00	14.15	442.17	4,759.48	6,256.71
Cooling Tower Enclosure	25.08	15.41	n/a	386.44	4,159.63	N/A
Transformer Enclosure	32.80	25.50	n/a	836.35	9,002.39	N/A
Retention Pond	30.00	16.00	1.50	480.00	5,166.68	720.00
ENCLOSED BUILDING TOTALS				6,371.41	68,581.27	59,079.06