A Presentation to the

Department of Veterans Affairs

Rocky Hill VA Campus

Pre-Design Study of DVA Campus for Additional Housing Rocky Hill, CT BI-C-287

17 May 2016

Presented by:

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Agenda (Alan Lagocki)

Presentation

- Demographics
- Vision 2035
- Civil Upgrades
- Campus MEP and Utility Upgrades
- Renovations within the Domiciles, Veterans' Recovery Center, and Building 5 (former Health Care Facility)
- Cost Analysis
- Questions and Answers

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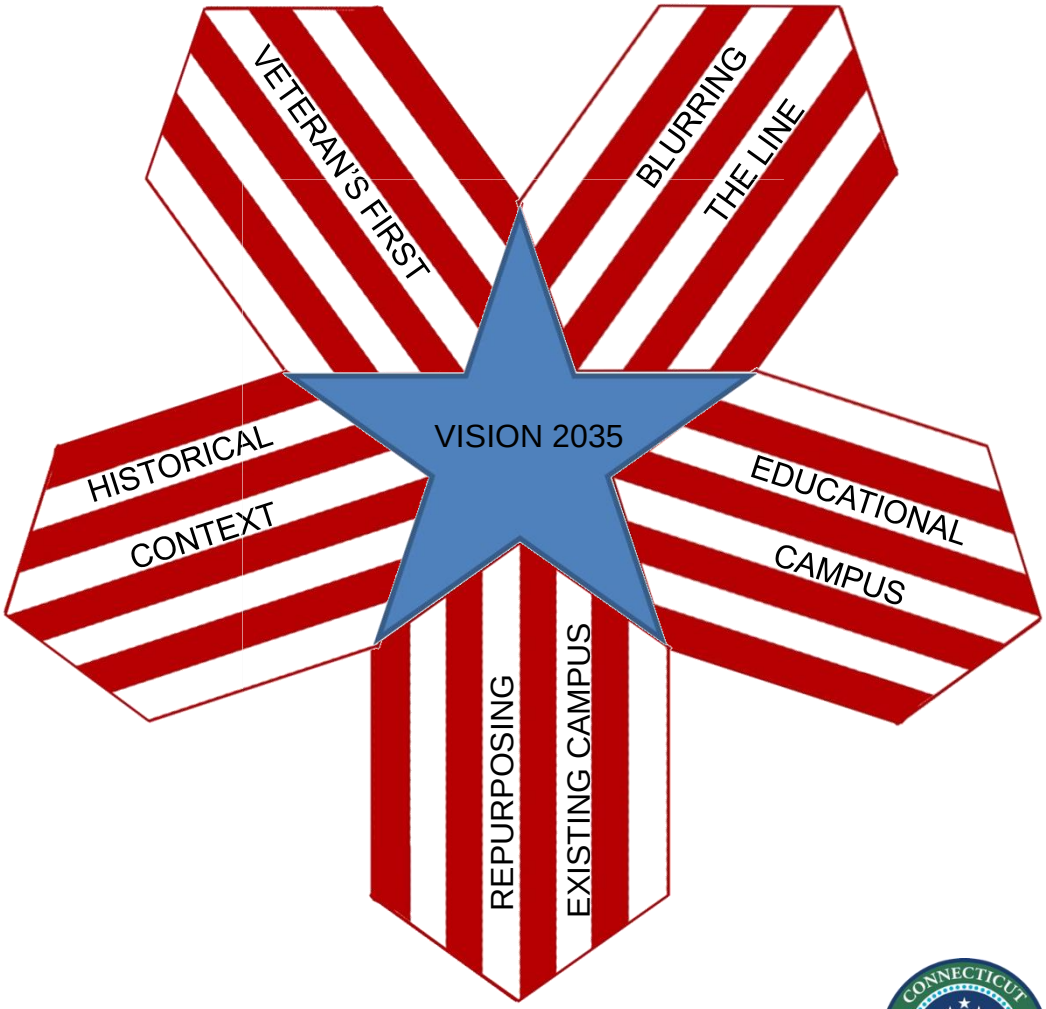
Campus Renovations (Alan Lagocki)

2035 Vision



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Campus Renovations (Alan Lagocki)

2015 Rocky Hill Campus

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Demographic Study Report (Rena Cheskis-Gold)

Information prepared by

Rena Cheskis-Gold
CEO and Founder,
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New Haven, CT

DEMOGRAPHIC PERSPECTIVES, LLC

Demographic Study Report (Rena Cheskis-Gold)

Research Conducted

- Overview of previous studies, available data on U.S. and Connecticut Veterans, non-Veterans, and homeless populations
- Interviews
  - Maria Cheney, Director of Residential Programs and Services, Rocky Hill Veterans Home, and staff
  - Babatunde Green, former Director of Planning, Department of Veterans Affairs
  - Laurie Harkness, VA Connecticut Errera Community Care Center
  - Maureen Pasko, Director of VA Connecticut Homeless Program
  - Ronald Gantick, Property Manager of Victory Gardens housing

Executive Summary

Demographic Study Report (Rena Cheskis-Gold)

Executive Summary

- The number of CT Veterans will decline within the next 20 years
- The age/gender breakdown of the CT Veteran population is changing
- The Veteran population may vary from the projections depending on political, economic, and programmatic forces
- There will continue to be a need for different types of Veteran housing, including transitional housing, permanent housing, assisted living, and family housing
- The Home should continue to provide a reasonable and modest amount of housing, but should consider altering the bed types and amount of housing it offers to match the population composition and needs of the future Veteran population

Demographic Study Report (Rena Cheskis-Gold)

State of Connecticut Veteran 20 Year Population Forecast

Overall Connecticut Veteran Population

- *2014:* estimated 213,420 Veterans
- *2024:* estimated 155,158 Veterans, a decline of about one-quarter
- *2034:* estimated 114,469 Veterans, a decline of about one-half

Gender Balance in 2034

- Men will still be the majority of the population, but will constitute a smaller proportion
- Women will continue to comprise only a small proportion of the population, but their proportion will increase
- In the population age 65 and older, the number of men will decline, but the number of women will increase

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Demographic Study Report (Rena Cheskis-Gold)

State of Connecticut Veteran 20 Year Population Forecast

Age Groups in 2034

- Veterans age 55+ will constitute a smaller proportion of the population
  - Older adults, age 55 to 74 will constitute a *smaller* proportion of the population
  - Elderly adults, age 75+, will constitute a *larger* proportion of the population
- Younger Vets, age 20 to 34, will continue to comprise only a small portion of the population
- Using a wider definition, younger Veterans, age 20 to 44 will grow as a proportion of the Vet population, but only modestly
- Projections may quickly change if there is an increase in the numbers serving in the armed forces, for any reason

Source: Data stem from the U.S. Department of Veteran Affairs actuarial model, "Veteran Population Projection Model (VPPM) 2014"

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Demographic Projection for Rocky Hill Home: Summary

- Home has potential to receive greater share of CT Vets with new unit mix, amenity spaces, and integrated marketing
- Reorganize unit mix and amenity spaces to address demographic changes by gender, age, and disability status
- Number of beds needed could vary from 133 to 256
- Demographics
  - Gender mix: anticipate more women (11%)
  - Higher % younger men 20 to 39, interested in both short-term and long-term stays
  - Majority will still be older men in long-term stays, including potential Assisted Living unit

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Current U.S. and Connecticut Veteran Population

Demographic Study Report (Rena Cheskis-Gold)

Current U.S. and Connecticut Veteran Population

TABLE 1: U.S. AND CONNECTICUT VETERAN POPULATION, BY SERVICE PERIOD, 2013

Service Period	U.S. Estimate	%	CT Estimate	%
Gulf War 2001 and Later	2,445,335	12%	16,128	7%
Gulf War 1990 to 2001	3,529,787	17%	23,756	11%
Vietnam War	7,463,586	35%	75,628	35%
Korean War	2,445,335	12%	29,423	14%
WW II	1,828,685	9%	27,461	13%
Other (Between Wars, Before WW II)	3,551,051	17%	45,769	21%
Total	21,263,779	100%	217,947	100%

Source: American Community Survey, 2013, Table S2101

- Biggest single group by period of service is the Vietnam War service period (U.S.: 35%; CT: 35%)
- Combining the two Gulf War periods at the national level approaches the size of the Vietnam War cohort, (U.S.: 29%), but is a much smaller proportion of the CT Veteran population (18%)

Demographic Study Report (Rena Cheskis-Gold)

Age

TABLE 2: U.S. AND CONNECTICUT VETERAN POPULATION, BY AGE, 2013

Age	U.S. Estimate	%	CT Estimate	%
18-34	1,722,366	8%	11,333	5%
35-54	5,337,209	25%	44,679	21%
55-64	4,911,933	23%	47,294	22%
65-74	4,507,921	21%	51,000	23%
75+	4,784,350	23%	63,641	29%
Total	21,263,779	100%	217,947	100%

Source: American Community Survey, 2013, Table S2101

- U.S: Largest cohorts are ages 55 to 64, and 65 to 74 (44%)
- Adding in the oldest cohort of ages 75+, 2/3 are middle aged or older
- 1/3 is under the age of 55

Compared to the national Veteran population:

- CT has a similar population of 55 to 64 and 65 to 74 year olds (U.S.: 44%; CT: 45%)
- CT has significantly fewer below age 55 (U.S.: 33%; CT: 26%), and significantly more in the oldest cohort of ages 75+ (U.S.: 23%; CT: 29%)

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Service-Connected Disability

Disability Status, and Level	U.S. Estimate	%	CT Estimate	%
No Disability	17,784,887	84%	194,518	89%
Disability	3,478,892	16%	23,429	11%
Total	21,263,779	100%	217,947	100%
0% Disability	225,813	1%	1,923	1%
10% or 20%	1,195,300	6%	9,382	4%
30% or 40%	599,065	3%	3,577	2%
50% or 60%	381,728	2%	2,190	1%
70% +	802,278	4%	4,368	2%
Not available	274,708	1%	1,969	1%

Source: American Community Survey, 2013, Table B21100

TABLE 3: U.S. AND CONNECTICUT VETERAN POPULATION, BY SERVICE-CONNECTED DISABILITY STATUS AND LEVEL OF DISABILITY, 2013

- Majority of Veterans do not have a service-connected disability (U.S. 16%, CT: 11%)
- *(See also Table 5, which compares Vets and non-Vets on general disability status that is service or non-service connected.)*

Note: Will not add to 100% due to rounding.

Demographic Study Report (Rena Cheskis-Gold)

Gender and Race

TABLE 4: U.S. AND CONNECTICUT VETERAN POPULATION, BY GENDER AND SELECTED RACE AND ETHNICITY CATEGORIES*, 2013

Gender and Race/Ethnicity	U.S. Estimate	%	CT Estimate	%
Men	17,784,887	93%	194,518	95%
Women	3,478,892	7%	23,429	5%
Total	21,263,779	100%	217,947	100%
White *	17,882,838	84%	197,024	90%
Black *	2,360,279	11%	14,385	7%
Hispanic (of any Race) *	1,190,772	6%	8,500	4%

** Race categories will not to 100% due to omission of race categories. Hispanic persons can be of any race.*

Source: American Community Survey, 2013, Table B21100

- Only a small % of Veterans are women. CT is lower than U.S. (U.S.: 7%; CT: 5%)
- CT Veterans are less likely to be Black or Hispanic

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Veterans vs. Non-Veterans: Financial Health

TABLE 5A: COMPARISON OF VETERAN AND NON-VETERAN (CIVILIANS AGE 18 AND OLDER) MEDIAN INCOME, U.S. AND CONNECTICUT, 2013

	U.S. Estimate	CT Estimate
Median Income		
Veteran	$37,346	$42,984
Non-Veteran	$25,968	$32,592

Source: American Community Survey, 2013, Table S2101

- All U.S. and CT Veterans have higher average incomes than non-Veterans, and are also less likely to be at or below the poverty level
- Income: CT income greater than U.S.
- Veterans less likely to be unemployed than non-Veterans, but unemployment is a particular problem for younger Veterans*
  - In 2013, 6.6% of U.S. Veterans were unemployed
  - A much higher % of younger Veterans were unemployed: Ages 18 to 24 (21%); Ages 24 to 35 (10%)

** Source: Bureau of Labor Statistics*

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Veterans vs. Non-Veterans: Financial Health

TABLE 5B: COMPARISON OF VETERAN AND NON-VETERAN (CIVILIANS AGE 18 AND OLDER) POVERTY STATUS, U.S. AND CONNECTICUT, 2013

	U.S. Estimate	CT Estimate
Poverty Status past 12 months		
Veteran	7%	5%
Non-Veteran	14%	10%

Source: American Community Survey, 2013, Table S2101

- % Veterans at or below the poverty level:
  U.S.: 1.5 million; CT: 11,000
- Below Poverty Level: CT Veterans are less likely to be at or below the poverty level

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Veterans vs. Non-Veterans: Disabilities

TABLE 5C: COMPARISON OF VETERAN AND NON-VETERAN (CIVILIANS AGE 18 AND OLDER) DISABILITY STATUS, U.S. AND CONNECTICUT, 2013

	U.S. Estimate	CT Estimate
Disability Status		
Veteran	**26%**	**24%**
Non-Veteran	**14%**	**12%**

Source: American Community Survey, 2013, Table S2101

- Service-Related Disabilities: U.S.: 16%; CT: 11%
- All Disabilities: U.S.: 26%; CT: 24%
- Veterans are much more likely to have a disability compared to non-Veterans
- CT Poverty gap related to Veteran Disability for Veterans Age 18 to 64
  - *With* disability, living in poverty: 13%
  - With *no* disability, living in poverty: 7%

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Homelessness

Unemployment, poverty, and disability status are all factors related to homelessness (Tables 5A, 5B, and 5C)

U.S.

- Estimated that 1/3 of homeless adults nationally are Veterans
- 2013: 58,000 homeless Veterans, a decline of 24% since 2010

Connecticut

Previous Homeless Estimates

- In Connecticut, in 2014, one organization estimated that there were about 300 Veterans who were homeless
- As recent as 2010, however, there were Point-in-Time survey estimates of 800 to 3,000 homeless Veterans in Connecticut

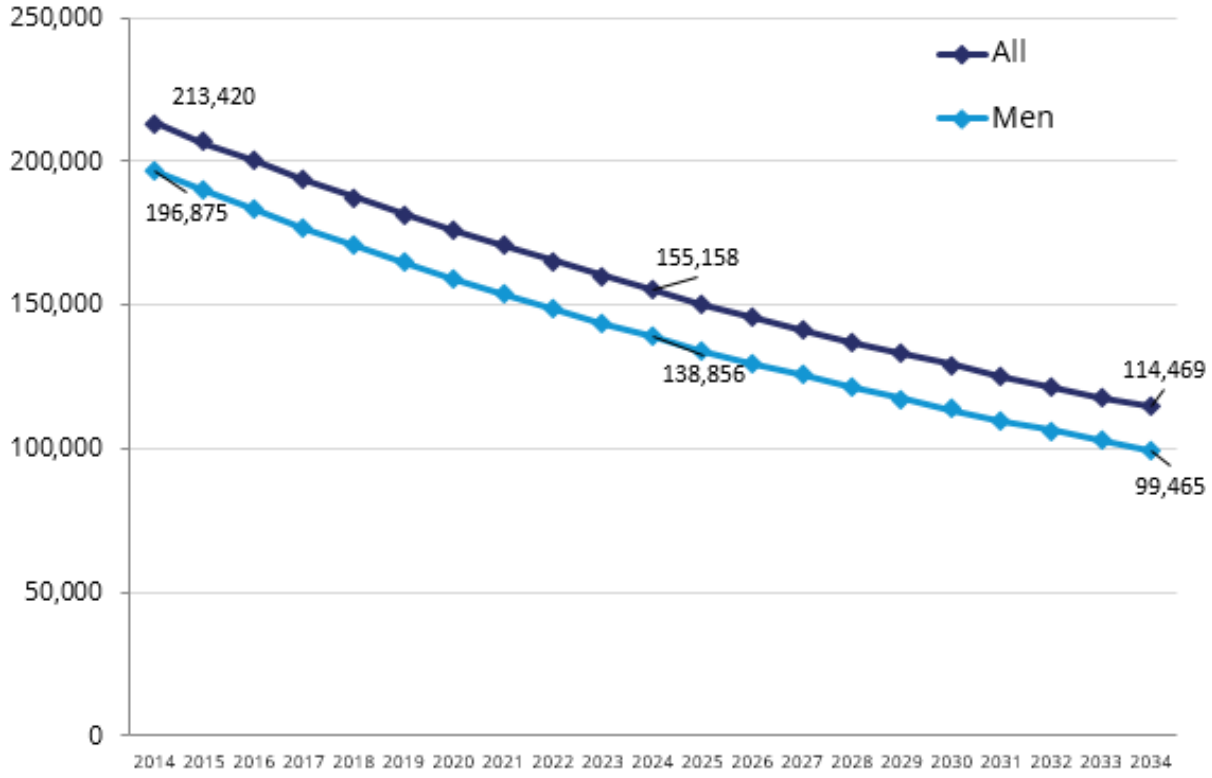
Spring 2015

- Connecticut 1st state to eradicate chronic Veteran homelessness
- Only 80 Veterans found in emergency shelters in February 2015
- Homelessness eradicated by investments in affordable housing; collaboration to provide rental assistance vouchers, case management and clinical services, skill training

Demographic Study Report (Rena Cheskis-Gold)

Connecticut Veteran 20-Year Population Forecast

Figure 1: Projected Veteran Population, Connecticut, 2014 to 2034



Source: http://va.gov/vetdata (9L_VetPop2014)

2014 Snapshot:
213,420 Veterans

- 93% are male
- 69% are age 55+
- Females are younger, overall, than males

2034 Snapshot:
114,469 Veterans Projected

- Population will decline to about half the 2014 population
- Number of Veterans in every age group will decline
- In the population age 65+, the number of men will decline, but the number of women will increase

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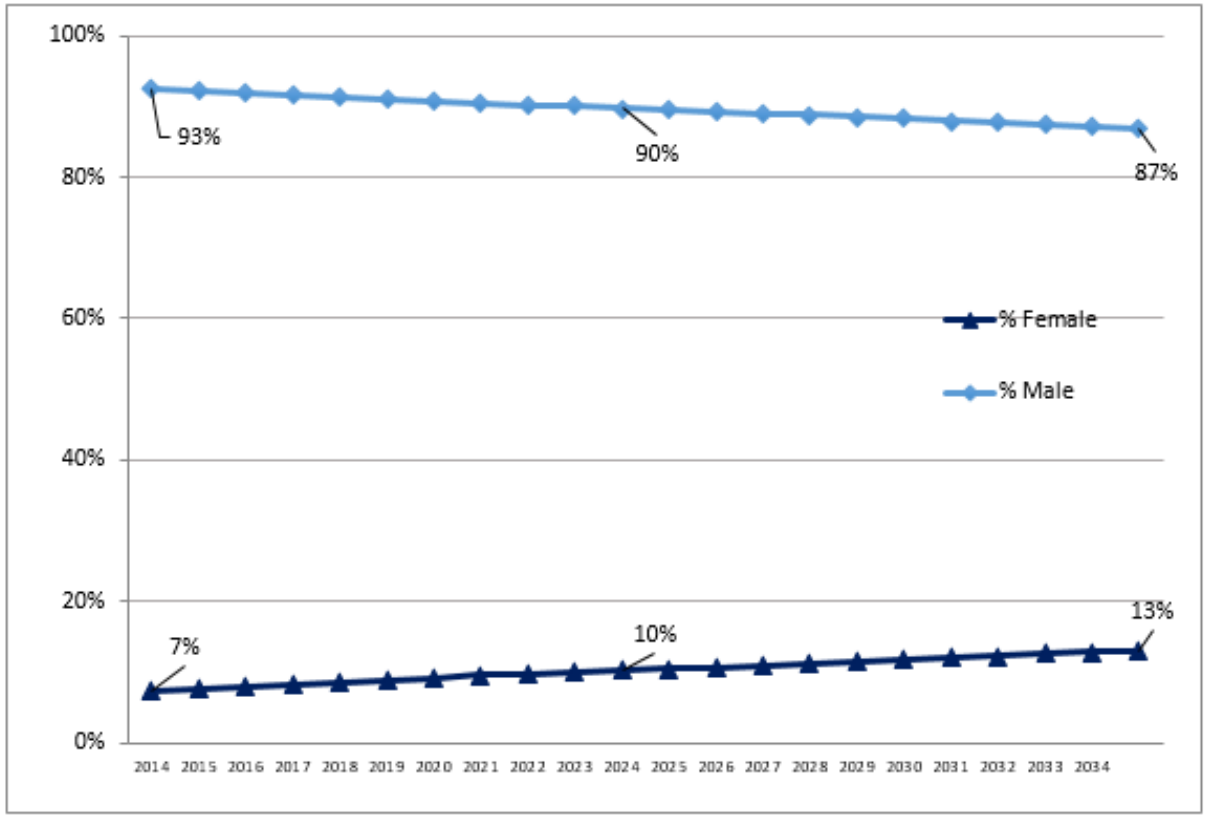
Demographic Study Report (Rena Cheskis-Gold)

Connecticut Veteran 20-Year Population Forecast, by Gender

Figure 2: Projected Veteran Population, % Male and Female, Connecticut, 2014-2034



Source: http://va.gov/vetdata (9L_VetPop2014)

Proportion of the CT Veteran Population

- Men will still be the majority of the Veteran population, but will constitute a somewhat smaller proportion

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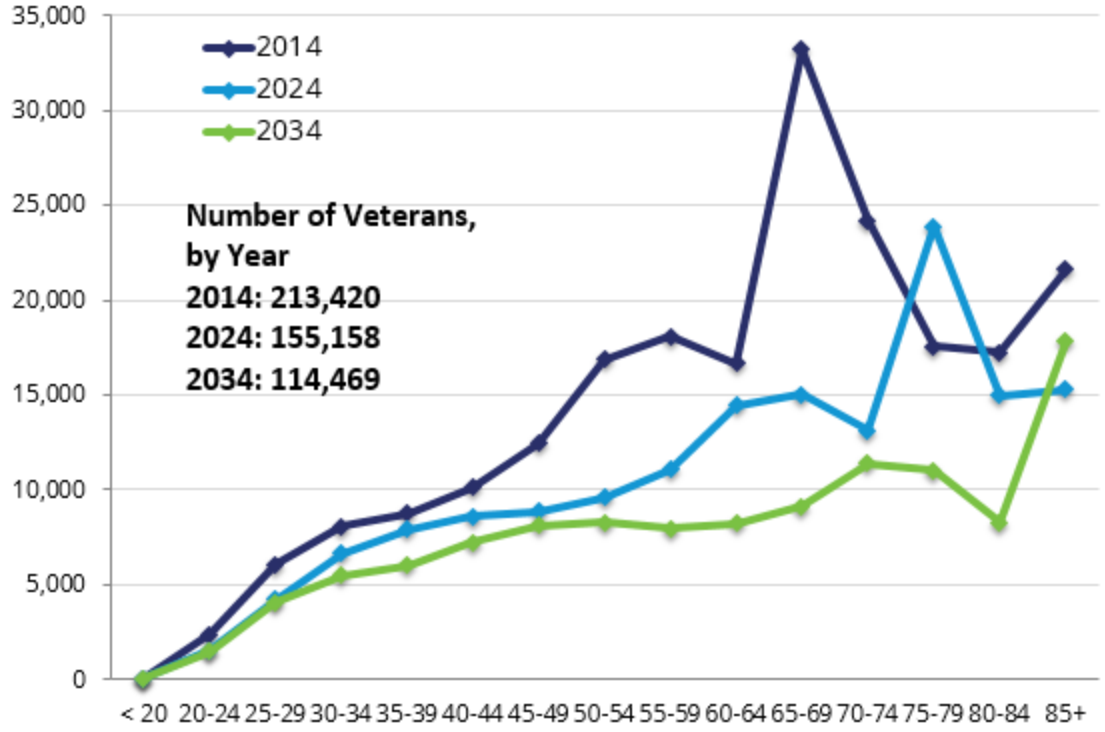
Demographic Study Report (Rena Cheskis-Gold)

Connecticut Veteran 20-Year Population Forecast, by Age

Figure 3: Projected Veteran Population, Connecticut, by Age, 2014 to 2034



Source: http://va.gov/vetdata (6L_VetPop2014)

Proportion of the CT Veteran Population

- Smaller % age 55+
- Smaller % Older adults, age 55-74
- Larger % Elderly adults, age 75+
  - But # elderly will decline strongly
  - Most needy group in terms of care
- Younger Veterans, age 20 to 34, will continue to be small %
- Using a wider definition, younger Veterans, age 20 to 44, will grow modestly in %
- *Note: Projections may quickly change if there is an increase in the numbers serving in the armed forces, for any reason*

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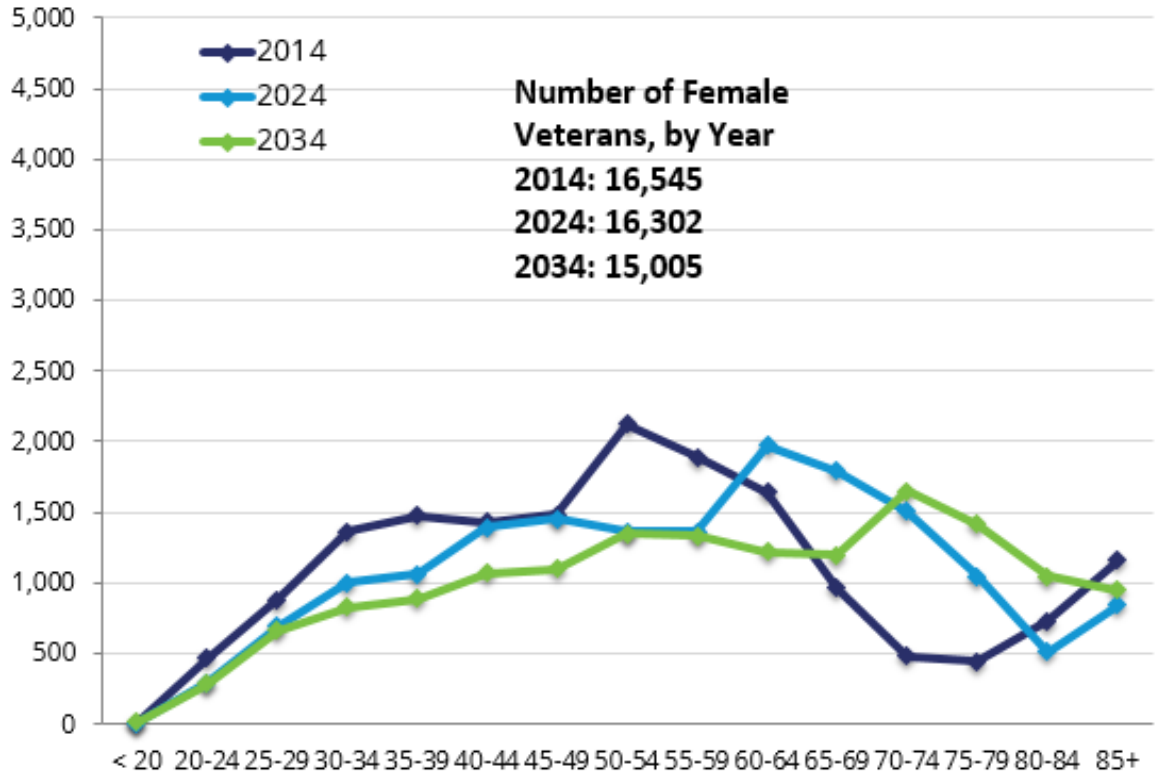
Demographic Study Report (Rena Cheskis-Gold)

Connecticut Veteran 20-Year Population Forecast, for Women

Figure 4: Projected Female Veteran Population, by Age, Connecticut, 2014-2034



Source: http://va.gov/vetdata (6L_VetPop2014)

- Women are younger than men
- Peak age group for women is 50 to 54, compared to 65 to 69 for men

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Demographic Study Report (Rena Cheskis-Gold)

Detailed Supporting Data for Connecticut

Veteran Numbers

- Overall CT Veteran population decline from 2014 to 2034 of 46%, from 213,420 to 114,469
- Decline in next decade (2014 to 2024) of 27%, from 213,420 to 155,158
- Number of men, aged 65+; 2014: 113,833; 2034: 57, 603 (Decline of 49%)
- Number of women, aged 65+; 2014: 3,781; 2034: 6,260 (Increase of 51%)

Proportion of the Veteran Population

- Overall CT Veteran population decline from 2014 to 2034 of 46%, from 213,420
- % male declines, from 93% of population in 2014, to 87% of population in 2034
- % female still small, but increases, from 7% of population in 2014, to 13% in 2034
- In 2014, women are younger than men; the current peak age group for women is 50 to 54, compared to 65 to 69 for men
- Going forward, the number of men in the elderly adult population 75+ will decline by 34%, while the number of women will increase by 46%
- Smaller % are age 55+, from 69% to 64% of population
  - Declining % Older adults: % age 55-74, from 43% to 32% of population
  - Increasing % Elderly: % age 75+, from 26% to 32% of population
- Younger Veterans age 20-34 do not comprise a significant portion of the population in either 2014 or 2034
  - Increase only from 8% to 10% of population
- Using a wider definition of younger Veterans, age 20 to 44, will grow as a proportion of the population, but only very modestly (% 20 to 44; 2014: 17%; 2034: 21%)

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Campus Renovations (Alan Lagocki)

2015 Rocky Hill - Entrance

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2015 Rocky Hill - Fence Line

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2035 Rocky Hill - Fence Line

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Campus Renovations (Alan Lagocki)

2015 Rocky Hill - Back Half of Campus

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Campus Renovations (Alan Lagocki)

2035 Rocky Hill - Back Half of Campus

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Campus Renovations (Alan Lagocki)

2015 Domicile Courtyards

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Campus Renovations (Alan Lagocki)

2035 Domicile Courtyards

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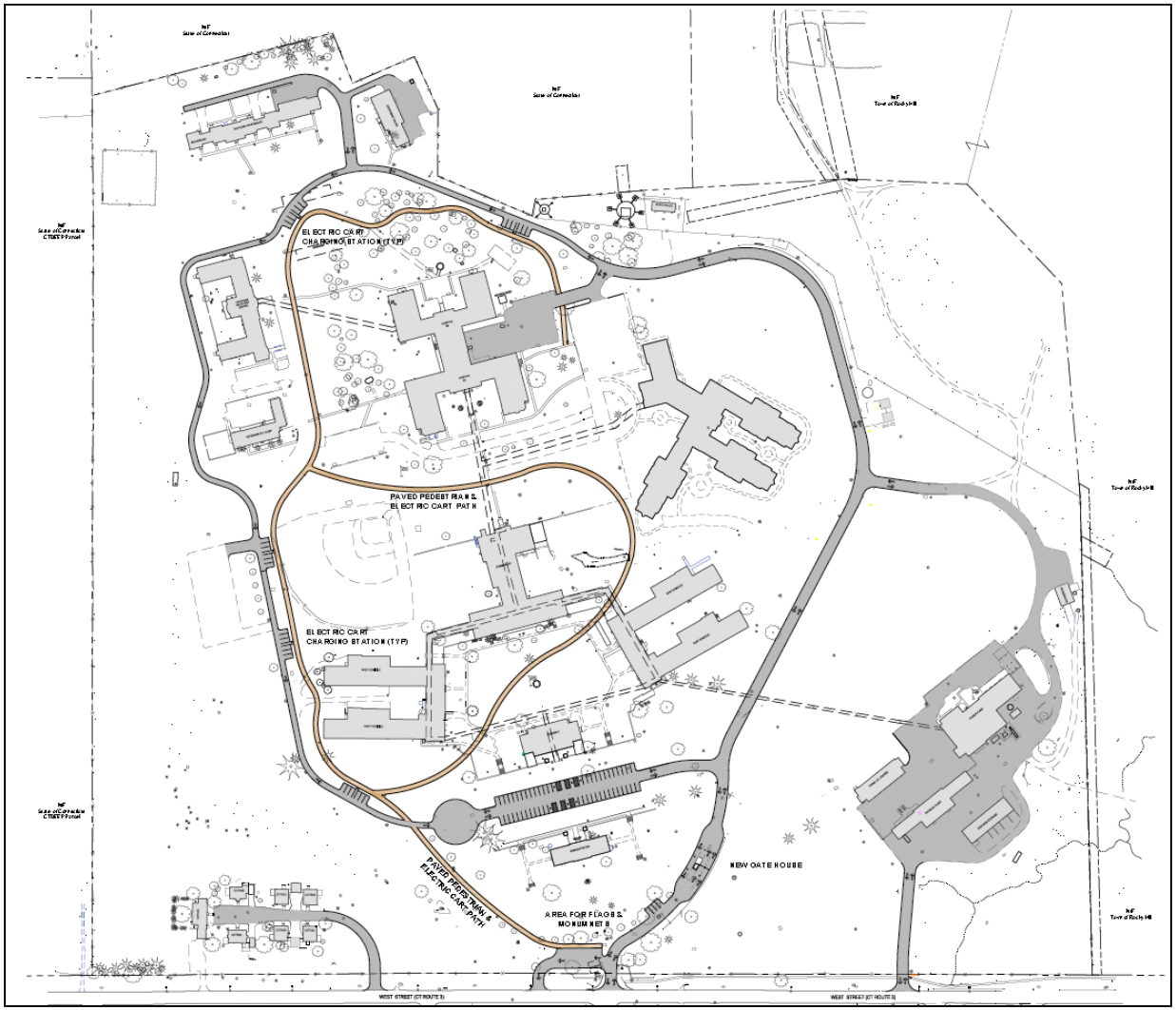
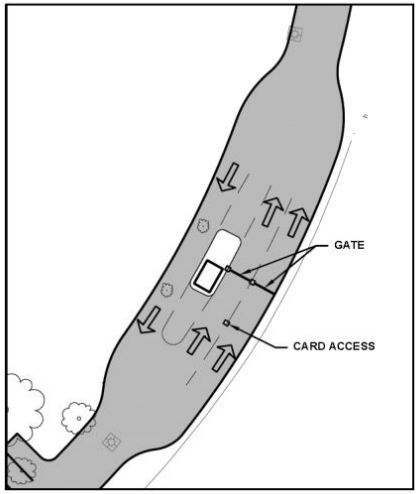
Civil Upgrades (Ed Shelomis)

Vision for Vehicular & Pedestrian Site Circulation





NEW GATED ENTRANCE

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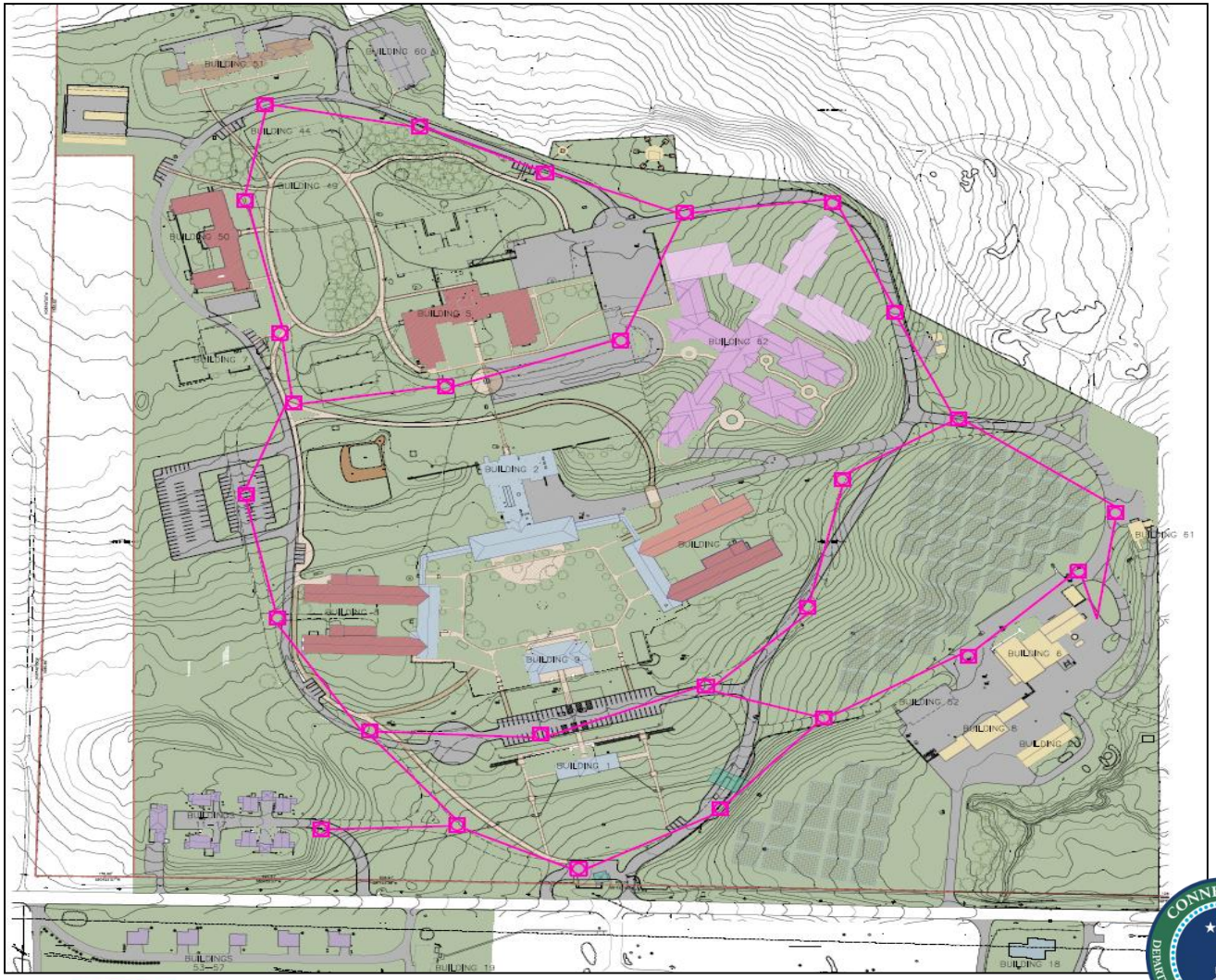
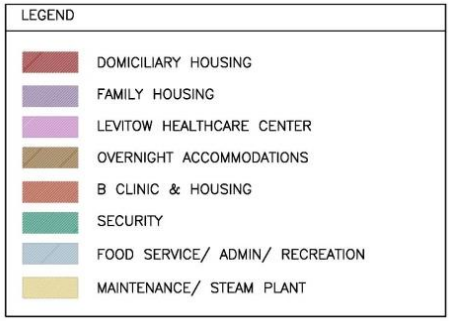
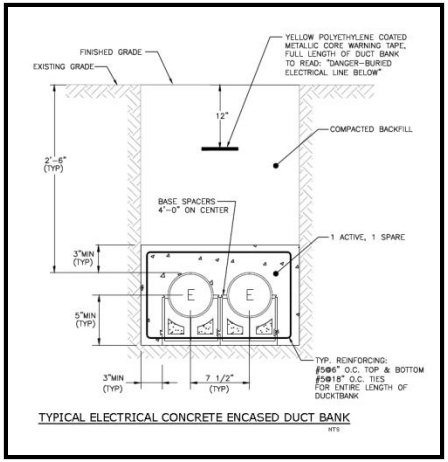
Civil Upgrades (Ed Shelomis)
Vision for Electrical Distribution







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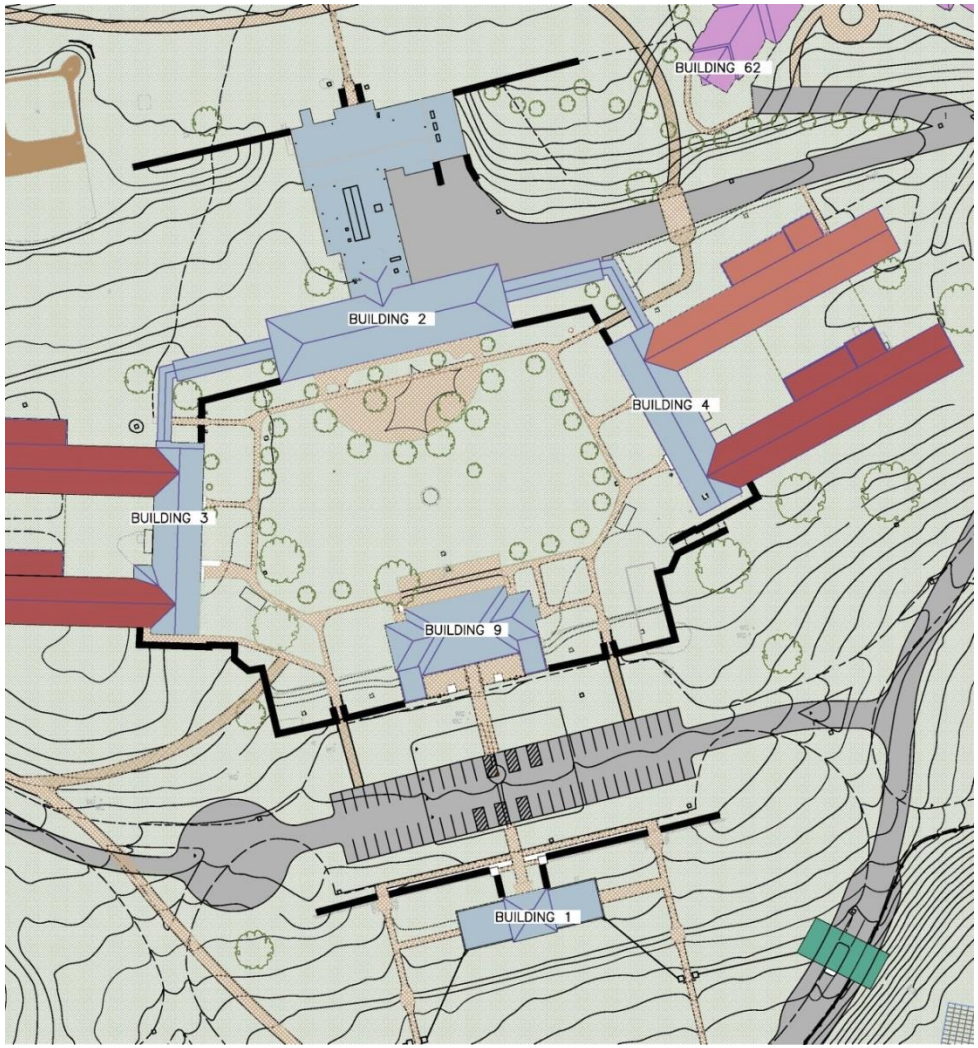
Civil Upgrades (Ed Shelomis)

Details



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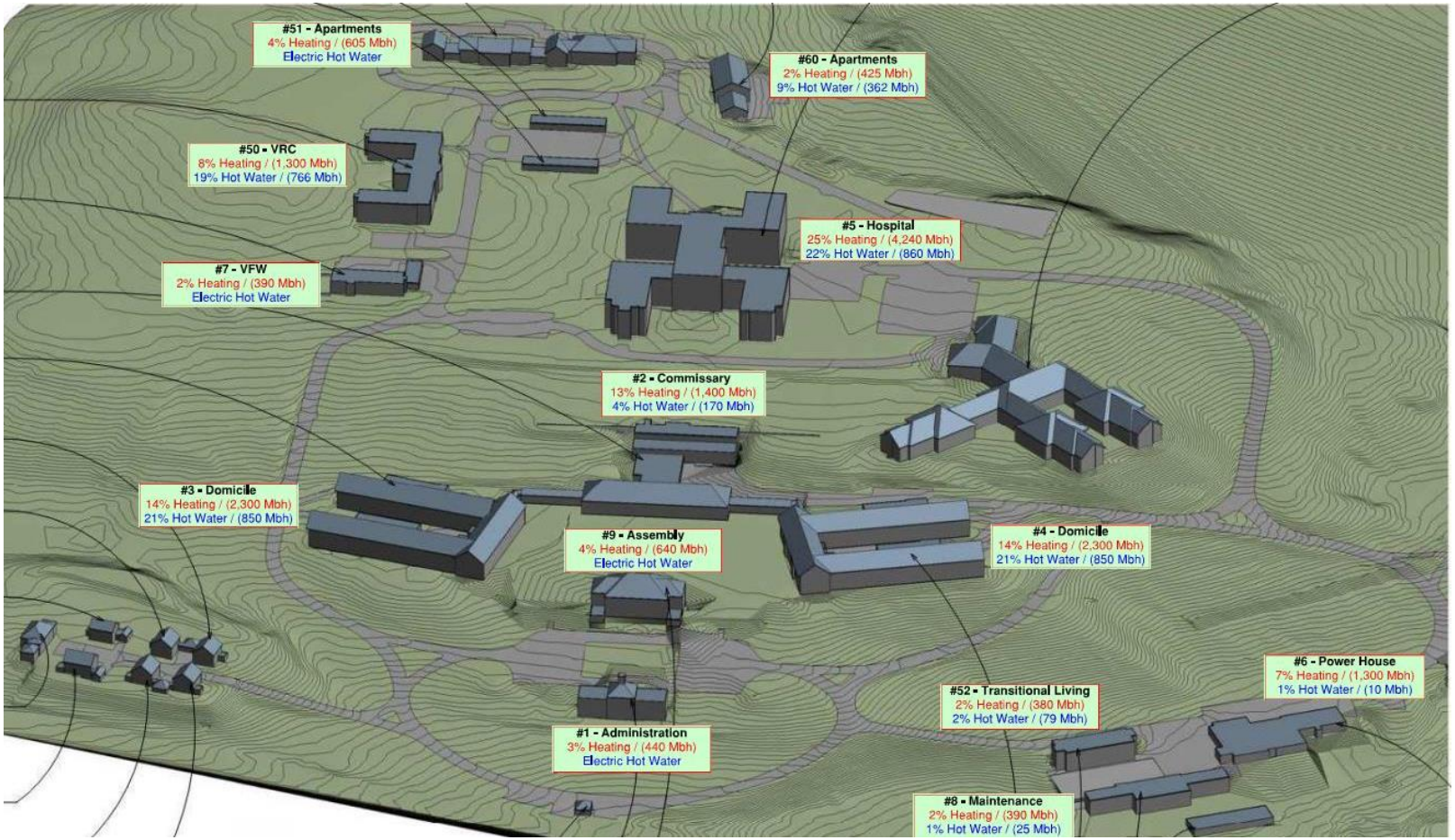
MEP Upgrades (Doug LaJoie)
2035 Rocky Hill Existing Steam Boiler Plant

<u>Existing Steam Plant Consist of 4 Boilers.</u>

- Boiler 1: Installed in 1992 (24 Years Old)
  - Newest of all the Boilers
  - Needs Immediate Repair
- Boiler 2 and Boiler 3: Installed in 1939 (77 Years Old)
  - Operating Beyond it's Useful Life
  - Replacement Parts Not Readily Available
- Boiler 4: installed in 1954 (62 Years Old)
  - Operating Beyond it's Useful Life
  - Replacement Parts Not Readily Available
- Operating Efficiency:
  - Existing Steam Plant: 65%
  - Propose Hot Water Plant: 95%

MEP Upgrades (Doug LaJoie)
2035 Rocky Hill Campus Steam Distribution



MEP Upgrades (Doug LaJoie)
2035 Rocky Hill Existing Steam Plant Phasing Options

Heating Plant Phasing Senario

Phasing Option 1:

- Retrofit Newer Boiler (B-1) as Primary Heating Source
- Provide Connection for Mobile Steam Boiler
- Utilize Remaining (3) Boilers Until System Failure. Salvage Parts as Required to Keep Existing In Use

Phasing Option 2:

- Repair Newer Boiler (B-1)
- Replace Remaining (3) Boilers with (1) New Steam Boiler

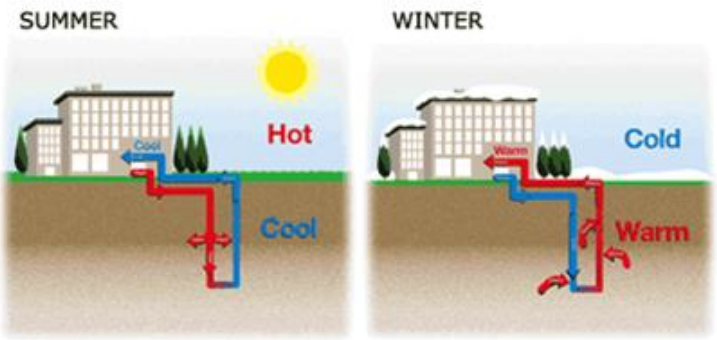
MEP Upgrades (Sal Fazzino)

2035 Rocky Hill HVAC System Option Overview

- Upper Heating And Cooling Plant
- Middle Heating and Cooling Plant

Function	Option 1: Geothermal Heating and Cooling Plant	Option 2: Dual Fuel Heating and Cooling Plant	Option 3: High Efficient Conventional Heating and Cooling Plant
Cooling Plant Description	• Closed Loop Geothermal Bores • Central Heat Pump • Central Chilled Water Pumping	• Gas Driven and Electric Chiller • Cooling Tower • Central Chilled Water Pumping	• Electric Chiller • Cooling Tower • Central Chilled Water Pumping
Heating Plant Description	• Closed Loop Geothermal Bores • Central Heat Pump • Central Hot Water Pumping	• Condensing Gas Fired Boilers • Central Hot Water Pumping	• Condensing Gas Fired Boilers • Central Hot Water Pumping
Control System	A central DDC control system with web based control	Same as System 1	Same as System 1

MEP Upgrades (Sal Fazzino)
2035 Rocky Hill Option 1 Geothermal System



- Geothermal Closed Loop Bore Field
- 400 ft ~ 500 ft Bore Depth
- Bore Field QTY: 450 ~ 550
  - 250 ~ 300 Middle Plant Bores
  - 200 ~ 250 Upper Plant Bores

- Water to Water Heat Pump Coupled with Geothermal Bore Field
- Generates Chilled Water in Summer
- Generates Hot Water in Winter
- Energy Recovery Transfer in Shoulder Season

MEP Upgrades (Sal Fazzino)

2035 Rocky Hill Option 1 Propose Bore Field Locations

MEP Upgrades (Sal Fazzino)

2035 Rocky Hill Option 2 Dual Fuel Cooling Plant

- Gas Engine Driven Chiller
- Based on fuel cost, gas engine chiller Could be the lead cooling source
- Heat Rejection Could be used to Preheat Domestic HW
- 350 tons Middle Chiller Plant – Gas Fired
- 300 tons Upper Chiller Plant – Gas Fired

•Electric Engine Driven Chiller

•High Efficient Chiller operating at 0.55 KW/ton.
Typical equipment operates at 1.0 KW/ton.

•350 tons Middle Chiller Plant – Electric
•300 tons Upper Chiller Plant – Electric

MEP Upgrades (Sal Fazzino)
2035 Rocky Hill Option 2 Heating Plant

- 18,000 MBH Boiler Plant
  - 10,000 MBH Middle Boiler Plant
  - 8,000 MBH Lower Boiler Plant
- 95% Efficient Boiler Plant
- Fuel source is Natural Gas

MEP Upgrades (Sal Fazzino)
2035 Rocky Hill Option 3 Cooling Plant

•Electric Engine Driven Chiller

•High Efficient Chiller operating at 0.55 KW/ton
Typical equipment operates at 1.0 KW/ton

•1300 ton Cooling Capacity
- •700 tons Middle Chiller Plant
- •600 tons Upper Chiller Plant

MEP Upgrades (Sal Fazzino)
2035 Rocky Hill Option 3 Heating Plant

- 18,000 MBH Boiler Plant
  - 10,000 MBH Middle Boiler Plant
  - 8,000 MBH Lower Boiler Plant
- 95% Efficient Boiler Plant
- Fuel source is Natural Gas

MEP Upgrades (Sal Fazzino)

2035 Rocky Hill Housing HVAC Terminal Unit Consideration

Chilled Beam System or Valance

- System consists of:
  - Provides Heating and Cooling
  - Coupled with Outdoor Air Ventilation System
  - Low Noise Levels (No Fan)
  - Individual Room Control
  - Low Maintenance

Chilled Beam System

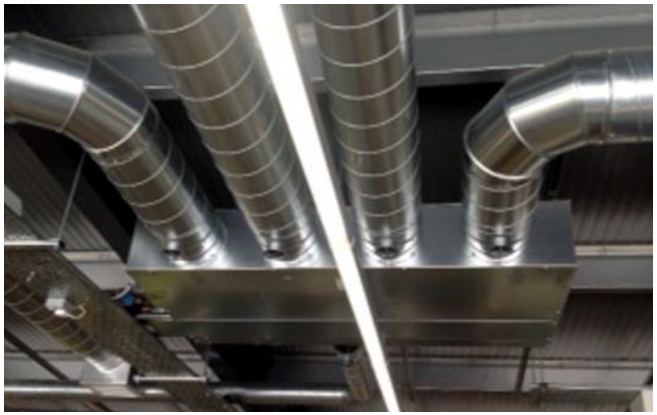
Valance System

MEP Upgrades (Sal Fazzino)

2035 Rocky Hill Community HVAC Terminal Unit Consideration

Chilled Beam System

- System consists of:
  - Provides Heating and Cooling.
  - Coupled with Outdoor Air Ventilation System
  - Low Noise Levels (No Fan)
  - Low Maintenance



4-Pipe Fan Coil Unit

- System consists of:
  - Provides Heating and Cooling
  - Coupled with Outdoor Air Ventilation System
  - Fan Will Generate Noise
  - Maintenance required for Filters

•MEP Upgrades (Doug LaJoie)

2035 Rocky Hill Solar Electric (Photovoltaic)

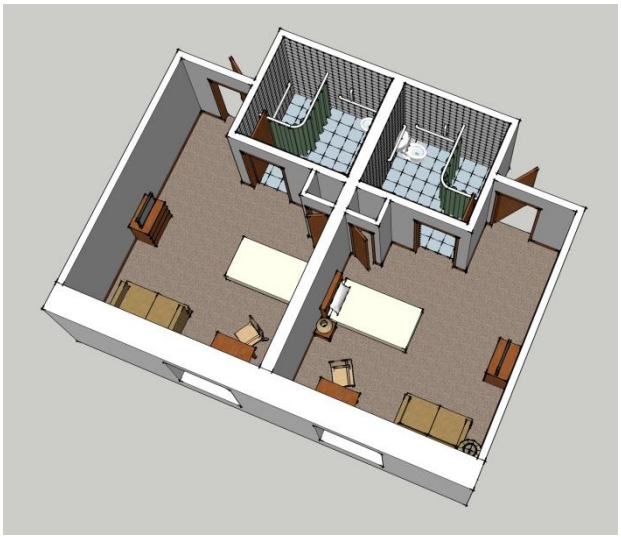
PV System Description

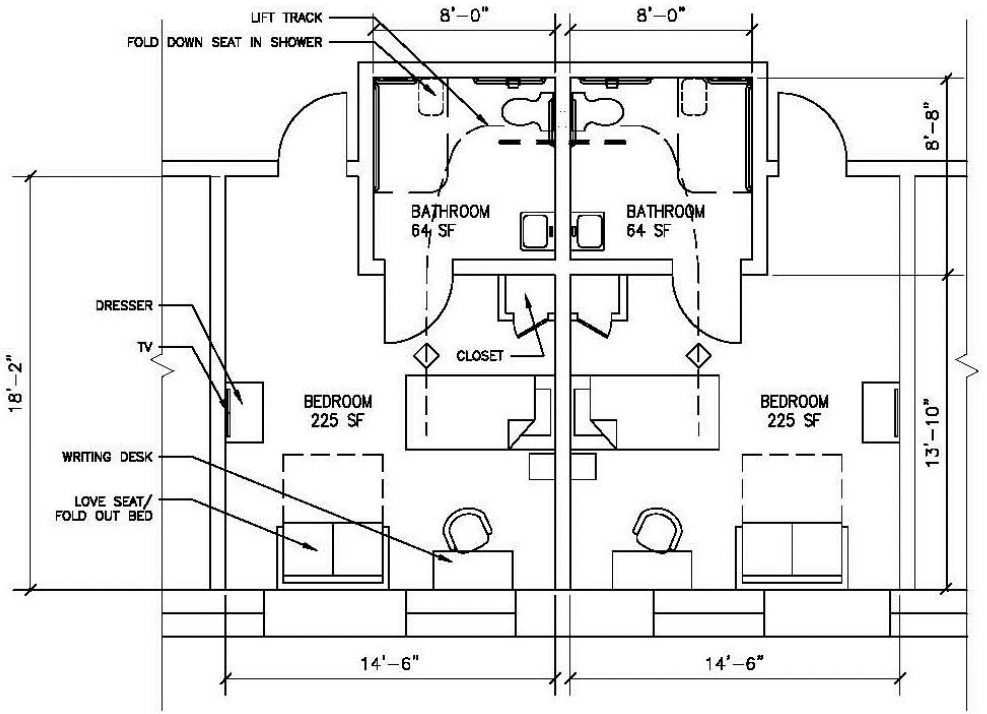
- 2 Megawatts
- Ground Mounted Modules
- Aluminum Framing mounted off Steel Posts

•MEP Upgrades (Doug LaJoie)
2035 Rocky Electric Service

- New Main Electrical Distribution Loop: 13.8KV
- Generators Located at The Central Plant, Back-up Power for The Campus
- Propose Generator Plant Consist of The Following:
  - Existing 1 MW Generator (Recently Designed)
  - (3) New 1 MW Generators

Domicile Renovations (Sherry Petruccione)
Typical CLC Private Bedroom and Bathroom





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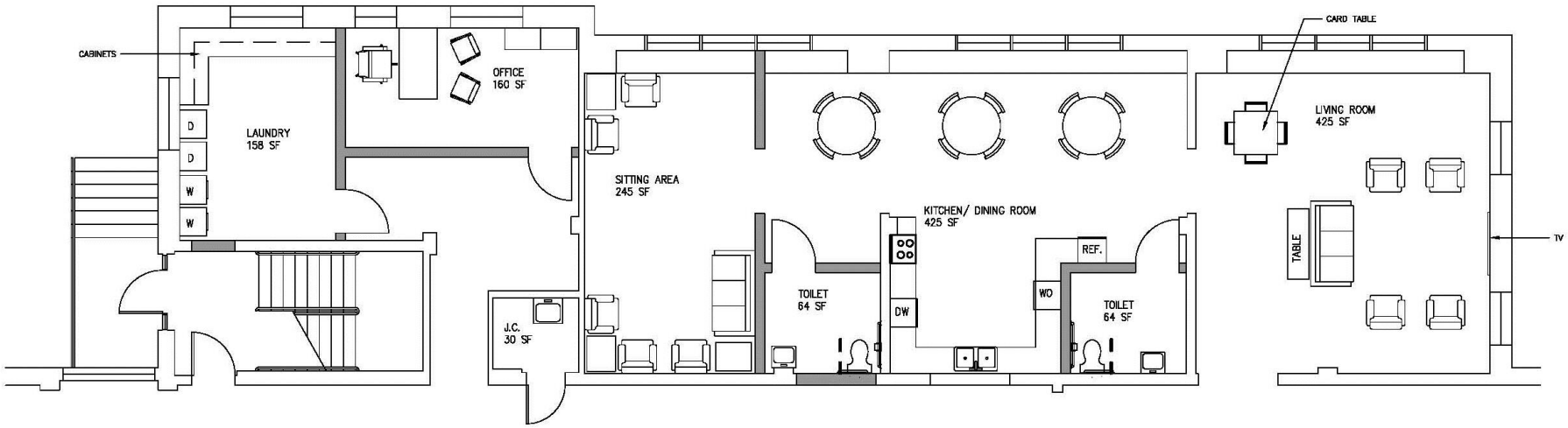
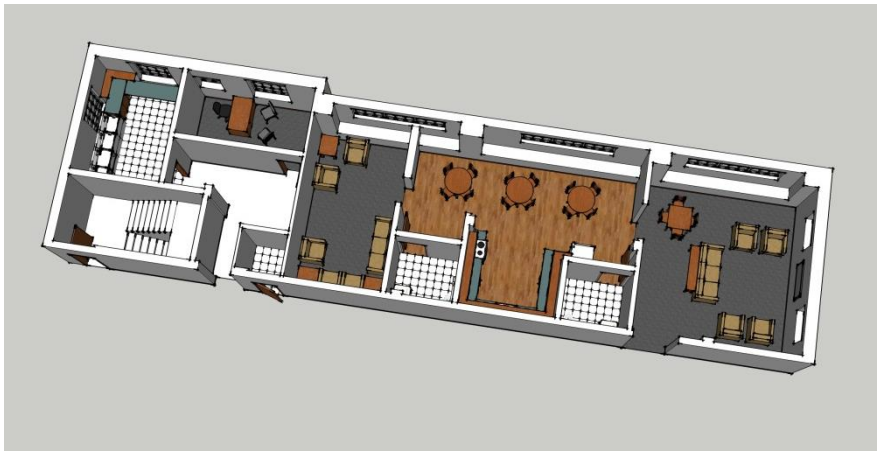
Domicile Renovations (Sherry Petruccione)

Typical CLC Community Living Space





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Domicile Renovations (Sherry Petruccione)
Building 3 – First Floor Plan

- 48 Units
- 4 Wings of 12 units

Domicile Renovations (Sherry Petruccione)
Building 4 – First Floor Plan

- 36 Units
- 3 Wings of 12 units
- 1 Wing for Clinic

PLAN KEY

- PRIVATE BEDROOM AND BATHROOM
- COMMUNITY SPACE
- CIRCULATION
- OFFICES

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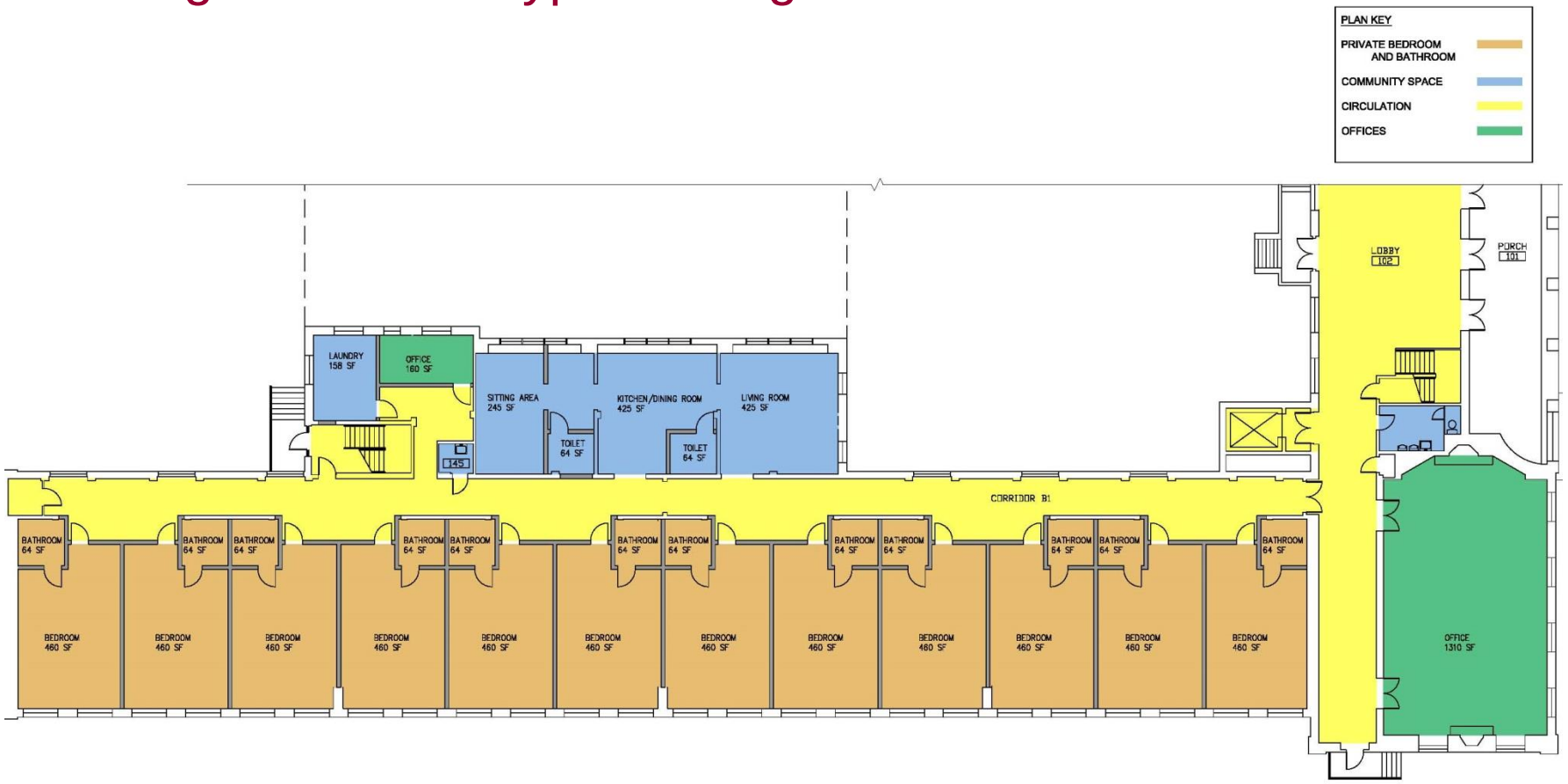
Domicile Renovations (Sherry Petruccione)

Buildings 3 and 4 – Typical Wing



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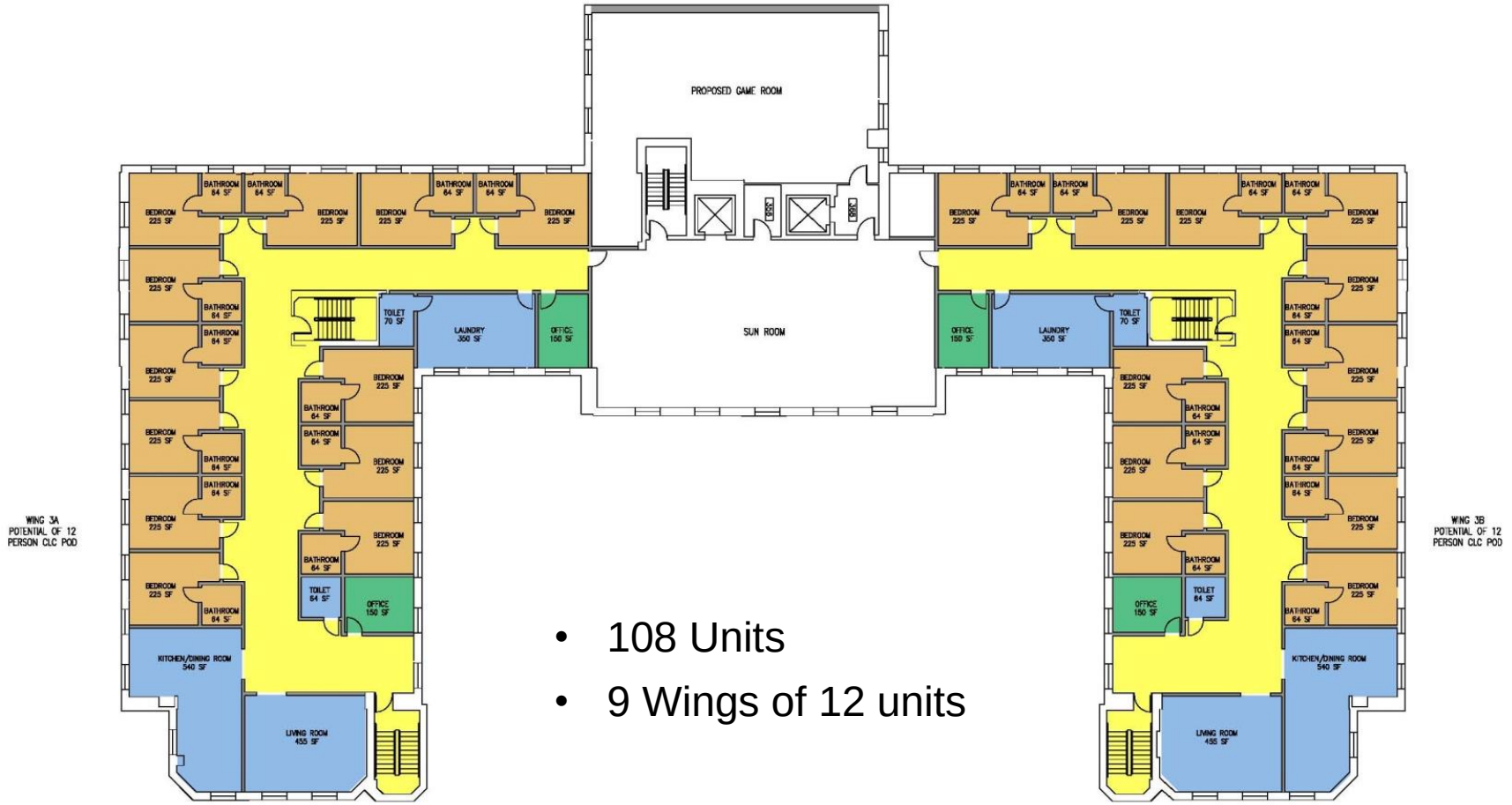
Domicile Renovations (Sherry Petruccione)

Building 5 – Third Floor Plan



- 108 Units
- 9 Wings of 12 units

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Domicile Renovations (Sherry Petruccione)

Building 5 – Fifth Floor Plan

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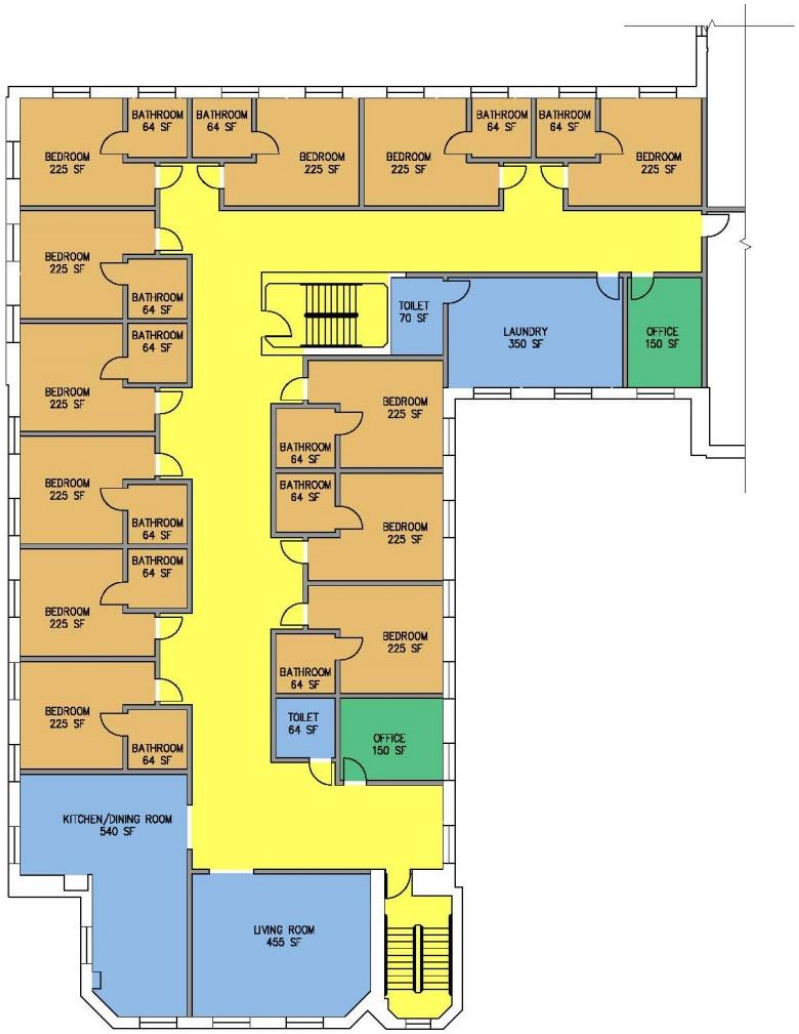
Domicile Renovations (Sherry Petruccione)

Building 5 – Typical Wing



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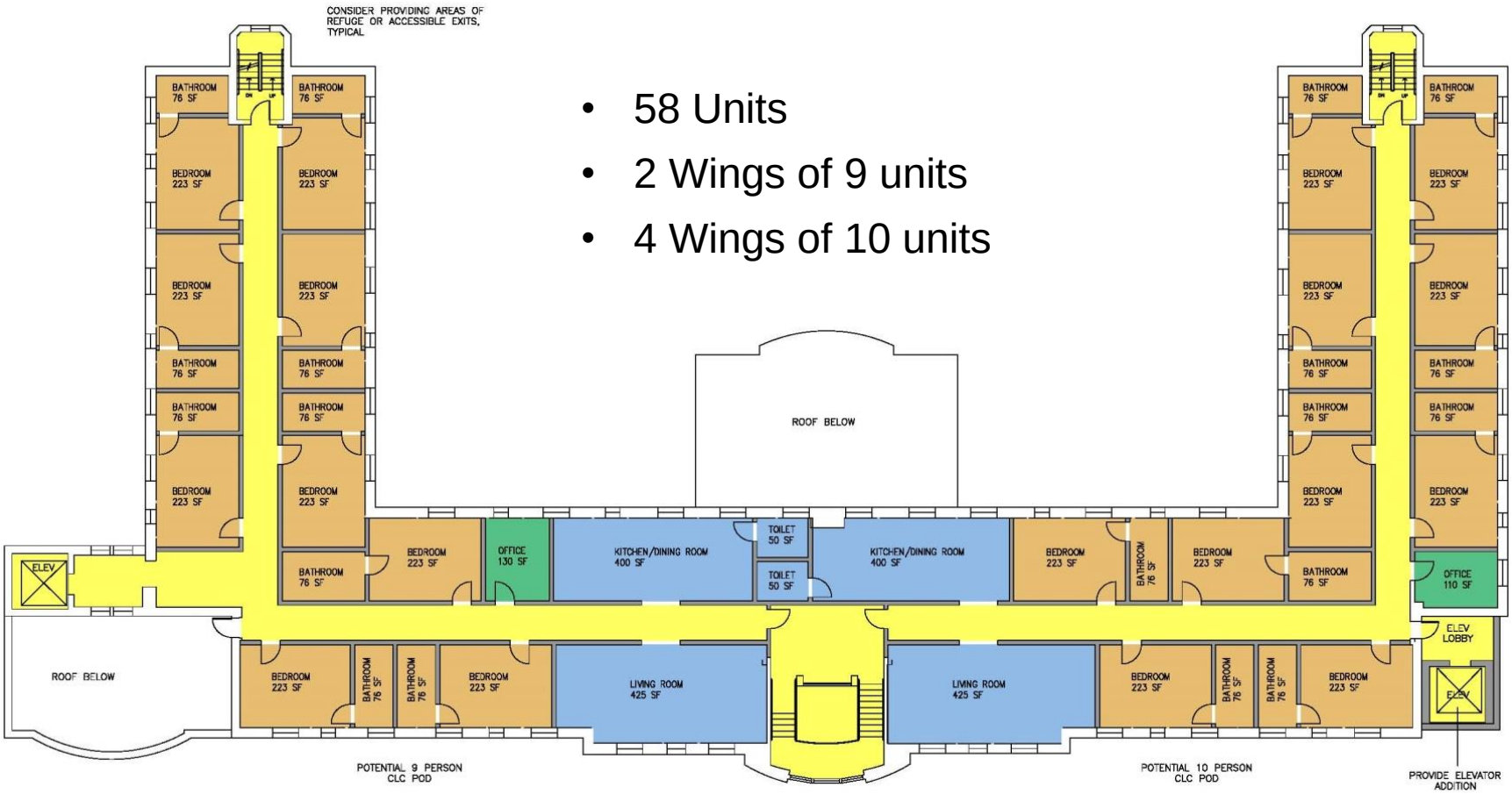
Domicile Renovations (Sherry Petruccione)

Building 50 – Second Floor Plan



- 58 Units
- 2 Wings of 9 units
- 4 Wings of 10 units

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Vision 2035 (Ed Shelomis)
Civil – Cost Analysis

Vehicular Traffic Improvements: $6,447,530.00

- Associated with the cost under this item are new parking lots that will receive a 3-inch thick (two 1 ½-inch layers) bituminous concrete pavement over a 12-inch thick gravel base. There are eight parking areas totaling 338,750 square feet of paved areas.
- 2210 linear feet of 24 foot wide two-way traffic roadway pavement. 3-inches thick (two 1 ½-inch layers) on a 12-inch thick gravel base.
- 2700 linear feet of 18 foot wide one-way traffic roadway pavement. 3-inches thick (two 1 ½-inch layers) on a 12-inch thick gravel base.
- 5600 linear feet of pedestrian path pavement that is 12 feet wide. Single 2-inch thick bituminous concrete pavement over a 6-inch gravel base.
- Entry paved area. 6,420 square feet of 3-inch thick (two 1 ½-inch layers) over a 12-inch gravel base.
- Driveways for buildings 11 through 17 is 15,600 square feet of 3-inch thick. (two 1 1/2–inch layers) bituminous concrete pavement over a 12-inch gravel base.
- Driveways for buildings 53 through 57 is 21,600 square feet of 3-inch thick. (two 1 ½-inch layers) bituminous concrete pavement over a 12-inch gravel base.
- As part of the roadway renovation; 50 new catch basins and 1000 linear feet of 18-inch reinforced concrete pipe.
- Topsoil and seeding along the new roadways.
- Guard rails.

Vision 2035 (Ed Shelomis)
Civil – Cost Analysis

Pedestrian Traffic Improvements: $1,204,400.00

- 5600 linear feet of pedestrian path pavement that is 12 feet wide. Single 2-inch thick bituminous pavement over a 6-inch gravel base.
- Topsoil and seeding along travel lane.

Site Lighting Package: $1,138,500.00

- Maximum spacing between light poles is 40 feet. The number of required poles required for the traffic and pedestrian travel ways will be approximately 250 poles. Each pole includes a pole base, wiring, and light pole fixture.
- An additional 330 light poles will be required for the parking lots.

Electrical Duct Bank: $1,875,038.00

- Approximately 30 pull boxes with frame and covers
- Approximately 8800 linear feet of duct bank (2 – conduits)

Vision 2035 (Ed Shelomis)
Civil – Cost Analysis

Miscellaneous Site Work (repair brick retaining walls, etc.): $526,125.00

Building #1- wall on east and west side of building north face

Walls between Building #3/Building #9/Building #4

Walls between building #3/Building #2/Building #4

Wall along north side of Building #2

- Demolition and removal of existing brick. Based on limited field review the existing foundations will be reused.
- Re-build the retaining walls with new brick.
- Topsoil and seed disturbed areas.

Miscellaneous Site Work (re-build entire retaining structure): $1,652,406.00

Building #1 – wall on east and west side of building north face

Walls between Building #3/Building #9/Building #4

Walls between Building #3/Building #2/Building #4

Wall along north side of Building #2

- Demolition and removal of existing brick and concrete wall structure including the footing.
- Place a new footing and foundation wall system of reinforced concrete
- Rebuild brick masonry walls on new concrete foundation
- Backfill around new retaining wall
- Topsoil and seed.

MEP Upgrades (Doug LaJoie)

2035 Rocky Hill Electrical and Mechanical Plant Cost Summary

Electrical Campus Wide Infrastructure	
Description	Cost ($)
Electrical Service / Generators	$3,900,000
Photovoltaic	$8,000,000
Total	$11,900,000

Upper Heating and Cooling Plant		
Options	Description	Cost ($)
Option 1	Geothermal	$4,553,060
Option 2	Dual Fuel	$2,204,310
Option 3	High Effic. Conventional	$2,054,310

Middle Heating and Cooling Plant		
Options	Description	Cost ($)
Option 1	Geothermal	$5,153,060
Option 2	Dual Fuel	$2,424,935
Option 3	High Effic. Conventional	$2,166,810

Domicile Renovations (Alan Lagocki)

Building 3 – Cost Analysis – 48 CLC Units

BUILDING 3	
ARCHITECTURAL	$4,461,609.00
MEP	$7,920,000.00
STRUCTURAL	$720,000.00
SUBTOTAL	$13,101,600.00
OH&P 13%	$1,703,200.00
CONTINGENCY 25%	$3,701,200.00
TOTAL	**$18,506,000.00**

Building 4 – Cost Analysis-36 CLC Units

BUILDING 4–	
ARCHITECTURAL	$3,383,700.00
MEP	$7,920,000.00
STRUCTURAL	$720,000.00
SUBTOTAL	$12,023,700.00
OH&P 13%	$1,563,100.00
CONTINGENCY 25%	$3,396,000.00
TOTAL	**$16,982,800.00**

Domicile Renovations (Alan Lagocki)

Building 5 – Cost Analysis – 108 CLC Units

BUILDING 5	
ARCHITECTURAL	$16,847,000.00
MEP	$14,653,000.00
STRUCTURAL	$900,000.00
SUBTOTAL	$32,400,000.00
OH&P 13%	$4,212,000.00
CONTINGENCY 25%	$9,153,000.00
TOTAL	**$45,765,000.00**

Building 50 – Cost Analysis-58 CLC Units

BUILDING 50	
ARCHITECTURAL	$4,251,500.00
MEP	$5,328,000.00
STRUCTURAL	$300,000.00
SUBTOTAL	$9,879,500.00
OH&P 13%	$1,284,300.00
CONTINGENCY 25%	$2,791,000.00
TOTAL	**$13,954,800.00**

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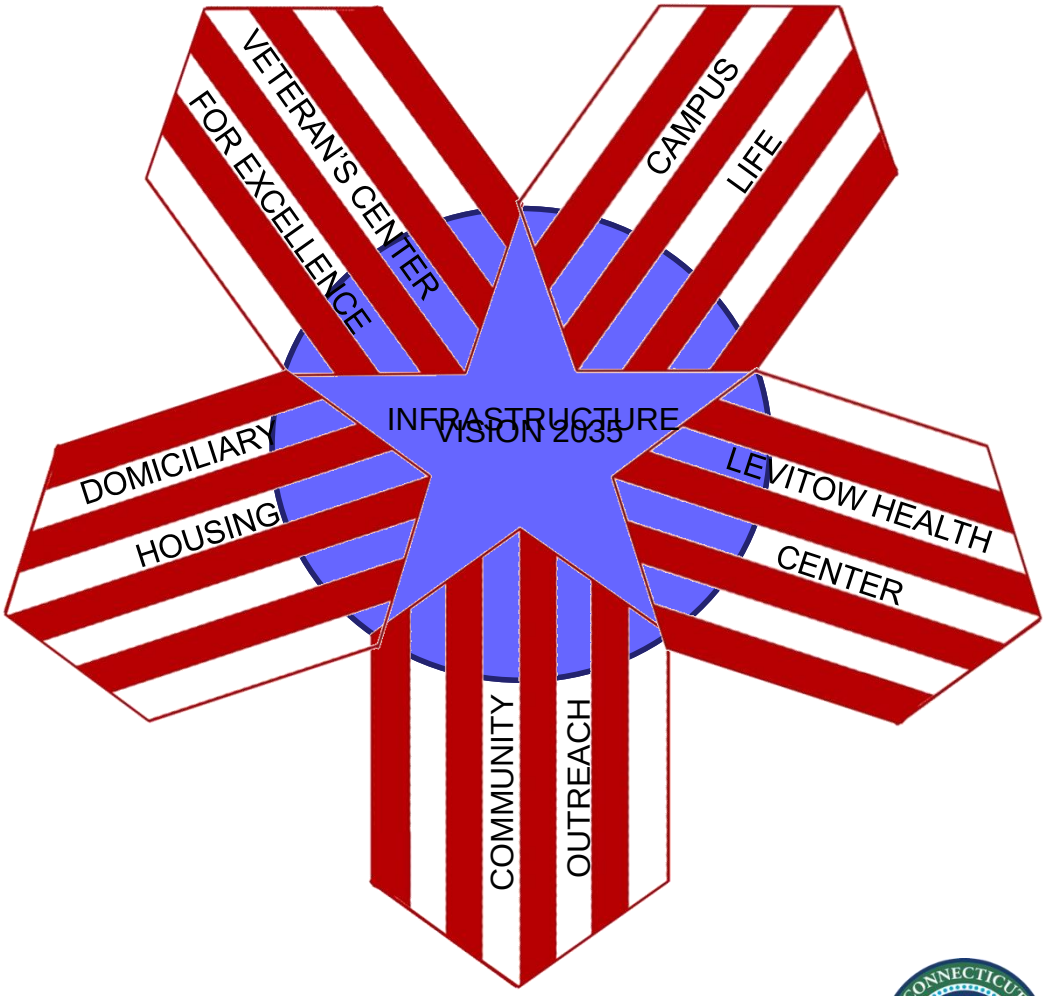
Campus Renovations (Alan Lagocki)

2035 Vision



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Campus Renovations (Alan Lagocki)

Thank You

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Questions and Answers

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