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# CONCEPTUAL DESIGN STUDY FOR THE STATE OF VERMONT

APRIL 12, 2021



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## Foreword

See Part I for the analysis of Vermont’s existing detention infrastructure.

Part II of this report is focused on proposed solutions. We have structured it to begin with applicable criteria and standards and quickly move to proposed concepts with broad strokes. Options are then fully rendered with proposed programming (architectural block diagramming), site test fits, unit test fits, gap reports and cost estimates. The section ends with a conclusion and recommendation. This approach works well for a scaled understanding of the proposed and comparing options side by side.

Please see section titled ‘Project Criteria’ for keyed references to deliverables from the RFP.

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## Introduction

HOK is pleased to submit this two-part study for the Vermont Department of Corrections (DOC), as commissioned by Vermont Buildings and General Services (BGS). Part I of the study includes an in-depth look at the existing facilities and reports on their current conditions, while considering the suitability for expansion and modernization. Part 2 of the study focuses on determining what the future setting for the DOC might look like in the future. The various scenarios contemplate all new centralized facilities and iterations that include utilizing existing facilities.

In addressing this study, HOK has assembled a diverse and experienced team to conduct this study, including our own personnel with experience in state and large county master plans and facility design. HOK has partnered with Freeman French Freeman as the local architect with great local knowledge; McFarland-Johnson, for engineering support; Marcus Hardy, recently a deputy director for the Illinois Department of Corrections; and Bill Garnos, a long-time veteran in the discipline of projecting future bed needs for systems.

The Vermont detention system stands at a crossroads. On one hand, the current system has served the community to date with progressive and effective programs. However, Vermont's detention facilities are aging and rely on a series of unique solutions resulting in a patchwork of service. This patchwork makes it difficult to achieve standardized models, resulting in expensive renovations, partial solutions, non-compliance with national standards and inequity in programs. Using the only female facility, Chittenden Regional Correctional Facility, as an example, these conditions have created a condition where both inmates and staff are not properly served, resulting in a culture of ineffectiveness and less than optimal results.

When combined with Vermont's desire to bring inmates home, the nation's highest staff to inmate ratio, and the system's high deferred maintenance costs, this leaves little room for the system's ability to respond to new detention standards and enact cost saving measures including applying for funds associated with housing federal inmates. We understand the state also desires to introduce new programs to enhance inmate outcome and decrease recidivism. It is clear structural change is needed to change the path of this institution.

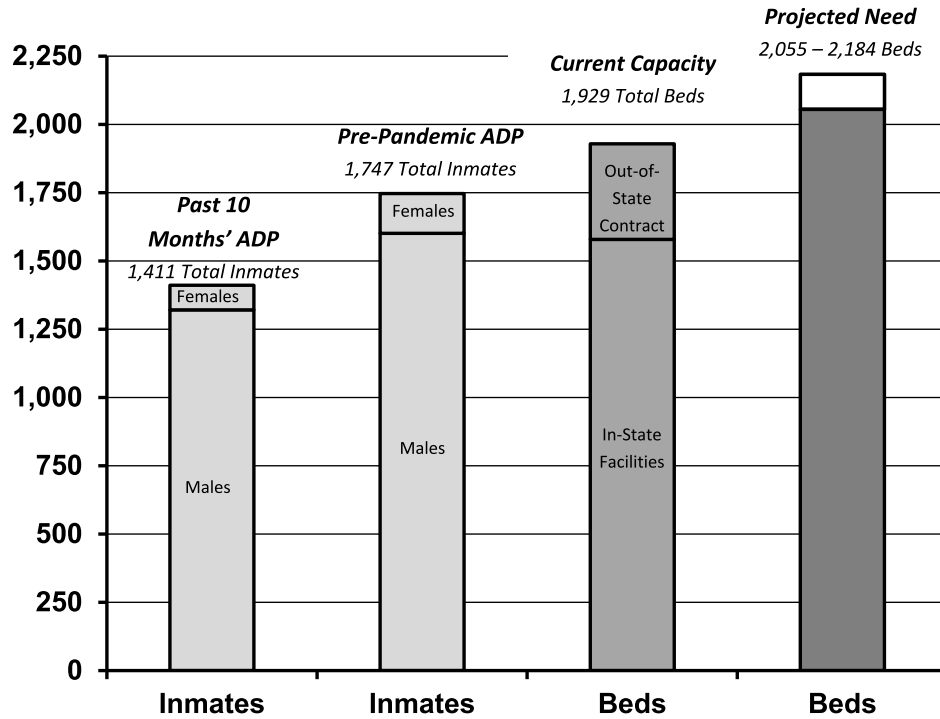
In response we have proposed a series of options for restructuring corrections in Vermont. These options consider existing and future needs. They also have been organized from models that can achieve the highest level of long term operational efficiency to approximating the existing system to models propose only a targeted intervention. Some of the organizing project goals are as follows. Some options achieve these goals better than others. See Pros/Cons and project matrix for performance:

- Goal to house all Vermont inmates within Vermont facilities and addressing growing offender populations
- Goal to restructure the system to bring Vermont's criminal justice system in line with national standards
- Goal to restructure the system in promotion of reducing prison populations and recidivism
- Goal to introduce re-entry facility and improve offender outcomes
- Additional goals and drivers listed in the conclusion of the facilities and operations report.

Further, as we conducted the study and worked closely with the BGS and DOC stakeholders, we further refined our recommendations to include the following criteria as benchmark goals:

- Consider the condition and opportunities for expandability of existing facilities
- Evaluate operational costs, with a focus on staff to inmate ratios
- Consider the size, feasibility, sequencing and overall cost impacts of any plan
- Create a new, unique facility for women
- Create re-entry facilities for men and women
- Support current and future programs for DOC
- Consider operations with county partners and medical needs for inmates, along with overall transportation issues

**Comparison of Average Daily Population ‘ADP’, Existing Capacity, and Projected Bed Needs**



Average Daily Population	Current Capacity	Projected Bed Needs
<p><b>ADP for Past 10 Months</b> March – December 2020 1,321 Male Inmates + 90 Female Inmates <b>1,411 Total Inmates</b></p> <p><b>Pre-Pandemic ADP</b> Jan. 2016 – Feb. 2020 1,601 Male Inmates + 146 Female Inmates <b>1,747 Total Inmates</b></p>	<p>177 CRCF 118 MVRCF 219 NERCC (NERCF+CWCC) 433 NSCF 255 NWSCF + 377 SSCF <b>1,579 In-State Facilities</b> + 350 Out-of-State Contract <b>1,929 Total Beds</b></p>	<p>“80% Rule” = 2,184 Beds “85% Rule” = 2,055 Beds <b>2,055 – 2,184 Total Beds</b></p> <p>Pre-Pandemic ADP = 80 to 85% of total beds needed, to (1) accommodate routine peaks in the population; and (2) provide sufficient capacity to separate genders, to separate inmates with different security requirements, and to allow for disciplinary or administrative segregation.</p>

## Project Criteria

### EVALUATION OF FACILITY TYPE AND DISPERSION

*THIS SECTION ADDRESSES 2.3.1; OF THE RFP*

The State of Vermont Correctional system is served by six facilities. Per this section of the request for proposal ‘RFP’, the team has been asked to evaluate the implications of the current facility dispersion, consider a centralized scalable campus facility and a combination of the two scenarios. We have interpreted this to be an alternate scenario that proposes a mid-step between the current and fully consolidated system. This portion of the report imagines five scenarios along a spectrum from a fully consolidated facility on a single site to a scenario resembling the current existing facility dispersion.

While we can note that a centralized facility provides greater opportunities for efficiencies through the reduction of duplicated services, a fully centralized facility increases transportation and can make inmate access a challenge for families. A detailed analysis of benefits and disadvantages is provided under each option along with estimated cost to operate and capital costs to construct.

We have provided an analysis and recommendation at the completion of this section.

### IDENTIFY SUBGROUPS AND EFFECTIVENESS OF THE OPTIONS TO SUPPORT

*THIS SECTION ADDRESSES 2.3.2; 2.3.2.1; 2.3.2.2; OF THE RFP*

- Subgroups within the existing detention system are outlined in EVALUATION OF INMATE POPULATION AND DEVELOPMENT PROJECTIONS, in the Feasibility Study (Part I).
- As stated in the EVALUATION OF INMATE POPULATION AND DEVELOPMENT PROJECTIONS in the Feasibility Study (Part I), applying the “85 percent rule” to the benchmark average daily population (ADP) of 1,747 total inmates, it is estimated that Vermont will need an incarceration capacity of 2,055 beds. Applying the “80 percent rule,” it is estimated that Vermont will need an incarceration capacity of 2,184 beds. Therefore, for facility planning purposes, it is suggested that Vermont will need a total of approximately 2,055 to 2,184 beds system-wide, to support its inmate population over the next ten years.
- There must be sufficient capacity for inmate classification and management purposes to separate and segregate different types of inmates. Additional capacity is needed to provide enough beds to allow for the separation of males and females, to separate inmates by custody classification (minimum, medium, or close custody), and to allow further segregation for administrative and disciplinary purposes. Additional capacity may also be needed for special management purposes, such as an infirmary, suicide-prevention cells, etc.
- The two tables below represent the DOC’s current allocation of beds both before and during the covid epidemic. The tables are provided to reflect current numbers and percentages of bed types. The tables also reflect any changes that may occur as a result of the current pandemic situation. A reduction in beds is generally attributed to a slowing of transfers into facilities, continued or even expedited releases and reallocation of bed classifications to mitigate the spread of covid. It is assumed that the bed configurations will remain somewhat consistent with pre-covid percentages within the next twelve to twenty-four months and can therefore be used for facility planning purposes.

**DOC Current Bed Configuration Before Covid-19 (March 2020)**

Bed Type	CRCF	NWSCF	NSCF	NERCF	CCWC	SSCF	MVRCF	Total
General Population	118	130	372	93	50	250	98	1111
Restrictive Housing	15	20	18	4	0	16	4	77
Close Custody	24	20	0	0	0	32	0	76
Medical	0	0	3	0	0	28	0	31
Crisis	1	0	0	0	0	10	0	11
Other	12	70	30	8	0	24	8	152
Booking	2	7	10	8	0	8	8	43
Infirmery	5	0	0	0	0	9	0	14
Work Camp	0	0	0	0	56	0	0	56
<b>Total Beds</b>	<b>177</b>	<b>247</b>	<b>433</b>	<b>113</b>	<b>106</b>	<b>377</b>	<b>118</b>	<b>1571</b>

Bed Type	Male	%	Female	%	Total	%
General Population	993	71%	118	67%	1111	71%
Restrictive Housing	62	4%	15	8%	77	5%
Close Custody	52	4%	24	14%	76	5%
Medical	31	2%	0	0%	31	2%
Crisis	10	1%	1	1%	11	1%
Other	140	10%	12	7%	152	10%
Booking	41	3%	2	1%	43	3%
Infirmery	9	1%	5	3%	14	1%
Work Camp	56	4%	0	0%	56	4%
<b>Total Beds</b>	<b>1394</b>	<b>101%</b>	<b>177</b>	<b>100%</b>	<b>1571</b>	<b>100%</b>



**DOC Current Bed Configuration During Covid-19**

Bed Type	CRCF	NWSCF	NSCF	NERCF	CCWC	SSCF	MVRCF	Total
General Population	96	103	372	71	50	150	98	940
Restrictive Housing	12	12	10	0	0	10	0	44
Close Custody	12	16	0	0	0	40	0	68
Medical	0	0	3	0	0	28	0	31
Crisis	1	0	0	0	0	10	0	11
Other	22	70	23	23	0	97	12	247
Booking	2	3	10	8	0	8	8	39
Infirmary	5	0	0	0	0	9	0	14
Work Camp	0	0	0	0	56	0	0	56
<b>Total Beds</b>	<b>150</b>	<b>204</b>	<b>418</b>	<b>102</b>	<b>106</b>	<b>352</b>	<b>118</b>	<b>1450</b>

Bed Type	Male	%	Female	%	Total	%
General Population	844	65%	96	64%	940	65%
Restrictive Housing	32	2%	12	8%	44	3%
Close Custody	56	4%	12	8%	68	5%
Medical	31	2%	0	0%	31	2%
Crisis	10	1%	1	1%	11	1%
Other	225	17%	22	15%	247	17%
Booking	37	3%	2	1%	39	3%
Infirmary	9	1%	5	3%	14	1%
Work Camp	56	4%	0	0%	56	4%
<b>Total Beds</b>	<b>1300</b>	<b>100%</b>	<b>150</b>	<b>100%</b>	<b>1450</b>	<b>100%</b>

- As mentioned in the OFFENDER PROGRAM EVALUATION AND COMPARISON – PROGRAM SUMMARY in the Feasibility Study (Part I), a review of DOC offender programs indicates a variety of interventions covering the rehabilitative needs of the offender population. A large majority of the programs are either evidence-based and/or cognitive in nature. Additionally, programming (inmate services) is available to both male and female offenders equally. By having numerous curricula devoted to Cognitive Behavioral Therapy (CBT), there is great opportunity to focus on thought-patterns and behavioral change of the offender. These focal points are key to successful rehabilitation and reintegration.
- At the same time, there are several notable deficits in DOC programming (inmate services). There appears to be very little programming (inmate services) focused on housing and post-secondary education (college). And while not listed in the table, there appears to be very little, if any, programming (inmate services) on life skills. A close look at services designed to assist offenders with medical and mental health deficits, reveal a lack of programs here as well.

**ADDITIONAL DATA POINTS TO BE PROVIDED WITH ANY RECOMMENDATIONS**

*THIS SECTION ADDRESSES 2.3.2.3; 2.3.2.4, 2.3.3, 2.3.4, 2.3.5; OF THE RFP*

- Gross Square Footage, Acreage, Operating Cost and Capital Cost been provided for existing and the proposed options within the Option Stats, starting on page 17.
- Existing transitional supports are outlined and evaluated in the following sections of the Feasibility Study (Part I); Overview DOC Program Inventory, National Offender Program Standards, Program summary. Scenarios with specific components are noted within the options.
- Facility based treatment and programming (inmate services) are outlined in the OFFENDER PROGRAM EVALUATION AND COMPARISON – PROGRAM SUMMARY in the Feasibility Study (Part I) of this report. National research indicates that for offenders to reintegrate successfully into society, programming (inmate services) must address the following needs: cognitive thinking, housing, education, employment, family support and support services. Combined with basic life skills such as money management, goal setting/planning and good decision-making; the chances of a return to incarceration are lowered significantly.
- See cost estimate for basis of design for new construction, renovations, and other building maintenance items of note.
- Report conclusion, gaps and recommendation are provided at the end of this section.

## Housing Unit Breakdown Philosophy / Classification

One of the most important elements in a properly functioning corrections system is the ability to place inmates in their proper classification. While inmate classification considers an offender’s criminal history and associations, classifications also provide important information how a facility can support the rehabilitation process. Socialization, mental stability or illness, physical limitations, age, propensity for violence and other factors are evaluated by an effective classification system so residents can be placed safely and in an environment that maximizes their opportunity for success.

The facility master plan must support this proper classification. Along with proper management and programming (inmate services), proper classification is an important factor in success. This report suggests at a master plan level, that new or expanded facilities should be planned around typically accepted percentages of classifications, such as the following:

Maximum or Close Custody	10%
Medium Security	50%
Minimum Security	20%
Special Needs	20%

The first three groups [maximum or closed custody, medium security and minimum security] are relatively self-explanatory, with maximum representing the most restrictive units, with high security construction and close supervision to medium security with less restrictive environment to minimum security with the least restrictive environment and supervision. Within each group, there can be further categorization based on a facility’s needs, but the facility itself should be built with as much commonality and flexibility as possible. It should also be noted that each of these classifications gets access to medical and mental health treatment as well as recreation, visitation, and programs. Medium and minimum-security inmate populations often will have frequent access to outdoor program activities and visitation while maximum security inmate populations will have more limitations on these activities. In none of these custody groups is the strategy of isolation supported.

The special needs custody group represent units dedicated to a higher level of intensity and frequency of care and therapeutic interventions. These units have fewer beds per unit, and often will accommodate clinical staff as well as management staff. Acute mental health, transitional mental health, medical, geriatric, certain sexual offenders, and physically challenged residents may make up the subcategories of this group. Special needs units are typically located close to clinical facilities.



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## Standards

### PRISON RAPE ELIMINATION ACT (PREA)

The topic of sexual abuse of inmates was recognized by the United States Congress in 2003 when it passed The Prison Rape Elimination Act (PREA). The final PREA Standards were signed into law and released by the United States Department of Justice in 2012. The purpose of the Act is to “provide for the analysis of the incidence and effects of prison rape in Federal, State, and local institutions and to provide information, resources, recommendations and funding to protect individuals from prison rape.” One of those resources is the National PREA Resource Center.

While no system or design will replace a well-trained and attentive staff, these measures have greatly enhanced the staff’s ability to create a safe environment for all. At a minimum, a new facility should include the following physical aspects:

- Appropriate levels of visual supervision and monitoring / adequate staffing
- Elimination of cross-gender viewing
- Sight and sound separation
- Elimination of blind spots
- Cameras and video monitoring
- Use of separate housing for protective custody inmates
- Access to programming (inmate services) space for staff, volunteers, and inmate education
- Access to medical and mental health facilities
- PREA related signage

### AMERICANS WITH DISABILITIES ACT (ADA)

The American with Disabilities Act was signed into law on July 26, 1990 and prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone else. A disability, which is defined with ADA as a physical or mental impairment that substantially limits one of more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having an impairment. The American with Disabilities Act ‘ADA’ does not specifically name all the impairments that are protected.

2010 ADA Standards for Accessible Design is a combination of 2 different documents, the U.S Code of Federal Regulations (CFR) and the ADA Accessibility Guidelines (ADAAG). The 2010 ADA Standards for Accessible Design is broken down into sections II and III which requires certain elements within facilities to be accessible to the disabled community. Title II covers resources for State Local Governments and peoples with disabilities and combines 28 CFR part 35, 151 and 2004 ADAAG. Title III covers resources for businesses and people with disabilities and combines 28 CFR part 36 subpart D and 2004 ADAAG.

The Department of Justice regulates Title II of the American with Disabilities Act, which covers state and local governments. Public entities are responsible for the operation and management of adult jails, detention and correctional facilities. The regulation requires that public entities ensure that qualified inmates with disabilities are not discriminated against, denied benefits to which they are entitled, or excluded from programs, services, or activities. Inmates with disabilities must be housed in the most integrated setting appropriate to their needs, which include accessible cells or housing units in all classifications, visitation, program and medical areas.

At a minimum, a new facility should comply with the following standards in section 232:

- 3% of cells must be accessible for individuals with mobility disabilities, including those in wheelchairs. These accessible cells must be provided in each classification.
- 2% of general holding and housing cells must be equipped with communication features designed to accommodate individuals who are deaf or hard of hearing.

- Medical and long-term care facilities in detention and correctional facilities, whether they are licensed or not, are subject to the 2010 ADA standards.

### AMERICAN CORRECTIONAL ASSOCIATION (ACA)

The first attempt to standardize the prison industry was started in 1870 with the National Prison Industry. This was the origin for the American Correctional Association (ACA). Today, ACA publishes 25 various accreditation manuals for all areas of correctional operation including juvenile, community corrections, correctional training academies, industry programs and central administration offices.

ACA accreditation strives to improve the environment, treatment, and security of detainees as well as outline operational procedures for the staff. At a minimum, a new facility should comply with the physical standards listed below, however not all standards are listed:

- (4-4126) Institutions are divided into distinct, semiautonomous management units that encourage positive staff/inmate interactions and effective communication.
- (4-4128) Single cell living units shall not exceed 80 inmates.
- (4-4132) Cells/rooms used for housing inmates shall provide at a minimum, 25 square feet of unencumbered space per occupant.
- Written policy, procedure, and practice provide that single-occupancy cells/rooms shall be available, when indicated, for the following:
  - Inmates with severe medical disabilities.
  - Inmates suffering from serious mental illness.
  - Sexual predators.
  - Inmates likely to be exploited or victimized by others.
  - Inmates who have other special needs for single housing.
  - When confinement exceeds 10-hours a day, there is at least 80-square feet of total floor space, of which 35-square feet is unencumbered space.
- (4-4135) Dayrooms with space for varied inmate activities are situated immediately adjacent to the inmate sleeping areas. Dayrooms provide sufficient seating and writing surfaces and all furnishings are consistent with the custody level of the inmates assigned. Dayrooms provide a minimum of 35-square feet of space per inmate.
- (4-4137-1) Inmates have access to toilets and hand-washing facilities 24 hours per day and are able to use toilet facilities without staff assistance when they are confined in their cells/sleeping areas. Toilets are provided at a minimum ratio of 1 for every 12 inmates in male facilities and 1 for every 8 in female facilities. Urinals may be substituted for up to one-half of the toilets in male facilities. All housing units with 3 or more inmates have a minimum of 2 toilets. These ratios apply unless national or state building or health codes require additional fixtures.
- (4-4138-1) Inmates have access to operable wash basins with hot and cold running water in the housing units at a minimum ratio of 1 basin for every 12 occupants. These ratios apply unless applicable building or health code require additional fixtures.
- (4-4139) Inmates have access to operable showers with temperature-controlled hot and cold running water, at a minimum ratio of one shower for every twelve inmates. Water for showers is thermostatically controlled to temperatures ranging from 100 degrees Fahrenheit to 120 degrees Fahrenheit to ensure the safety of inmates and to promote hygienic practices. These ratios and temperatures shall apply unless national or state building or health codes specify a different ratio.
- (4-4141) All cells/rooms in restrictive housing provide a minimum of 80 square feet and shall provide 35 square feet of unencumbered space for the first occupant and 25 square feet of unencumbered space for each additional occupant.
- (4-4142) Inmates with disabilities are housed in a manner that provides for their safety and security. Housing used by inmates with disabilities is designed for their use and provides for integration with other inmates. Programs and services are accessible to inmates with disabilities who reside in the facility.

- (4-4146) Lighting in inmate rooms/cells is at least 20 footcandles at desk level and in personal grooming areas, as documented by an independent, qualified source and is checked at least once per accreditation cycle.
- (4-4147) All inmate rooms/cells provide access to natural light in existing facilities.
- (4-4147-1) All inmate rooms/cells provide inmates with access to natural light by means of at least three-square feet of transparent glazing, plus two additional square feet of transparent glazing per inmate in rooms/cells with three or more inmates.
- (4-4147-2) Each dormitory provides inmates with access to natural light by means of at least 12 square feet, plus two additional square feet of transparent glazing per inmate in the dormitory.
- (4-4149) Each dayroom provides inmates with access to natural light by means of at least 12 square feet of transparent glazing in the dayroom, plus two additional square feet of transparent glazing per inmate whose room/cell is dependent on access to natural light through the dayroom.
- (4-4150) Noise levels in inmate housing units do not exceed 70 dBa.
- (4-4151) Indoor Air Quality – Circulation is at least 15 cubic feet of outside or recirculated filtered air per minute per occupant for cells/rooms, officer stations, and dining areas, as documented by a qualified technician and should be checked not less than once per accreditation cycle.
- (4-4154) Both outdoor and covered/enclosed exercise areas for general population offenders are provided in sufficient number to ensure that each inmate is offered at least one hour of access daily. Use of outdoor areas is preferred but covered/enclosed areas must be available for use in inclement weather. Covered/enclosed areas can be designed for multiple uses as long as the design and furnishings do not interfere with scheduled exercise activities.

#### VERMONT DEPARTMENT OF CORRECTIONS AND VERMONT DEPARTMENT OF BUILDINGS AND GENERAL SERVICES DESIGN STANDARDS

We understand that DOC does not have a published document outlining building standards. In lieu of local standards this report will use national standards and similar state DOC standards for reference. Vermont Department of Buildings and General Service’s published building standard is the BGS Design Guidelines, last updated in November of 2018 and available on their website<sup>1</sup>.

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<sup>1</sup> <https://bgs.vermont.gov/sites/bgs/files/Design%20Guidelines%202018.pdf>



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## Options

The following section of the report is dedicated to proposed options. These options range from a single facility which will yield the highest level of efficiency in per diem costs to an option that targets the most immediate needs of the system and approximates conditions as they are today, regardless of ongoing costs. The middle options fall on a spectrum between these two points, investigate different approaches across the Vermont community, and aim to maintain the system’s assets. The positive and negative factors as well as option statistics are provided in each option sheet. The following Schedule of Options provides each of the option investigated side by side to aid in the consideration process.

### SCHEDULE OF OPTIONS

*This table provides a quick summary of the proposed options highlighting consolidated, existing operational or new facilities for each option:*

	CRCF	MVRCF	NERCC	NSCF	NWSCF	SSCF	NEW MALE (QTY)	NEW FEMALE (QTY)	NEW MALE/FEMALE RE-ENTRY	TOTAL BEDS
OPTION A	✗	✗	✗	✗	✗	✗	✓ (1)	✓ (1)	✓ (2)	2,046
OPTION B	✗	✗	✗	✗	✗	✓	✓ (2)	✓ (1)	✓ (2)	2,063
OPTION C	✗	✗	✓	✓	✗	✓	✓ (1)	✓ (1)	✓ (2)	2,067
OPTION D	✗	✗	✓	✓	✓	✓	✓ (1)	✓ (1)	✓ (2)	2,070
OPTION E	✗	✓	✓	✓	✓	✓	✓ (1)	✓ (1)	✓ (2)	2,032

✗ = Closed/repurposed facility    ✓ = Operational facility    ✓ = New facility (quantity)

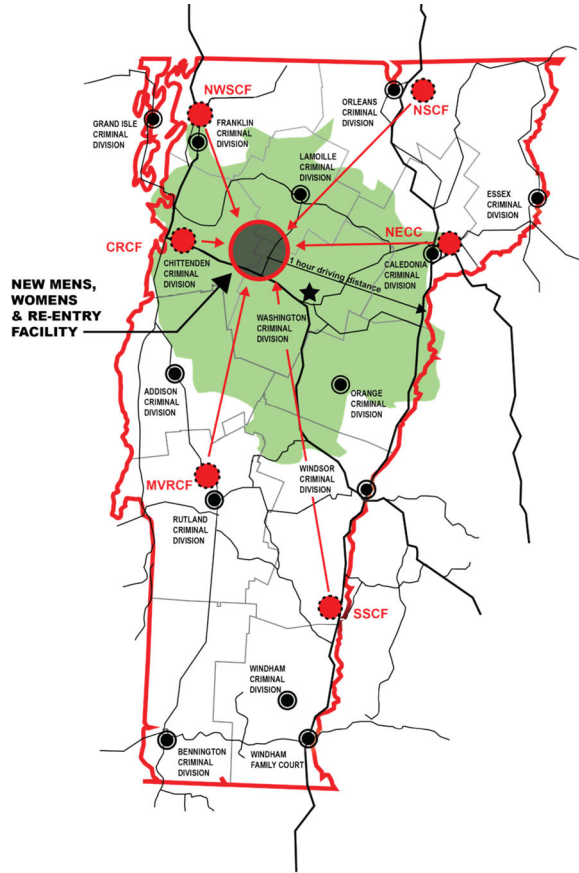
This table provides a quick summary highlighting specific advantages and disadvantages for each option:

	ALL INMATES STAY IN STATE	CONSOLIDATES SERVICES	TRAUMA-INFORMED/GENDER RESPONSIVE DESIGN	ENERGY EFFICIENCY	ACA COMPLIANCE	ADA/PREA COMPLIANCE	REDUCED TRAVEL BURDEN	STAKEHOLDER RESISTANCE	REDUCED DEFERRED MAINTENANCE COSTS	REDUCED CONSTRUCTION COSTS	PER DIEM COST	CAPITAL COST/SQUARE FOOT	CAPITAL COST	BED CAPACITY
OPTION A	✓	✓	✓	✓	✓	✓	✗	✗	✓	✗	\$99	\$467	\$330M	2,046
OPTION B	✓	✓	✓	✓	✓	✓	✗	✗	✓	✗	\$104	\$555	\$379M	2,063
OPTION C	✓	✓	✓	✓	✓	✓	✗	■	■	■	\$112	\$587	\$252M	2,067
OPTION D	✓	✗	✓	✓	✗	■	✗	✓	✗	■	\$124	\$664	\$247M	2,070
OPTION E	✓	✗	✓	✓	✗	✗	■	✓	✗	✓	\$118	\$614	\$234M	2,032
BASELINE MODEL	✗	✗	✗	✗	✗	✗	✓	■	✗	✓	\$126	\$556 <sup>1</sup>	■	1,579

✓ Meets Criteria/Positive   ■ Neutral   ✗ Does not meet Criteria/Negative

<sup>1</sup> Based on estimated replacement values from 2014 Facility Condition Assessment with 4.5% escalation per year: \$284,127,197/510,573 GSF

## Option A



Option A explores the consolidation of all services at a single site. The site will be comprised of 4 different state-of-the-art facilities segregating female and males and providing female and male re-entry. In aggregate the four facilities will provide for approximately 2,046 beds (194 female/1852 male). To best serve the community this facility is proposed to be centrally located and sized to serve the entire inmate population including the out-of-state population.

The map to the left graphically shows the 6 existing facilities consolidating to a central campus style facility. The green footprint shows the new central facility is within 1 hour driving radius of much of the state. Regional correctional divisions are also shown. These sites may provide short-term support in the single campus model to reduce driving requirements.

Given the travel distances necessary for a centralized facility, this option considers options for regional support services. One option includes shifting regional support to regional state divisions, police departments, sheriff and state trooper sites. Alternatively, selected existing regional facilities can be shifted to a supporting role. The analysis of the transition of these supporting sites have been left for future analysis

Refer to Concept Diagram 1.00 – Option A and its associated Concept Design Program within the appendix.

### APPROACH

Legend: **Highlighting** denotes item changed from the previous phase.  
Underscore denotes item changes in the next phase.  
(BRACKETS) denotes existing facility population is expanded via addition

#### Current

- Current instate Facilities and Capacity

Capacity;  $433 + 177 + 118 + 219 + 255 + 377 = 1,579$  key - [NSCF+CRCF+MVRCF+NECC+NWSCF+SSCF = total]

#### Phase 1 – New 1194 (1044 + 150 re-entry) beds at centralized location.

- Consolidation of NSCF, CRCF, and MVRCF, out of state population and Federal beds.
- Divest or Convert SSCF, NERCF and NWSCF to partial regional support roles, reducing populations.

Capacity;  $1,194 + 219 + 255 + 377 = 2045$

key - [newPH1 + NECC + NWSCF + SSCF = total]

Continued on following page:

**Phase 2 – 852 bed and core expansion.**

- Consider divesting SSCF, NERCF and NWSCF or converting to support infrastructure
- Consider moving support services to local or regional law enforcement infrastructure

Capacity;  $1,194 + 852 = 2,046$











key -  $[PH1_{new} + newPH2 = total]$

**OPTION A – OPTION STATS**

Description		Metric
Option A PH1 Site  This phase includes a women’s facility, women’s re-entry, men’s re-entry and part of a new men’s facility.	Population Served	194 females and 1000 males = 1,194 ppl
	Acreage	$88 + 24 + 2.8 + 2.5 = 117.3$ acres <i>Full property purchased in PH1</i>
	Gross SF	$83,030 + 320,500 + (24,380 + 37,260 \text{ re-entry}) = 465,170$ GSF
	SF per inmate	388 SF
	Security Staff-to-Offender Ratio	1:4
	Per Diem and Per Capita Cost	Per diem of \$100 and per capita of \$36,512
	FY21 Operating Costs	\$43,595,750
	Capital Cost <i>Assumed year 0</i>	Year 0 cost: \$207,900,000
<hr/>		
Option A PH2 Site  &  Average System Performance	System Capacity	194 females and 1852 males = 2,046 ppl
	Acreage	$88 + 24 + 2.8 + 2.5 = 117.3$ acres (see PH1)
	Gross SF	$83,030 + 561,430 + (24,380 + 37,260 \text{ re-entry}) = 706,100$ GSF
	SF per inmate	345 SF
	Security Staff-to-Offender Ratio	1:4
	Per Diem and Per Capita Cost	Per diem of \$99 and per capita of \$35,992
	FY21 Operating Costs	\$73,640,050
	Capital Cost <i>Assumed year 5. Escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 5 cost: 122,400,000  Total capital costs: :\$330,000,000

Refer to cost estimate within appendix for additional information

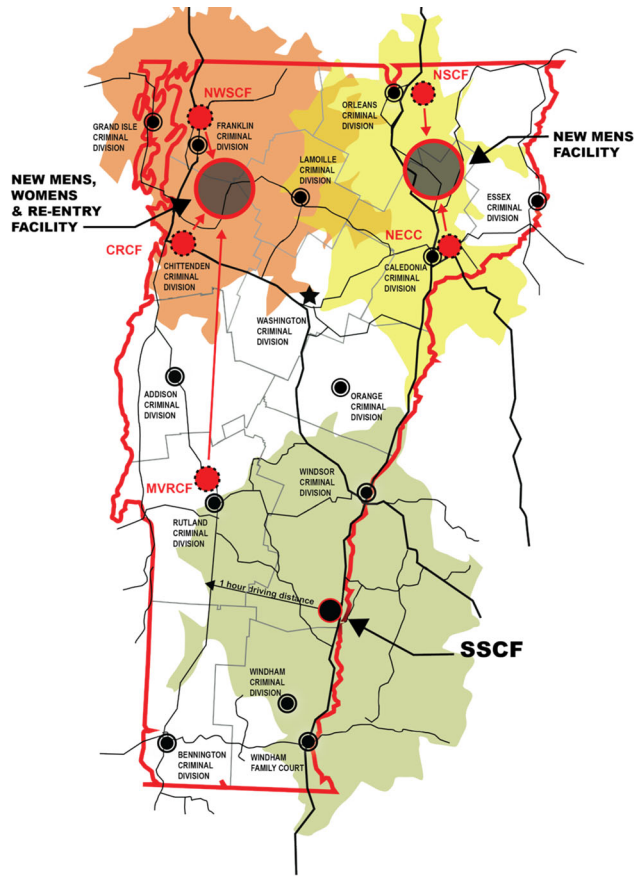
**OPTION A – PROS/CONS CHART**

PROS	CONS
 <p>OPTION A PROVIDES CAPACITIES THAT MEET INMATE POPULATION PROJECTIONS, ALL INMATES STAY IN STATE.</p>	 <p>OPTION A MAY INCREASE TRAVEL BURDEN ON LOCAL JURISDICTIONS.</p>
 <p>OPTION A PROVIDES CENTRALIZED AND UNIFIED ADMINISTRATIVE MODEL FOR A REDUCTION TO OPERATIONAL COSTS.</p>	 <p>OPTION A MAY HAVE STAKEHOLDER RESISTANCE TO CLOSURES / REPURPOSED FACILITIES.</p>
 <p>OPTION A CONSOLIDATES SERVICES OF ALL OPERATIONS AND STAFFING FOR OF MENTAL HEALTH, MEDICAL, AGING CARE, AND ADDITIONAL SPECIAL NEEDS.</p>	 <p>OPTION A HAS HIGHER CONSTRUCTION COSTS COMPARED TO OTHER OPTIONS.</p>
 <p>OPTION A IS DESIGNED TO BE TRAUMA-INFORMED AND GENDER RESPONSIVE WITH A FOCUS ON REHABILITATION, MENTAL HEALTH, AND ADDICTION TREATMENT.</p>	
 <p>OPTION A PROVIDES HIGHEST POTENTIAL FOR BUILDING ENERGY EFFICIENCY.</p>	
 <p>OPTION A IS DESIGNED TO MEET ALL CURRENT STANDARDS INCLUDING ADA, PREA, AND ACA.</p>	
 <p>OPTION A PROVIDES REDUCTION TO DEFERRED MAINTENANCE COSTS.</p>	



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## Option B



Option B explores the consolidation of services at three sites: SSCF, a site in the northwest, and a site in the northeast. This intervention capitalizes on the existing infrastructure to expand SSCF (144 male), and a new 648 bed facility in the northeast. The site in the northwest will be comprised of 4 different state-of-the-art facilities segregating female and males and providing female and male re-entry. In aggregate the north west site will provide 894 beds (194 female/700 male).

The map to the left graphically shows the 5 existing facilities consolidating to 3 regional sites. The colored footprints show 1 hour driving radius to most of the state.

Refer to Concept Diagram 2.00 – Option B and its associated Concept Design Program within the appendix.

### APPROACH

Legend: **Highlighting** denotes item changed from the previous phase.  
Underscore denotes item changes in the next phase.  
**(BRACKETS)** denotes existing facility population is expanded via addition

#### Current

- Current instate Facilities and Capacity

Capacity;  $433 + 177 + 118 + 219 + 255 + 377 = 1,579$  key -  $[NSCF + \underline{CRCF} + \underline{MVRCF} + NECC + \underline{NWSCF} + SSCF = total]$

#### Phase 1 – New 894 (744+150) beds at site in the Northwest.

- Consolidation of NWSCF, CRCF, and MVRCF, out of state population and Federal beds. Consider using MVRCF as regional a support.

Capacity;  $433 + 894 + 219 + 377 = 1,923$

key -  $[NSCF + \text{newPH1} + NECC + \underline{SSCF} = total]$

#### Phase 2 – Expand SSCF.

- Build out SSCF to meet growing regional support demand.

Capacity;  $433 + 894 + 219 + (377 + 144) = 2,067$

key -  $[NSCF + \text{newPH1} + \underline{NECC} + (\text{newSSCF}) = total]$

Continued on following page:

**Phase 3 – Consolidate Services in NE.**

- Modernize services by consolidating at a single site or constructing a new facility.

Capacity;  $648 + 894 + 521 = 2,063$

key - [ $newPH3 + newPH1 + newSSCF = total$ ]

**OPTION B – OPTION STATS**

Description		Metric
Option B PH1 Site  This phase includes a women’s facility and men’s facility, a women’s re-entry and a men’s re-entry in the northwest.	Population Served	194 female and 700 male = 894 ppl
	Acreage	$39+24+2.8+2.5 = 68.3$ acres
	Gross SF	$83,030+234,830+24,380+37,260= 379,500$ GSF
	SF per inmate	425 SF
	Security Staff-to-Offender Ratio	1:4 (224/894)
	Per Diem and Per Capita Cost	Per diem of \$99 and per capita of \$36,074
	FY21 Operating Costs	\$32,250,350
	Capital Cost <i>Assumed years 0</i>	\$195,000,000
Option B PH2 Expansion  Expansion at SSCF	Population Served	521 male
	Acreage	27 acres – no expansion of current property
	Gross SF	$145,805$ (etr) + $49,910 = 195,715$ GSF
	SF per inmate	376 SF
	Blended Security Staff-to-Offender Ratio based on exg & new	$1:3.01$ ( $125/377$ ) + $1:4$ ( $36/144$ ) = $1:3.24$ ( $161/521$ )
	Per Diem and Per Capita Cost	Per diem of \$122 and per capita of \$44,560
	FY21 Operating Costs	\$23,216,050
	Capital Cost <i>Assumed year 5. Escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 5 cost: \$24,800,000

Table continued following page:













Description		Metric
Option B PH3 Facility  This phase includes a men's facility in the northeast.	Population Served	648 male
	Acreage	39 acres
	Gross SF	253,460 GSF
	SF per inmate	391 SF
	Security Staff-to-Offender Ratio	1:4 (162/648)
	Per Diem and Per Capita Cost	Per diem of \$99 and per capita of \$35,989
	FY21 Operating Costs	\$23,321,100
	Capital Cost <i>Assumed year 10. Escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 10 cost: \$159,200,000

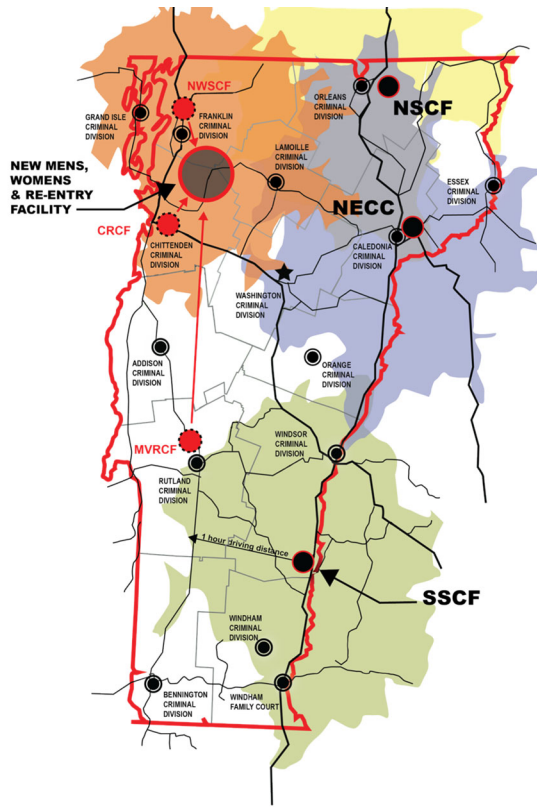
Description		Metric: <i>newPH1 + newSSCF + newPH3</i>
Option B Average System Performance	System Capacity	2063 ppl
	Total Acreage	68.3+27+39 = 134.3 acres
	Gross SF	379,500 + 195,715 + 253,460 = 828,675 GSF
	SF per inmate	402 SF
	Average Security Staff-to-Offender	(224/894)+ (161/521)+ (162/648) = 1:3.77 (547/2,063)
	Per Diem and Per Capita Cost	Per diem of \$104 and per capita of \$38,139
	FY21 Operating Costs	\$78,682,450
	Total Capital Cost	\$379,000,000

Refer to cost estimate within appendix for additional information

**OPTION B – PROS/CONS CHART**

PROS	CONS
 <p>OPTION B PROVIDES CAPACITIES THAT MEET INMATE POPULATION PROJECTIONS, ALL INMATES STAY IN STATE.</p>	 <p>OPTION B MAY INCREASE TRAVEL BURDEN ON LOCAL JURISDICTIONS.</p>
 <p>OPTION B PROVIDES CENTRALIZED AND UNIFIED ADMINISTRATIVE MODEL FOR A REDUCTION TO OPERATIONAL COSTS.</p>	 <p>OPTION B MAY HAVE STAKEHOLDER RESISTANCE TO CLOSURES / REPURPOSED FACILITIES.</p>
 <p>OPTION B CONSOLIDATES SERVICES OF ALL OPERATIONS AND STAFFING FOR OF MENTAL HEALTH, MEDICAL, AGING CARE, AND ADDITIONAL SPECIAL NEEDS.</p>	 <p>OPTION B HAS HIGHER CONSTRUCTION COSTS COMPARED TO OTHER OPTIONS.</p>
 <p>OPTION B IS DESIGNED TO BE TRAUMA-INFORMED AND GENDER RESPONSIVE WITH A FOCUS ON REHABILITATION, MENTAL HEALTH, AND ADDICTION TREATMENT.</p>	
 <p>OPTION B PROVIDES HIGHEST POTENTIAL FOR BUILDING ENERGY EFFICIENCY.</p>	
 <p>OPTION B IS DESIGNED TO MEET ALL CURRENT STANDARDS INCLUDING ADA, PREA, AND ACA.</p>	
 <p>OPTION B PROVIDES REDUCTION TO DEFERRED MAINTENANCE COSTS.</p>	

## Option C



Option C explores the consolidation of services at four sites: NSCF, NECC, SSCF, and a new site in the northwest area of the state. This option is very similar to option B but does not carry the consolidation in the NE portion of the state. This intervention capitalizes on the existing infrastructure to expand SSCF (144 male).

The site in the northwest will be comprised of 4 different state-of-the-art facilities segregating female and males and providing female and male re-entry. In aggregate the north west site will provide 894 beds (194 female/700 male).

The map to the left graphically shows the 5 existing facilities consolidating to 4 regional sites. The colored footprints show 1 hour driving radius to most of the state.

Refer to Concept Diagram 3.00 – Option C and its associated Concept Design Program within the appendix.

### APPROACH

Legend: **Highlighting** denotes item changed from the previous phase.  
Underscore denotes item changes in the next phase.  
**(BRACKETS)** denotes existing facility population is expanded via addition

#### Current

- Current instate Facilities and Capacity

Capacity;  $433 + \underline{177} + \underline{118} + 219 + 255 + 377 = 1,579$       key -  $[NSCF + \underline{CRCF} + \underline{MVRCF} + NECC + NWSCF + SSCF = total]$

#### Phase 1 – New 894 (744+150) beds at site in the Northwest.

- Consolidation of NWSCF, CRCF, and MVRCF, out of state population and Federal beds. Consider using MVRCF as regional support facility
- Consider reusing NWSCF site. To achieve planned efficiencies, much of the existing facility would need to be removed and rebuilt.

Capacity;  $433 + \underline{894} + 219 + \underline{377} = 1,923$       key -  $[NSCF + \underline{newPH1} + NECC + \underline{SSCF} = total]$

#### Phase 2 – Expand SSCF.

- Build out SSCF to meet growing regional support demand.

Capacity;  $433 + 894 + 219 + (\underline{377} + \underline{144}) = 2,067$       key -  $[NSCF + newPH1 + NECC + (\underline{newSSCF}) = total]$

**OPTION C – OPTION STATS**







Description		Metric
Option C PH1 facility  This phase includes a women’s facility and men’s facility, a women’s re-entry and a men’s re-entry in the northwest.	Population Served	194 female and 700 male = 894 ppl
	Acreage	39+24+2.8+2.5 = 68.3 acres
	Gross SF	83,030+234,830+24,380+37,260= 379,500 GSF
	SF per inmate	425 SF
	Security Staff-to-Offender Ratio	1:4 (224/894)
	Per Diem and Per Capita Cost	Per diem of \$99 and per capita of \$36,074
	FY21 Operating Costs	\$ 32,250,350
	Capital Cost <i>Assumed years 0</i>	Year 0: \$226,900,000
Option C Expansion at SSCF	Population Served	521 male
	Acreage	27 acres – no expansion of current property
	Gross SF	145,805 (etr) + 49,910 = 195,715 GSF
	SF per inmate	376 SF
	Blended Security Staff-to-Offender Ratio based on exg & new	1:3.01 (125/377) + 1:4 (36/144) = 1:3.24 (161/521)
	Per Diem and Per Capita Cost	Per diem of \$122 and per capita of \$44,560
	FY21 Operating Costs	\$23,216,050
	Capital Cost <i>Assumed year 5. Escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 5 cost: \$24,800,000

See “EXISTING SYSTEM IN A SNAPSHOT” for existing Facilities proposed to remain.

Description		Metric: <i>NSCF + newPH1 + NECC + newSSCF</i>
Option C Average System Performance	System Capacity	2,067 ppl
	Acreage	41 + 68.3 + 47 + 27= 183.3 acres
	Gross SF	125,348 + 379,500 + 66,579 + 195,715 = 767,142 GSF
	SF per inmate	371 SF
	Average Security Staff-to-Offender	(112 /433) + (224/894) + (97/219) + (154/521) = 1:3.52 (587/2,067)
	Per Diem and Per Capita Cost	Per diem of \$112 and per capita of \$40,861
	FY21 Operating Costs	\$84,460,200
	Total Capital Cost (assumes year 0)	\$252,000,000

Refer to cost estimate within appendix for additional information

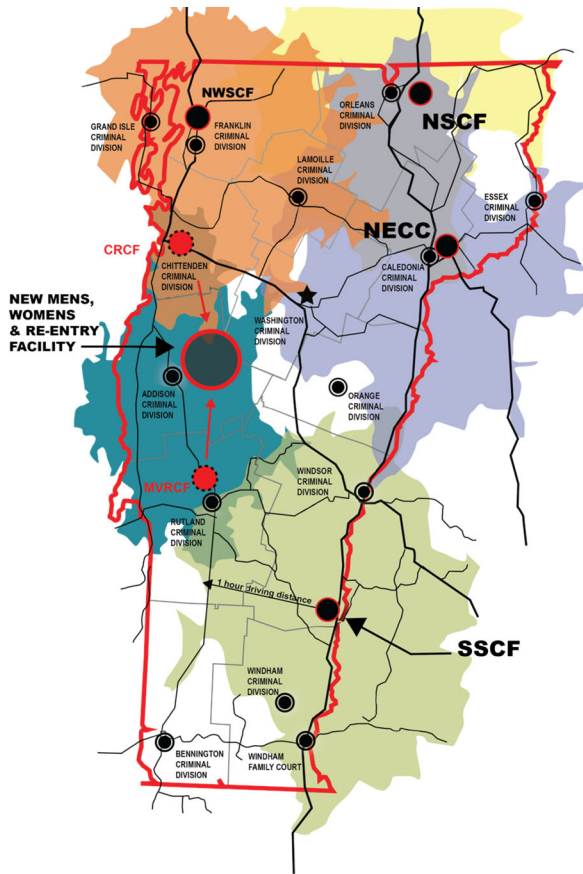
**OPTION C – PROS/CONS CHART**

PROS	CONS
 <p>OPTION C PROVIDES CAPACITIES THAT MEET INMATE POPULATION PROJECTIONS, ALL INMATES STAY IN STATE.</p>	 <p>OPTION C MAY INCREASE TRAVEL BURDEN ON LOCAL JURISDICTIONS.</p>
 <p>OPTION C CONSOLIDATES SERVICES OF ALL OPERATIONS AND STAFFING FOR OF MENTAL HEALTH, MEDICAL, AGING CARE, AND ADDITIONAL SPECIAL NEEDS.</p>	
 <p>OPTION C IS DESIGNED TO BE TRAUMA-INFORMED AND GENDER RESPONSIVE WITH A FOCUS ON REHABILITATION, MENTAL HEALTH, AND ADDICTION TREATMENT.</p>	
 <p>OPTION C PROVIDES HIGHEST POTENTIAL FOR BUILDING ENERGY EFFICIENCY.</p>	
 <p>OPTION C IS DESIGNED TO MEET ALL CURRENT STANDARDS FOR ADA AND PREA.</p>	



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## Option D



Option D explores a site in central western Vermont consolidating CRCF and MVRCF. This strategy largely maintains the existing facilities infrastructures while capitalizes on the existing infrastructure to expand SSCF with (144 male) beds. NWSCF will receive an addition to the core facility to support programs (inmate services).

The site in the western region of the state will be comprised of 4 different state-of-the-art facilities segregating female and males and providing female and male re-entry. In aggregate the western site will provide 642 beds (194 female/448 male).

*The map to the left graphically shows 2 existing facilities consolidating to a new facility. The balance of facilities is shown as is. The colored footprints show 1 hour driving radius to almost all of the state. Regional correctional divisions are also shown.*

*Refer to Concept Diagram 4.00 – Option D and its associated Concept Design Program within the appendix.*

### APPROACH

Legend: **Highlighting** denotes item changed from the previous phase.  
Underscore denotes item changes in the next phase.  
**(BRACKETS)** denotes existing facility population is expanded via addition

#### Current

- Current instate Facilities and Capacity

Capacity;  $433 + \underline{177} + \underline{118} + \underline{219} + \underline{255} + \underline{377} = 1,579$       key -  $[\underline{NSCF} + \underline{CRCF} + \underline{MVRCF} + \underline{NECC} + \underline{NWSCF} + \underline{SSCF} = \text{total}]$

#### Phase 1 – New 642 (492 + 150 re-entry) bed site.

- Consolidation of CRCF, and MVRCF, out of state population and federal beds.

Capacity;  $433 + \underline{642} + \underline{219} + \underline{255} + \underline{377} = 1,926$       key -  $[\underline{NSCF} + \underline{\text{newPH1}} + \underline{NECC} + \underline{NWSCF} + \underline{SSCF} = \text{total}]$

#### Phase 2 – Expand at SSCF and NWSCF

- Build out SSCF to meet growing regional support demand. An addition to NWSCF core facilities to support inmate programs.

Capacity;  $433 + \underline{642} + \underline{219} + \underline{255} + \underline{(377 + 144)} = 2,070$       key -  $[\underline{NSCF} + \underline{\text{newPH1}} + \underline{NECC} + \underline{NWSCF} + \underline{(\text{newSSCF})} = \text{total}]$

**OPTION D – OPTION STATS**

Description		Metric
Option D PH1 facility  This phase includes a women’s facility and men’s facility, a women’s re-entry and a men’s re-entry.	Population Served	194 female and 448 male = 642 ppl
	Acreage	36+24+2.8+2.5 = 65.3 acres
	Gross SF	83,030+154,330+24,380+37,260= 299,000 GSF
	SF per inmate	379 SF
	Security Staff-to-Offender Ratio	1:4 (161/642)
	Per Diem and Per Capita Cost	Per diem of \$99 and per capita of \$36,162
	FY21 Operating Costs	\$23,216,050
	Capital Cost <i>Assumed years 0</i>	Year 0 cost: \$208,500,000
Option D Expansion at SSCF	Population Served	521 male
	Acreage	27 acres – no expansion of property
	Gross SF	145,805 (etr) + 49,910 = 195,715 GSF
	SF per inmate	376 SF
	Blended Security Staff-to-Offender Ratio based on exg & new	1:3.01 (125/377) + 1:4 (36/144) = 1:3.24 (161/521)
	Per Diem and Per Capita Cost	Per diem of \$122 and per capita of \$44,560
	FY21 Operating Costs	\$23,216,050
	Capital Cost <i>Assumed years 5. Escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 5 cost: \$24,800,000
Option D Expansion at NWSCF	Population Served	255 male (exg)
	Acreage	85 acres – no expansion of property
	Gross SF	114,082 (etr) + 22,885 = 136,967 GSF
	SF per inmate	537 SF
	Staff-to-Offender Ratio at capacity	1:2.15; (118/255)
	Per Diem and Per Capita Cost	Per diem of \$185 and per capita of \$67,562
	FY21 Operating Costs	\$17,228,200
	Capital Cost <i>Assumed years 5. escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 5 cost: Information forthcoming

See “EXISTING SYSTEM IN A SNAPSHOT” for existing Facilities proposed to remain.









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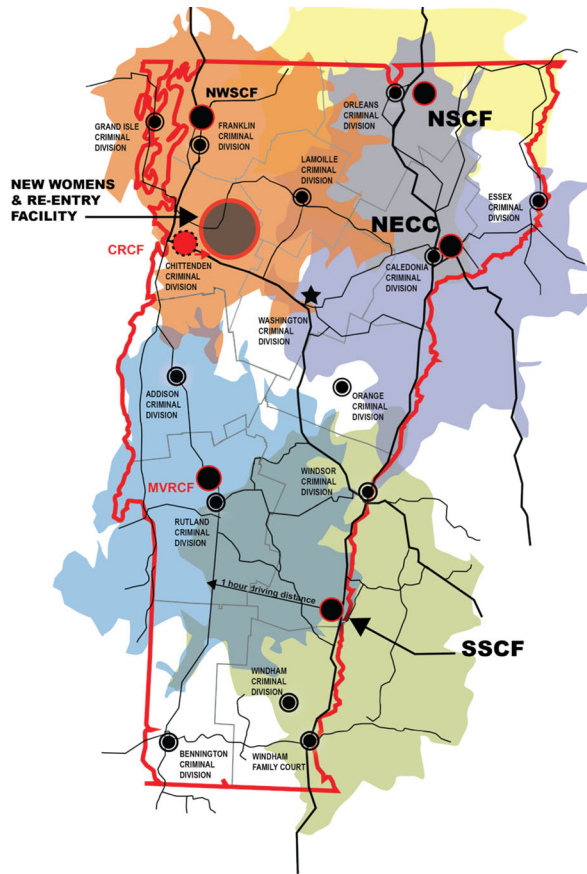
Description		Metric: NSCF + newPH1 + NECC + NWSCF + newSSCF
Option D Total System Performance	System Capacity	2070 ppl
	Acreage	41+65.3+47+85+27 = 265.3 acres
	Gross SF	125,348+ 299,000+ 66,579+ 136,967+ 195,715= 823,609 GSF
	SF per inmate	398 SF
	Average Staff-to-Offender	(112/433)+(161/642)+(97/219)+(118/255)+(161/521)= 1:3.19 (649/2,070)
	Per Diem and Per Capita Cost	Per diem of \$124 and per capita of \$45,116
	FY21 Operating Costs	\$93,389,450
	Total Capital Cost	\$233,000,000

Refer to cost estimate within appendix for additional information

**OPTION D – PROS/CONS CHART**

PROS	CONS
 <p>OPTION D PROVIDES CAPACITIES THAT MEET INMATE POPULATION PROJECTIONS, ALL INMATES STAY IN STATE.</p>	 <p>OPTION D DOES NOT PROVIDE A CENTRALIZED MODEL FOR A REDUCTION TO OPERATIONAL COSTS.</p>
 <p>OPTION D IS DESIGNED TO BE TRAUMA-INFORMED AND GENDER RESPONSIVE WITH A FOCUS ON REHABILITATION, MENTAL HEALTH, AND ADDICTION TREATMENT.</p>	 <p>OPTION D IS NOT DESIGNED TO MEET ALL CURRENT STANDARDS INCLUDING ADA, PREA, AND ACA STANDARDS.</p>
 <p>OPTION D PROVIDES HIGHEST POTENTIAL FOR BUILDING ENERGY EFFICIENCY.</p>	 <p>OPTION D MAY INCREASE TRAVEL BURDEN ON LOCAL JURISDICTIONS.</p>
 <p>OPTION D HAS LIMITED STAKEHOLDER RESISTANCE TO CLOSURES / REPURPOSED FACILITIES.</p>	 <p>OPTION D DOES NOT PROVIDE REDUCTION TO DEFERRED MAINTENANCE COSTS.</p>

## Option E



Option E explores a scenario where the State maintains its current system with the replacement of CRCF and a series of expansions. Expansion at NSCF will include 96 male beds. Expansion at SSCF will include 240 male beds and a new technical training center. The expansion at SSCF and NSCF will require a revision of current permitting as it exceeds current permitted capacity. NWSCF will receive an addition to the core facility to support programs (inmate services).

CRCF replacement will be comprised of 3 different state-of-the-art facilities; a new woman’s facility and separate female and male re-entry facilities. In aggregate the site will provide 294 beds (194 female/100 male).

*The map to the left graphically shows the 6 existing facilities. The colored footprints show 1 hour driving radius to almost all of the state. Regional correctional divisions are also shown.*

*Refer to Concept Diagram 5.00 – Option E and its associated Concept Design Program within the appendix.*

### APPROACH

*Legend: **Highlighting** denotes item changed from the previous phase.  
Underscore denotes item changes in the next phase.  
**(BRACKETS)** denotes existing facility population is expanded via addition*

#### Current

- Current instate Facilities and Capacity

Capacity;  $433 + \underline{177} + 118 + 219 + 255 + \underline{377} = 1,579$  key -  $[NSCF + \underline{CRCF} + MVRCF + NECC + NWSCF + SSCF = total]$

#### Phase 1 – Replace CRCF with New 294 (144 women + 150 re-entry) bed site.

- Replace CRCF with new women’s facility and re-entry facility in the area of Chittenden County

Capacity;  $433 + \underline{294} + 118 + 219 + 255 + \underline{377} = 1,694$  key -  $[NSCF + \underline{newCRCF} + MVRCF + NECC + NWSCF + SSCF = total]$

#### Phase 2 – Addition at SSCF & NWSCF

- Build out SSCF plus 117 for an additional 240 beds. An addition to NWSCF core facilities to support inmate programs.

Capacity;  $433 + 294 + 118 + 219 + 255 + \underline{(377 + 240)} = 1,936$  key -  $[NSCF + newCRCF + MVRCF + NECC + NWSCF + \underline{newSSCF} = total]$

Continued on following page:

**Phase 3 – Addition at NSCF.**

- Add housing units at NSCF within the fence to meet growing demand.

Capacity: **(433+96) +294+118+219+255+617=2,032** key - [newNSCF+newCRCF+MVRCF+NECC+NWSCF+newSSCF = total]

**OPTION E – OPTION STATS**

Description		Metric
Option E New CRCF  This phase includes a women’s facility, a women’s re-entry and a men’s re-entry.	Population Served	194 female and 100 male = 294 ppl
	Acreage	24+ 2.8+2.5 =29.3 acres
	Gross SF	83,030+24,380+37,260= 144,670 GSF
	SF per inmate	492 SF
	Security Staff-to-Offender Ratio	1:4 (74/294)
	Per Diem and Per Capita Cost	Per diem of \$99 and per capita of \$36,089
	FY21 Operating Costs	\$10,610,050
	Capital Cost <i>Assumed years 0</i>	Year 0 cost: \$161,500,000
<hr/>		
Option E Expansion At SSCF	Total Population Served	617 male
	Acreage	27 acres – no expansion of current property
	Gross SF	145,805(etr) + 90,850 = 236,655 GSF
	SF per inmate	384 SF
	Blended Security Staff-to-Offender Ratio based on exg & new	1:3.01 (125/377) + 1:4 (60/240) = 1:3.33 (185/617)
	Per Diem and Per Capita Cost	Per diem of \$118 and per capita of \$43,075
	FY21 Operating Costs	\$26,577,650
	Capital Cost <i>Assumed year 5. Escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 5 cost: \$37,600,000

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






Description		Metric
Option E Expansion At NSCF	Population Served	529 male
	Acreage	41 acres – no expansion of current property
	Gross SF	125,348(etr) + 17,940 = 143,288 GSF
	SF per inmate	271
	Blended Security Staff-to-Offender Ratio based on exg & new	1:3.86; (112/433) + 1:4 (24/96) = 1:3.88 (136/529)
	Per Diem and Per Capita Cost	Per diem of \$101 and per capita of \$36,936
	FY21 Operating Costs	\$19,539,300
	Capital Cost <i>Assumed year 5. Escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 5 cost: 21,100,000
Option E Expansion at NWSCF	Population Served	255 male (exg)
	Acreage	85 acres – no expansion of property
	Gross SF	114,082 (etr) + 22,885 = 136,967 GSF
	SF per inmate	537 SF
	Staff-to-Offender Ratio at capacity	1:2.15; (118/255)
	Per Diem and Per Capita Cost	Per diem of \$185 and per capita of \$67,562
	FY21 Operating Costs	\$17,228,200
	Capital Cost <i>Assumed year 5. Escalation applied as 4.5% flat forward.</i> <a href="#">calculator</a>	Year 5 cost: \$13,400,000

See “EXISTING SYSTEM IN A SNAPSHOT” for existing Facilities proposed to remain.

Description		Metric:
		newNSCF+newCRCF+MVRCF+NECC+NWSCF+newSSCF
Option E Average System Performance	System Capacity	2,032 ppl
	Acreage	41+29.3+5+47+85+27=234.3
	Gross SF	143,288+ 144,670+34, 308+66,579+136,967+236,655= 762,467GSF
	SF per inmate	375 SF
	Average Security Staff-to-Offender	(136/529)+(74/294)+(50/118)+(97/219)+(118/255) +(185/617) = 1:3.08 (660/2,032)
	Per Diem and Per Capita Cost	Per diem of \$127 and per capita of \$46,372
	FY21 Operating Costs	\$94,229,850
	Total Capital Cost	\$234,000,000

Refer to cost estimate within appendix for additional information

**OPTION E – PROS/CONS CHART**

PROS	CONS
 <p>OPTION E PROVIDES CAPACITIES THAT MEET INMATE POPULATION PROJECTIONS, ALL INMATES STAY IN STATE.</p>	 <p>OPTION E DOES NOT PROVIDE A CENTRALIZED MODEL FOR A REDUCTION TO OPERATIONAL COSTS.</p>
 <p>OPTION E IS DESIGNED TO BE TRAUMA-INFORMED AND GENDER RESPONSIVE WITH A FOCUS ON REHABILITATION, MENTAL HEALTH, AND ADDICTION TREATMENT.</p>	 <p>OPTION E IS NOT DESIGNED TO MEET ALL CURRENT STANDARDS INCLUDING ADA, PREA, AND ACA STANDARDS.</p>
 <p>OPTION E PROVIDES HIGHEST POTENTIAL FOR BUILDING ENERGY EFFICIENCY.</p>	 <p>OPTION E DOES NOT PROVIDE REDUCTION TO DEFERRED MAINTENANCE COSTS.</p>
 <p>OPTION E HAS LIMITED STAKEHOLDER RESISTANCE TO CLOSURES / REPURPOSED FACILITIES.</p>	
 <p>OPTION E HAS LOWER CONSTRUCTION COSTS COMPARED TO OTHER OPTIONS.</p>	

## Existing System in a Snapshot

Description		Metric
<u>NSCF</u>  Northern State Correctional Facility	Facility Capacity	433 male
	Acreage	41 acres
	Gross SF	125,348 GSF
	SF per inmate	289 SF
	Staff-to-Offender Ratio <i>security staff/FY20 ADP</i>	1:3.86; (104 /401); <i>at capacity = 1:3.86; (112/433)</i>
	FY21 Per Diem and Per Capita Cost	Per diem of \$92 and per capita of \$33,464
	FY21 Budget	\$14,490,097
	Deferred Maintenance Value 2020-2032	\$10,443,320
	Services	Vocational, Risk Reduction, Small Medical Wing
<hr/>		
<u>CRCF</u>  Chittenden Regional Correctional Facility	Facility Capacity	177 women
	Acreage	6 acres
	Gross SF	51,211 GSF
	SF per inmate	289 SF
	Staff-to-Offender Ratio <i>security staff/FY20 ADP</i>	1:1.56; (85/133) <i>at capacity = 1:1.56; (113/177)</i>
	FY21 Per Diem and Per Capita Cost	Per diem of \$172 and per capita of \$62,914
	FY21 Budget	\$11,135,791
	Deferred Maintenance Value 2020-2032	\$6,298,247
	Services	Multiple Risk Reduction Programs
<hr/>		
<u>MVRCF</u>  Marble Valley Regional Correctional Facility	Facility Capacity	118 male
	Acreage	5 acres
	Gross SF	34, 308 GSF
	SF per inmate	290 SF
	Staff-to-Offender Ratio <i>security staff/FY20 ADP</i>	1:2.35 (55/129) <i>At capacity = 1:2.35; (50/118)</i>
	FY21 Per Diem and Per Capita Cost	Per diem of \$193 and per capita of \$70,543
	FY21 Budget	\$8,324,127
	Deferred Maintenance Value 2020-2032	\$2,131,306
	Services	None

	Description	Metric
<u>NECC</u>  North East Correctional Complex	Facility Capacity	219 male
	Acreage	47 acres
	Gross SF (CCWC + NERCF)	66,579 GSF
	SF per inmate	304 SF
	Staff-to-Offender Ratio <i>security staff/FY20 ADP</i>	1:2.26 (76/164) <i>At capacity = 1:2.26; (97/219)</i>
	FY21 Per Diem and Per Capita Cost	Per diem of \$147 and per capita of \$53,535
	FY21 Budget	\$11,724,273
	Deferred Maintenance Value 2020-2032	\$2,140,848
	Services	Work Camp, Risk Reduction Programming (inmate services)
<u>NWSCF</u>  Northwest State Correctional Facility	Facility Capacity	255 male
	Acreage	85 acres
	Gross SF	114,082 GSF
	SF per inmate	447 SF
	Staff-to-Offender Ratio <i>security staff/FY20 ADP</i>	1:2.15 (98/211) <i>At capacity = 1:2.15; (118/255)</i>
	FY21 Per Diem and Per Capita Cost	per diem of \$149 and per capita of \$54,427
	FY21 Budget	\$13,878,992
	Deferred Maintenance Value 2020-2032	\$7,609,031
	Services	Risk Reduction Programming (inmate services), Vocational
<u>SSCF</u>  Southern State Correctional Facility	Facility Capacity	377 male
	Acreage	27 acres
	Gross SF	145,805 GSF
	SF per inmate	386 SF
	Staff-to-Offender Ratio <i>security staff/FY20 ADP</i>	1:3.01 (118/355) <i>At capacity = 1:3.01; (125/377)</i>
	FY21 Per Diem and Per Capita Cost	Per diem of \$123 and per capita of \$45,065
	FY21 Budget	\$16,989,471
	Deferred Maintenance Value 2020-2032	\$5,486,263
	Services	Geriatric, Risk Reduction Programming (inmate services), Infirmary, and Mental Health Stabilization



Description		Metric
Out of state population	Capacity (contracted)	350 male
	Acreage	NA
	Gross SF	NA
	SF per inmate	NA
	Security Staff-to-Offender Ratio	NA
	Per Diem and Per Capita Cost	Per diem of \$75 and per capita of \$27,382
	FY21 Budget *	\$5,640,604
	Deferred Maintenance Value 2020-2032	NA

\*Based on current appropriation for 206 beds.

Description		Metric
Average Existing System Performance	Total capacity	1579 + 350 (out of state) = 1929 Total Beds
	Total Acreage	211 acres
	Total Gross SF	510,573 GSF*
	Average SF per inmate	323 SF*
	Average Staff-to-Offender Ratio <i>security staff/FY20 ADP</i>	1:2.59 (536/1393) * <i>at capacity = 1:2.65; (596/1579)*</i>
	Per Diem and Per Capita Cost	Per diem of \$126 and per capita of \$46,041
	FY21 Budget	\$76,542,751 + \$5,640,604** = \$82,183,355
	Deferred Maintenance Value 2020-2032	\$34,109,015

\*not including out of state population

\*\*based on 206 offenders currently held out of state



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## Existing Facilities Gap Report

This list captures elements discussed in interviews with BGS District Facility Managers, as highlighted in the facility conditions reports, or work orders. See current Facility reports in conjunction with current work order lists for full list of items of work. See proposed construction for renovation for standard recommendations.

Description	
<u>NSCF</u>  Northern State Correctional Facility	Repair Tunnel Leaks, replace windows, inspect CMU structures and repair
	Replace central boiler heating plant
	Replace copper piping
	Domestic Hot Water at Capacity, boilers will need to be replaced if demand increases
	Upgrade electrical distribution infrastructure
	Add air conditioning
<u>CRCF</u>  Chittenden Regional Correctional Facility	Roof Fascia profile repair, building brick veneer spot repairs, replace windows, security doors, hardware and door security system. Replace failing interior finishes.
	Replace HVAC system (Boilers, Air handling Units, and terminal equipment)
	Replace ductwork facility-wide
	Replace building automation control system
	Replace all Plumbing piping; supply and sanitary
	Replace fire alarm system
Add air conditioning	
<u>MVRCF</u>  Marble Valley Regional Correctional Facility	Building masonry pointing and repair, remove organic growth, replace windows, security doors, hardware and door security system. Replace failing carpet. Replace roof system.
	Replace all plumbing piping
	Replace building automation controls (Currently scheduled for 2022)

Description	
<u>NERCC</u>  Northeast Regional Correctional Facility	Repair tunnel system, roofing system replacement, replace windows, and door security system. Repair masonry veneer as noted. Replace failing interior finishes. Replace showers.
	ADA – this facility is not ADA compliant. Investigate noncompliant areas and either replace with complaint conditions or rebuild with new complaint conditions.
	Replace generators, fuel tanks, and transfer switches (Currently under design)
	Upgrade electrical distribution infrastructure
	Redo parking and add capacity, restriping
	Add air conditioning
<u>NWSCF</u>  Northwest State Correctional Facility	Remove historic homestead and barn, fix roof leaks, repair brick veneer, Replace security doors, hardware and door security system. Replace failing interior finishes. Replace security windows.
	Upgrade electrical distribution infrastructure, replace failing plumbing
	Replace boiler plant within the next 5 years
	Repair access roads
	Add air conditioning
	Existing core is undersized for the population need. Expansion of core for baseline services needed if this facility is kept operational.
<u>SSCF</u>  Southern State Correctional Facility	Re-caulking of precast panels, Repair or replace security doors, hardware and door security system. Repair roof leaks. Replace failing interior finishes.
	Replace fire alarm system
	Upgrade electrical distribution infrastructure
	Replace central boiler plant
	Add air conditioning

In order to accurately correlate with cost estimating the gap report does not differentiate between works in progress (work underway), work orders (planned work), facility assessments reports (future work identified).

### DECOMMISSIONING OF DETENTION PROPERTIES

While the reuse of commercial properties is common, it is less common for detention properties to be reused to the value they were initially designed. While some of these properties may be eligible for divestment, an amount will remain with the State's ownership portfolio as: general use (likely office space or storage), rental or mothballed. The feasibility and extent of reuse has been left to future analysis.

Typical expenses to anticipate in the case of mothballing include, but are not limited, to building insurance, utility fees, fuel to maintain freeze protection, a nominal maintenance staff and a nominal maintenance budget.



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## Proposed Construction (Basis of Design)

### GENERAL SUSTAINABILITY

The BGS Design Guidelines notes that the design of all new construction and major renovations shall achieve at a minimum, Efficiency Vermont's High-Performance Building Certification and strive to achieve Net Zero Certification where feasible.

It is recommended any new facility achieve a minimum of LEED gold certification, or an equivalent rating system, to promote the State's ongoing commitment to high performing buildings with Net Zero certification as an aspiration. A holistic and integrated approach to sustainability considers not only the performance of the building and site ecology, but also focuses on producing a high-quality indoor environment to encourage collaboration, productivity, and user well-being. As a third-party rating system, LEED is utilized to validate the comprehensive sustainability approach, ensuring that minimum sustainability goals are achieved under each of several categories and crediting additional strategies that are selected by the project team based on the project's customized scope and priorities.

To support the State's commitment to health and wellness of the staff and inmates, the WELL Building Standard is a performance-based system for measuring and monitoring features in the built environment that impact human health and wellbeing. The WELL Building Standard used in conjunction with LEED, would promote the State's goal for being environmental stewards, as well as putting the health and wellness of inmates and staff at the forefront of the design process.

### BGS DESIGN GUIDELINES

The BGS Design Guidelines set the tone for construction activities for state projects and provide targets to achieve. The following are some items of note for site selection, conceptual design and detention construction. See guidelines for the complete set of standards.

- See general sustainability for this project's approach.
- Develop a safe facility: organizationally, structurally and consistent with all project permits.
- Develop a high quality, long lasting and maintainable facility. Design to 50-year construction (item 1.13).
- Design to the greater; 500-year flood level or 100 year +12".
- Utilize locally sourced materials [where appropriate], maximize the incorporation of alternative renewable energy technologies.
- Provide clearance within in attics and plenums for mechanical. Provide for easy means of access and maintenance. See standards for specifics. Consider the use of gabled, hipped, or mansard type roofs for housing mechanical. Consider providing dedicated mechanical chase access to cells. Discussed and illustrated strategy shows a continuous rear chase.

**ENVELOPE ENERGY PERFORMANCE**

The 2020 Vermont Commercial Building Energy Standards (CBES) is based on the International Energy Conservation Code (IECC) 2018 and incorporates elements of ANSI/ASHRAE/IES Standard 90.1 2016 Energy standard for Buildings Except Low-Rise Residential Buildings.

The minimum exterior insulation requirements for new construction are as follows:

<b>IECC Table C402.1(1)</b>	
Roof (Insulation entirely above roof deck)	R-40 ci; average
Metal wall roof	R-25 + R-11 lineal system
Attic and other	R-49
Mass walls	R-13.3 + R-17 ci or R-22.1 ci
Metal building walls <sup>1</sup>	R-13 + R-13 ci
Below-grade walls	R-15 ci
Mass floors	R-16.7 ci
Joist/framing	R-38
Unheated slabs	R-10 for entire slab

<sup>1.</sup> Refer to table C402.1(2) for *Building Envelope Requirements – Metal Building Assembly Descriptions*

**BUILDING ENCLOSURES AND ARCHITECTURAL SYSTEMS - NEW BUILDINGS & ADDITIONS**

1. High Performance Building Criteria – General:
  - 1.1. Commissioning – 3<sup>rd</sup> party Systems Commissioning Agent from Schematic Design through project completion.
  - 1.2. Thermal - Where possible increase insulation values at roofs and walls by 25%, Maintain maximum of 4” of insulation at roof drains (or as noted by code), general targets as follows; Roof – R50 (average) and Walls –R24.
  - 1.3. Materials – Where possible use materials with no greenhouse gases emissions and/or low imbedded carbon.
  - 1.4. Air Leakage – whole building air leakage goal of 0.15 CFM/SF at 50 Pascals.
  - 1.5. Connections – connections to exterior elements to be thermally broken or use a low conductive material.
2. Roofs
  - 2.1. Low membrane sloped roof structures with thermally broken structural supports for roof top equipment and PV systems. Membrane to be light grey to minimize heat island effect. Roof slope by tapered insulation or structure to exceed requirements in IBC and Table C402.1(1). Thermally protected parapets with fall protection. Low slope roof to have secondary AV barrier flashed into drains and onto exterior weather barrier systems at roof deck.
  - 2.2. Sloped roofs, similar to low slope roof except as noted. Standing metal seam roofing with a color lighter than medium grey. Roofs sloped in a manner to avoid snow collection and away from entries. Avoid conditions where snow and ice may drop to a secondary roof. At area above pedestrian activity provide snow fall protection.
3. Exterior Walls - Precast Architectural Tilt-up Concrete Panels
  - 3.1. Architectural precast concrete panels will be insulated sandwich panels with rigid insulation encased between two layers of precast using engineered fiber composite connectors. The exterior face shall receive architectural finish including, but not limited to form liners, reveals, acid-etching and/or sandblasting. Interior structural panels to meet security requirements of grade 1 (maximum) security wall. All vertical and horizontal working joints in the precast panels will be sealed with silicone sealant to achieve a barrier system



- 3.2. Panels will be connected to the building's structural frame at every story and will provide anchorage for windows, curtain walls and doors.
- 4. Foundation and slab on grade
  - 4.1. Foundation and slab on grade to be thermally treated as outlined in Table C402.1(1) and thermally broken at exterior conditions.
- 5. Fenestration
  - 5.1. Non-Security Windows
    - 5.1.1. Curtain Wall Assembly -Thermally broken system able to accept 1-¼" IGU.
    - 5.1.2. Insulated Glazing Unit (IGU) - Double glazed unit, high performance spacers, argon filled, and solar control low-E coating on surface #2. Glazing to be tempered or security glazing.
  - 5.2. Detention Windows
    - 5.2.1. Thermally rated stainless steel security glazing units, jambs packed with mineral fiber insulation and reinforced with tool resisting steel bars. Security glazing will be set in detention window frames with silicone glazing sealant and with pick-resistant sealant for inmate and secure locations.
    - 5.2.2. Clear insulated laminated polycarbonate security glazing units shall be in thicknesses required to comply with physical security ratings and to sustain wind loads.
  - 5.3. Skylights
    - 5.3.1. Security level skylights meeting CBES 2020. Integral fall protection and interior vandal resistance.
- 6. Doors - Exterior and Interior
  - 6.1. Standardized centralized detention door control system, detention level doors and frames, sensors and hardware.
  - 6.2. Stainless-steel doors at partitions and doors at wet area enclosures.

### **BUILDING ENCLOSURES AND ARCHITECTURAL SYSTEMS - PRE-ENGINEERED METAL BUILDING**

- 1. See new buildings for standard notes unless noted otherwise.
- 2. Pre-engineered metal buildings are allowable for support program functions.
- 3. Interior security walls within pre-engineered metal buildings are required within the secure perimeter.

### **MECHANICAL/ELECTRICAL/PLUMBING SYSTEMS - NEW BUILDINGS AND ADDITIONS**

- 1. High performance building criteria – general:
  - 1.1. Commissioning – 3rd party Systems Commissioning Agent from Schematic Design through project completion.
  - 1.2. PV solar array infrastructure.
  - 1.3. EV car charging station as outlined in CBES 2020.
- 2. Mechanical:
  - 2.1. Heating plant options:
    - 2.1.1. High efficiency condensing propane boilers.
    - 2.1.2. Biomass wood chip facility to utilize local resources.
    - 2.1.3. Geothermal.
  - 2.2. Utilize in-floor radiant heat to take advantage of the thermal mass of the buildings.
  - 2.3. Smoke control systems in the housing units.
  - 2.4. Discharge building exhaust through heat recovery units to preheat ventilation air.
  - 2.5. Kitchen facilities to utilize variable volume exhaust and makeup air systems for the cooking hoods.

- 2.6. Facilities with a sewage treatment plant to capture waste heat/biogases to preheat water systems and/or generate electricity.
- 2.7. All occupied spaces to be air conditioned and ventilated based on current building code requirements. Minimum return air filtration will include MERV 13 class filters, unless stricter regulations are implemented due to the pandemic response prior to the completion of the design. All new systems will include premium efficiency motors and implement demand control ventilation to reduce energy consumption when the spaces are not fully occupied.
3. Electrical:
  - 3.1. Three-phase power with medium voltage switches on a facility electrical loop for a primary metered configuration.
  - 3.2. Medium voltage step-down transformer in the main electrical room of each building with additional step-down transformers for branch circuits. Transformers to meet DOE 2016 efficiency standards.
  - 3.3. Distribution panelboards to be sized for 25% spare capacity.
  - 3.4. Receptacles in cells to be spaced and circuited for future additional need.
  - 3.5. Utilize schedule-based or occupancy sensor plug load control.
  - 3.6. Perform an arc flash analysis for the entire facility.
  - 3.7. Parallel emergency diesel generators sized for full facility back-up.
  - 3.8. Networked fire alarm with addressable devices. Individual panels in each building connected in a peer-to-peer network.
4. Lighting
  - 4.1. Space and select lighting to meet the lighting power density requirements of the Vermont Commercial Building Energy Standards.
  - 4.2. Utilize lighting control devices where appropriate. Integrate with the Building Management System.
  - 4.3. Confinement/detention LED fixtures with tamper resistant hardware. Steel gauge to be determined by security level of the area.
5. Plumbing:
  - 5.1. Install low flow fixtures, showerheads, combi-units, etc.
  - 5.2. Utilize a central fixture control system to monitor and control inmate water usage.
  - 5.3. Separate water supply and waste for combi-units, supplying fresh water for lavatory and reclaimed water for water closet.
  - 5.4. Preheat domestic hot water with solar thermal hot water systems.
  - 5.5. Reclaim grey water from lavatory, showers and laundry facilities for use in toilets and urinals.
  - 5.6. Reclaim rainwater for use as grey water or as cooling water makeup for areas outfitted with air conditioning.
  - 5.7. Reclaim storm water for irrigation or general washdown uses.

## BUILDING ENCLOSURES AND ARCHITECTURAL SYSTEMS – RENOVATIONS

1. High Performance Building Criteria – General (review scale of project for appropriateness):
  - 1.1. Commissioning – On major renovations carry 3<sup>rd</sup> party Envelope Commissioning Agent from SD through project completion.
  - 1.2. Thermal – Provide air sealing to meet current standard. Replace sealants, gaskets and ensure air barrier continuity.
2. Materials – Where possible use materials with no greenhouse gases emissions and/or low embedded carbon.
3. Air Leakage – whole building air leakage goal of 0.15 CFM/SF at 50 Pascals.
4. Roofs:
  - 4.1. Inspect roofs for leakage. Replace roofing, flashing, and roof accessories as appropriate.
  - 4.2. Replace air and vapor components past 90% of their warranted lifespan.

- 4.3. Increase insulation to meet contemporary standards.
5. Exterior Walls:
  - 5.1. See air sealing.
6. Structure:
  - 6.1. Inspect structure for deficiencies and make appropriate repairs.
7. Fenestration:
  - 7.1. Inspect and replace with similar assembly type meeting contemporary standards.
  - 7.2. Replace sealants.
8. Skylights – Introduce at double height spaces (dayrooms, gymnasium and cafeterias):
  - 8.1. Security level skylights meeting CBES 2020. Integral fall protection and interior vandal resistance.
9. Doors - Exterior and Interior:
  - 9.1. Inspect for existing for wear. Replace and/or upgrade to provide; standardized centralized detention door control system, detention level doors and frames, sensors and hardware.
10. Interior finishes – Refinish finishes past 50% of their usable lifespan. Consider aesthetic upgrades in inmate and staff areas for wellbeing measures.

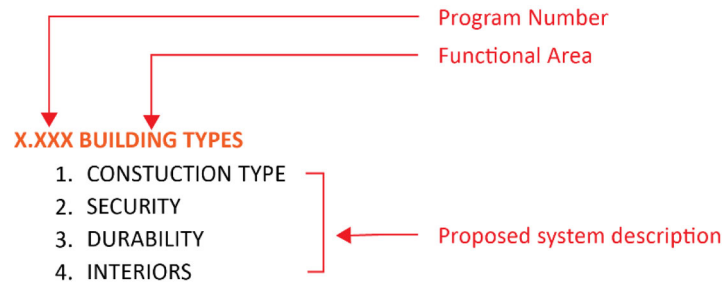
### MECHANICAL/ELECTRICAL/PLUMBING SYSTEMS – RENOVATIONS

1. High performance building criteria – general:
  - 1.1. Commissioning – 3<sup>rd</sup> party Systems Commissioning Agent from Schematic Design through project completion.
  - 1.2. PV solar array infrastructure.
  - 1.3. EV car charging station as outlined in CBES 2020.
2. Mechanical:
  - 2.1. Evaluate and upgrade or replace heating plants.
  - 2.2. Install energy meters to monitor energy use and develop a strategy to reduce energy consumption.
  - 2.3. Verify building automation controls are functioning properly.
  - 2.4. Duct Cleaning.
  - 2.5. Replace failed steam traps.
  - 2.6. Retrofit kitchen facilities with variable volume exhaust and makeup air systems for the cooking hoods.
  - 2.7. Evaluated and upgraded existing mechanical to provide air conditioning and ventilation to all occupied spaces. Minimum return air filtration will include MERV 13 class filters, unless stricter regulations are implemented due to the pandemic response prior to the completion of the design. The increased filtration will most likely result in increased fan horsepower and require electrical circuit modifications to the existing units. Where feasible the existing systems will be equipped with demand control ventilation controls to reduce energy use when the spaces are only partially occupied.
  - 2.8. Replace exhaust fans with heat recovery systems.
  - 2.9. Implement demand control ventilation on air handling unit systems.
3. Electrical:
  - 3.1. Evaluate the main switchgear for available circuit space. Replace if needed to accommodate additional building load.
  - 3.2. Replace existing panelboards with limited available space with panelboards employing feedthrough lugs to install a second adjacent panelboard. Evaluate loading to ensure existing conductors will not be overloaded.
  - 3.3. Utilize schedule-based or occupancy sensor plug load control.
  - 3.4. Perform an arc flash analysis for the entire facility.
  - 3.5. Replace fixtures with surface mounted confinement/detention LED fixtures with tamper resistant hardware. Steel gauge to be determined by security level of the area.
  - 3.6. Install lighting control devices where appropriate.

- 3.7. Replace fire alarm system with retrofit kit if the existing system is past its end-of-life. Evaluate fire alarm devices and cabling to determine if replacement is required.
- 3.8. Evaluate the emergency branch of the electrical distribution system for additional loading requirements.
4. Plumbing:
  - 4.1. Install low flow fixtures, showerheads, combi-units, etc.
  - 4.2. Install solar thermal hot water systems to preheat domestic hot water.

## Program and Area Descriptions

Functional space standards developed by HOK to set minimum requirements. Full space narratives would be further refined in the next phase of design.



### 1.000 PUBLIC LOBBY

1. Interior framing to be traditional metal stud framing with high abuse gypsum walls. Grade 1 (maximum) security CMU walls to be used at sallyports and secure perimeters.
2. Minimum level, with appropriate security at sallyports and other transitional areas. Commercial grade doors and locks, and glazing.
3. High durability.
4. Commercial finish requirements.

### 2.000 ADMINISTRATION

1. Interior framing to be traditional metal stud framing with high gypsum walls or CMU. Grade 1 (maximum) security CMU walls to be used at sallyports and secure perimeters.
2. Minimum level, with appropriate security at sallyports and other transitional areas. Commercial grade doors and locks.
3. Medium durability.
4. Commercial finish requirements.

### 3.000 STAFF SUPPORT

1. Interior framing to be traditional metal stud framing with high gypsum walls or CMU.
2. Minimum level, with appropriate security at sallyports and other transitional areas. Commercial grade doors and locks, commercial grade windows and glazing.
3. Medium durability.
4. Commercial finish requirements.

### 4.000 SECURITY OPERATIONS

1. Interior walls to be grade 1 (maximum) security CMU walls at perimeter and traditional CMU walls or metal stud framing with gypsum.
2. Maximum level, detention grade doors and locks at security control points. Commercial grade doors and locks, commercial grade windows and glazing.
3. Medium durability.
4. Commercial finish requirements.

### 5.000 VISITATION

1. Interior walls to be grade 1 (maximum) security CMU walls at secure perimeter and traditional CMU walls or metal stud framing with gypsum.
2. Medium level. Detention grade doors and locks at security control points and commercial grade doors and locks at all other locations. Visitation shall contain rotary molded plastic furnishings and stainless-steel combination toilets for inmates and porcelain fixtures for visitors. Non-contact visitation shall be high security. Video visitation shall be commercial grade.
3. Highly durable.
4. Medium finish requirements, epoxy level paint, sealed and carpeted concrete floors, commercial ceilings where non-accessible.

### 6.000 RECEPTION AND PROCESSING, DIAGNOSTICS, RELEASE AND TRANSFER

1. Interior walls to be grade 1 (maximum) security CMU walls at secure perimeter. Holding cell construction to be precast, tilt-up, steel or modular construction.
2. Medium level. Detention grade doors and locks, windows in holding cell to be detention level. Molded plastic furnishing in waiting areas and security metal furnishing within holding cells. Stainless steel combination toilets at all inmate restrooms and porcelain fixtures at staff bathrooms.
3. Highly durable.
4. High durability finish requirements, epoxy level paint, sealed concrete floors, maximum security ceilings in holding cells, commercial ceilings where non-accessible.

### 7.000 HEALTHCARE ADMINISTRATION AND CLINIC

1. Interior walls to be grade 1 (maximum) security CMU walls at secure perimeter. Interior framing may be traditional metal stud framing with high gypsum walls or CMU in staff areas.
2. Minimum level, with appropriate security at sallyports and other transitional areas. Commercial grade doors and locks. Detention grade doors and locks at security control points and inmate holding areas.
3. Highly durable.
4. Medium finish requirements, Primecoat or epoxy level paint and shower coating, sealed concrete floors with carpeted segments, security ceilings or commercial ceilings where non-accessible. Impact resistant laminate with solid surface countertops. Clinical areas to receive seamless bacteriostatic flooring with integral base coves.

### 7.100 MEDICAL INFIRMARY

1. Interior walls to be grade 1 (maximum) security CMU walls at secure perimeter. Cell construction to be precast, tilt-up, steel or modular construction or partial height CMU walls separating dormitory sleeping areas.
2. Medium level, high. Detention grade doors and locks, windows in cell to be detention level. Steel detention furnishings and stainless-steel combination toilets. Molded plastic furniture in dayrooms.
3. Highly durable.
4. Medium finish requirements, Primecoat or epoxy level paint and shower coating, sealed concrete floors with carpeted segments, security ceilings or commercial ceilings where non-accessible. Impact resistant laminate with solid surface countertops. Clinical areas to receive seamless bacteriostatic flooring with integral base coves.

### 8.000 MEDIUM SECURITY HOUSING

1. Interior walls to be grade 1 (maximum) security CMU walls at secure perimeter. Cell construction to be precast, tilt-up, steel or modular construction or partial height CMU walls separating dormitory sleeping areas.
2. Medium level, high. Detention grade doors and locks, windows in cell to be detention level. Steel detention furnishings and stainless-steel combination toilets. Molded plastic furniture in dayrooms.
3. Highly durable.
4. Minimum finish requirements, Primecoat or epoxy level paint and shower coating, sealed concrete floors with carpeted segments, security ceilings or commercial ceilings where non-accessible. Solid surface or high impact plastic casework.

### 8.000 CLOSE CUSTODY OR SPECIAL MANAGEMENT HOUSING

1. Interior walls to be grade 1 (maximum) security CMU walls at secure perimeter. Cell construction to be precast, tilt-up, steel or modular construction.
2. Maximum level. Detention grade doors and locks, windows in cell to be detention level. Steel detention furnishings and stainless-steel combination toilets. Molded plastic furniture in dayrooms.
3. Highly durable.
4. Minimum finish requirements, Primecoat or epoxy level paint and shower coating, sealed concrete floors, carpet tile flooring in dayrooms, security ceilings or commercial ceilings where non-accessible. Solid surface or high impact plastic.

### 8.000 MINIMUM SECURITY/RE-ENTRY

1. Interior walls to be grade 1 (maximum) security CMU walls at secure perimeter. Cell construction to be precast, tilt-up, steel or modular construction.
2. Medium level. Detention grade doors and locks. Molded plastic detention furnishings and powder coated stainless steel security fixtures.
3. Highly durable.
4. Medium finish requirements, Primecoat or epoxy level paint and shower coating, sealed concrete floors with carpeted segments, vandalism resistant ceilings or commercial ceilings where non-accessible. Solid surface or high impact plastic.

### 8.000 MEDICAL AND MENTAL HEALTH HOUSING

1. Interior walls within housing units to be grade 1 (maximum) security CMU walls. Cell construction to be precast, tilt-up, steel or modular construction. Interior framing to be CMU at supervised locations.
2. Medium level. Detention grade doors and locks, windows in cell to be detention level. Molded plastic Steel detention furnishings and stainless-steel combination toilets.
3. Highly durable.
4. Medium finish requirements, Primecoat or epoxy level paint and shower coating, sealed concrete floors with carpeted segments, security ceilings or commercial ceilings where non-accessible. Impact resistant laminate with solid surface countertops. Clinical areas to receive seamless bacteriostatic flooring with integral base coves.

### 9.000 PROGRAMS AND SERVICES

1. Interior walls to be grade 2 (medium) security CMU walls at security points and traditional CMU walls or metal stud framing with gypsum.
2. Medium level. Detention grade doors and locks at security control points and commercial grade doors and locks at all other locations.
3. Highly durable.
4. High finish requirements, epoxy level paint and coatings, resilient tile, luxury vinyl tile, and carpet tile, vandalism resistant ceilings or commercial ceilings where non-accessible. Impact resistant laminate casework with solid surface countertops. Commercial grade furniture, as required for program function.

### 10.000 TECHNICAL TRAINING

1. Interior walls to be CMU walls.
2. Minimum level. Detention grade doors and locks at security points and commercial grade doors and locks at all other locations.
3. Highly durable.
4. Epoxy level paint and coatings, epoxy flooring or sealed concrete flooring.

### 11.000 FOOD SERVICES

1. Interior walls to be CMU.
2. Minimum level. Detention grade doors and locks at security points and commercial grade doors and locks at all other locations.
3. Highly durable.
4. Epoxy level paint, cementitious urethane concrete floor coating with integral base within kitchen area, epoxy flooring within all other areas, vandalism resistant ceilings or commercial ceilings where non-accessible. Stainless steel casework and countertop within kitchen, impact resistant laminate and solid surface within inmate areas. Detention style furniture for inmate dining.

### 12.000 LAUNDRY SERVICES

1. Interior walls to be CMU.
2. Minimum level. Detention grade doors and locks at security points and commercial grade doors and locks at all other locations.
3. Highly durable.
4. Epoxy level paint, epoxy floor coating with integral base, vandalism resistant ceilings or commercial ceilings where non-accessible. Stainless steel casework and countertop.

### 13.000 WAREHOUSE

1. Interior walls to be CMU.
2. Non-secure.
3. Medium durability.
4. Sealed concrete flooring, steel storage rack system, chain link unit separators.

### 14.000 FACILITY MAINTENANCE AND STORAGE

1. Interior walls to be CMU.
2. Minimum level. Detention grade doors and locks at security points and commercial grade doors and locks at all other locations.
3. Medium durability.
4. Sealed concrete flooring.



**15.000 SITE ENTRY, VEHICLE SALLYPORT AND PARKING**

1. Pre-manufactured steel building with secure perimeter interior wall or insulated precast sandwich panel with steel or concrete structure.
2. Non-secure level.
3. Medium durability.
4. Auto-shop appropriate equipment and finishes.

**16.000 CENTRAL UTILITY PLANT**

1. Interior walls to be CMU.
2. Medium security level.
3. Medium durability.
4. HVAC, plumbing, electrical systems equipment.



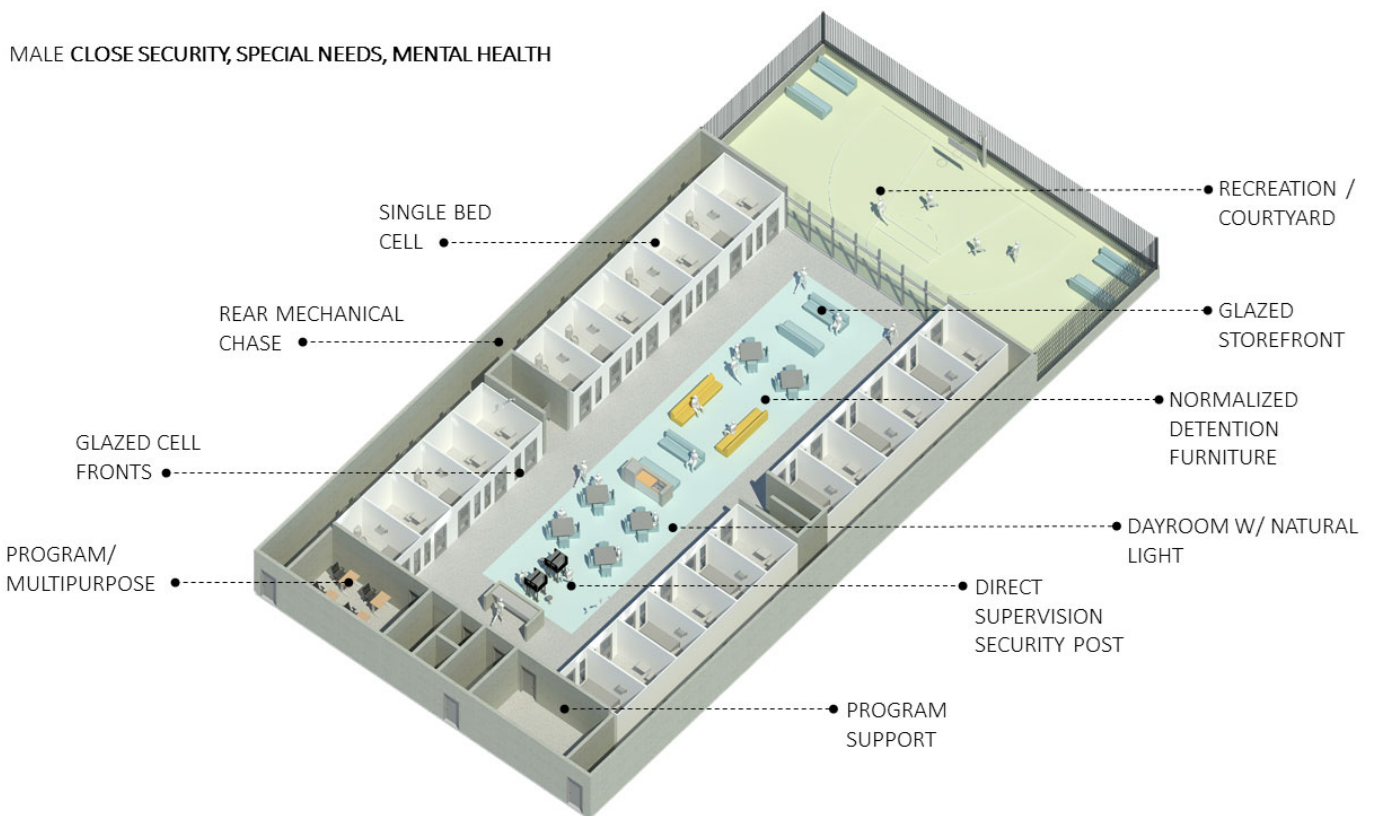
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## Housing Unit Test Fit

*The following housing unit test-fits are intended to provide general guidelines for each arrangement. Actual housing unit design will vary, as required, during the development of a future project.*

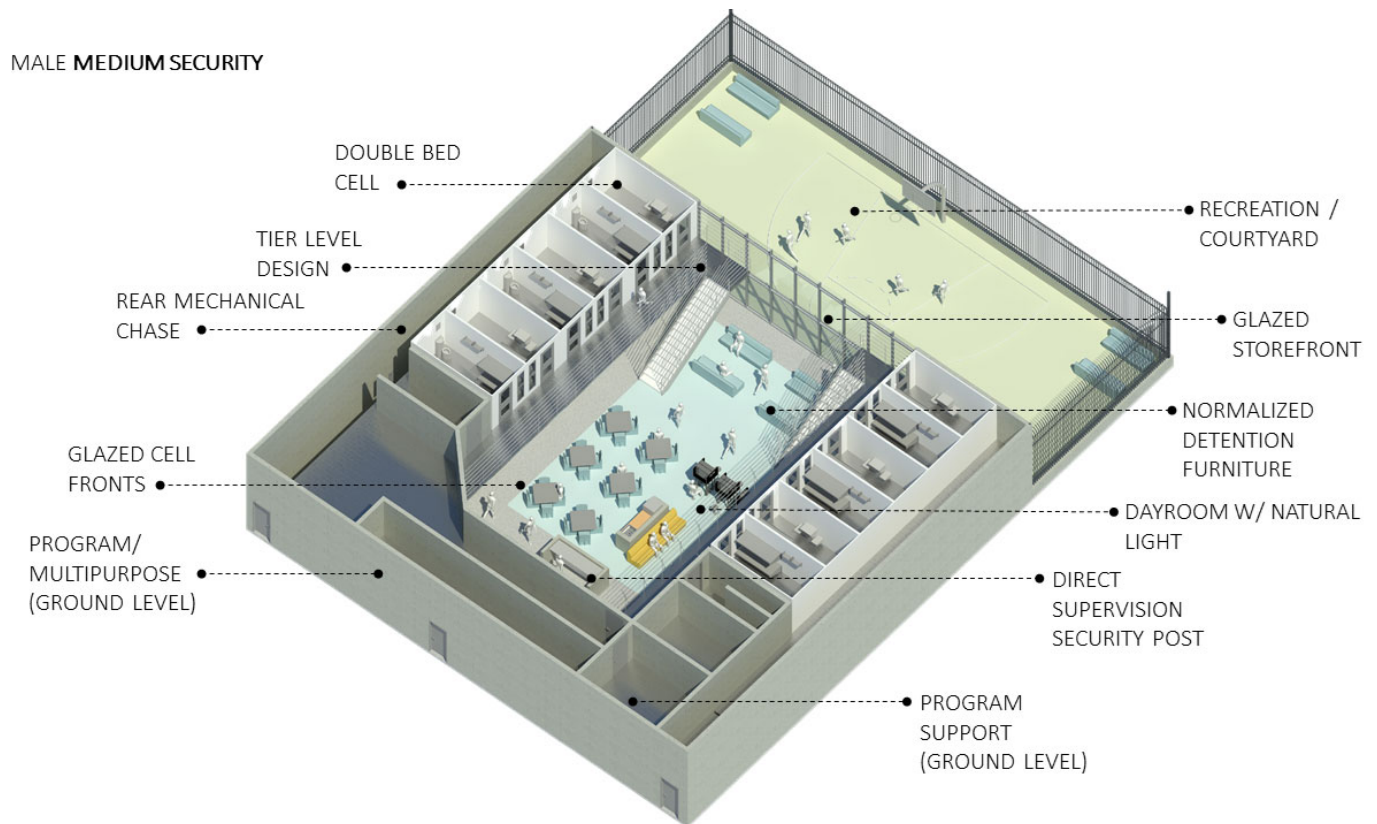
### MALE CLOSE SECURITY, SPECIAL NEEDS, MENTAL HEALTH

At approximately 7,600 gross square feet, the male close, special needs, and mental health security housing unit is comprised of 4 main areas on a single level for universal mobility and security as well as all ligature-resistant construction and furniture. The unit houses 24 beds with 1-bed sleeping areas which include a single floor mounted bed, desk and seat, and partitioned plumbing fixture to meet PREA, ADA and ACA requirements. The front of the sleeping areas are glazed for maximum supervision and security. Within the housing unit a large dayroom is centered between the sleeping areas. This area is sized to meet all state and federal requirements, along with a focus on natural light and acoustics for a safe yet rehabilitative environment. A security desk is placed at the entrance of the unit and provides a direct supervision model of design. Also, towards the front of the unit, programs and additional support spaces are provided for offender education, rehabilitation, counseling, medical care, and video visitation. At the rear of the unit, a large glazed wall opens to a secured recreation space. This allows offenders maximum outdoor time without additional staffing.



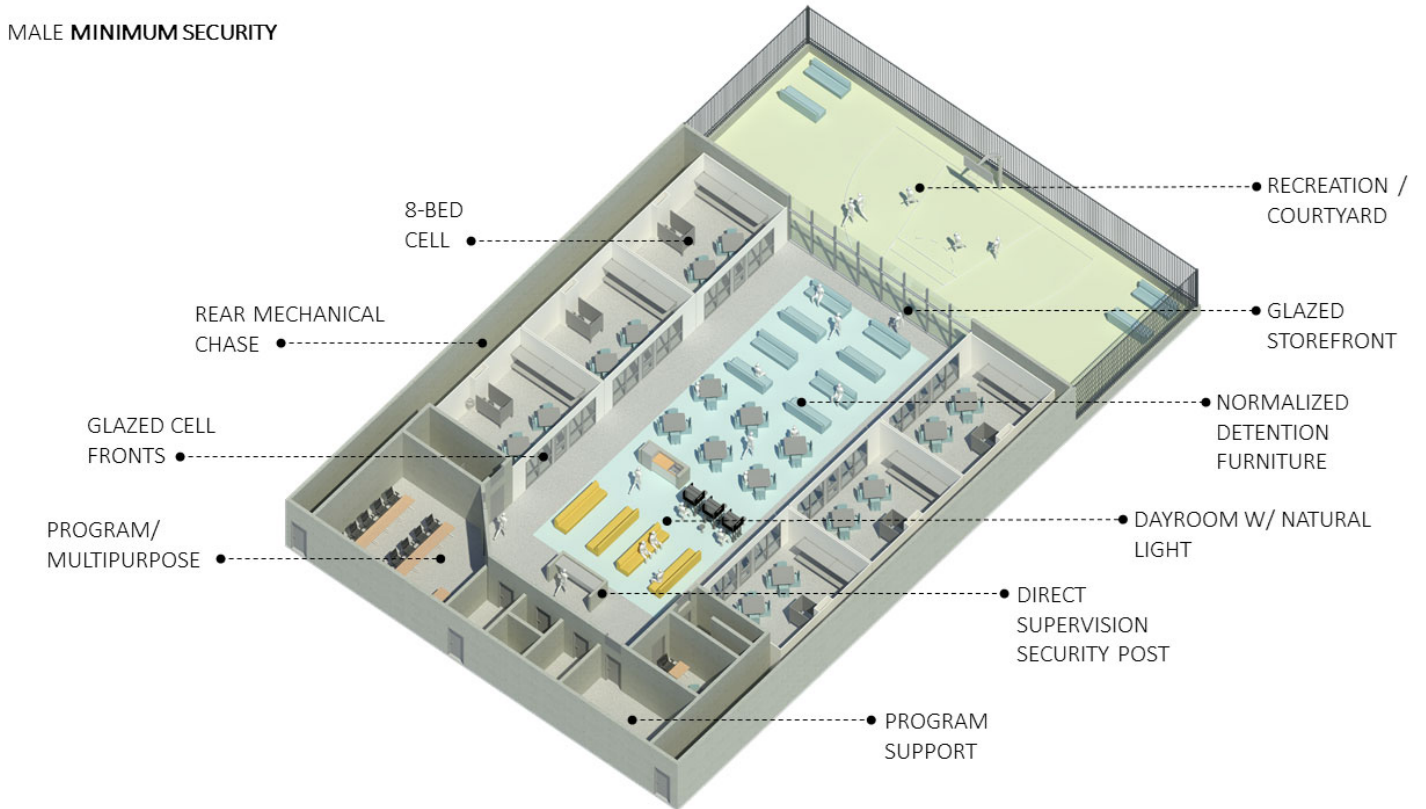
**MALE MEDIUM SECURITY**

At approximately 9,000 gross square feet, the male medium security housing unit is comprised of 4 main areas with an upper and lower tier with 2 stairs for egress. The unit houses 48 beds with 2-bed sleeping areas which include double bunking, areas for storage, 2 seats with a desk, and partitioned plumbing fixture to meet PREA and ACA requirements. ADA sleeping areas would be located on the main level of the housing unit. The front of the sleeping areas are glazed for maximum supervision and security. Within the housing unit a large dayroom is centered between the sleeping areas. This area is sized to meet all state and federal requirements, along with a focus on natural light and acoustics for a safe yet rehabilitative environment. A security desk is placed at the entrance of the unit and provides a direct supervision model of design. Also, towards the front of the unit, programs and additional support spaces are provided for offender education, rehabilitation, counseling, medical care, and video visitation. At the rear of the unit, a large glazed wall opens to a secured recreation space. This allows offenders maximum outdoor time without additional staffing.



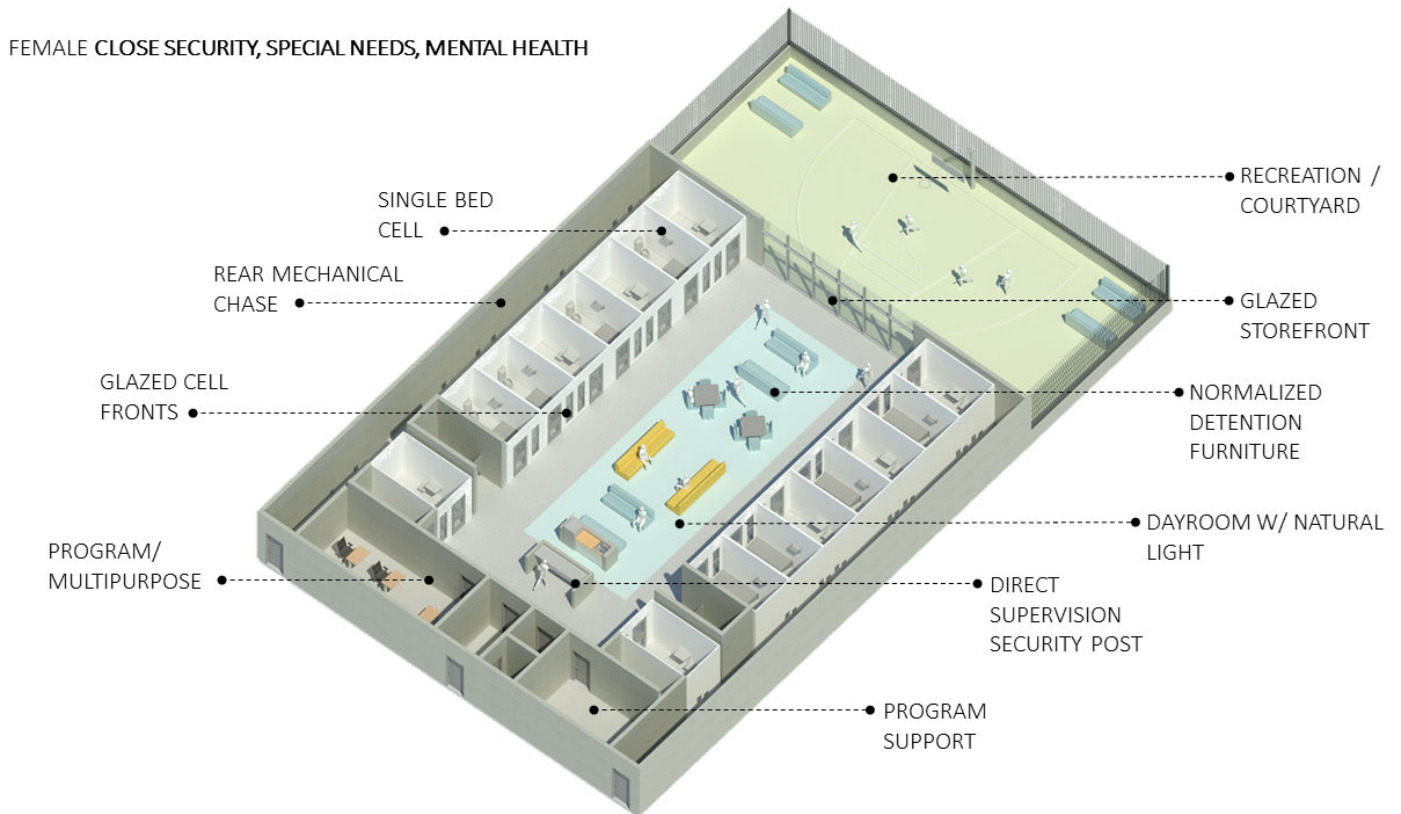
**MALE MINIMUM SECURITY**

At approximately 8,000 gross square feet, the male minimum security housing unit is comprised of 4 main areas on a single level for universal mobility and security. The unit houses 48 beds with 8-bed sleeping areas which include double bunking, areas for storage, tables for playing games or eating, and partitioned plumbing fixtures to meet PREA, ADA and ACA requirements. The front of the sleeping areas are glazed for maximum supervision and security. Within the housing unit a large dayroom is centered between the sleeping areas. This area is sized to meet all state and federal requirements, along with a focus on natural light and acoustics for a safe yet rehabilitative environment. A security desk is placed at the entrance of the unit and provides a direct supervision model of design. Also, towards the front of the unit, programs and additional support spaces are provided for offender education, rehabilitation, counseling, medical care, and video visitation. At the rear of the unit, a large glazed wall opens to a secured recreation space. This allows offenders maximum outdoor time without additional staffing.



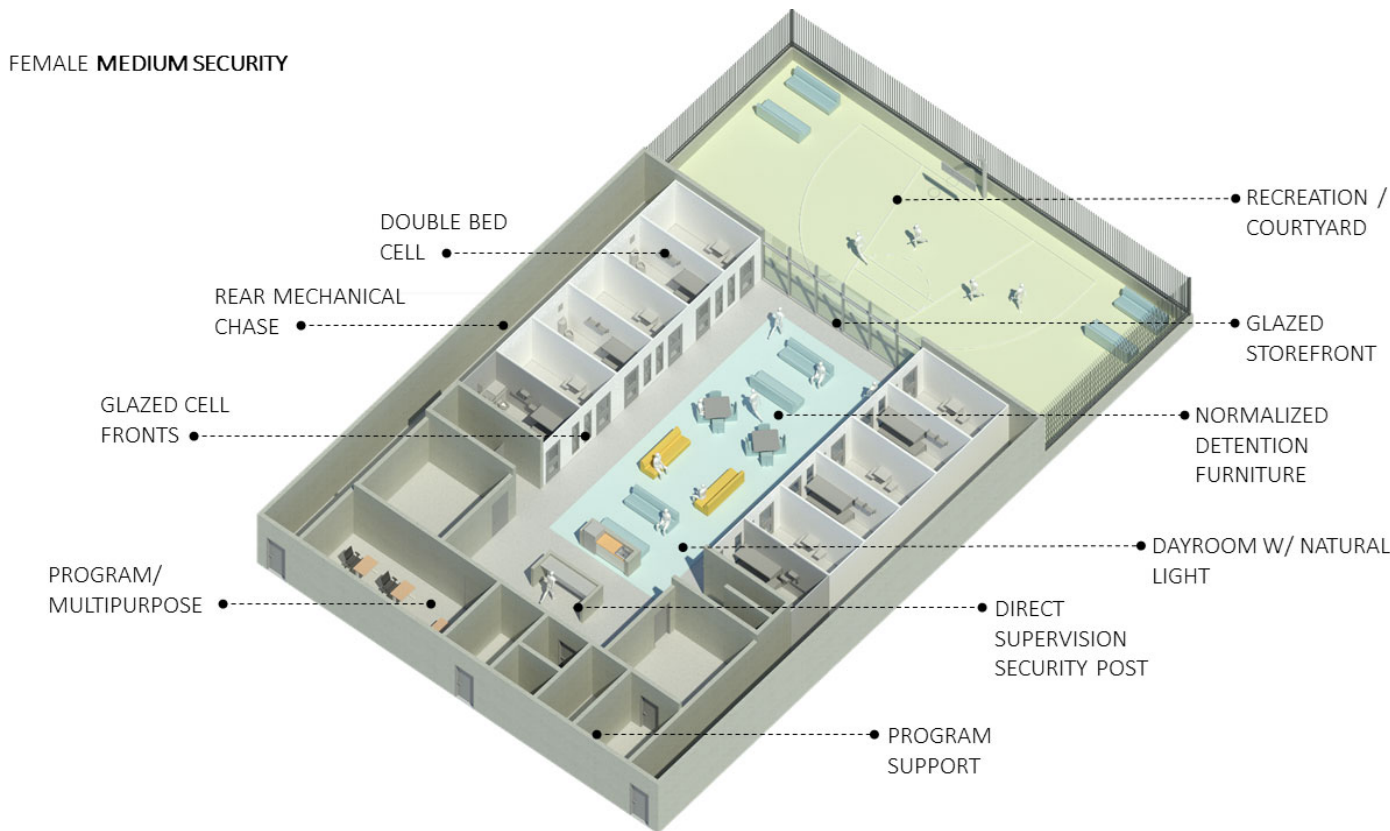
**FEMALE CLOSE SECURITY, SPECIAL NEEDS, MENTAL HEALTH**

At approximately 6,000 gross square feet, the female close, special needs, and mental health security housing unit is comprised of 4 main areas on a single level for universal mobility and security as well as all ligature-resistant construction and furniture. The unit houses 16 beds with 1-bed sleeping areas which include a single floor mounted bed, desk and seat, and partitioned plumbing fixture to meet PREA, ADA and ACA requirements. The front of the sleeping areas are glazed for maximum supervision and security. Within the housing unit a large dayroom is centered between the sleeping areas. This area is sized to meet all state and federal requirements, along with a focus on natural light and acoustics for a safe yet rehabilitative environment. A security desk is placed at the entrance of the unit and provides a direct supervision model of design. Also, towards the front of the unit, programs and additional support spaces are provided for offender education, rehabilitation, counseling, medical care, and video visitation. At the rear of the unit, a large glazed wall opens to a secured recreation space. This allows offenders maximum outdoor time without additional staffing.



**FEMALE MEDIUM SECURITY**

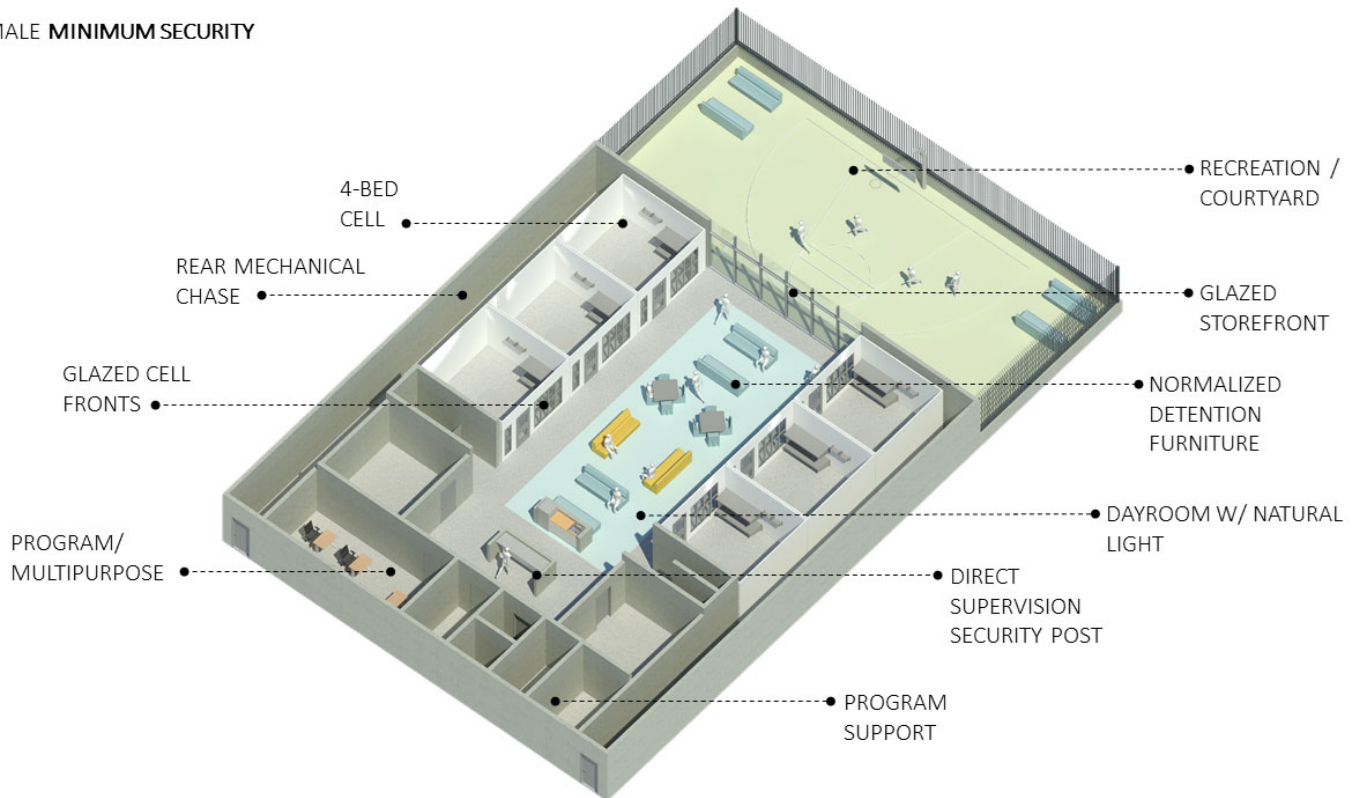
At approximately 5,600 gross square feet, the female medium security housing unit is comprised of 4 main areas on a single level for universal mobility and security. The unit houses 24 beds with 2-bed sleeping areas which include double bunking, areas for storage, 2 seats with a desk, and partitioned plumbing fixture to meet PREA, ADA and ACA requirements. The front of the sleeping areas are glazed for maximum supervision and security. Within the housing unit a large dayroom is centered between the sleeping areas. This area is sized to meet all state and federal requirements, along with a focus on natural light and acoustics for a safe yet rehabilitative environment. A security desk is placed at the entrance of the unit and provides a direct supervision model of design. Also, towards the front of the unit, programs and additional support spaces are provided for offender education, rehabilitation, counseling, medical care, and video visitation. At the rear of the unit, a large glazed wall opens to a secured recreation space. This allows offenders maximum outdoor time without additional staffing.



**FEMALE MINIMUM SECURITY**

At approximately 5,600 gross square feet, the female minimum-security housing unit is comprised of 4 main areas on a single level for universal mobility and security. The unit houses 24 beds with 4-bed sleeping areas which include double bunking, areas for storage, a table for playing games or eating, and partitioned plumbing fixtures to meet PREA, ADA and ACA requirements. The front of the sleeping areas are glazed for maximum supervision and security. Within the housing unit a large dayroom is centered between the sleeping areas. This area is sized to meet all state and federal requirements, along with a focus on natural light and acoustics for a safe yet rehabilitative environment. A security desk is placed at the entrance of the unit and provides a direct supervision model of design. Also, towards the front of the unit, programs and additional support spaces are provided for offender education, rehabilitation, counseling, medical care, and video visitation. At the rear of the unit, a large glazed wall opens to a secured recreation space. This allows offenders maximum outdoor time without additional staffing.

FEMALE MINIMUM SECURITY





## Recommendations

After due consideration of all schemes, the HOK team collectively determined that some of these schemes have benefits over others. Importantly, one should consider the key goals of this master plan exercise in making those determinations. In short, they are:

- Determine the short and long term needs of the Vermont corrections system.
- Consider the best environments of positive outcomes for all stakeholders.
- Consider the condition and opportunities for expandability of existing facilities.
- Evaluate operational costs, with a focus on staff to inmate ratios.
- Consider the size, feasibility, sequencing and overall cost impacts of any plan.
- Create a new, unique facility for women.
- Create re-entry facilities for men and women.
- Support current and future programs for DOC.
- Solve and improve code and standard compliance, including ADA and ACA.
- Consider operations with county partners and medical needs for inmates, overall transportation issues.

Upon these considerations, HOK has determined that Option C is the best option. It implements a new efficient facility that improves the staff to inmate ratio, best utilizes the existing facilities and provides an even geographic service for the State of Vermont. This option creates a new women’s facility and closes antiquated, inefficient, smaller facilities in the western half of the State. This option also provides a new treatment-oriented facility for men, expanding on existing facilities in the south and the northeast.

The second-best selection would be the all new one facility, Option A. This would set Vermont up with a state-of-the-art setting for the next few decades and would be the most staff efficient option. The drawbacks include the higher capital costs as well geographic challenges created by so few centralized facilities.

The least desirable option appears to be Option E. While this option would spend the least capital costs of all of these, it also changes the setting within the DOC the least and preserves many of the same current challenges that system struggles with. The high staffing costs at these older facilities is an especially difficult circumstance and would not be alleviated much in this plan. Further, these changes would be over multiple projects, resulting in a high cost per new bed compared with a newer facility while increasing the operating costs of the system.

**End of part II**