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BUKER BUILDING STUDY

New London, New Hampshire
PROJECT #18495

December 07, 2018

FINAL REPORT – DRAFT FOR OWNER REVIEW





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EXECUTIVE SUMMARY

Project Scope

The Town of New London contracted Harriman to review the adequacy of facilities that house its Police and Recreation Departments. Harriman assessed both the facility condition and space needs to determine the potential of Whipple Hall and the Buker Building to be used by the Police Department and/or the Recreation Department. Although the Request For Proposal issued by the Town included review of potential alternative sites, Harriman's contract with the Town did not include site selection beyond investigating a residential parcel next to the Buker Building. Program space on the upper level of Whipple Hall, used as public assembly space, was included in the space needs but not considered for use by a single department or for renovation of any kind.

The existing facility evaluation is intended to provide information to help determine the feasibility, cost, complexity and outcome of renovating and upgrading the New London Police and Recreation Departments' existing spaces. This facility review focuses solely on the physical condition of the facility and its physical capacity to support the police functions within it. Considerations of space needs and building program occur in the Space Needs Assessment and Program Report.

General Description

The police station occupies the basement of Whipple Hall as well as the majority of the connected Buker Building. Whipple Hall is 6,104 GSF which includes the mezzanine area. It was built in 1918 and is on the New Hampshire Register of Historic Places. The Buker Building includes three parts a 2-story building constructed in 1985 which is 3,984 GSF and two additions, both single story and built in 2000, with a combined area of 4,199 GSF.

The facility was constructed in 1918, 1985, and 2000 is in need of material upgrades for finishes, lighting, and equipment. Low cost materials have not held up well over the building's history. Building systems, especially mechanical, do not operate well enough to provide a comfortable indoor environment for users. Further, most major building systems do not meet current code standards for critical facilities such as fresh air, ventilation of evidence areas, temperature controlled zones, protected electrical distribution and hardened telecommunications systems.

The building has deficiencies in life safety with regard to proper exiting requirements and exit signage. Although the most recent addition was built in 2000, the facility lacks appropriate vertical circulation in the form of an elevator per the Americans with Disabilities Act (ADA) that allow the facility to be functionally utilized by persons with mobility impairments. Other life safety issues include lack of a sprinkler system or fire rated doors between assembly and business spaces as well as holes in fire rated partitions in the attic.



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The site is also deficient in many areas that affect the function of law enforcement agencies including multiple ingress/egress locations, ample parking, and separation of public and fleet vehicles.

A detailed evaluation of the facility was completed in 2014 which documented many of the facility concerns but did not specifically address police operations or space needs.

Recommendation

Based on the existing site and facility evaluation, it is strongly recommended that the Town of New London focus its development efforts on design and construction of a new stand-alone Police Facility and a new stand-alone Recreation Facility on a new site location that is yet to be determined.



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Section 2 FACILITY EVALUATION

- *Site Assessment*
- *Architectural Assessment*
- *Mechanical and Plumbing Systems Assessment*
- *Electrical Systems Assessment*
- *Building Condition Summary Table*



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SITE EVALUATION

Existing Site Description



Southwest view of Whipple Hall from Town Green.



View of Buker Building from Seamans Road

Whipple Hall and the attached Buker Building sit on the eastern end of the New London Town Green. The buildings are bordered by Main Street on the southern edge and Seamans Road along the eastern edge. Primary access to Whipple Hall is from Main Street with a vehicular exit onto Seamans Road. This parking area connects to police department parking along the west side of Whipple Hall that connects to a sallyport entrance that is part of the Buker Building. There is on-street parking and unloading along Seamans Road as well as dedicated police parking on the north side of the Buker Building. Site access is a driveway that is shared with the abutting residential property.



Buker Building east side



Buker Building west side

Limited space on the site, sloping topography, and multiple additions to the Buker Building have created site drainage issues for the entire northern edge of the Buker Building. The Police Department, which occupies the northern side of the Buker Building, experiences flooding on both floor levels due to poor site drainage at the building and at paved parking areas. In addition, the



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site lacks the typical hardening and security that accompany critical facilities such as public safety buildings. Site elements including the sallyport garage door, communications tower, emergency generator, and police fleet vehicles are typically separated from public areas by fencing and/or barriers.

Recommendations

To improve the existing site conditions, significant site work is recommended to improve drainage away from the building and to improve site security for critical infrastructure such as the communications tower and emergency generator. Additional parking upgrades are also recommended to improve separation of the police fleet and public vehicles.



Police sallyport



Police parking looking West to ward Town Green



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ARCHITECTURAL SYSTEMS EVALUATION

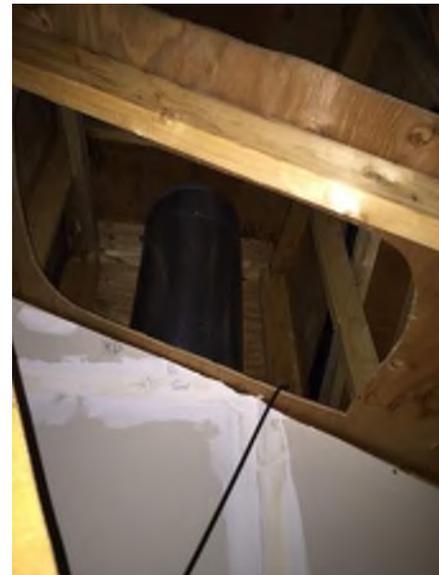
Interior Systems Descriptions

Interior partitions are a mix of CMU (concrete masonry units) and drywall over stud framing. Interior finishes are generally in fair-to-good condition. The materials, especially the CMU, is durable enough to withstand the abuse of a 24/7 facility although there are areas where the drywall partitions are in fair-to-poor condition. The facility has been renovated many times and, concurrent to a facility study performed in 2018, material and product choices have not always been appropriate to serve the building's use.

Interior finishes that are in need of upgrade include ceiling tiles, flooring and drywall ceiling areas. There is a range of acoustic ceiling tile in poor condition. Interior fire separation, especially in the attic of the newest portion of the Buker Building, was observed to be compromised with large holes and gaps. These conditions should be repaired immediately to satisfy life safety codes and ensure occupant welfare.



Corridor between Buker and Whipple



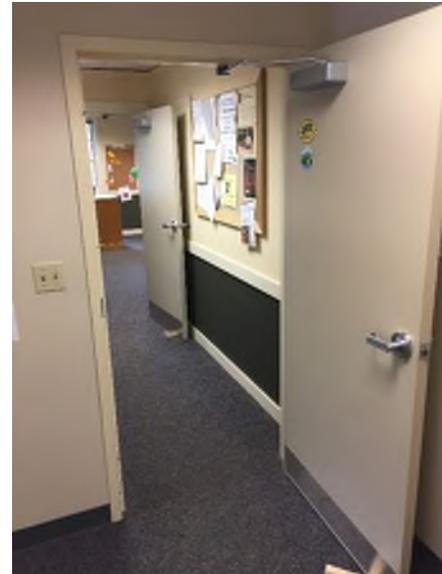
Large holes in fire rated partition locations



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Police interior



Recreation interior

Exterior Systems Evaluation

The Whipple Hall is a masonry building and the Buker Building construction is a combination of concrete/concrete block, wood framing, and brick veneer. The older portions of Buker and Whipple Hall are constructed with higher quality than the recent Buker additions. The lower quality of the additions built in 2000 make renovation options more costly and complicated.

Overall the brick veneer on the Buker Building appears to be in good condition, although the exterior wall assemblies including the roof, are not well constructed from both a material quality perspective and a thermal performance perspective. Any renovation efforts should consider significant upgrades to the exterior envelope to improve energy efficiency and structural upgrades to meet critical facility code requirements.

Wood framed canopies protecting exterior doors are in fair condition. The exterior egress walkway over the sallyport roof has a small set of stairs that have pulled away from the building and should be replaced.



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Front Entrance - metal door and wood framed canopy



Dispatch Wall - former penetration patched



Exterior of 2000 Buker Addition



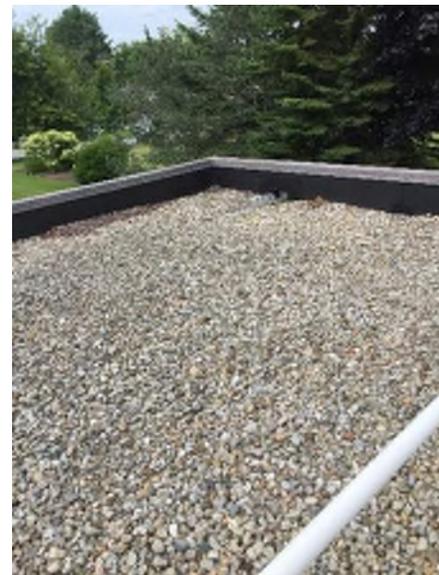
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Whipple Hall and unprotected sallyport door

Roof Evaluation

The existing roof was mostly visible but not accessible at the time of the facility evaluation. The asphalt shingles on the original portion of the building appeared to be relatively new and in good condition. The sallyport portion of the building has a flat roof with a walkable egress path on top. Ice dams were reported at the Buker Building roof.



Sallyport roof



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Rooflines at Buker connector to Whipple



Buker roof with Whipple in background

Considerations for Renovation and Expansion

Complete renovations for facilities in the condition of the Buker Building are complicated and costly. Since the space would need to be completely reconfigured to support the current program, work would include:

- Exterior trenching, piping, and backfill with drainable material to alleviate water infiltration issues.
- Complete interior demolition and removal of all finishes, fixtures, wiring, piping, and equipment.
- Insulation upgrades to building envelope, specifically at the roof and potentially within the exterior wall cavity.
- Trenching of existing slab to accommodate locker rooms, toilet rooms, and other plumbing.
- Structural improvements as required to meet critical facilities design standards.
- Site improvements for increased parking for visitors and staff would be required.
- Upgrades and improvements to the telecommunications system.

For all the above mentioned scope items, an addition would also need to be constructed to meet current and future space needs.

For facilities such as this one, the decision to renovate will most likely create an expensive design and construction solution that yields an unsatisfactory result. Leveraging new construction on a new site location will provide more flexibility to layout the site, the building, and control cost. For these reasons, Harriman strongly recommends against a renovation and addition solution.



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MECHANICAL

Introduction:

The following report provides an overview of the existing conditions of mechanical systems serving the Police Department and Recreation Department office/community space by visual observation. The report was developed by Harriman Architects and Engineers.



Front Façade of the Whipple Building

The Building was built in 1917, with additions added at various times. The Police Station is one of the later additions to the building. The building is a brick facade with wood roof structure.

HVAC [Heating, Ventilation and Air Conditioning] Areas:

Boiler:



The Present Gas-Fired Cast Iron Sectional Boiler



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The present boiler seems to be oversized for the building, but a computer calculation would need to be done to verify. The radiation connected to the hot water heating system is not properly selected and is in numerous locations undersized for the load. At present the boiler appears to be vented into one of the original brick chimneys. This is not permitted when the boiler is burning gas [LP]. The chimney should be lined. A redesign of the building would permit the use of lower temperature hot water and a much more efficient heating system – condensing gas boilers.

Fuel:

The use of LP gas for heating is the best available fuel for this building.

HVAC:



One of Numerous Condensing Units – some Non-Functional

The building is heated, ventilated and cooled by air handlers located in the unheated attics. These units are poor quality, contain hot water coils that have frozen and flooded the building, are located in places almost impossible to service and are failing and worn out. A total redesign of the building HVAC is in order. The ventilation will be challenging as there is very little space available to install ducts. The entire system should be designed to use VRF with ERV(s) to ventilate the entire building. The Dispatch Center AC system is not low ambient and will not function as required during a cold winter day.



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Plumbing:



Single Lavatory in Locker Room for entire Police Force

The system appears to be limited in number of fixtures and available hot water. A redesign should examine these areas and correct them as required.

Sprinkler System:



Sprinkler Entrance in the same space as the 911 Electronics



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The sprinkler riser space should be relocated or the electronics in that space relocated. The sprinkler backflow preventer has already dumped water on that floor and could wipe out the 911 Call Center if it happens again. The sprinklers appear to only cover the lower level of the Police Station. With the size of the entrance it should be able to cover the entire facility.



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ELECTRICAL

Introduction:

The following report provides an overview of the existing conditions of the Police Department and Recreation Department office/community space by visual observation. The report was developed by Harriman Architects and Engineers.



Front Entrance to the Police Station

The Building was built in 1917, with additions added at various times. The police station is one of the later additions to the building. The building is a brick facade with wood roof structure.

Critical Operation Areas:

The New London Police Station dispatches for Town of New London and the surrounding area. The National Electrical Code (NEC) list power systems requirements for Critical Operation Areas i.e. Critical Operations Power Systems (COPS) including but not limited to the following:

- Wiring shall be protected from physical damage. This is important to maintain the integrity of the cable for both accidental damage of the cable or an active event. It has been reported that there was work being done in the building and data wiring was disturbed which caused a loss of computer networking.
- Feeders shall have a 2-hour fire rating. This is important for COPS to maintain the function of the power system in the event of a fire in the building.
- Receptacles shall be identified with a distinctive color or marking so as to be readily identifiable. If the receptacles are readily identifiable the critical equipment will have power and not be accidently plugged into the wrong (normal power) receptacle.
- Feeder distribution equipment shall be located in a space with a 2-hour fire resistance



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rating. This is important for COPS to maintain the function of the power system in the event of a fire in the building.

- Surge protection is required at all voltage levels. Electronic equipment is sensitive to power surges. Installing surge protection adds a level of protection in the event of lightning strike, a car accident taking down a utility pole or a similar incident.
- Where the COPS are supplied by a single generator a means to connect a portable shall be provided.
- When the generator is being worked on a portable generator should be available to connect to the building to maintain the power to the critical systems in the event of a loss of utility power.
- The alternate power shall be capable of operating the COPS for 72 hours.
- 72 hour fuel storage will give the community time to provide for the relocation of the critical operations or at the very least the resupply of the fuel to operate the generator.

The existing facility does not meet the above requirements with the possible exception of the operating time of the generator.

Service Entrance:

The electrical service entrance comes in underground from a pole mounted 75kva transformer to an electrical room next to the boiler room terminating in a 400amp self- enclosed circuit breaker. The self-enclosed circuit breaker is the main for the building serving both the Police Department and the Recreational Department. The 400amp main circuit breaker feeds a 600amp ATS (automatic transfer switch) which feeds a 400amp panelboard rated at 240/120volt 1PH, 3W. There is an existing exterior generator feeding the automatic transfer switch supplying backup power to the entire building. This is very beneficial to the building but limits the generator run time based on the fuel storage of the generator. The utility meter, a Centron #72 983 989, is located on the outside of the building with the CT (current transformers) located inside the building. Because the CT's are within the building when the utility calibrates the CT's access to the building is required. The utility PSNH (Eversource) pole serving the building is pole number 61-1, (302/1).

The electrical service does not meet NEC 708 Critical Operations Power Systems (COPS). This building should have the power system upgraded to conform to the NEC 708 where this facility is a critical operation for the Town of New London and the surrounding communities.



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400amp Main panelboard-automatic transfer switch -Enclosed circuit breaker 400A



75kw diesel generator – Olympian with a model year of 1999

Lighting:

The buildings general lighting consists of Incandescent chandeliers in the recreation meeting room. The stage has a homemade system of flood lamps, mounted to wood backboard, with the wiring connections exposed on the back. Code required line voltage connections are made within a junction box. The police station has T8 fluorescent 2x4 recessed parabolic troffers installed in



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offices, the front entry area and similar spaces and surface fixtures in some of the smaller rooms. The flagpole light appears to be a building mounted flood light. There are high intensity discharge (HID) wall packs and floods mounted on the building for security and parking lot lighting. There are a variety of light sources on site requiring maintenance. LED light sources are longer life and more energy efficient requiring less maintenance. Lighting controls for the police station are light switches on the walls. The stage has some dimming switching for the incandescent fixtures.

Exit signs and Emergency Lighting:

Some of the exit signs are brass face with red letters (in the old Town Hall area) and others are plastic housing with red letters. The exit signs with the exception of the brass faced exit signs appear to be in good condition and indicate the egress paths. The emergency battery units in the building have been replaced recently (reported as within the last six months) and all appear to be in good condition. The building appears to have the proper coverage of emergency lighting.

Small Power:

There are receptacles located throughout the building. (It was reported knob and tube wiring may still be in the building in the old Town Hall area, this condition was not observed.)

Fire Alarm:

The fire alarm panel located in the dispatch room is a Mircom series 1000. This is a conventional (zoned) fire alarm control panel. The fire alarm notification appliances have the clear strobe and meet the ADA for visual requirements although coverage is lacking. Pull stations are located at doors leading to the exterior. There are smoke detectors located in the corridors. There is not a smoke detector in the dispatch area (i.e. in the vicinity of the fire alarm control panel which is required by code).

Clock system:

Not applicable.

Technology:

The telephone/data demarcation is in a utility closet within a conference room in the basement. The Main Distribution Frame (MDF) with the dispatch equipment is located in the basement with the sprinkler main for the building. The main distribution frame room is cooled with a wall fan installed in the wall common with an egress stair. The egress stair is compromised with this opening. The data wiring is run indiscriminately throughout the building, typical within the attic space.

Fiber optic comes in from the same utility pole as the electrical service underground to the electrical room. Fiber optic runs through the building to the MDF (server) room which is on the other side of the building.

The building has a radio tower behind the building. The cables are protected from falling debris



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but are exposed otherwise. The radio wiring appears to run in a plumbing pipe to enter the building.



Data wiring and some nonmetallic sheath power cable



MDF room for the dispatch area. This room also is the radio tower entrance room and the sprinkler entrance room.



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Security:

There are security key pads to access secure spaces. There are a few CCTV cameras located within the building and on the exterior of the building.

BUILDING CONDITION SUMMARY TABLE

Tuesday, July 31, 2018

Summary Information							Building Exterior							Life Safety					Interior					19 Total Review Categories		Overall Condition Rating		
BUILDING NAME	ADDRESS	YEAR CONSTRUCTED	CONSTRUCTION TYPE	BUILDING USE	BUILDING AREA (GSF)	TOTAL # OF FLOORS	Exposed Foundation	Brick / Masonry	Siding / Cladding	Windows	Doors	Canopies / Overhangs	Roof / Flashing	Fire Alarm / Strobes	CO / Smoke Detector	Life Safety: Exit Signs	Life Safety: Emergency Lighting	Condition of Walls	Base	Flooring	Ceiling	Stairs	Handrails	Doors	Glazing		Total Score	Building Average Rating
Whipple Hall Buker Building Buker Additions	429 Main St 25 Seamans Rd	1918/1985/2000	Masonry & Masonry/Wood	Office & Assembly	6,104 3,984 4,199	2	3	2	2	1.5	2	2	1.5	2	2	3	5	2.5	3	2	2.5	1.5	1.5	2	3	44.0	2.32	Fair

Summary Information							Electrical			Lighting		Mechanical				Plumbing					Structure				38 Total Review Categories		Overall Condition Rating	
BUILDING NAME	ADDRESS	YEAR CONSTRUCTED	CONSTRUCTION TYPE	BUILDING USE	BUILDING AREA (GSF)	TOTAL # OF FLOORS	Service Entrance	Panel / Distribution	Emergency Power	Lighting	Lighting Controls	Boiler	Fuel	HVAC	Vented Police area	Toilet Rooms	Kitchen	Domestic Water	Sprinkler Riser	Sprinkler Distribution	Showers	Observable Steel	Observable Masonry	Headers / Lintels	Misc Metals / Stairs	Total Score		Building Average Rating
Whipple Hall Buker Building Buker Additions	429 Main St 25 Seamans Rd	1918/1985/2000	Masonry & Masonry/Wood	Office & Assembly	6,104 3,984 4,199	2	1	1	1	3	1	3	4	1	1	2	4	2	2	1	2	2.5	3	2	2	82.5	2.23	Fair

Rating Index	1 Poor	2 Fair	3 Good	4 Very Good	5 Brand New
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Comments

Structural. Concrete floor slabs at the joint between the 1985 Police Dept. building and the 2000 Addition (which is slab on grade) move independently. Wood framing in Whipple building is in good condition for its age. Wood framing in Buker building is in fair condition for its age.

Architectural: Exterior. Building exterior is fair-to-good condition. Exterior steps off Sallyport roof deck do not meet code, are not connected to the building, and need to be replaced. Site grading near the police entry creates flooding of the entry vestibule, secure lobby, toilet room, and administrative office. There are no ballistic rated windows on the building exterior (lack of building hardening).

Architectural: Interior. Fire rated partitions in attic area of 2000 Buker addition have several large openings and do not meet code. Interior finishes range from good condition to poor condition through all parts of each building. Upgrades to flooring, door hardware, and hard ceilings (gypsum board, p

Mechanical. Boiler is in good condition. Chimney needs a liner installed for natural gas fuel. Radiation is residential, not commercial, and is undersized for the required heating load. Buried LP tank and associate piping look good. HVAC system is not properly designed or installed and should be replaced or undergo substantial improvements. The ventilation system should be completely replaced. There are not enough toilet fixtures for the population using the facility. Domestic hot water does not meet demand for showers. The kitchen is not properly ventilated.

Electrical. The building does not meet 7 major criteria for Critical Operations Power Systems (COPS) as outlined in the National Electrical Code (NEC) 708. Service entrance, distribution, and emergency power categories are listed in poor condition since they do not meet the COPS standard. Lighting is older, less efficient technology but in good condition and lacks modern lighting controls.

Life Safety. Additional strobes are needed to meet ADA requirements. Brand new emergency lighting has been installed. Some older brass exist signs are faded and difficult to read.

Operational Notes: Additional facilities considerations need to be made for the critical facility use of the police department. Issues such as water infiltration (flooding), lack of building hardening, delicate / vulnerable communications infrastructure, limited run time for back up power, improper ventilation at evidence storage, and inappropriate HVAC throughout have a more detrimental impact on a critical facility that is required to remain operational 24 hours a day, 7 days per week, 365 days per year.



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Section 3 PROGRAM SUMMARY



Existing facility

Space Needs

The Space Needs Assessment (SNA) for Whipple Hall and the Buker Building is the first step in a feasibility study to provide a conceptual design for a new Police Facility. The needs assessment is an exercise that is independent of space planning and design. It is meant to objectively establish the current and future square footage needs for the New London Police Department and Recreation Department and become the basis for the new building program. It is worth noting that the Police Department program, due to its specialized nature and critical municipal use, is the primary focus of this assessment. The SNA is an accepted step in design and construction of police facilities by the International Association of Chiefs of Police as listed in their *Police Facility Planning Guidelines* publication. It is important to note that the assessment is not a wish list of spaces, it is based on the operational needs of all divisions of the New London Police Department. Similarly, the Recreation Department space needs are based on square footage required to operate their programs and services.

Although the Buker Building represents additional square footage that is mostly dedicated to the Police Department, none of the recent expansion efforts have sufficiently met the department's needs. In addition to staff increases, there have been many changes in policing strategies and professional standards which require more square footage than previously needed. Since the existing facility did not meet current needs at the time of construction, space for growth has not existed. The lack of space has impeded the ability of the New London Police Department to perform its duties efficiently and to the level of national professional standards.



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An example of meeting national professional standards is compliance with the Commission on Accreditation for Law Enforcement Agencies (CALEA). CALEA is the national standard for professional law enforcement best practices. Compliance with CALEA means that an agency meets rigorous standards, both administratively and operationally. The New London Police Department does not plan to become a CALEA accredited agency in the near future, however its operations would benefit from the ability to meet these national standards in a renovated or new facility.

The SNA process includes interviews with staff to understand how the New London Police Department and Recreation Department function and to determine the right types of spaces for them. A chart is developed that compares the facility's current square footage with what they actually need today, and what is expected for needs in the future. The chart is based on interview information, observations of the current facility and utilization of national standards. Space and staffing projections are made for 5, 10 and 20 years into the future. Projections are based upon several sources including Town growth projections, department staffing history and Town budget history for police department staffing. Planning for future growth is essential since most public facilities will be paid for using a 20 year bond. To provide a value to both taxpayers and the municipality, it is prudent to ensure the facility remains viable until after the bond is retired.

In general, both the New London Police Department and Recreation Department need roughly two times the space they currently have. The additional square footage provides spaces that do not currently exist, and are needed for both departments to conduct safe, professional, and efficient work.

Square footage values are based on Net Square Footage, or the space within the confines of four walls. To accommodate space taken up by wall thickness, corridors, and other non-program needs, a 'net-to-gross' multiplier is used. That multiplier yields the Gross Square Footage, which represents the total area of the building. Law enforcement agencies typically have a slightly higher net-to-gross multiplier to accommodate wider hallways and more robust structural requirements.

During the process, the Town requested that the study focus only on the Police Department. Harriman then created a second SNA for Police only. This removed both the Recreation Department and the shared spaces in Whipple Hall since they were no longer relevant without the Recreation program.

Program Summary

Description	Exist	2017	2022	2027	2037	Total Net Area Required (sf)	Delta Between Exist and Required Area (sf)
	Current Area	Net Area Required (sf)	Anticipated Future Area (sf)	Anticipated Future Area (sf)	Anticipated Future Area (sf)		
S1.0 Shared Building Program	3,269	3,686	0	0	0	3686	(417)
R1.0 Recreation	1,618	2,692	204	364	0	3260	(1,642)
1.0 Administration	424	948	100	0	0	1048	(624)
2.0 Records	215	420	20	40	0	480	(265)
3.0 Communications	289	412	0	64	0	476	(187)
4.0 Patrol	2,003	2,584	24	24	0	3028	(1,137)
5.0 Training	950	1,000	64	64	0	1128	(178)
6.0 Investigations	0	444	0	0	0	444	(444)
7.0 Property & Evidence	237	832	20	40	20	912	(675)
8.0 Legal - Prosecutor	0	140	0	0	0	140	(140)
9.0 Common Facilities	1,526	2,014	80	40	40	2174	(648)
10.0 Other General-Specialty Areas	230	256	0	10	0	266	(36)
11.0 Facility Support	322	60	0	0	0	60	262
R12.0 Recreation Parking - Fleet						25,800 SF = 0.59 Acres	
12.0 Police Parking - Fleet						10,400 SF = 0.24 Acres	
Total Net Square Footage	11,083	15,488	512	466	60	16,526	(5,443)
Net to Gross Factor	1.289	1.4	1.4	1.4	1.4	1.4	
Total Gross Square Footage	14,287	21,684	717	652	84	23,137	(8,850)

S1.0 Shared Building Program

Description	Exist	Space Needs - 2018				2023	2028	2038	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
S1.10 FT Assitant	0	0		100	0				
S1.20 PT Assistant	0	0		64	0				
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
S1.30 Assembly Space	1564	1		1,564	1,564				
S1.40 Stage	395	1		395	395				
S1.50 Mezzanine	500	1		500	500				
Sub-Total:	2,459	3			2,459	0	0	0	
C. Storage									
S1.60 Center for the Arts Supervisor of the	75	1		75	75				1
S1.70 Checklist	40	1		40	40				2
S1.80 General Storage	20	1		40	40				3
S1.90 Equipment Storage	0	1		60	60				4
Sub-Total:	135	4			215	0	0	0	
D. Support									
S1.10 Front Entry	216	1		216	216				
S1.11 Unfinished Rooms	196	1		196	196				5
S1.12 Service Rooms	263	1		600	600				6
Sub-Total:	675	3			1,012	0	0	0	
Subtotal Program Area									
	3,269				3,686	0	0	0	
				% above/below existing	113%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	5160	0	0	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	5,160				
				2027		5,160			
				2037			5,160		

II. Comment Key

- Center for the Arts occupies a storage room in the Recreation area.
- Supervisor of the Checklist occupies roughly 40 SF of the 123 SF storage room otherwise occupied by Recreation.
- Small storage areas at stage need to be increased to improve access and efficiency.
- General building storage needed that is independent from Recreation storage.
- Unfinished spaces in lower level are currently under utilized and difficult to access.

S1.0 Shared Building Program

- 6 Building services rooms for electrical, mechanical and water entrance are all undersized. Current access is limited due to Current location in secure Police Department areas.

R1.0 Recreation

Description	Exist	Space Needs - 2018				2023	2028	2038	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
R1.10 Recreation Director	169	1		160	160				1
R1.20 Waterfront Director	0	1		64	64				1,2
R1.30 Asst. Waterfront Director	0	1		64	64				1,2
R1.40 Camp Director	0	1		64	64				1,2
R1.50 Administrator (FT)	290	1		100	100				1
R1.60 Counselors		20		20	400	60			1,2
Sub-Total:	459	25			852	60	0	0	
B. Meeting Spaces									
R1.70 Conference	262	1		400	400		120		3
Sub-Total:	262	1			400	0	120	0	
C. Storage									
R1.80 File Storage	0	1		64	64				4
R1.90 Supply Storage	83	1		60	60				5
R1.10 General Storage	46	1		80	80				5
R1.11 Equipment Storage	0	2		150	300		100		5
Sub-Total:	129	5			504	0	100	0	
D. Support									
R1.12 Reception/Admin	0	0			0				6
R1.13 Waiting Area (Lobby)	554	1		600	600	80	80		7
R1.14 Toilet - Unisex	110	3		64	192	64	64		8
R1.15 Toilet-Staff	56	1		64	64				
R1.16 Kitchenette	48	1		80	80				9
Sub-Total:	768	6			936	144	144	0	
Subtotal Program Area									
	1,618				2,692	204	364	0	
			% above/below existing		201%				
			Grossing Factor:		1.35	1.35	1.35	1.35	
			Gross Building Area:		3634	275	491	0	
			<u>Anticipated Future Total Space Requirements</u>						
					2022	275			
					2027		194		
					2037			0	

II. Comment Key

- 1 Recreation Director needs private office, others can work in an open office area, but needs appropriate space.
- 2 Counselor space can be a dedicated area off the open office space: does not need to be a separate room. Staff that do not utilize Buker Building include: 20 lifeguards, 6 swim instructors and 1 sailing instructor.

R1.0 Recreation

- 3 Conference room needs to be larger and include infrastructure to support art and movement activities: 12 @ 32SF + 20SF storage. Operable windows for daylight & ventilation.
- 4 Currently located in 290 SF open office area. Current and future needs includes central filing and file storage at staff area.
- 5 Move offsite storage to Buker: roughly 200 SF. Equipment and Supply storage currently shares a 123 SF room off Assembly Space. At least some equipment storage spaces should be accessible from inside and outside the building.
- 6 A reception window facing the entry and lobby from open work area would improve oversight and service.
- 7 Current lobby works well and is reasonably sized.
- 8 A third unisex toilet is needed for meet program needs. Additional fixtures should be added to meet needs of assembly space.

- 9 Current kitchenette is in a corridor with no dedicated space to sit or utilize kitchenette equipment. Needs to include warming and light cooking.
- 10 Other program notes: parking makes additional exercise and after school programs prohibitive. If Rec moves, it needs a similar space to Whipple: large, flexible, high ceilings.

1 Administration

Description	Exist	Space Needs - 2018				2023	2028	2038	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
1.10 Police Chief	119	1		200	200				1
1.11 Captain	0	0		180	0				
1.12 Lieutenant	160	1		140	140				2
1.13 Detective	0	0		120	0				3
1.14 Administrator (FT)	145	1		140	140				3
1.15 Administrator (PT)	0	0		64	0	100			
Sub-Total:	424	3			480	100	0	0	
B. Meeting Spaces									
1.20 Chief Conference	0	1	10	240	240				4
Sub-Total:	0	1			240	0	0	0	
C. Storage									
1.30 File Storage	0	1		20	20				5
1.31 Supply Storage	0	1		20	20				5
1.32 General Storage	0	1		24	24				5
1.33 IA/personnel files	0	0		20	0				6
Sub-Total:	0	3			64	0	0	0	
D. Support									
1.40 Reception/Admin	0	1		36	36				
1.41 Waiting Area	0	1		40	40				
1.42 Toilet - Unisex	0	1		64	64				
1.43 Toilet- Chief	0	0		74	0				
1.44 Kitchenette	0	1		24	24				
Sub-Total:	0	4			164	0	0	0	
Subtotal Program Area									
	424				948	100	0	0	
				% above/below existing	247%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	1,327	140	0	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	1,467				
				2027		1,467			
				2037			1,467		

II. Comment Key

- 1 Work area, small meeting area, closet.
- 2 Work area, small meeting area.
- 3 Need private office. Refer to 6.0 Investigations for Detective office area.
- 4 Locate between Chief and Lt. offices.

1 Administration

- 5 Lockable storage room closets.
- 6 Located within Chief's office.
- 7 Other program notes: a dedicated administrative suite is preferred to provide privacy. FT Admin to be located near dispatch and lobby to attend to customer service needs of community.

2 Records

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
2.10 General Office Areas	0	0		100	0				
2.11 Report Copy/Work Area	68	1		60	60		20		
2.12 Shredding Room/Area	0	1		20	20				2
2.13 Citizen Counter: Records	0	1		40	40				1
2.14 Officer Counter	0	0		40	0				
Sub-Total:	68	3			120	0	20	0	
B. Meeting Spaces									
2.20 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
2.30 Office/Active File Storage	0	1		20	20				2
2.31 Hard Copy Records Storage	101	1		200	200	20	20		3
2.32 Supply Storage	46	1		80	80			20	
Sub-Total:	147	3			300	20	20	20	
D. Support									
2.40	0	0			0				
Sub-Total:	0	0			0	0	0	0	
Subtotal Program Area									
	215				420	20	40	20	
			% above/below existing		233%				
			Grossing Factor:		1.40	1.40	1.40	1.40	
			Gross Building Area:		588	28	56	28	
			<u>Anticipated Future Total Space Requirements</u>						
					2022	616			
					2027		672		
					2037			700	

II. Comment Key

- 1 Locate counter adjacent to FT Administrator's office.
- 2 Active records stored in FT administrator's office.
- 3 Other program notes: future position of records clerk and dispatch supervisor listed in 1.0 Admin (100 SF).

3 Communications

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
3.10 Dispatch Console	236	2	2	100	200				1,2
3.11 Call Taker Console	0	1	1	64	64		64		1
3.12 Emergency Operations	0	0		64	0				
Sub-Total:	236	3			264	0	64	0	
B. Meeting Spaces									
3.20 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
3.30 Staff Lockers & Storage	0	1		24	24				3
Sub-Total:	0	0			24	0	0	0	
D. Support									
3.40 Breakroom/Break Area	0	1		40	40				4
3.41 Dispatch Restrooms	53	1		64	64				
3.42 Public Access Window	0	1		20	20				
Sub-Total:	53	3			124	0	0	0	
Subtotal Program Area									
	289				412	0	64	0	
% above/below existing					165%				
Grossing Factor:					1.40	1.40	1.40	1.40	
Gross Building Area:					577	0	90	0	
<u>Anticipated Future Total Space Requirements</u>									
					2022	577			
					2027		666		
					2037			666	

II. Comment Key

- 1 Replace current casework layout with 2 dispatch consoles and 1 call taker position.
- 2 Dispatches for 6 towns/agencies (Sunapee, Newbury, Sutton, Wilmont, Croydon, & New London Ambulance) 12 hour shifts.
- 3 Double tier locker storage for 8 staff.
- 4 Break area kitchenette needs a vent hood.

4 Patrol

Description	Exist Current Area	Space Needs - 2017				2022	2027	2037	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
4.10 Supervisor Offices	112	1	2	200	200				1
Sub-Total:	112	1			200	0	0	0	
B. Meeting Spaces									
4.20 Breifing/Roll Call Room	0	1		100	100	24	24		2
Sub-Total:	0	1			100	24	24	0	
C. Storage									
4.30 Equip/Quartermaster	69	1		80	80		20		
4.31 Patrol Bike Storage	0	1		60	60				8
4.32 Long Gun Lockers		1		12	12				
4.33 Pistol Lockers		0		8	0				
Sub-Total:	69	3			152	0	20	0	
D. Support									
4.40 Secure Booking Room	394	1		300	300				3
4.41 Trap	38	1		40	40				4
4.42 Hard Suspect Interview Rm	82	1		100	100				4
4.43 Soft Interview Rm	0	0		100	0				6
4.44 Adult Holding Rooms	94	2		80	160				4
4.45 Multi-occupant holding	0	1		120	120				5
4.46 Intoxilizer Area	0	1		60	60				3
4.47 Juvenile Holding Room	47	1		80	80				4
4.48 Juvenile Ante-room	61	1		60	60				4
4.49 Secure Vestibule	108	1		100	100				4
4.50 Secured Sallyport	587	1		400	400				10
4.51 Report Writing Room	0	1		120	120				
4.52 Patrol Officer Area	411	8		64	512		128		
4.53 K-9 kennel area	0	1		80	80				
Sub-Total:	1,822	21			2,132	0	128	0	
Subtotal Program Area									
	2,003				2,584	24	24	0	
				% above/below existing	160%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	3618	34	34	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	3,651				
				2027		4,301			
				2037			4,301		

II. Comment Key

4 Patrol

- 1 1 shared O.I.C. Sgt office.
- 2 Use open officer area for roll call.
- 3 Keep intoxilizer separate from open booking area.
- 4 Spaces in current booking area generally work well.
- 5 Area off Sallyport to hold multiple occupants.
- 6 Soft Interview Room area in 9.0 Common Facilities.
- 7 Provide a gun discharge barrel in roll call or near lockers.
- 8 Current bike storage is in service cloests. Adjacency to fleet and sallyport.
- 9 Weapons storage accounted for in 5.0 Training.
- 10 Vehicle evidence bay accounted for in 7.0 Property & Evidence.

5 Training

Description	Exist Current Area	Space Needs - 2017				2022	2027	2037	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
5.10 None Required	0	0			0				1
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
5.20 Training Classrooms	864	1	25	32	800	64	64		2
Sub-Total:	864	1			800	64	64	0	
C. Storage									
5.30 Dept Weapons Storage Armory/Weapons	43	1		20	20				
5.31 Cleaning & Storage Training Equipment	0	1		40	40				3
5.32 Storage Room	0	1		60	60				
5.33 Ammo-Target Storage	43	1		20	20				
Sub-Total:	86	4			140	0	0	0	
D. Support									
5.50 Officer Weapons Cleaning		1		60	60				
Sub-Total:	0	1			60	0	0	0	
Subtotal Program Area									
	950				1,000	64	64	0	
					% above/below existing	119%			
					Grossing Factor:	1.40	1.40	1.40	1.40
					Gross Building Area:	1400	90	90	0
					<u>Anticipated Future Total Space Requirements</u>				
					2022	1,490			
					2027		1,579		
					2037			1,579	

II. Comment Key

- See Lt. office in 1.0 Administration.
- Fitness and Defensive Tactics training areas listed in 9.0 Common Facilities.
- Armory, storage for all gun types, targets, ammunition, cleaning area, workbench area, ventilated, firearm barrel in cleaning area, tasers, spray.

6 Investigations

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
6.10 Staff Offices	0	1		120	120				
Sub-Total:	0	1			120	0	0	0	
B. Meeting Spaces									
6.20 Soft Interview Rooms	0	1		100	100				1
6.21 Hard Interview Rooms	0	1		100	100				2
6.22 Polygraph Room	0	0		100	0				
Sub-Total:	0	2			200	0	0	0	
C. Storage									
6.30 Secured File Storage	0	1		20	20				
6.31 Gun Locker safe	0	1		20	20				3
6.32 Narcotics/Money Storage	0	1		4	4				3
6.33 A/V Equipment Closet	0	1		40	40				3
6.34 Equipment Storage Closet	0	1		40	40				3
Sub-Total:	0	5			124	0	0	0	
D. Support									
6.40 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
Subtotal Program Area									
	0				444	0	0	0	
				% above/below existing	444%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	622	0	0	0	
				<u>Anticipated Future Total Space Requirements</u>					
					2022	622			
					2027		622		
					2037			622	

II. Comment Key

- 1 Off lobby; area listed under 4.0 Patrol.
- 2 One-way glass off detective's office. Area in addition to interview room in Booking, under 4.0 Patrol.
- 3 One lockeable closet.

7 Property & Evidence

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
7.10 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
7.20 None Required	0	0		80	0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
7.30 Evidence Drop off	0	1		36	36				
7.31 Evidence Lockers	0	1		16	16				
7.32 Refrig. Evidence Lockers	0	1		4	4				
7.33 Evidence Processing	0	1		36	36				
7.34 Gen. Stor./Bulk Evidence	237	1		160	160	20	20	20	
7.35 Weapons Storage	0	1		92	92		20		1
7.36 Narcotics Storage	0	1		8	8				2
7.37 Cash & Valuables Storage	0	1		8	8				2
7.38 Freezer & Refrig. Storage	0	1		12	12				
7.39 Bicycle Storage	0	1		60	60				3
7.40 Vehicle Examination	0	1		400	400				3
Sub-Total:	237	11			832	20	40	20	
D. Support									
7.50 None Required	0				0				
Sub-Total:	0				0	0	0	0	
Subtotal Program Area									
	237				832	20	40	20	
				% above/below existing	385%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	1,165	28	56	28	

Anticipated Future Total Space Requirements

2022	1,193
2027	1,249
2037	1,277

II. Comment Key

- 1 Provide improved storage such as hanging system.
- 2 Lockable safe, not a separate room.
- 3 Potentially off-site.

8 Legal - Prosecutor

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
8.10 Prosecutor	0	1		120	120				
8.11 Contract Attorney	0	0		64	0				
Sub-Total:	0	1			120	0	0	0	
B. Meeting Spaces									
8.20 None required	0	0		24	0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
8.30 Secure Files-Prosecutor	0	1		20	20				1
Sub-Total:	0	1			20	0	0	0	
D. Support									
8.40 None Required	0	0			0				
Sub-Total:	0				0	0	0	0	
Subtotal Program Area									
	0				140	0	0	0	
				% above/below existing	140%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	196	0	0	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	196				
				2027		196			
				2037			196		

II. Comment Key

1 Files stored in office.

9 Common Facilities

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments	
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area		
I. Space Program										
A. Office										
9.10 None Required	0	0			0					
Sub-Total:	0	0			0	0	0	0		
B. Meeting Spaces										
9.20 Lunch/Break Room	150	1		250	250				1	
9.21 Public Lobby	83	1		320	320				2	
9.22 Interview Rooms (Lobby)	139	1		100	100				3	
9.23 Community Room	0	0		400	0				4	
Sub-Total:	372	3			670	0	0	0		
C. Storage										
9.30 Server Room	36	1		120	120					
Sub-Total:	36	1			120	0	0	0		
D. Support										
9.40 M Locker Rm: shwrs,toilet	143	16		20	320	40		40	5	
9.41 W Locker Rm: shwrs,toilet	123	4		50	200	40	40		5,6	
9.42 Fitness	385	1		450	450				7	
9.43 Defensive Tactics	425	1		120	120				8	
9.44 Boot Shining Area	0	1		6	6					
9.45 Staff Restrooms	42	1		64	64				9	
9.46 Public Restrooms	0	1		64	64				10	
Sub-Total:	1,118	25			1,224	80	40	40		
Subtotal Program Area										
	1,526				2,014	80	40	40		
				% above/below existing	142%					
				Grossing Factor:	1.40	1.40	1.40	1.40		
				Gross Building Area:	2820	112	56	56		
				<u>Anticipated Future Total Space Requirements</u>						
					2022	2,932				
					2027		2,988			
					2037			3,044		

II. Comment Key

- 1 Break Room to provide light cooking and be in proximity to Patrol Officer area.
- 2 Accommodate up to 15 people with circulation space for multiple doors and 2 customer service windows.
- 3 Soft Interview Room with door to Lobby and door to secure corridor. Current space is combined with circulation to toilet and PD office areas.
- 4 Community can use Training Room.

9 Common Facilities

- 5 20 SF per officer: 3 Sworn Women and 1 Civilian. 16 Men (8 FT, 8 PT).
- 6 Womens multiplier is higher to provide minimum space required.
- 7 Current Fitness area is high, but has poor layout out due to door swings and columns.
- 8 Defensive Tactics to occupy a large Storage Closet, shares program space in Training Rooms.
- 9 Staff restroom currently located on secure side of lobby but in a semi-public waiting area.
- 10 Public Toilet to be located off lobby without need for secure access to PD.

10 Other General-Specialty Areas

Description	Exist Current Area	Space Needs - 2017				2022 Anticipated Future Area	2027 Anticipated Future Area	2037 Anticipated Future Area	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)				
I. Space Program									
A. Office									
10.10 K-9 Kennel	0	0	80	0					1
Sub-Total:	0	0		0	0	0	0	0	
B. Meeting Spaces									
10.20 None Required	0	0		0					
Sub-Total:	0	0		0	0	0	0	0	
C. Storage									
10.30 SWAT Weapons Storage	0	2	10	20		10			2
Sub-Total:	0	2		20	0	10	0		
D. Support									
10.40 Radio Equipment Room	115	1	80	80					3
10.41 Miscellaneous Storage	0	1	120	120					
10.42 Employee Mailboxes	0	1	24	24					
10.43 Department History Displa	0	1	6	6					
10.44 Trophy & Awards Display	0	1	6	6					
10.45 Animal Control Storage	0	0	24	0					
Sub-Total:	115	5		236	0	0	0		
Subtotal Program Area									
	230			256	0	10	0		
			% above/below existing	205%					
			Grossing Factor:	1.40	1.40	1.40	1.40		
			Gross Building Area:	359	0	14	0		
			<u>Anticipated Future Total Space Requirements</u>						
			2022	359					
			2027		373				
			2037			373			

II. Comment Key

- 1 See 4.0 Patrol for Kennel area.
- 2 Provide for 2 SWAT personnel for current needs.
- 3 Radio equipment currently located in Sprinkler Room.

11 Facility Support

Description	Exist Current Area	Space Needs - 2017				2022	2027	2037	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
11.1. None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
11.2. None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
11.3. None Required	104				0				
Sub-Total:	104	0			0	0	0	0	
D. Support									
11.4. Mechanical Room	104	0	160	0					1
11.5. Electrical Room-Main	114	0	120	0					1
11.6. Electrical Room-Gen.	0	0	120	0					1
11.7. Janitor Room	0	1	60	60					
Sub-Total:	218	1		60	0	0	0		
Subtotal Program Area									
	322			60	0	0	0		
				% above/below existing	19%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	84	0	0	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	84				
				2027		84			
				2037			84		

II. Comment Key

1 See S1.0 Shared for area attributed to electrical and mechanical support spaces.

R12 Recreation Parking - Fleet

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Visitor Parking									
1.	4	10		400	4,000	4000	6000	6000	1, 2, 4, 5
Sub-Total:	4	10			4,000	4,000	6,000	6,000	
B. Employee Parking									
1. Director & Staff	2	9		400	3,600	400	400		1, 2
Sub-Total:	2	9			3,600	400	400	0	
C. Recreation Fleet Parking									
1. 14 Passenger Van (Bus)	0	1		600	600	0	0	0	6
2.	0	0		400	0				
Sub-Total:	0	1			600				
D. Other Fleet or Exterior Needs									
1. Drop off / Pick up	0	1			800				7
2.	0	0			0				
Sub-Total:	0	1			800	0			
Subtotal Program Area									
	2,400				25,800	4,400	6,400	6,000	
% above/below existing 1075%									
Equivalent Acreage for Parking and Fleet Requirements									
1 Acre = 43,560 SF	0.06	Acres			0.59	Acres			

II. Comment Key

- 1 400 GSF per car includes parking stall and circulation area.
- 2 Square footage needs to be converted to acreage for site development considerations.
- 3 Staff and Fleet parking to be located in a secure environment.
- 4 Current visitor parking for programs such as art and karate.
- 5 Current need: 10-15 cars. 5 year projection: +10. 10 year projection: +15. 20 year projection: +15. Total max. 50 cars
- 6 600 GSF per car includes parking stall and circulation area.
- 7 10' wide drop off zone x 80' long to fit 1 schoolbus and 1 14 passenger van/bus. Length will accommodate 3 SUV's or 4 small cars.

12 Police Parking - Fleet

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Visitor Parking									
1.	2	3		400	1,200	400	400		
Sub-Total:	2	3			1,200	400	400		0
B. Employee Parking									
1.	2	7		400	2,800	400	400		
Sub-Total:	2	7			2,800	400	400		0
C. Police Fleet Parking									
1. Patrol/Admin Car/SUV	6	8		400	3,200	400	400		
2. K-9 Patrol SUV	1	1		400	400				
3. Command Vehicles	1	1		400	400				
4. Motorcycles	0	0		200	0				
Sub-Total:	8	10			4,000	400	400		0
D. Other Fleet or Exterior Needs									
1. Bicycles	0	0			0				
2. OHRV	0	0			0				
Sub-Total:	0	0			0	0	0		0
Subtotal Program Area									
	4,800				10,400	1,200	1,200		0
					% above/below existing	267%			
Equilvant Acreage for Parking and Fleet Requirements									
1 Acre = 43,560 SF	0.11	Acres			0.24	Acres			

II. Comment Key

- 1 400 GSF per vehicle.
- 2 Square footage needs to be converted to acreage for site development considerations.
- 3 Staff and Fleet parking to be located in a secure environment.

Program Summary: Police Only

Description	Exist	2017	2022	2027	2037	Total Net Area Required (sf)	Delta Between Exist and Required Area (sf)
	Current Area	Net Area Required (sf)	Anticipated Future Area (sf)	Anticipated Future Area (sf)	Anticipated Future Area (sf)		
S1.0 Shared Building Program	810	600	0	0	0	600	210
1.0 Administration	424	948	100	0	0	1048	(624)
2.0 Records	215	420	20	40	0	480	(265)
3.0 Communications	289	412	0	64	0	476	(187)
4.0 Patrol	2,003	2,584	24	24	0	3028	(1,137)
5.0 Training	950	1,000	64	64	0	1128	(178)
6.0 Investigations	0	344	0	0	0	344	(344)
7.0 Property & Evidence	237	832	20	40	20	912	(675)
8.0 Legal - Prosecutor	0	140	0	0	0	140	(140)
9.0 Common Facilities	1,526	2,014	80	40	40	2174	(648)
10.0 Other General-Specialty Areas	230	256	0	10	0	266	(36)
11.0 Facility Support	322	60	0	0	0	60	262
12.0 Police Parking - Fleet						10,400 SF = 0.24 Acres	
Total Net Square Footage	7,006	9,610	308	466	60	10,444	(3,438)
Net to Gross Factor	1.238	1.4	1.4	1.4	1.4	1.4	
Total Gross Square Footage	8,674	13,454	431	652	84	14,622	(5,948)

S1.0 Shared Building Program

Description	Exist	Space Needs - 2018				2023	2028	2038	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
S1.10 FT Assitant	0	0		100	0				
S1.20 PT Assistant	0	0		64	0				
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
S1.30 Assembly Space	1564	0		1,564	0				
S1.40 Stage	395	0		395	0				
S1.50 Mezzanine	500	0		500	0				
Sub-Total:	2,459	0			0	0	0	0	
C. Storage									
S1.60 Center for the Arts Supervisor of the	75	0		75	0				1
S1.70 Checklist	40	0		40	0				2
S1.80 General Storage	20	0		40	0				3
S1.90 Equipment Storage	0	0		60	0				4
Sub-Total:	135	0			0	0	0	0	
D. Support									
S1.10 Front Entry	216	0		216	0				
S1.11 Unfinished Rooms	196	0		196	0				5
S1.12 Service Rooms	263	1		600	600				6
Sub-Total:	675	0			600	0	0	0	
Subtotal Program Area									
(Whipple Support areas only)	810				600	0	0	0	
				% above/below existing	74%				
Grossing Factor:					1.40	1.40	1.40	1.40	
Gross Building Area:					840	0	0	0	
Anticipated Future Total Space Requirements									
					2022	840			
					2027		840		
					2037			840	

II. Comment Key

- Center for the Arts occupies a storage room in the Recreation area.
- Supervisor of the Checklist occupies roughly 40 SF of the 123 SF storage room otherwise occupied by Recreation.
- Small storage areas at stage need to be increased to improve access and efficiency.
- General building storage needed that is independent from Recreation storage.
- Unfinished spaces in lower level are currently under utilized and difficult to access.

S1.0 Shared Building Program

- 6 Building services rooms for electrical, mechanical and water entrance are all undersized. Current access is limited due to Current location in secure Police Department areas.

1 Administration

Description	Exist	Space Needs - 2018				2023	2028	2038	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
1.10 Police Chief	119	1		200	200				1
1.11 Captain	0	0		180	0				
1.12 Lieutenant	160	1		140	140				2
1.13 Detective	0	0		120	0				3
1.14 Administrator (FT)	145	1		140	140				3
1.15 Administrator (PT)	0	0		64	0	100			
Sub-Total:	424	3			480	100	0	0	
B. Meeting Spaces									
1.20 Chief Conference	0	1	10	240	240				4
Sub-Total:	0	1			240	0	0	0	
C. Storage									
1.30 File Storage	0	1		20	20				5
1.31 Supply Storage	0	1		20	20				5
1.32 General Storage	0	1		24	24				5
1.33 IA/personnel files	0	0		20	0				6
Sub-Total:	0	3			64	0	0	0	
D. Support									
1.40 Reception/Admin	0	1		36	36				
1.41 Waiting Area	0	1		40	40				
1.42 Toilet - Unisex	0	1		64	64				
1.43 Toilet- Chief	0	0		74	0				
1.44 Kitchenette	0	1		24	24				
Sub-Total:	0	4			164	0	0	0	
Subtotal Program Area									
	424				948	100	0	0	
				% above/below existing	247%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	1,327	140	0	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	1,467				
				2027		1,467			
				2037			1,467		

II. Comment Key

- 1 Work area, small meeting area, closet.
- 2 Work area, small meeting area.
- 3 Need private office. Refer to 6.0 Investigations for Detective office area.
- 4 Locate between Chief and Lt. offices.

1 Administration

- 5 Lockable storage room closets.
- 6 Located within Chief's office.
- 7 Other program notes: a dedicated administrative suite is preferred to provide privacy. FT Admin to be located near dispatch and lobby to attend to customer service needs of community.

2 Records

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
2.10 General Office Areas	0	0		100	0				
2.11 Report Copy/Work Area	68	1		60	60		20		
2.12 Shredding Room/Area	0	1		20	20				2
2.13 Citizen Counter: Records	0	1		40	40				1
2.14 Officer Counter	0	0		40	0				
Sub-Total:	68	3			120	0	20	0	
B. Meeting Spaces									
2.20 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
2.30 Office/Active File Storage	0	1		20	20				2
2.31 Hard Copy Records Storage	101	1		200	200	20	20		3
2.32 Supply Storage	46	1		80	80			20	
Sub-Total:	147	3			300	20	20	20	
D. Support									
2.40	0	0			0				
Sub-Total:	0	0			0	0	0	0	
Subtotal Program Area									
	215				420	20	40	20	
			% above/below existing		233%				
			Grossing Factor:		1.40	1.40	1.40	1.40	
			Gross Building Area:		588	28	56	28	
			<u>Anticipated Future Total Space Requirements</u>						
					2022	616			
					2027		672		
					2037			700	

II. Comment Key

- 1 Locate counter adjacent to FT Administrator's office.
- 2 Active records stored in FT administrator's office.
- 3 Other program notes: future position of records clerk and dispatch supervisor listed in 1.0 Admin (100 SF).

3 Communications

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
3.10 Dispatch Console	236	2	2	100	200				1,2
3.11 Call Taker Console	0	1	1	64	64		64		1
3.12 Emergency Operations	0	0		64	0				
Sub-Total:	236	3			264	0	64	0	
B. Meeting Spaces									
3.20 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
3.30 Staff Lockers & Storage	0	1		24	24				3
Sub-Total:	0	0			24	0	0	0	
D. Support									
3.40 Breakroom/Break Area	0	1		40	40				4
3.41 Dispatch Restrooms	53	1		64	64				
3.42 Public Access Window	0	1		20	20				
Sub-Total:	53	3			124	0	0	0	
Subtotal Program Area									
	289				412	0	64	0	
% above/below existing 165%									
Grossing Factor:					1.40	1.40	1.40	1.40	
Gross Building Area:					577	0	90	0	
<u>Anticipated Future Total Space Requirements</u>									
					2022	577			
					2027		666		
					2037			666	

II. Comment Key

- 1 Replace current casework layout with 2 dispatch consoles and 1 call taker position.
- 2 Dispatches for 6 towns/agencies (Sunapee, Newbury, Sutton, Wilmont, Croydon, & New London Ambulance) 12 hour shifts.
- 3 Double tier locker storage for 8 staff.
- 4 Break area kitchenette needs a vent hood.

4 Patrol

Description	Exist Current Area	Space Needs - 2017				2022	2027	2037	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
4.10 Supervisor Offices	112	1	2	200	200				1
Sub-Total:	112	1			200	0	0	0	
B. Meeting Spaces									
4.20 Breifing/Roll Call Room	0	1		100	100	24	24		2
Sub-Total:	0	1			100	24	24	0	
C. Storage									
4.30 Equip/Quartermaster	69	1		80	80		20		
4.31 Patrol Bike Storage	0	1		60	60				8
4.32 Long Gun Lockers		1		12	12				
4.33 Pistol Lockers		0		8	0				
Sub-Total:	69	3			152	0	20	0	
D. Support									
4.40 Secure Booking Room	394	1		300	300				3
4.41 Trap	38	1		40	40				4
4.42 Hard Suspect Interview Rm	82	1		100	100				4
4.43 Soft Interview Rm	0	0		100	0				6
4.44 Adult Holding Rooms	94	2		80	160				4
4.45 Multi-occupant holding	0	1		120	120				5
4.46 Intoxilizer Area	0	1		60	60				3
4.47 Juvenile Holding Room	47	1		80	80				4
4.48 Juvenile Ante-room	61	1		60	60				4
4.49 Secure Vestibule	108	1		100	100				4
4.50 Secured Sallyport	587	1		400	400				10
4.51 Report Writing Room	0	1		120	120				
4.52 Patrol Officer Area	411	8		64	512		128		
4.53 K-9 kennel area	0	1		80	80				
Sub-Total:	1,822	21			2,132	0	128	0	
Subtotal Program Area									
	2,003				2,584	24	24	0	
				% above/below existing	160%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	3618	34	34	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	3,651				
				2027		4,301			
				2037			4,301		

II. Comment Key

4 Patrol

- 1 1 shared O.I.C. Sgt office.
- 2 Use open officer area for roll call.
- 3 Keep intoxilizer separate from open booking area.
- 4 Spaces in current booking area generally work well.
- 5 Area off Sallyport to hold multiple occupants.
- 6 Soft Interview Room area in 9.0 Common Facilities.
- 7 Provide a gun discharge barrel in roll call or near lockers.
- 8 Current bike storage is in service cloests. Adjacency to fleet and sallyport.
- 9 Weapons storage accounted for in 5.0 Training.
- 10 Vehicle evidence bay accounted for in 7.0 Property & Evidence.

5 Training

Description	Exist Current Area	Space Needs - 2017				2022 Anticipated Future Area	2027 Anticipated Future Area	2037 Anticipated Future Area	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)				
I. Space Program									
A. Office									
5.10 None Required	0	0			0				1
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
5.20 Training Classrooms	864	1	25	32	800	64	64		2
Sub-Total:	864	1			800	64	64	0	
C. Storage									
5.30 Dept Weapons Storage Armory/Weapons	43	1		20	20				
5.31 Cleaning & Storage Training Equipment	0	1		40	40				3
5.32 Storage Room	0	1		60	60				
5.33 Ammo-Target Storage	43	1		20	20				
Sub-Total:	86	4			140	0	0	0	
D. Support									
5.50 Officer Weapons Cleaning		1		60	60				
Sub-Total:	0	1			60	0	0	0	
Subtotal Program Area									
	950				1,000	64	64	0	
				% above/below existing	119%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	1400	90	90	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	1,490				
				2027		1,579			
				2037			1,579		

II. Comment Key

- See Lt. office in 1.0 Administration.
- Fitness and Defensive Tactics training areas listed in 9.0 Common Facilities.
- Armory, storage for all gun types, targets, ammunition, cleaning area, workbench area, ventilated, firearm barrel in cleaning area, tasers, spray.

6 Investigations

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
6.10 Staff Offices	0	1		120	120				
Sub-Total:	0	1			120	0	0	0	
B. Meeting Spaces									
6.20 Soft Interview Rooms	0	0		100	0				1
6.21 Hard Interview Rooms	0	1		100	100				2
6.22 Polygraph Room	0	0		100	0				
Sub-Total:	0	1			100	0	0	0	
C. Storage									
6.30 Secured File Storage	0	1		20	20				
6.31 Gun Locker safe	0	1		20	20				3
6.32 Narcotics/Money Storage	0	1		4	4				3
6.33 A/V Equipment Closet	0	1		40	40				3
6.34 Equipment Storage Closet	0	1		40	40				3
Sub-Total:	0	5			124	0	0	0	
D. Support									
6.40 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
Subtotal Program Area									
	0				344	0	0	0	
				% above/below existing	444%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	482	0	0	0	
				<u>Anticipated Future Total Space Requirements</u>		482			
				2022			482		
				2027				482	
				2037					482

II. Comment Key

- 1 Off lobby; area listed under 4.0 Patrol.
- 2 One-way glass off detective's office. Area in addition to interview room in Booking, under 4.0 Patrol.
- 3 One lockeable closet.

7 Property & Evidence

Description	Exist Current Area	Space Needs - 2017				2022	2027	2037	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
7.10 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
7.20 None Required	0	0		80	0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
7.30 Evidence Drop off	0	1		36	36				
7.31 Evidence Lockers	0	1		16	16				
7.32 Refrig. Evidence Lockers	0	1		4	4				
7.33 Evidence Processing	0	1		36	36				
7.34 Gen. Stor./Bulk Evidence	237	1		160	160	20	20	20	
7.35 Weapons Storage	0	1		92	92		20		1
7.36 Narcotics Storage	0	1		8	8				2
7.37 Cash & Valuables Storage	0	1		8	8				2
7.38 Freezer & Refrig. Storage	0	1		12	12				
7.39 Bicycle Storage	0	1		60	60				3
7.40 Vehicle Examination	0	1		400	400				3
Sub-Total:	237	11			832	20	40	20	
D. Support									
7.50 None Required	0				0				
Sub-Total:	0				0	0	0	0	
Subtotal Program Area									
	237				832	20	40	20	
				% above/below existing	385%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	1,165	28	56	28	

Anticipated Future Total Space Requirements

2022	1,193
2027	1,249
2037	1,277

II. Comment Key

- 1 Provide improved storage such as hanging system.
- 2 Lockable safe, not a separate room.
- 3 Potentially off-site.

8 Legal - Prosecutor

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
8.10 Prosecutor	0	1		120	120				
8.11 Contract Attorney	0	0		64	0				
Sub-Total:	0	1			120	0	0	0	
B. Meeting Spaces									
8.20 None required	0	0		24	0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
8.30 Secure Files-Prosecutor	0	1		20	20				1
Sub-Total:	0	1			20	0	0	0	
D. Support									
8.40 None Required	0	0			0				
Sub-Total:	0				0	0	0	0	
Subtotal Program Area									
	0				140	0	0	0	
				% above/below existing	140%				
				Grossing Factor:	1.40	1.40	1.40	1.40	
				Gross Building Area:	196	0	0	0	
				<u>Anticipated Future Total Space Requirements</u>					
				2022	196				
				2027		196			
				2037			196		

II. Comment Key

1 Files stored in office.

9 Common Facilities

Description	Exist Current Area	Space Needs - 2017				2022 Anticipated Future Area	2027 Anticipated Future Area	2037 Anticipated Future Area	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)				
I. Space Program									
A. Office									
9.10 None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
9.20 Lunch/Break Room	150	1	250	250					1
9.21 Public Lobby	83	1	320	320					2
9.22 Interview Rooms (Lobby)	139	1	100	100					3
9.23 Community Room	0	0	400	0					4
Sub-Total:	372	3		670	0	0	0		
C. Storage									
9.30 Server Room	36	1	120	120					
Sub-Total:	36	1		120	0	0	0		
D. Support									
9.40 M Locker Rm: shwrs,toilet	143	16	20	320	40		40		5
9.41 W Locker Rm: shwrs,toilet	123	4	50	200	40	40			5,6
9.42 Fitness	385	1	450	450					7
9.43 Defensive Tactics	425	1	120	120					8
9.44 Boot Shining Area	0	1	6	6					
9.45 Staff Restrooms	42	1	64	64					9
9.46 Public Restrooms	0	1	64	64					10
Sub-Total:	1,118	25		1,224	80	40	40		
Subtotal Program Area									
	1,526			2,014	80	40	40		
			% above/below existing	142%					
Grossing Factor:				1.40	1.40	1.40	1.40		
Gross Building Area:				2820	112	56	56		
			<u>Anticipated Future Total Space Requirements</u>						
				2022	2,932				
				2027		2,988			
				2037			3,044		

II. Comment Key

- 1 Break Room to provide light cooking and be in proximity to Patrol Officer area.
- 2 Accommodate up to 15 people with circulation space for multiple doors and 2 customer service windows.
- 3 Soft Interview Room with door to Lobby and door to secure corridor. Current space is combined with circulation to toilet and PD office areas.
- 4 Community can use Training Room.

9 Common Facilities

- 5 20 SF per officer: 3 Sworn Women and 1 Civilian. 16 Men (8 FT, 8 PT).
- 6 Womens multiplier is higher to provide minimum space required.
- 7 Current Fitness area is high, but has poor layout out due to door swings and columns.
- 8 Defensive Tactics to occupy a large Storage Closet, shares program space in Training Rooms.
- 9 Staff restroom currently located on secure side of lobby but in a semi-public waiting area.
- 10 Public Toilet to be located off lobby without need for secure access to PD.

10 Other General-Specialty Areas

Description	Exist Current Area	Space Needs - 2017				2022 Anticipated Future Area	2027 Anticipated Future Area	2037 Anticipated Future Area	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)				
I. Space Program									
A. Office									
10.10 K-9 Kennel	0	0	80	0					1
Sub-Total:	0	0		0	0	0	0	0	
B. Meeting Spaces									
10.20 None Required	0	0		0					
Sub-Total:	0	0		0	0	0	0	0	
C. Storage									
10.30 SWAT Weapons Storage	0	2	10	20		10			2
Sub-Total:	0	2		20	0	10	0		
D. Support									
10.40 Radio Equipment Room	115	1	80	80					3
10.41 Miscellaneous Storage	0	1	120	120					
10.42 Employee Mailboxes	0	1	24	24					
10.43 Department History Displa	0	1	6	6					
10.44 Trophy & Awards Display	0	1	6	6					
10.45 Animal Control Storage	0	0	24	0					
Sub-Total:	115	5		236	0	0	0		
Subtotal Program Area									
	230			256	0	10	0		
			% above/below existing	205%					
			Grossing Factor:	1.40	1.40	1.40	1.40		
			Gross Building Area:	359	0	14	0		
			<u>Anticipated Future Total Space Requirements</u>						
			2022	359					
			2027		373				
			2037			373			

II. Comment Key

- 1 See 4.0 Patrol for Kennel area.
- 2 Provide for 2 SWAT personnel for current needs.
- 3 Radio equipment currently located in Sprinkler Room.

11 Facility Support

Description	Exist Current Area	Space Needs - 2017				2022	2027	2037	Comments
		Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Office									
11.1. None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
B. Meeting Spaces									
11.2. None Required	0	0			0				
Sub-Total:	0	0			0	0	0	0	
C. Storage									
11.3. None Required	104				0				
Sub-Total:	104	0			0	0	0	0	
D. Support									
11.4. Mechanical Room	104	0	160	0					1
11.5. Electrical Room-Main	114	0	120	0					1
11.6. Electrical Room-Gen.	0	0	120	0					1
11.7. Janitor Room	0	1	60	60					
Sub-Total:	218	1		60	0	0	0		
Subtotal Program Area									
	322			60	0	0	0		
			% above/below existing	19%					
			Grossing Factor:	1.40	1.40	1.40	1.40		
	Gross Building Area:			84	0	0	0		
			<u>Anticipated Future Total Space Requirements</u>						
				2022	84				
				2027		84			
				2037			84		

II. Comment Key

1 See S1.0 Shared for area attributed to electrical and mechanical support spaces.

12 Police Parking - Fleet

Description	Exist	Space Needs - 2017				2022	2027	2037	Comments
	Current Area	Total # of Sp.	# of occup	Area of Ea. Sp. (sq. ft.)	Net Area Sub-Total (sq. ft.)	Anticipated Future Area	Anticipated Future Area	Anticipated Future Area	
I. Space Program									
A. Visitor Parking									
1.	2	3		400	1,200	400	400		
Sub-Total:	2	3			1,200	400	400	0	
B. Employee Parking									
1.	2	7		400	2,800	400	400		
Sub-Total:	2	7			2,800	400	400	0	
C. Police Fleet Parking									
1. Patrol/Admin Car/SUV	6	8		400	3,200	400	400		
2. K-9 Patrol SUV	1	1		400	400				
3. Command Vehicles	1	1		400	400				
4. Motorcycles	0	0		200	0				
Sub-Total:	8	10			4,000	400	400	0	
D. Other Fleet or Exterior Needs									
1. Bicycles	0	0			0				
2. OHRV	0	0			0				
Sub-Total:	0	0			0	0	0	0	
Subtotal Program Area									
	4,800				10,400	1,200	1,200	0	
					% above/below existing	267%			
Equilvant Acreage for Parking and Fleet Requirements									
1 Acre = 43,560 SF	0.11	Acres			0.24	Acres			

II. Comment Key

- 1 400 GSF per vehicle.
- 2 Square footage needs to be converted to acreage for site development considerations.
- 3 Staff and Fleet parking to be located in a secure environment.



NEW LONDON, NEW HAMPSHIRE BUKER BUILDING

Section 4 BLOCKING DIAGRAMS AND CONCEPT OPTIONS

Summary

Following the presentation of the Facilities and Space Needs Assessments, Harriman developed several potential renovation, addition, and new construction options for review and discussion. These alternatives constituted the majority of the work performed in the Buker Building Study. Once initial feedback was received from a set of options, Harriman updated those options and added order of magnitude (OoM) cost information to them.

Concept options and associated cost information informed the New London Board of Selectmen (BOS) that any project on the existing site required a minimum of a complete renovation of the Buker Building as well as one or several additions. The cost of these solutions resulted in the BOS to request additional work from Harriman in the form of a capital improvement plan (CIP) for the existing building. These findings are included in this report section and can be identified by the date of presentation to the BOS.

09-17-2018 Initial Blocking and Building Massing Diagrams

09-19-2018 Updated Blocking and Building Massing Diagrams w/ Cost Information

10-01-2018 Refined Blocking and Massing Diagrams w/ Cost Information and Recommendations

10-15-2018 Supplementary Cost Information and Recommendations for 10-01-18 Presentation

10-22-2018 Capital Improvement and Cost List for Existing Buker Building

Buker Building Study

Facility Assessment, Space Needs, & Concept
Design Alternatives
New London, NH



Board of Selectmen Presentation

17 September 2018



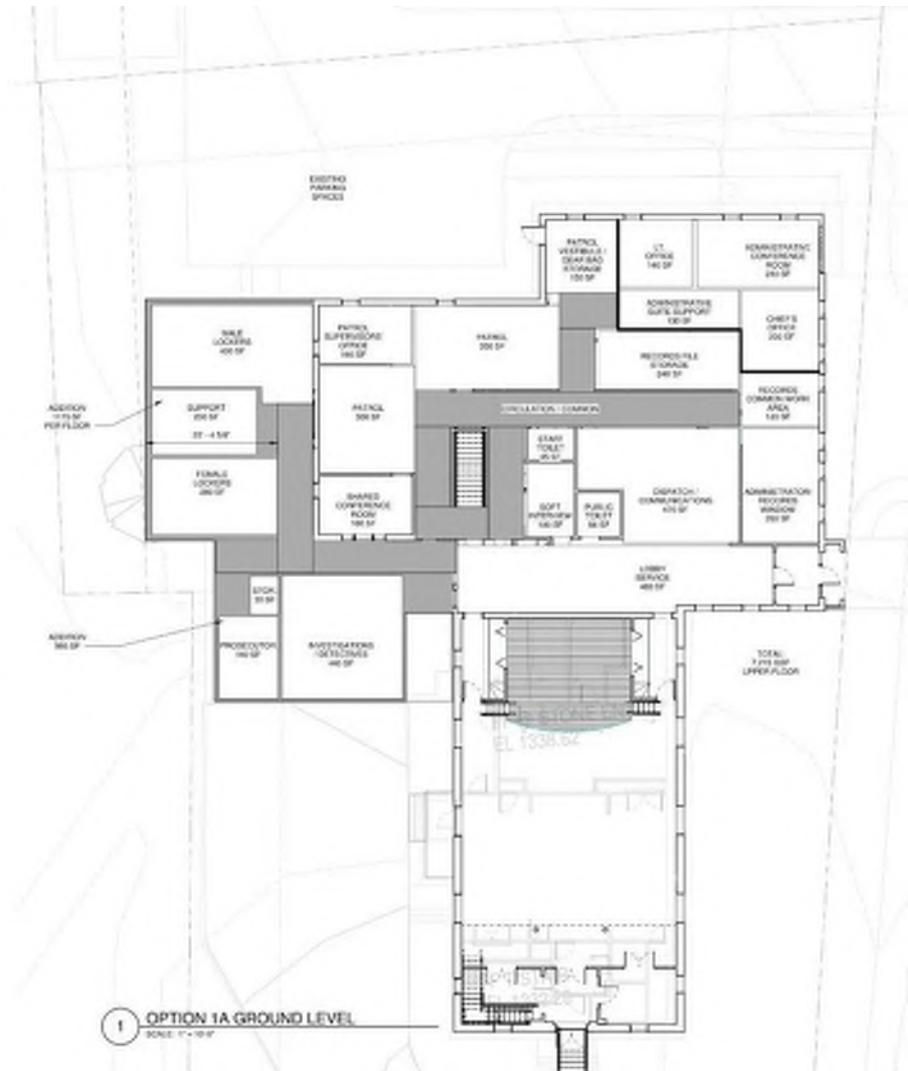
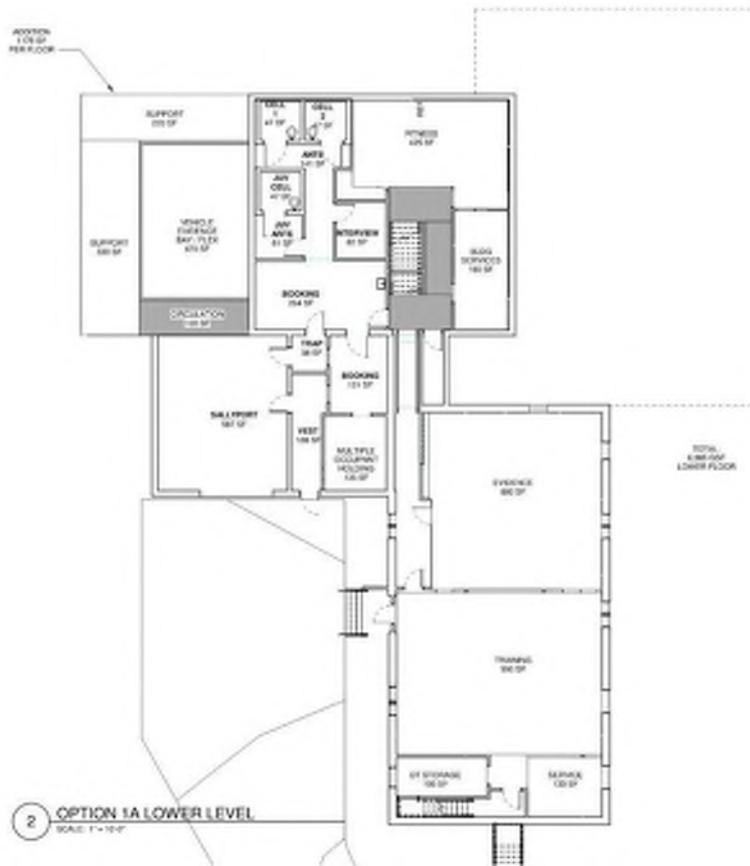
■ Pre-Design Options Findings

- A deed restriction on the Town Green property prohibits non-public use of the land. This limits the ability to rotate the sallyport 90° per previous option 4.
- Existing floor-to-floor height (FTFH) is 9.08' (9'-1"). Design FTFH = 12'-0".
- Moving the sallyport to the opposite side of the building makes a basement and/or use of the Whipple basement difficult.
- Use of the Whipple basement requires the construction of a new circulation element to house an elevator.
- The area gained by purchasing the neighboring property is needed to support an upper level sallyport and allows all options to work.
- Abandoning the existing Police entry is an essential step to solving building flooding issues.

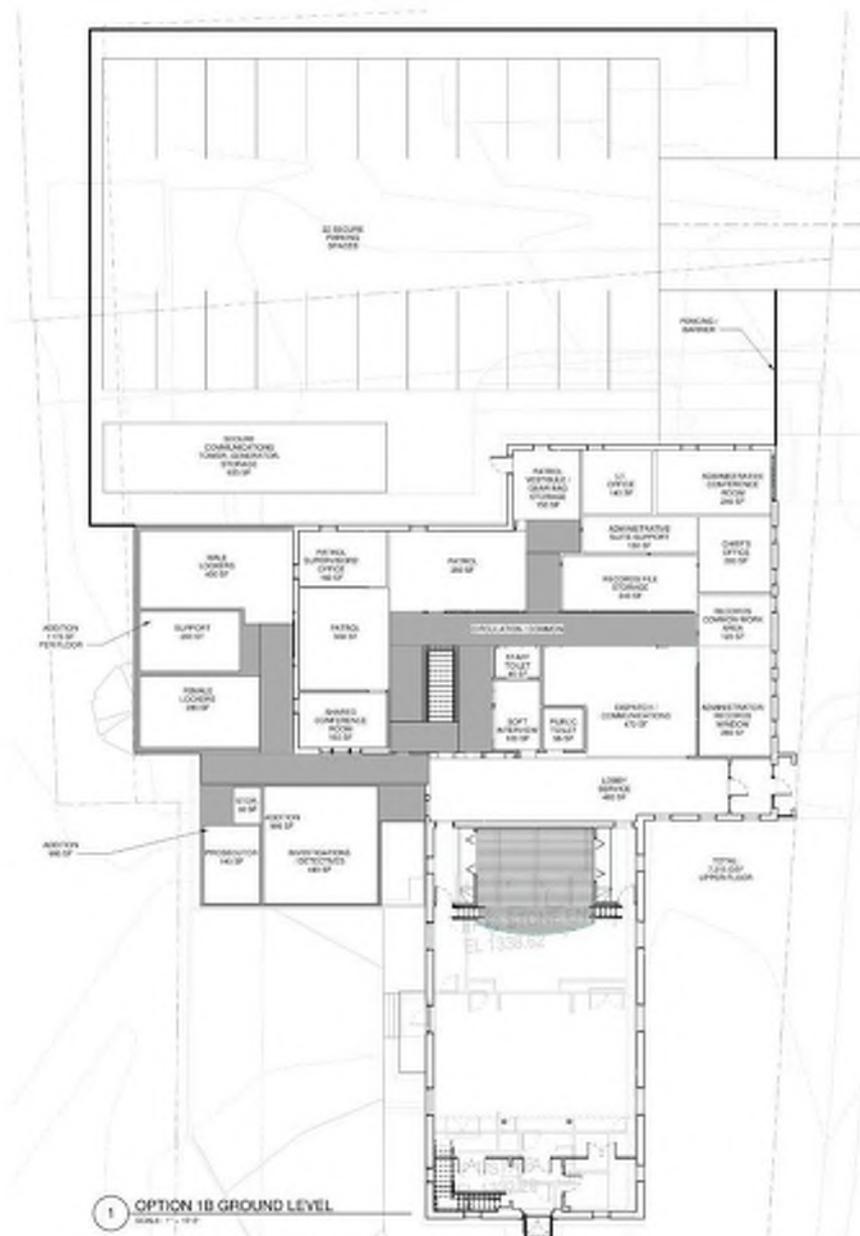
Options

- 1A: Renovate with minor additions: Police only
 - Recreation Department not included
 - Main level of Whipple Hall remains public use
 - Development is contained to existing property
- 1B: Renovate with minor additions: Police only
 - Recreation Department not included
 - Main level of Whipple Hall remains public use
 - Development extends neighboring property to provide secure parking
- 2: Three story addition
 - Recreation in Whipple Hall and connector addition
 - Police in a new, connected 3 story facility
 - Development extends neighboring property to provide secure parking
- 3: Two story stand-alone facility
 - Recreation in addition. Connected to Whipple Hall
 - Police in a new stand-alone 2 story facility
 - Development extends neighboring property to provide secure parking
- 4: Renovate with major additions: Police and Recreation
 - Rec in Whipple Hall and front of Buker
 - Police to utilize remaining Buker Building plus connected addition
 - Development extends neighboring property to provide secure parking

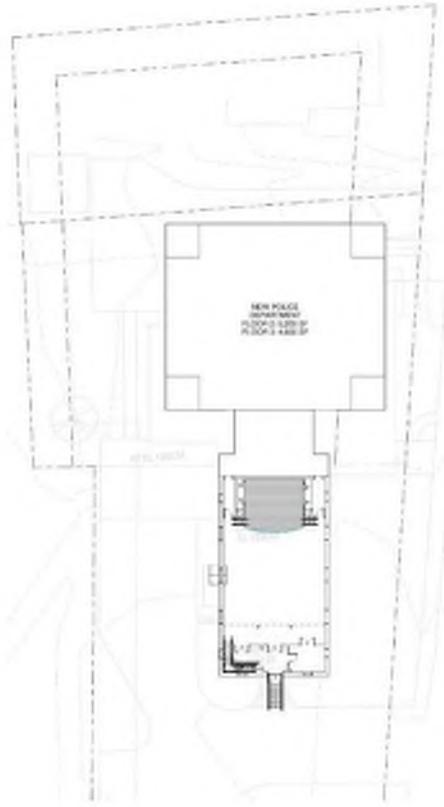
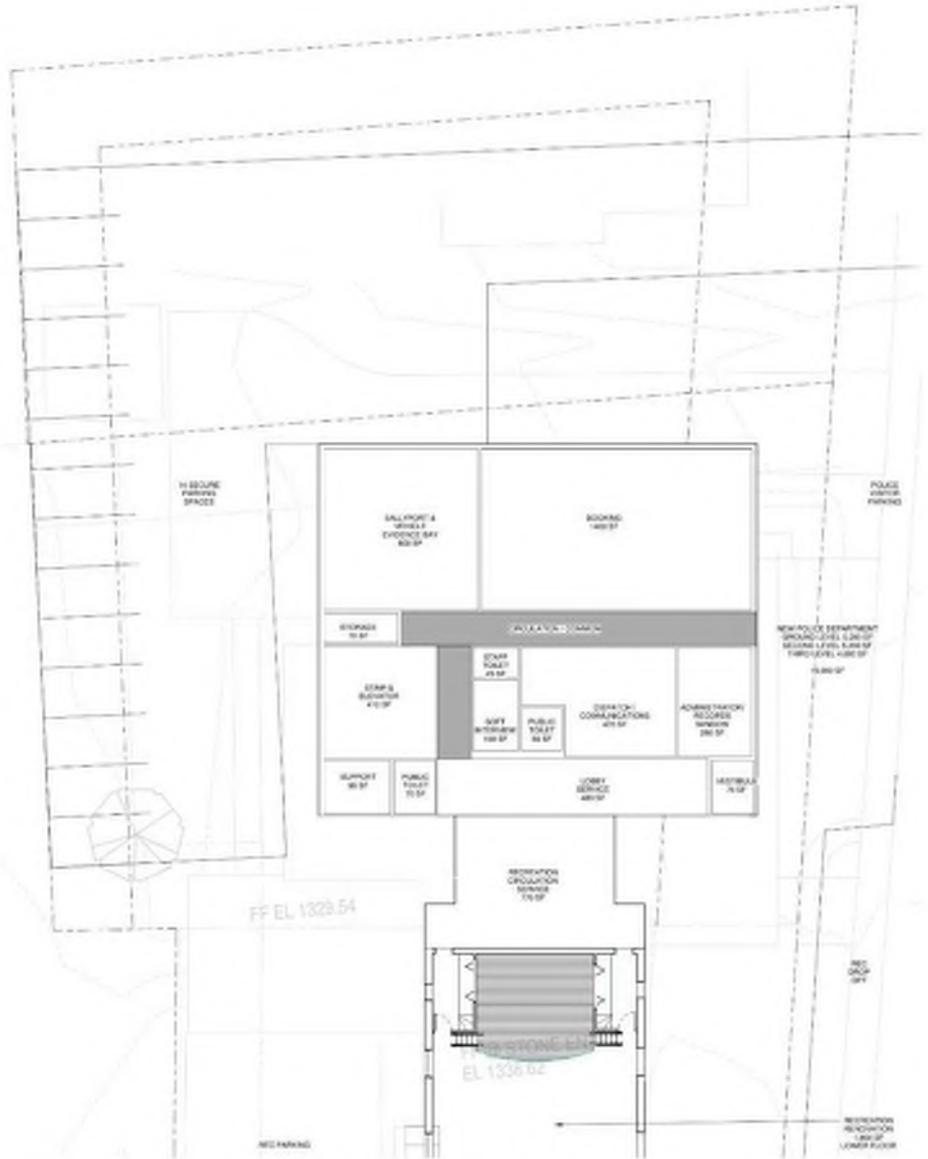
Option 1A: Police Only Renovation/Addition



Option 1B: Police Only Renovation/Addition



Option 2 (Lower): 3 Story Addition

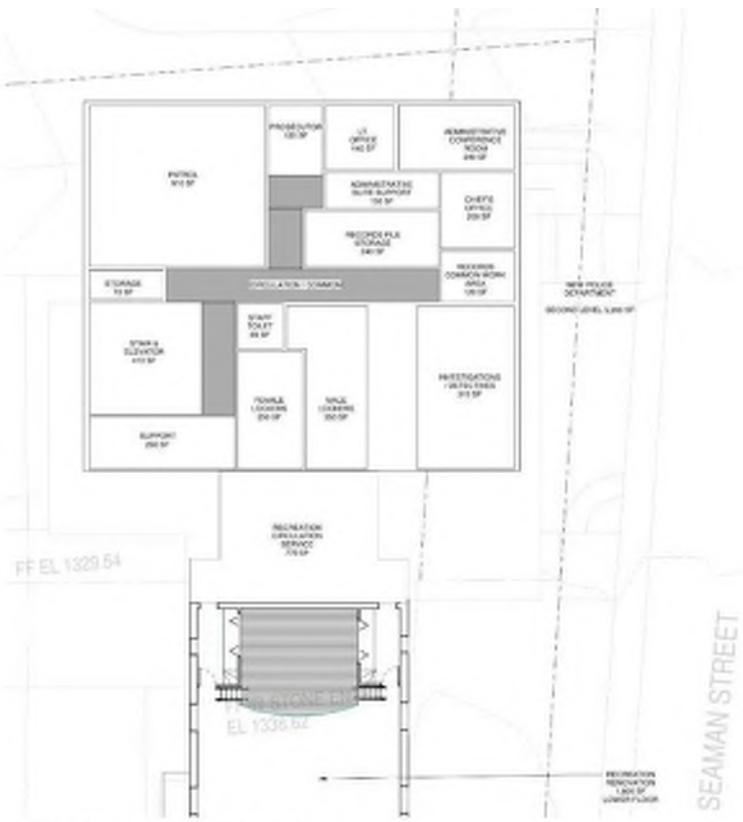


1 OPTION 2 LOWER LEVEL
SCALE 1/8" = 1'-0"

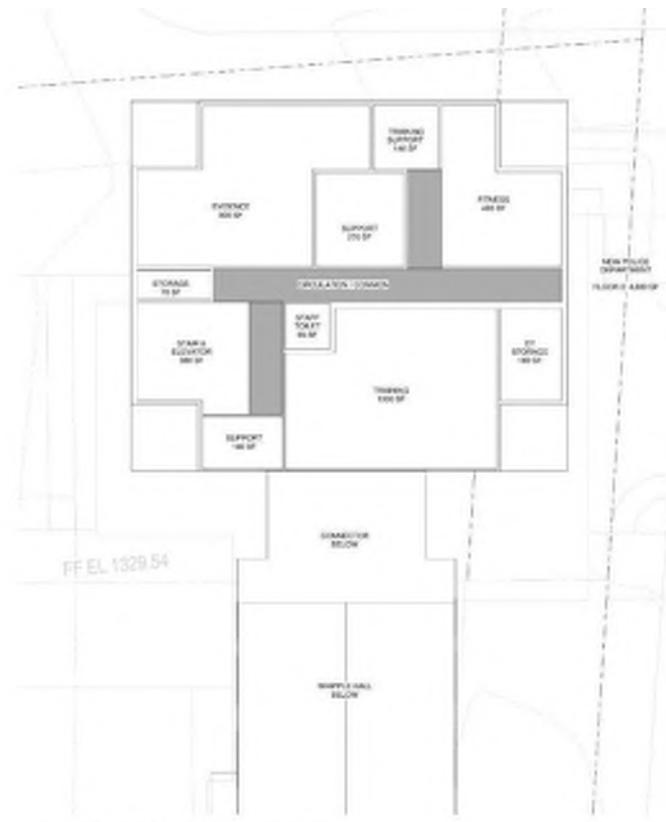
3 OPTION 2 GROUND LEVEL DEPT
SCALE 1/8" = 1'-0"

2 OPTION 2 THIRD LEVEL
SCALE 1/8" = 1'-0"

Option 2 (Upper): 3 Story Addition

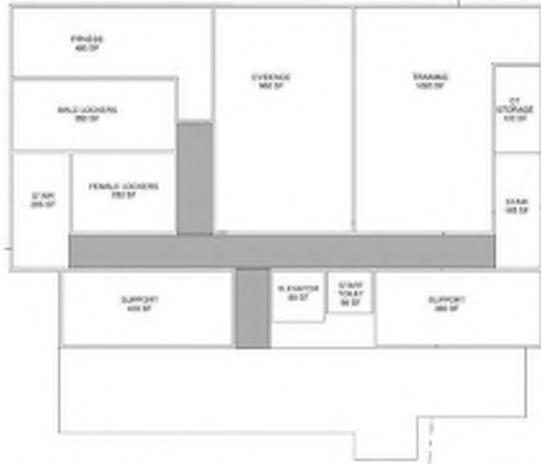


1 OPTION 2 SECOND LEVEL DEPT
SCALE 1/8" = 1'-0"

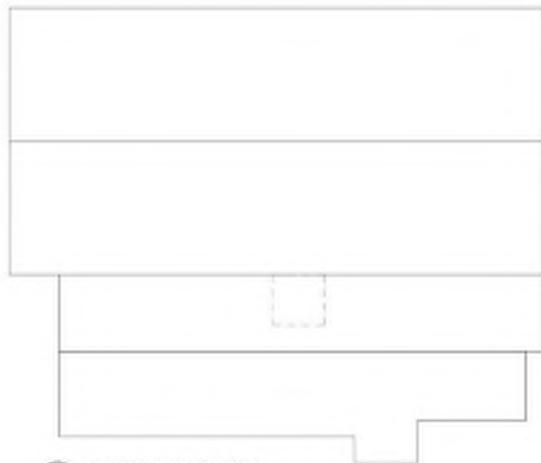


2 OPTION 2 THIRD LEVEL DEPT
SCALE 1/8" = 1'-0"

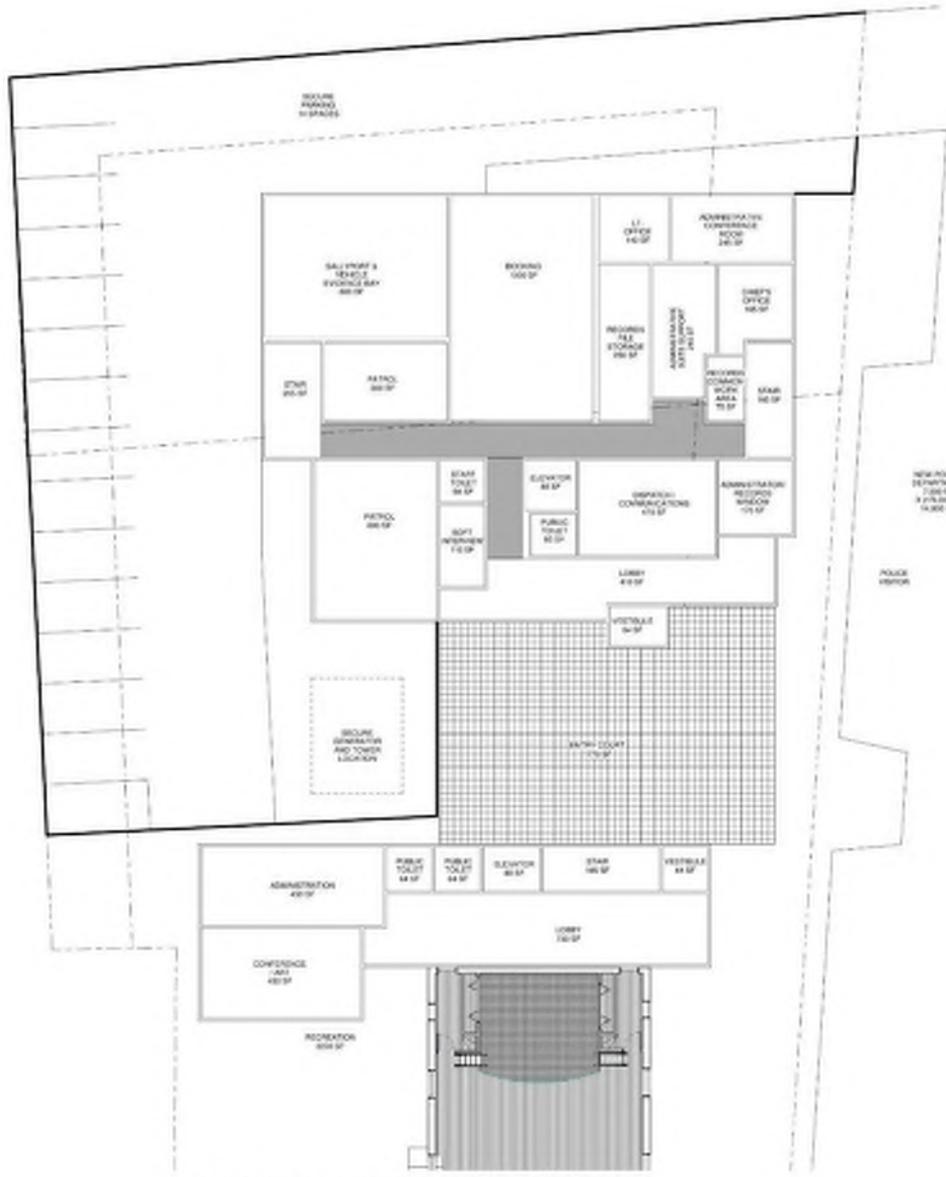
Option 3: 2 Story Stand-Alone Police Facility



1 OPTION 3C UPPER LEVEL
SCALE: 1" = 0'-0"

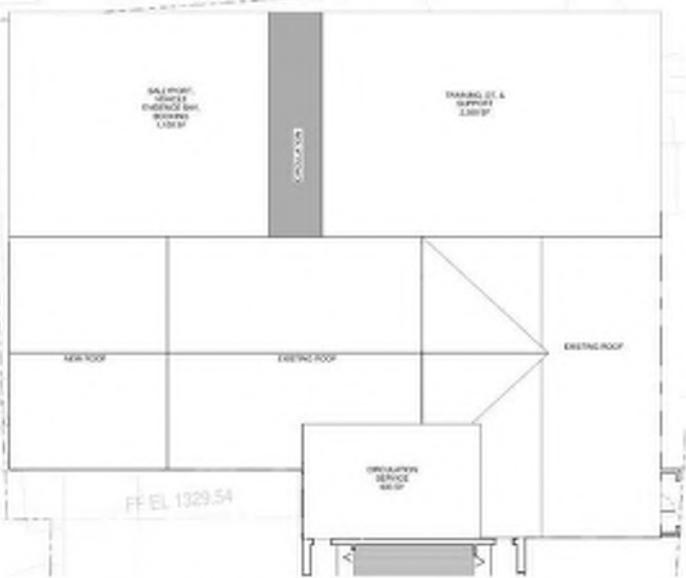


3 OPTION 3C ROOF LEVEL
SCALE: 1" = 0'-0"

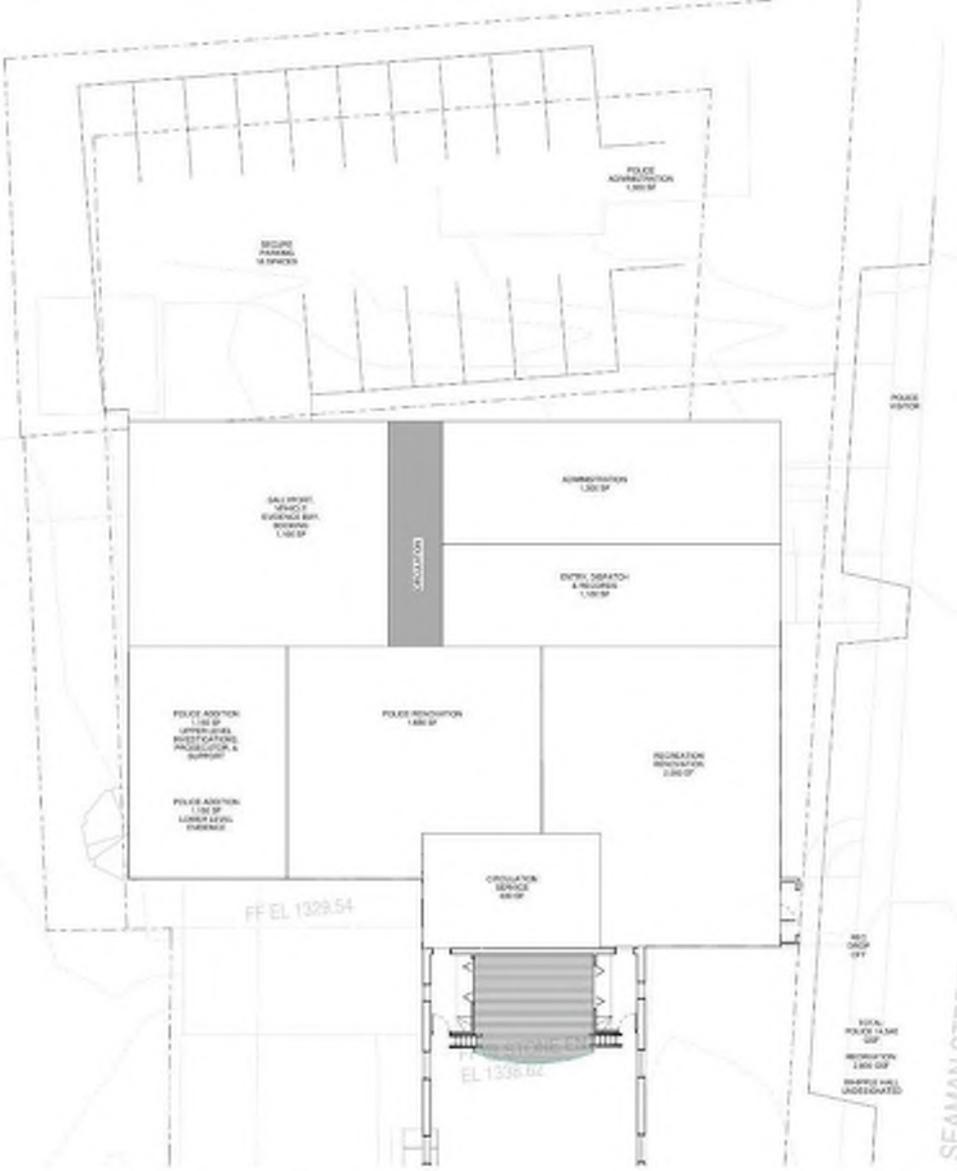


2 OPTION 3C GROUND LEVEL-1
SCALE: 1" = 0'-0"

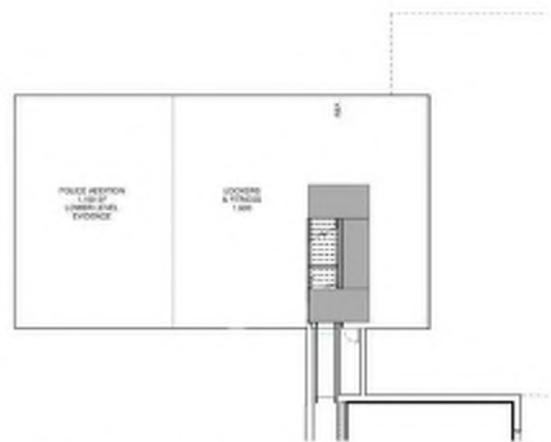
Option 4: Police & Recreation Renovation/Addition



3 OPTION 4 SECOND LEVEL
SCALE: 1/4" = 1'-0"



1 OPTION 4 UPPER LEVEL
SCALE: 1/4" = 1'-0"



2 EXISTING LOWER LEVEL OPTIONS
SCALE: 1/4" = 1'-0"

Space Needs Assessment – Deficiencies *Updated 8-30-2018*

- Overall program space need = 5,443 NSF (Net Square Feet)
- Overall total space need = **8,850 GSF** (Gross Square Feet)

- Police space need = 9,760 NSF
- Recreation space need = 3,260 NSF
- Shared space need (systems) = 417 NSF

- Current & future program target = 16,526 NSF
- Existing total program area = 11,083 NSF

- Existing Whipple Hall 1918 = 6,104 NSF (2-Story + Mezzanine)
- Existing Buker Building 1985 = 3,984 NSF (2-Story)
- Existing Buker Building 2000 = 4,199 NSF (1-Story, 2 footprints)

- Current & future building target = 23,137 GSF
- Existing total building area = 14,287 GSF

Design Options Findings

- 3 Story options break up important adjacencies and diminish operational efficiency. Although square footage is added, the function of the police department doesn't really improve.
- Use of the neighboring lot is essential for providing separate and secure parking as well as a secure location for generator and communication tower.
- Renovation and addition options (1 & 4) may be lower cost but yield another series of small additions to Whipple Hall. This is not the best long-term investment.
- 2 Story stand-alone Police Department meets all needs and creates a clear entry area for both Recreation and Police uses. Separating the programs improves security for both user groups. Option 3 is our recommendation for moving forward.

Buker Building Study

Facility Assessment, Space Needs, & Concept
Design Alternatives

New London, NH

**POST-MEETING SUPPLEMENT
SUBMITTED 09-19-2018**

Board of Selectmen Presentation

17 September 2018



HARRIMAN

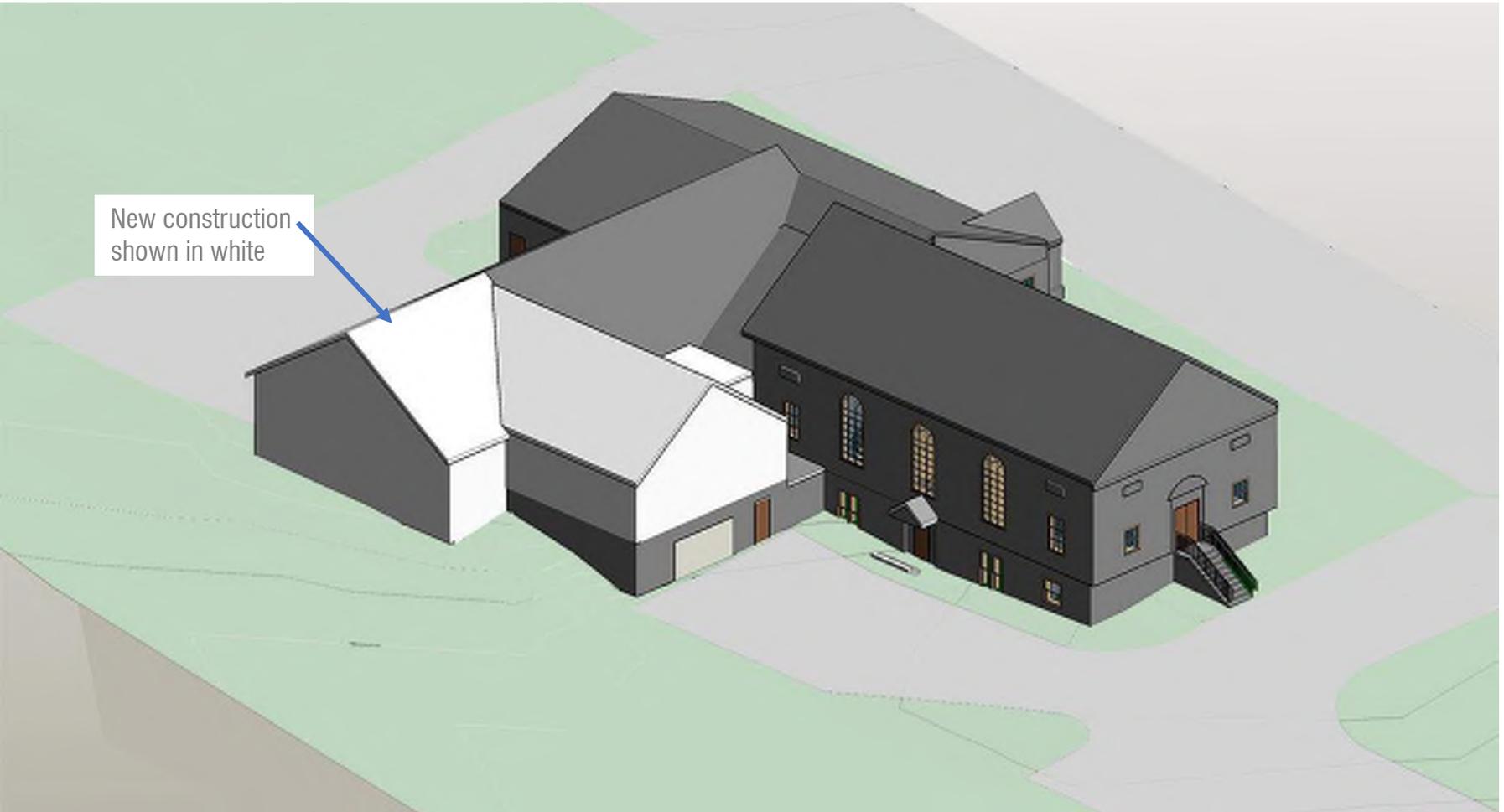
Options

- 1A: Renovate with minor additions: Police only
 - Recreation Department not included
 - Main level of Whipple Hall remains public use
 - Development is contained to existing property
- 1B: Renovate with minor additions: Police only
 - Recreation Department not included
 - Main level of Whipple Hall remains public use
 - Development extends neighboring property to provide secure parking
- 2A: Three story addition
 - Recreation in Whipple Hall and connector addition
 - Police in a new, connected 3 story facility
 - Development extends neighboring property to provide secure parking
- 2B: Three story addition with basement
 - Recreation in Whipple Hall with small connector addition
 - Police in a new, connected 3 story facility
 - Development stays within existing property

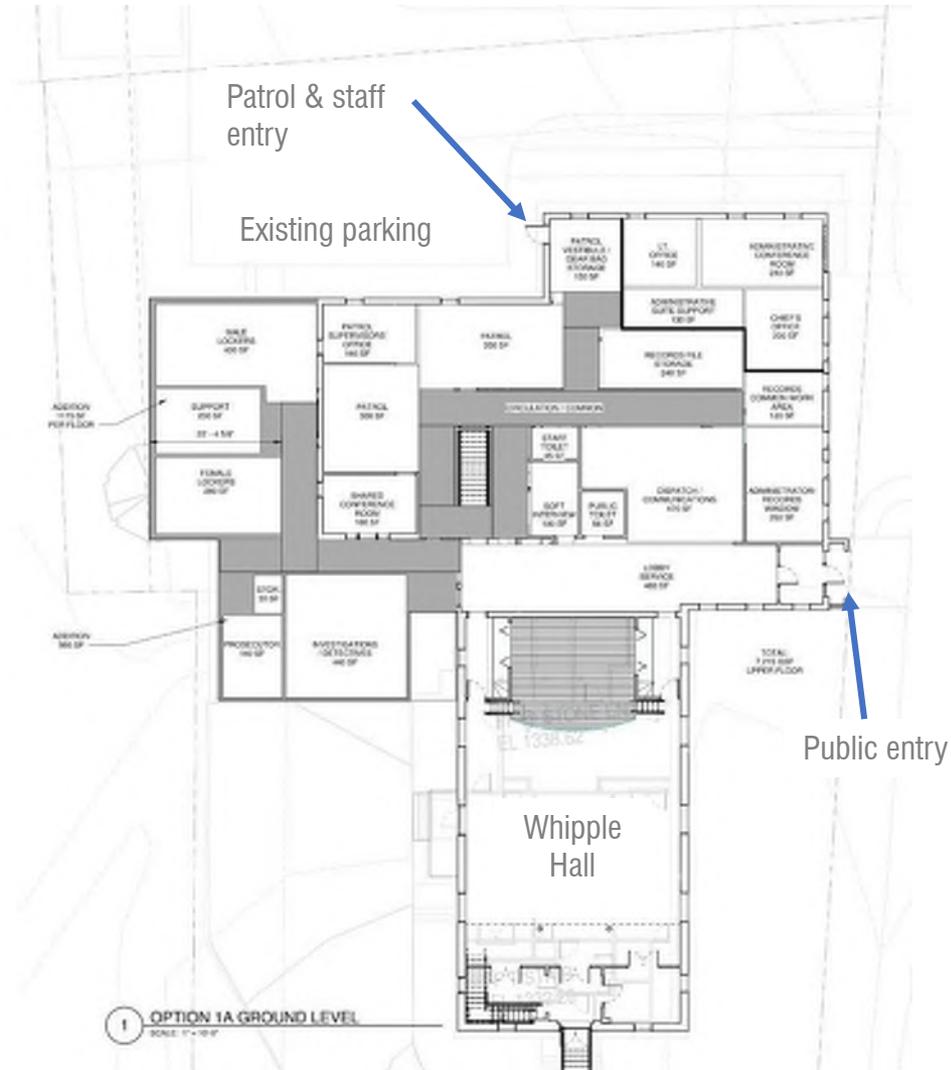
Options

- 3: Two story stand-alone facility
 - Recreation in addition. Connected to Whipple Hall
 - Police in a new stand-alone 2 story facility
 - Development extends neighboring property to provide secure parking
- 4: Renovate with major 2 story additions: Police and Recreation
 - Recreation in Whipple Hall and front of Buker
 - Police to utilize remaining Buker Building plus connected addition
 - Development extends neighboring property to provide secure parking

Option 1A: Police Only Renovation/Addition



Option 1A: Police Only Renovation/Addition



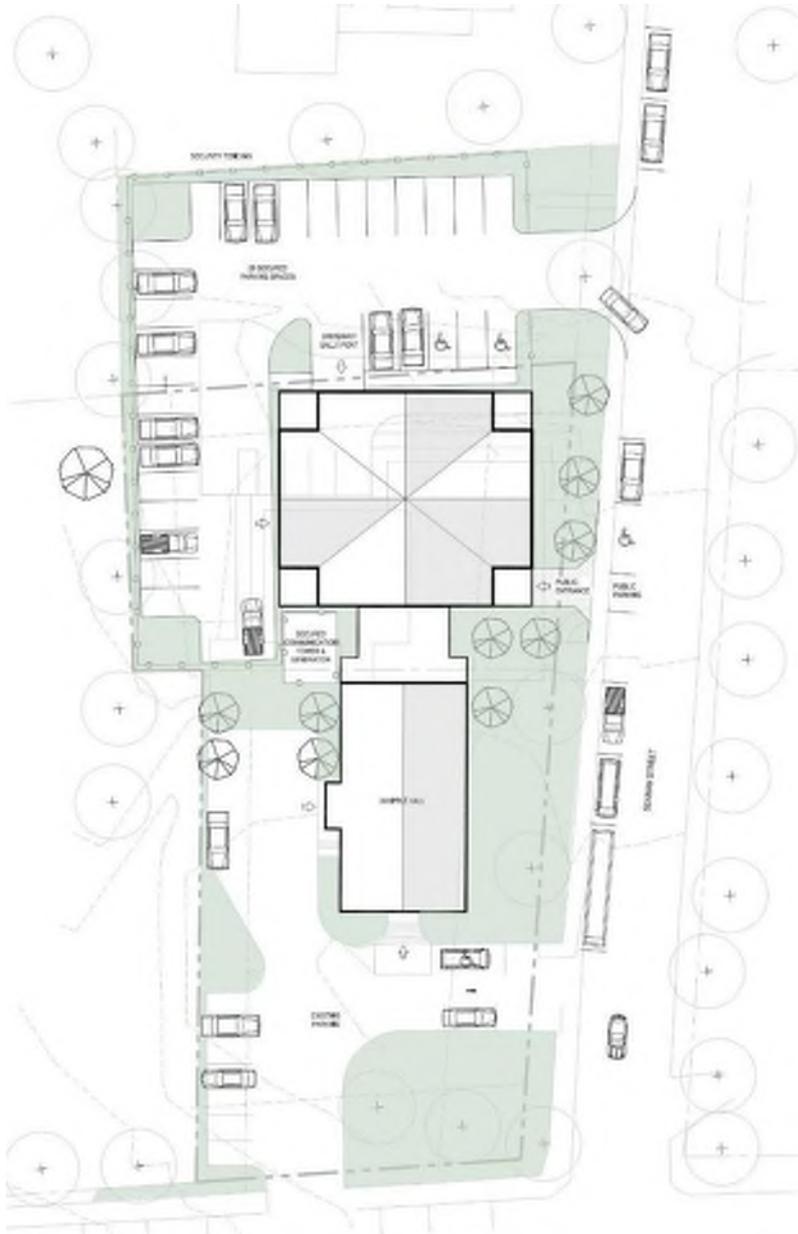
Option 1B: Police Only Renovation/Addition & site expansion



■ Option 1B: Police Only Renovation/Addition & site expansion



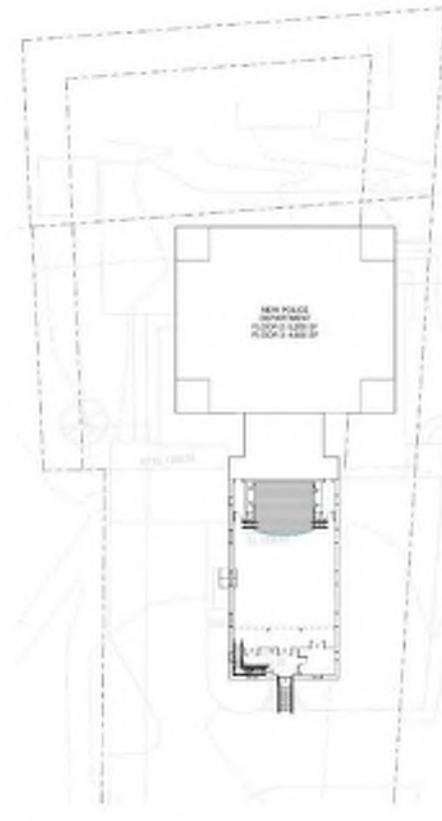
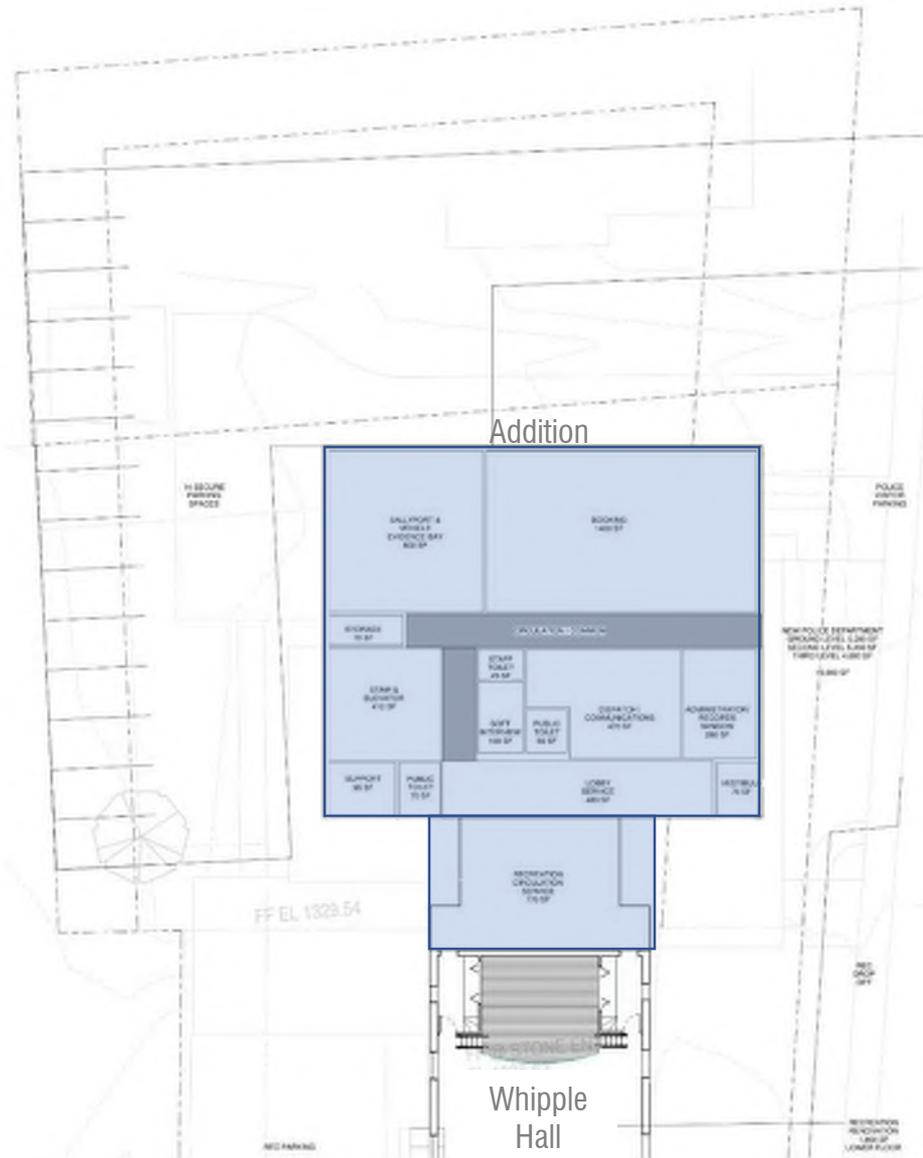
Option 2A: 3 Story Addition



■ Option 2A: 3 Story Addition



Option 2A (Lower): 3 Story Addition

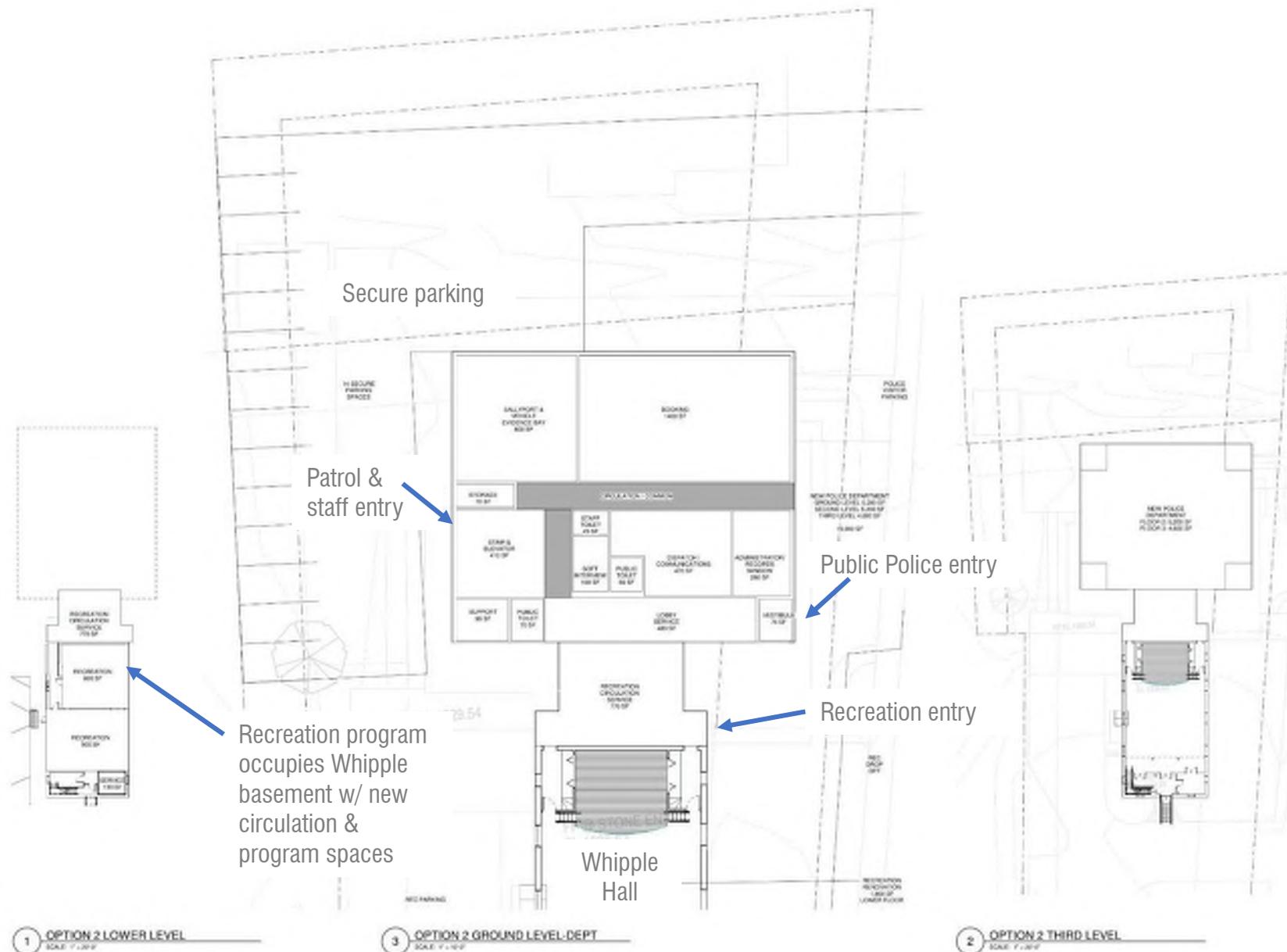


1 OPTION 2 LOWER LEVEL
SCALE: 1/8" = 1'-0"

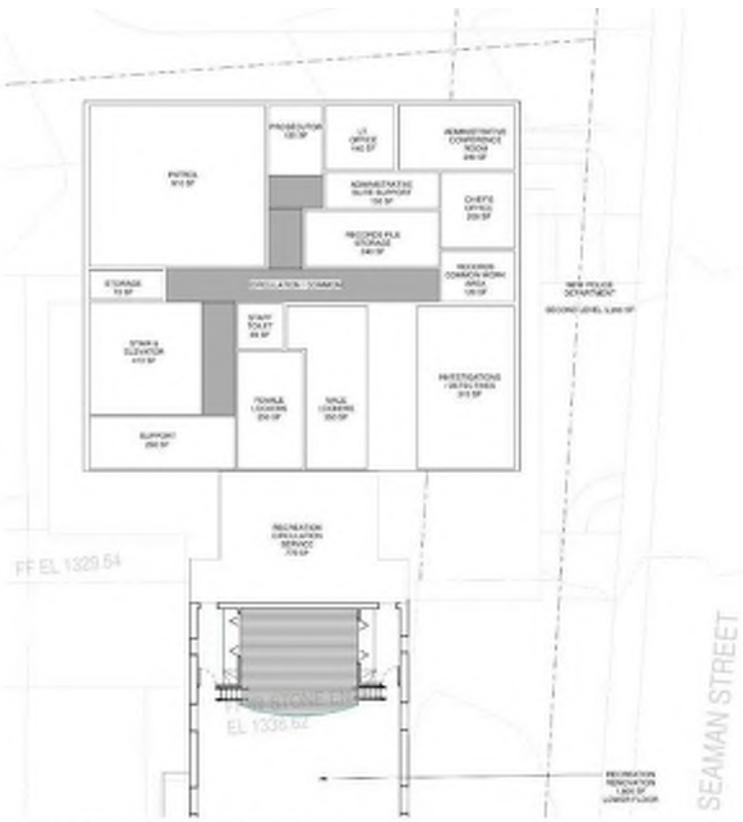
3 OPTION 2 GROUND LEVEL DEPT
SCALE: 1/8" = 1'-0"

2 OPTION 2 THIRD LEVEL
SCALE: 1/8" = 1'-0"

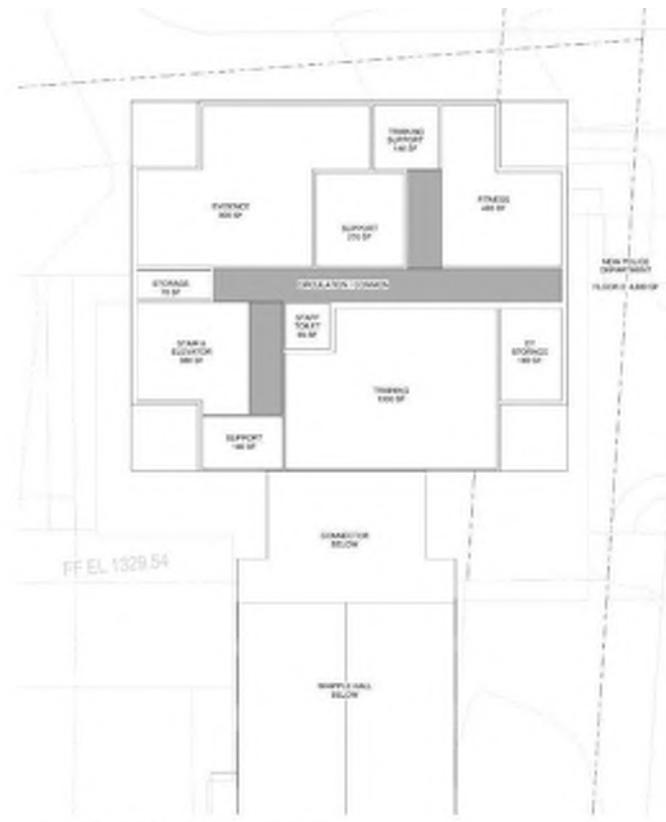
Option 2A (Lower): 3 Story Addition



Option 2A (Upper): 3 Story Addition

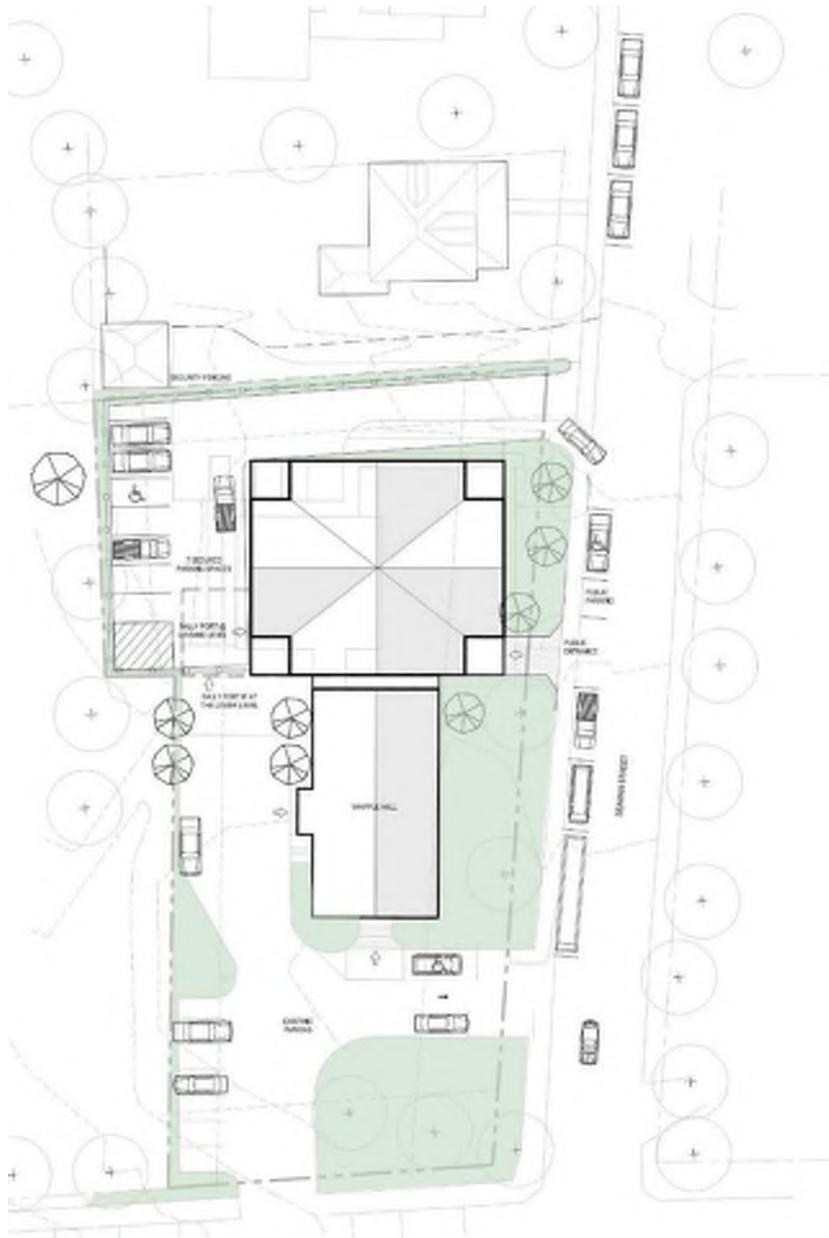


1 OPTION 2 SECOND LEVEL-DEPT
SCALE 1/8" = 1'-0"



2 OPTION 2 THIRD LEVEL-DEPT
SCALE 1/8" = 1'-0"

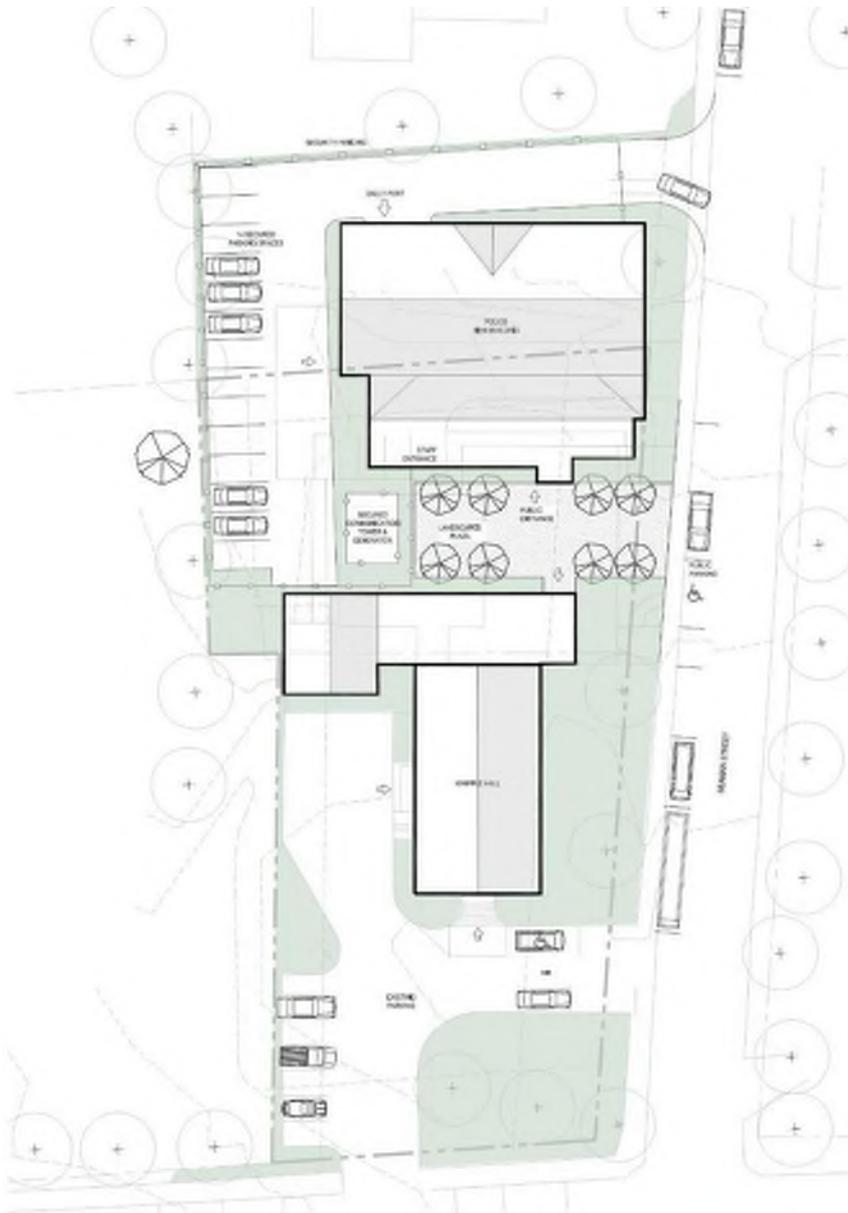
Option 2B: 3 Story Addition (with Basement)



■ Option 2B: 3 Story Addition (with Basement)



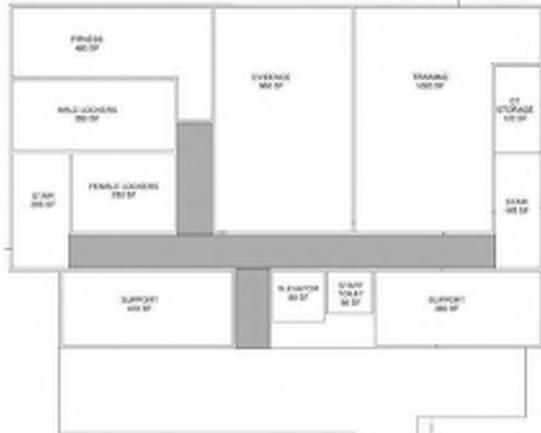
Option 3: 2 Story Stand-Alone Police Facility



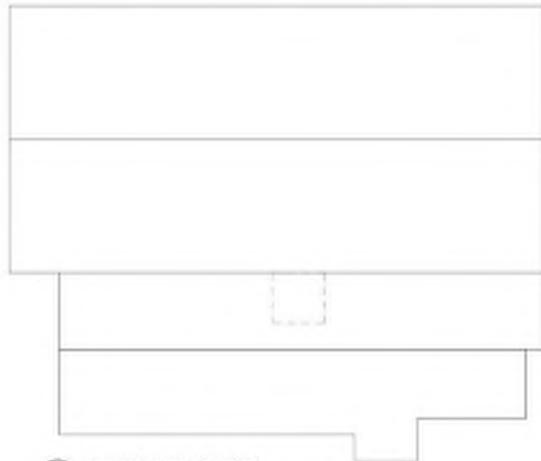
Option 3: 2 Story Stand-Alone Police Facility



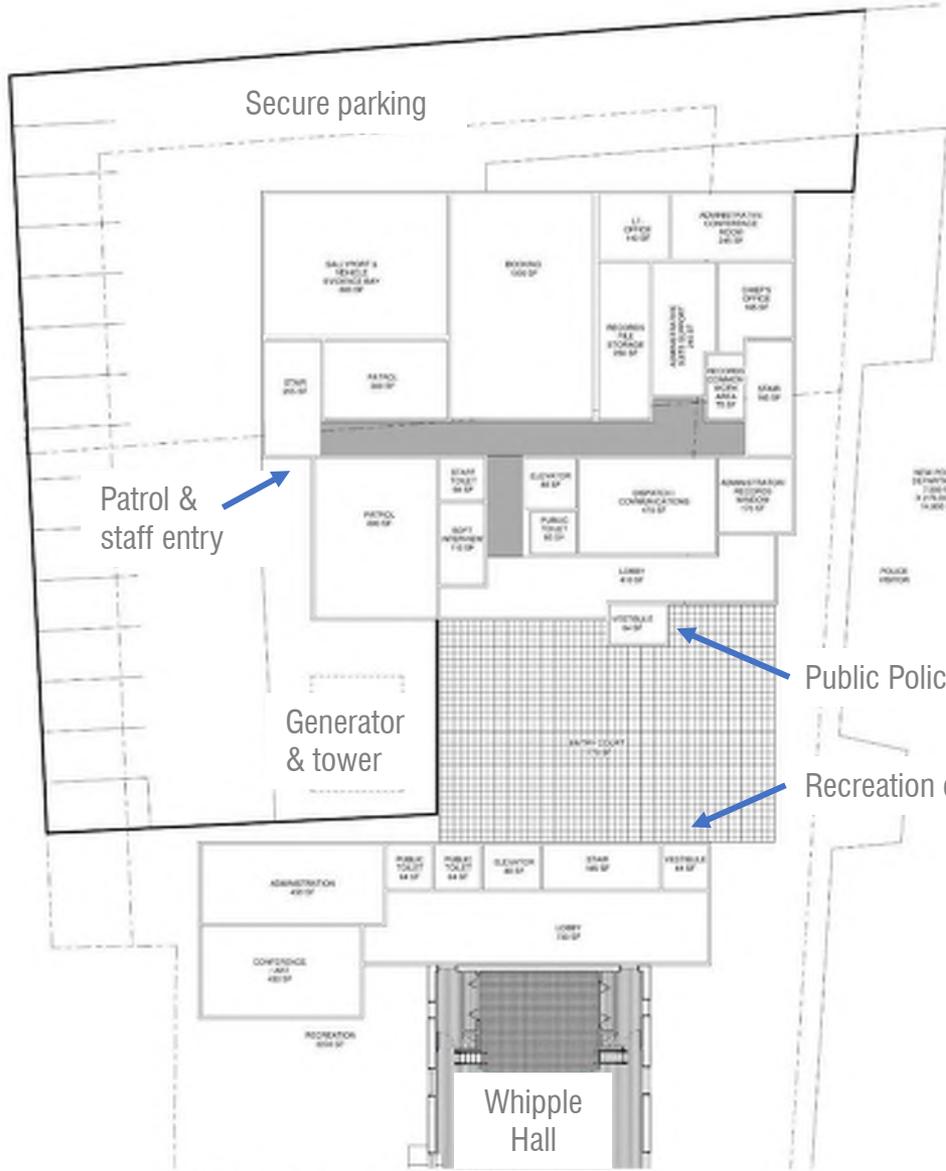
Option 3: 2 Story Stand-Alone Police Facility



1 OPTION 3C UPPER LEVEL
SCALE: 1/4" = 1'-0"

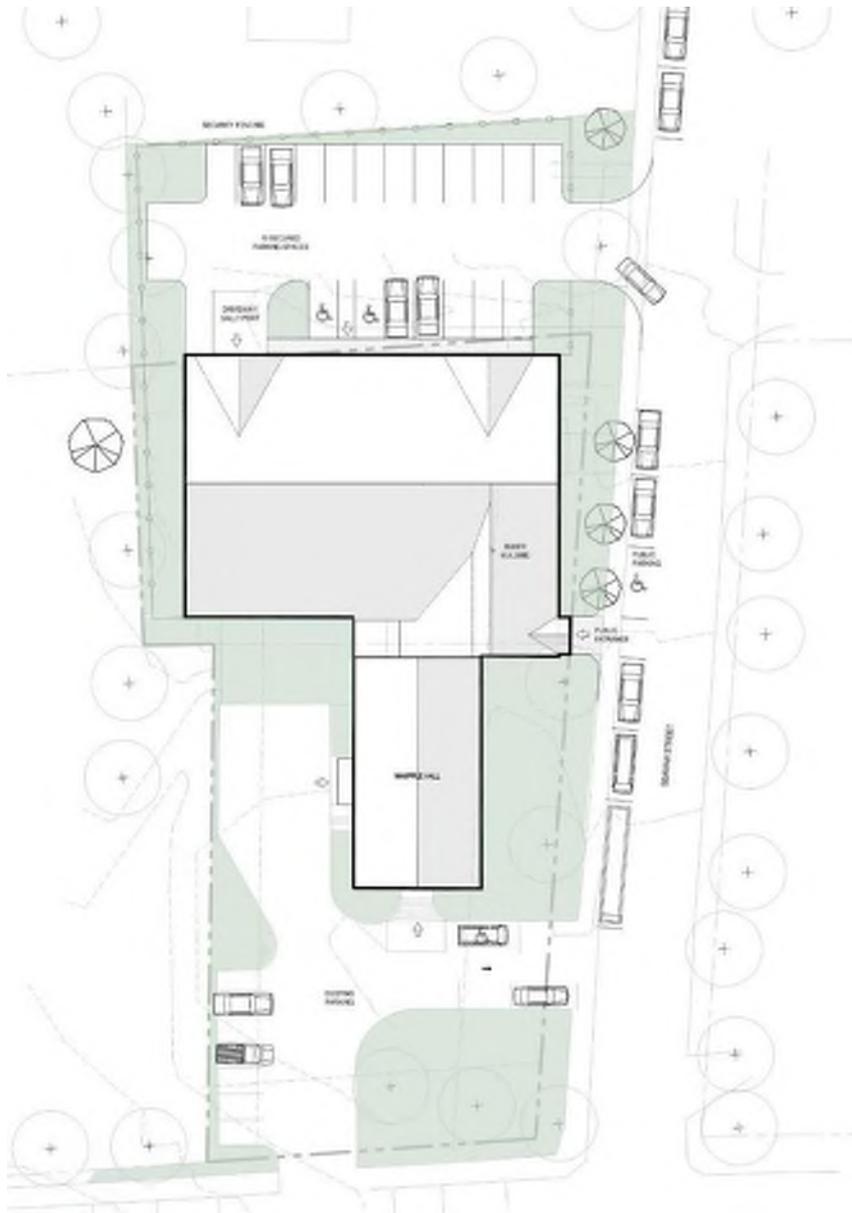


3 OPTION 3C ROOF LEVEL
SCALE: 1/4" = 1'-0"



2 OPTION 3C GROUND LEVEL-1
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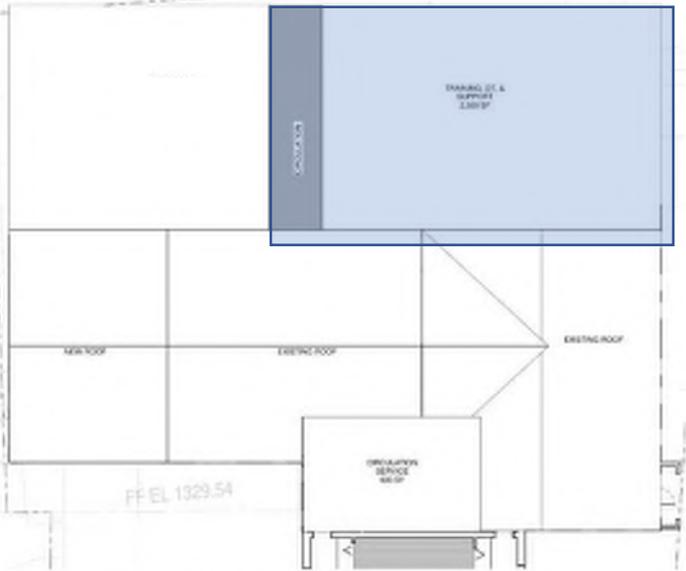
Option 4: Police & Recreation Renovation/Addition



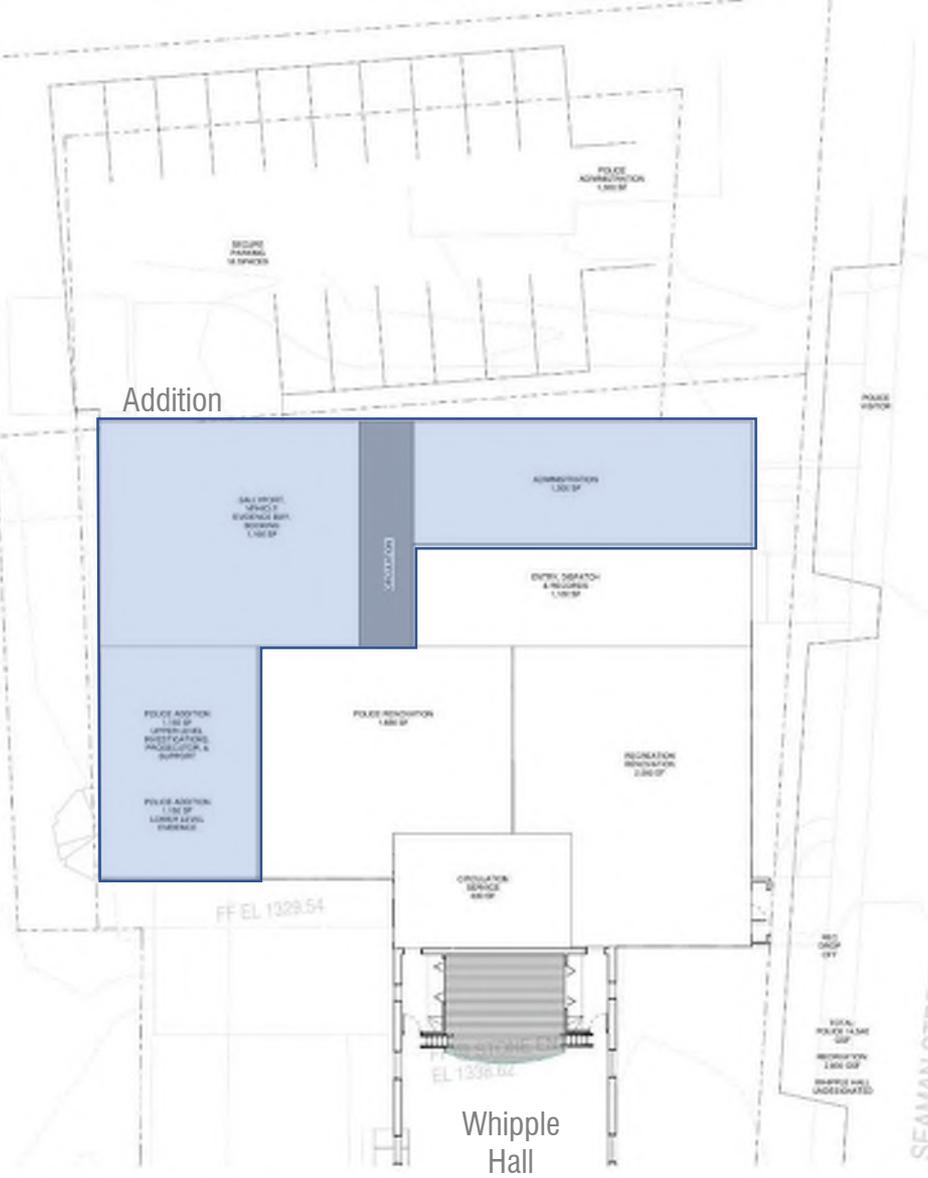
Option 4: Police & Recreation Renovation/Addition



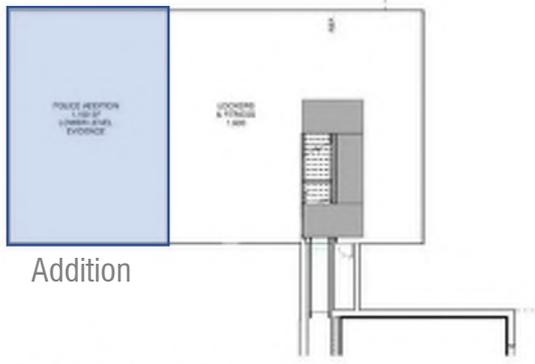
Option 4: Police & Recreation Renovation/Addition



3 OPTION 4 SECOND LEVEL
SCALE: 1/4" = 1'-0"



1 OPTION 4 UPPER LEVEL
SCALE: 1/4" = 1'-0"



2 EXISTING LOWER LEVEL OPTIONS
SCALE: 1/4" = 1'-0"

Space Needs Assessment – Summary *Updated 8-30-2018*

Description	Exist	2017	2022	2027	2037	Total Net Area Required (sf)	Delta Between Exist and Required Area (sf)
	Current Area	Net Area Required (sf)	Anticipated Future Area (sf)	Anticipated Future Area (sf)	Anticipated Future Area (sf)		
S1.0 Shared Building Program	3,269	3,686	0	0	0	3686	(417)
R1.0 Recreation	1,618	2,512	124	184	0	2820	(1,202)
1.0 Administration	424	948	100	0	0	1048	(624)
2.0 Records	215	420	20	40	0	480	(265)
3.0 Communications	289	412	0	64	0	476	(187)
4.0 Patrol	2,003	2,584	24	24	0	3028	(1,137)
5.0 Training	950	1,000	64	64	0	1128	(178)
6.0 Investigations	0	444	0	0	0	444	(444)
7.0 Property & Evidence	237	832	20	40	20	912	(675)
8.0 Legal - Prosecutor	0	140	0	0	0	140	(140)
9.0 Common Facilities	1,526	2,014	80	40	40	2174	(648)
10.0 Other General-Specialty Areas	230	256	0	10	0	266	(36)
11.0 Facility Support	322	60	0	0	0	60	262
R12.0 Parking - Fleet							
12.0 Parking - Fleet							
Total Net Square Footage	11,083	15,308	432	466	60	16,266	(5,183)
Net to Gross Factor	1.289	1.4	1.4	1.4	1.4	1.4	
Total Gross Square Footage	14,287	21,432	605	652	84	22,773	(8,486)

Space Needs Assessment – Deficiencies *Updated 8-30-2018*

- Overall program space need = 5,443 NSF (Net Square Feet)
- Overall total space need = **8,850 GSF** (Gross Square Feet)

- Police space need = 9,760 NSF
- Recreation space need = 3,260 NSF
- Shared space need (systems) = 417 NSF

- Current & future program target = 16,526 NSF
- Existing total program area = 11,083 NSF

- Existing Whipple Hall 1918 = 6,104 NSF (2-Story + Mezzanine)
- Existing Buker Building 1985 = 3,984 NSF (2-Story)
- Existing Buker Building 2000 = 4,199 NSF (1-Story, 2 footprints)

- Current & future building target = 23,137 GSF
- Existing total building area = 14,287 GSF

Design Options Findings

- 3 Story options break up important adjacencies and diminish operational efficiency. Although square footage is added, the function of the police department doesn't really improve.
- Use of the neighboring lot is highly recommended for providing separate and secure parking as well as a secure location for generator and communication tower.
- Renovation and addition options (1 & 4) may be lower cost but yield another series of small additions to Whipple Hall. This is not the best long-term investment.
- 2 Story stand-alone Police Department meets all needs and creates a clear entry area for both Recreation and Police uses. Separating the programs improves security for both user groups. Option 3 is our recommendation for moving forward.

Options Cost Summary

Option 1A

Construction: \$4,479,655

Total Project: \$ 6,155,512

Option 1B

Construction: \$4,779,655

Total Project: \$ 6,547,543

Option 2A

Construction: \$7,707,240

Total Project: \$10,373,229

Option 2B

Construction: \$7,489,090

Total Project: \$10,088,156

Option 3

Construction: \$8,761,840

Total Project: \$11,751,350

Option 4

Construction: \$5,712,500

Total Project: \$ 7,789,035



Option 1A: Major renovation and minor addition with no site expansion

	Demo	Reno	New PD	New Rec	Site
Area (GSF)	0	11,828	3,345	0	
Cost/SF		\$260	\$375		
Construction Cost	\$0	\$3,075,280	\$1,254,375	\$0	\$150,000
Construction Total					\$4,479,655
Administrative Cost & Reserve					\$806,948
Fees & Services					\$868,908
Grand Total					\$6,155,512



Option 1B: Major renovation and minor addition with site expansion

	Demo	Reno	New PD	New Rec	Site
Area (GSF)	0	11,828	3,345	0	
Cost/SF		\$260	\$375		
Construction Cost	\$0	\$3,075,280	\$1,254,375	\$0	\$450,000 Land cost not included
Construction Total					\$4,779,655
Administrative Cost & Reserve					\$851,948
Fees & Services					\$915,940
Grand Total					\$6,547,543



Option 2A: Connected 3 story addition w/ site expansion

	Demo	Reno	New PD	New Rec	Site
Area (GSF)	8,183	1,959	15,000	1,540	
Cost/SF		\$260	\$365	\$385	
Construction Cost	\$140,000	\$509,340	\$5,475,000	\$592,900	\$990,000 Land cost not included
Construction Total					\$7,707,240
Administrative Cost & Reserve					\$1,291,086
Fees & Services					\$1,374,903
Grand Total					\$10,373,229



Option 2B: Connected 3 story addition no site expansion

	Demo	Reno	New PD	New Rec	Site
Area (GSF)	8,183	1,959	15,000	350	
Cost/SF		\$260	\$375	\$385	
Construction Cost	\$140,000	\$509,340	\$5,625,000	\$134,750	\$1,080,000
Construction Total					\$7,489,090
Administrative Cost & Reserve					\$1,258,364
Fees & Services					\$1,340,703
Grand Total					\$10,088,156



Option 3: Stand-alone 2 story PD, Rec renovation/addition w/ site expansion

	Demo	Reno	New PD	New Rec	Site
Area (GSF)	8,183	1,959	14,000	4,500	
Cost/SF		\$260	\$365	\$375	
Construction Cost	\$140,000	\$509,340	\$5,110,000	\$1,687,500	\$1,315,000 <small>Land cost not included</small>
Construction Total					\$8,761,840
Administrative Cost & Reserve					\$1,449,276
Fees & Services					\$1,540,234
Grand Total					\$11,751,350



Option 4: Major renovation and addition with site expansion

	Demo	Reno	New PD	New Rec	Site
Area (GSF)	1,800	8,970	7,740	0	
Cost/SF	\$25	\$260	\$375	\$0	
Construction Cost	\$45,000	\$2,332,200	\$2,902,500	\$0	\$450,000
Construction Total					\$5,712,500
Administrative Cost & Reserve					\$994,455
Fees & Services					\$1,064,880
Grand Total					\$7,789,035

Buker Building Study

Concept Design Alternatives
New London, NH



Board of Selectmen Presentation

01 October 2018



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Current Options Matrix

OPTION	MASSING	DESCRIPTION	CONSTRUCTION COST	PROJECT COST	FACTORS
5-1		Renovation Only			
		Renovation 10,987 GSF New Construction 0 GSF			SITE EXPANSION <input type="checkbox"/>
		Total Option Area: 10,987 GSF	\$3,506,620	\$4,883,977	MEETS SPACE NEEDS (78%) <input type="checkbox"/>
		Total Area Required: 13,252 GSF Program Deficiency 2,210 NSF Total Building Area on Site 13,787 GSF			RELOCATE SALLYPORT <input type="checkbox"/>
5-2		Renovation with Minor Addition			
		Renovation 9,864 GSF New Construction 1,535 GSF			SITE EXPANSION <input checked="" type="checkbox"/>
		Total Option Area: 11,399 GSF	\$4,065,390	\$5,614,162	MEETS SPACE NEEDS (81%) <input type="checkbox"/>
		Total Area Required: 13,252 GSF Program Deficiency 1,854 NSF Total Building Area on Site 14,199 GSF			RELOCATE SALLYPORT <input checked="" type="checkbox"/>
5-3		Renovation/Addition			
		Renovation 10,987 GSF New Construction 1,535 GSF			SITE EXPANSION <input checked="" type="checkbox"/>
		Total Option Area: 13,899 GSF	\$5,002,890	\$6,839,260	MEETS SPACE NEEDS (97%) <input checked="" type="checkbox"/>
		Total Area Required: 13,252 GSF Program Deficiency 314 NSF Total Building Area on Site 16,699 GSF			RELOCATE SALLYPORT <input checked="" type="checkbox"/>
1B		Renovation/Addition			
		Renovation 9,864 GSF New Construction 4,035 GSF			SITE EXPANSION <input checked="" type="checkbox"/>
		Total Option Area: 14,332 GSF	\$5,279,655	\$7,200,929	MEETS SPACE NEEDS (99%) <input checked="" type="checkbox"/>
		Total Area Required: 13,252 GSF Program Deficiency 54 NSF Total Building Area on Site 17,132 GSF			RELOCATE SALLYPORT <input type="checkbox"/>
6		Stand-Alone Police Station with New Whipple Entry			
		New Construction Police 13,252 GSF New Construction Entry 685 GSF			SITE EXPANSION <input checked="" type="checkbox"/>
		Total Option Area: 13,837 GSF	\$6,620,980	\$8,953,735	MEETS SPACE NEEDS (100%) <input checked="" type="checkbox"/>
		Total Area Required: 13,252 GSF Program Deficiency 0 NSF Total Building Area on Site 19,437 GSF			RELOCATE SALLYPORT <input checked="" type="checkbox"/>

Current Options for Police only program

- **5-1: Renovation only: 10,987 GSF Total**
 - Renovate Buker and Whipple without adding any new construction
 - Phase 1: Current area in Buker occupied by Recreation is renovated, PD moves into that area
 - Phase 2: Remaining PD in Buker is renovated
 - Phase 3: Lower level of Whipple Hall is renovated
 - Existing sallyport remains to prevent the need for new construction
 - 100% of Buker and entire lower level of Whipple are completely renovated with new HVAC, electrical, and hardened building elements
 - HVAC moves out of attic requiring +/- 200 SF in the building footprint
 - Renovation requires an elevator: (\$150,000 and +/- 100 SF per floor)
 - 10,987 GSF are renovated. 2,800 GSF of the Whipple Hall assembly space is not touched
 - Option yields an overall space deficiency of 2,210 NSF for the PD. This translates to the following essential program items missing from the building:
 - 198 NSF of Administrative support program
 - 138 NSF of Training support program
 - 344 NSF of Investigations (entire program area)
 - 140 NSF of Prosecutor (entire program area)
 - 838 NSF of Common Facilities incl.: break room, lockers, & server room
 - 416 NSF of Support/Service Areas: Mechanical & Electrical Rooms, Janitor, General Storage
 - 94 NSF in other categories: Records, Communications, & Evidence
 - Functional space for Patrol support and equipment storage program

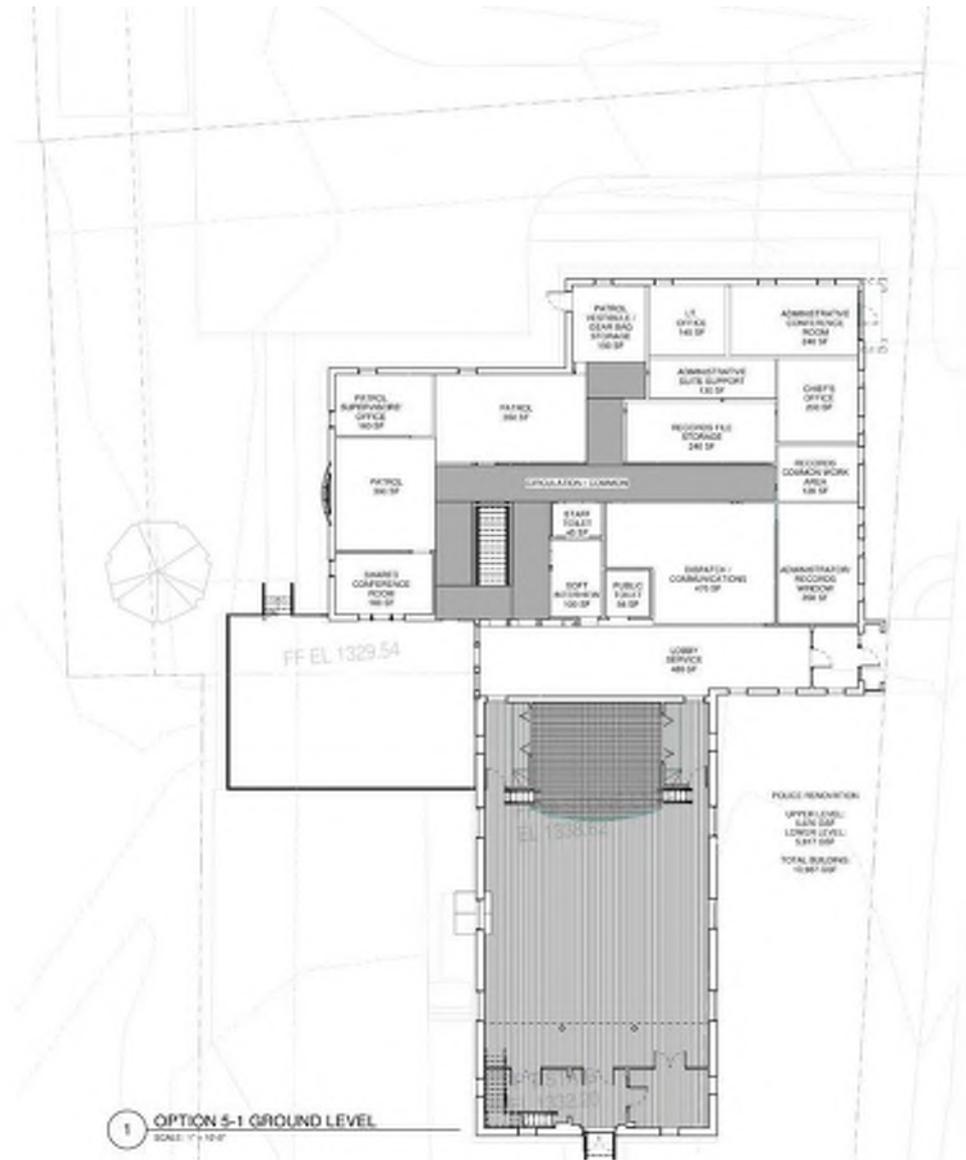
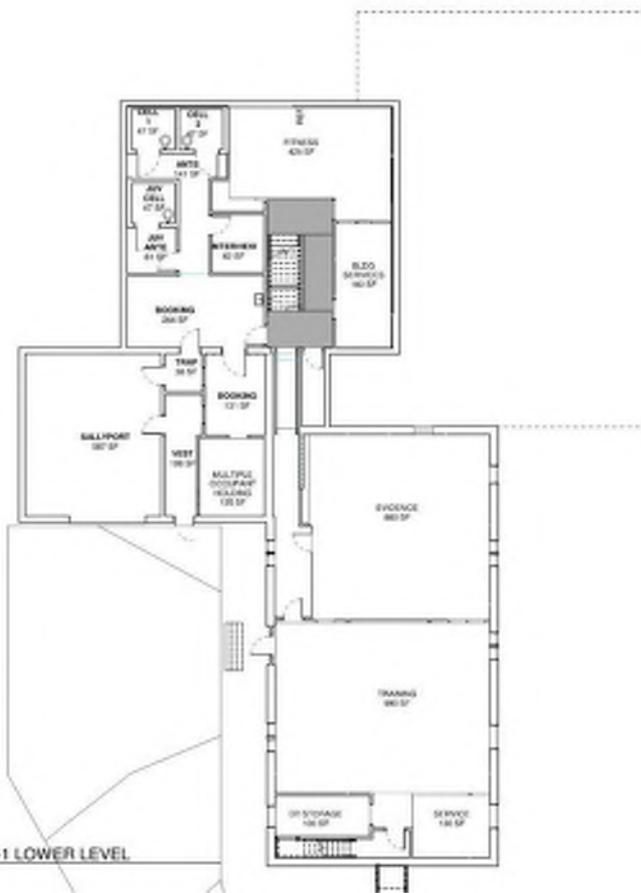
Option 5-1: Renovation Only



Option 5-1: Renovation Only



Option 5-1: Renovation Only



Current Options for Police only program

- **5-2: Renovation with minor addition: 11,399 GSF Total**
 - Renovate Buker and Whipple with 1,535 GSF of new construction
 - Phase 1: Current area in Buker occupied by Recreation is renovated, New construction is built, PD moves into area currently occupied by Recreation and new construction area
 - Phase 2: Remaining PD in Buker is renovated
 - Phase 3: Lower level of Whipple Hall is renovated
 - Sallyport is demolished and relocated to new construction
 - 100% of Buker and entire lower level of Whipple are completely renovated with new HVAC, electrical, and hardened building elements
 - HVAC moves out of attic requiring +/- 200 SF in the building footprint
 - Renovation requires an elevator: (\$150,000 and +/- 100 SF per floor)
 - 9,864 GSF are renovated. 2,800 GSF of the Whipple Hall assembly space is not touched
 - Option yields an overall space deficiency of 1,928 NSF for the PD. This translates to the following essential program items missing from the building:
 - 198 NSF of Administrative support program
 - 346 NSF of Patrol program
 - 120 NSF of Training support program
 - 912 NSF of Evidence (entire program area)
 - 117 NSF of Common Facilities incl.: break room, lockers, & server room
 - 121 NSF of Support/Service Areas: Mechanical & Electrical, Janitor, Storage
 - Functional space for Patrol support and equipment storage program

Option 5-2: Renovation with minor addition



**Option 5-2: Renovation with
minor addition**



Current Options for Police only program

- **5-3: Renovation with addition: 13,899 GSF Total**
 - Renovate Buker and Whipple with 4,035 GSF of new construction
 - Phase 1: Current area in Buker occupied by Recreation is renovated, New construction is built, PD moves into area currently occupied by Recreation and new construction areas
 - Phase 2: Remaining PD in Buker is renovated
 - Phase 3: Lower level of Whipple Hall is renovated
 - Sallyport is demolished and relocated to new construction
 - 100% of Buker and entire lower level of Whipple are completely renovated with new HVAC, electrical, and hardened building elements
 - HVAC moves out of attic requiring +/- 200 SF in the building footprint
 - Renovation requires an elevator: (\$150,000 and +/- 100 SF per floor)
 - 9,864 GSF are renovated. 2,800 GSF of the Whipple Hall assembly space is not touched
 - Option yields an overall space deficiency of 314 NSF for the PD which generally meets the overall space needs. This translates to the following essential program items missing from the building:
 - 198 NSF of Administrative support program
 - 120 NSF of Training support program
 - Most program areas generally meet SF targets with some slightly higher and some slightly lower.

Option 5-3: Renovation and addition



**Option 5-3: Renovation
and addition**

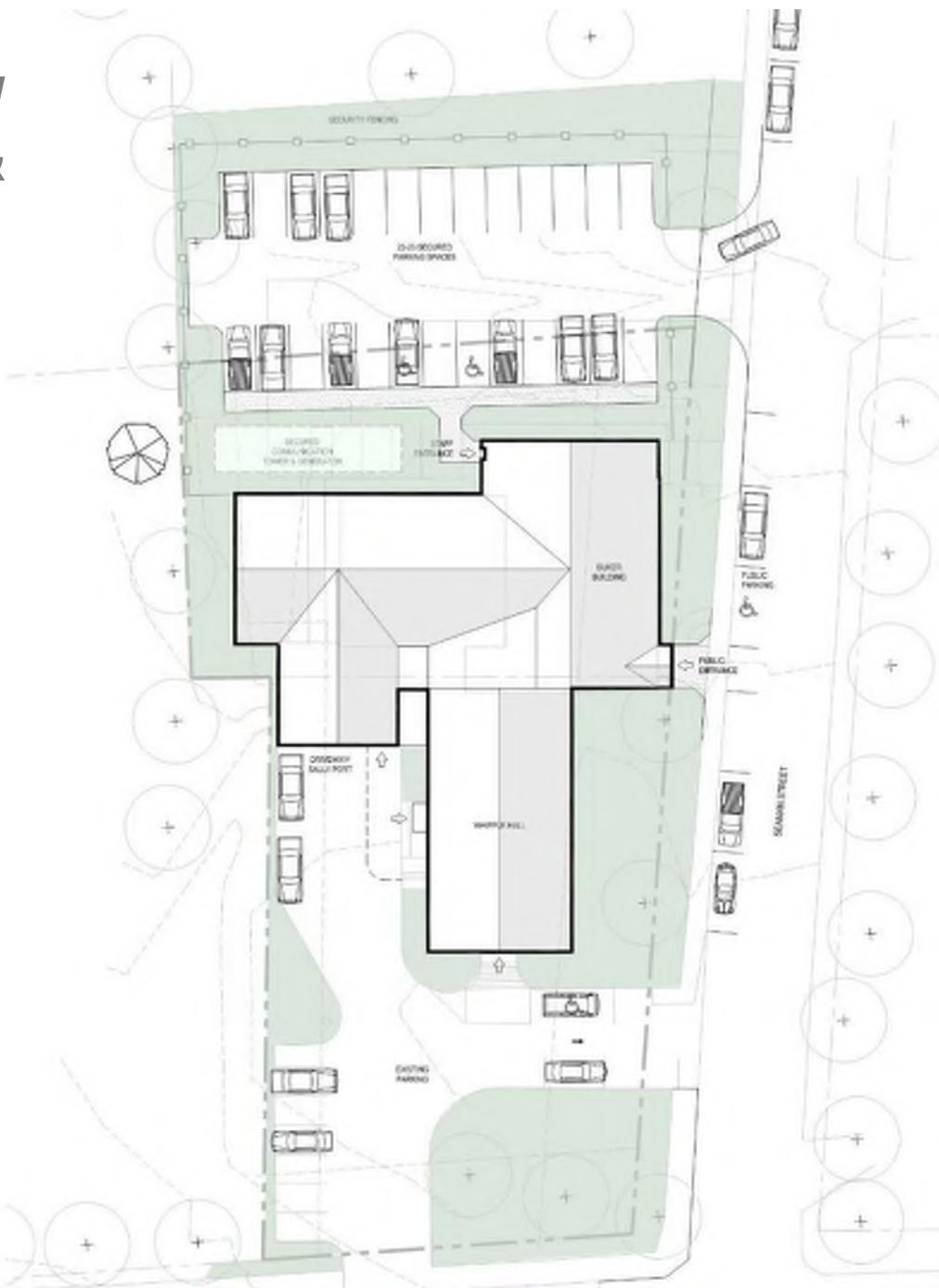


Previous Option for Police only program

- **1B: Renovation with additions over sallyport and toward Town Green: 14,332 GSF Total**
 - Renovate Buker and Whipple with 3,345 GSF of new construction
 - Phase 1: Current area in Buker occupied by Recreation is renovated, New construction is built, PD moves into area currently occupied by Recreation and new construction areas
 - Phase 2: Remaining PD in Buker is renovated
 - Phase 3: Lower level of Whipple Hall is renovated
 - Existing sallyport remains to prevent the need for site expansion
 - 100% of Buker and entire lower level of Whipple are completely renovated with new HVAC, electrical, and hardened building elements
 - HVAC moves out of attic requiring +/- 200 SF in the building footprint
 - Renovation requires an elevator: (\$150,000 and +/- 100 SF per floor)
 - 10,987 GSF are renovated. 2,800 GSF of the Whipple Hall assembly space is not touched
 - Option generally meets space need for the PD however inefficiencies from renovated and addition spaces require more addition area to be constructed. The patrol (sallyport and booking) and shared program areas are over their program SF due to existing layout and poor adjacency for new construction layouts
 - The following program items missing from the building:
 - 198 NSF of Administrative support program
 - 138 NSF of Training support program
 - 608 NSF of Common Facilities



Option 1B: Police Only Renovation/Addition & site expansion



■ Option 1B: Police Only Renovation/Addition & site expansion



Option 1B: Police Only Renovation/Addition & site expansion



2 OPTION 1B LOWER LEVEL
SCALE: 1" = 10'

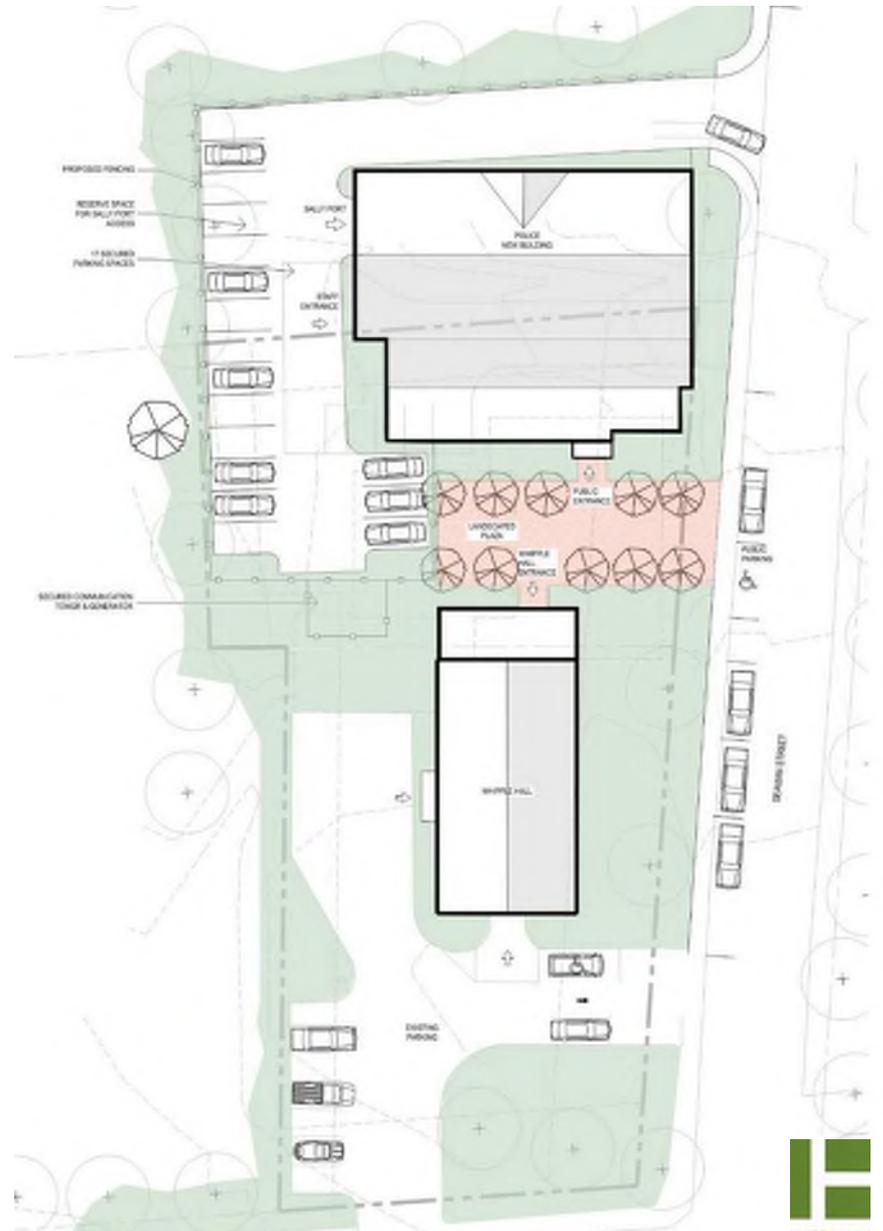
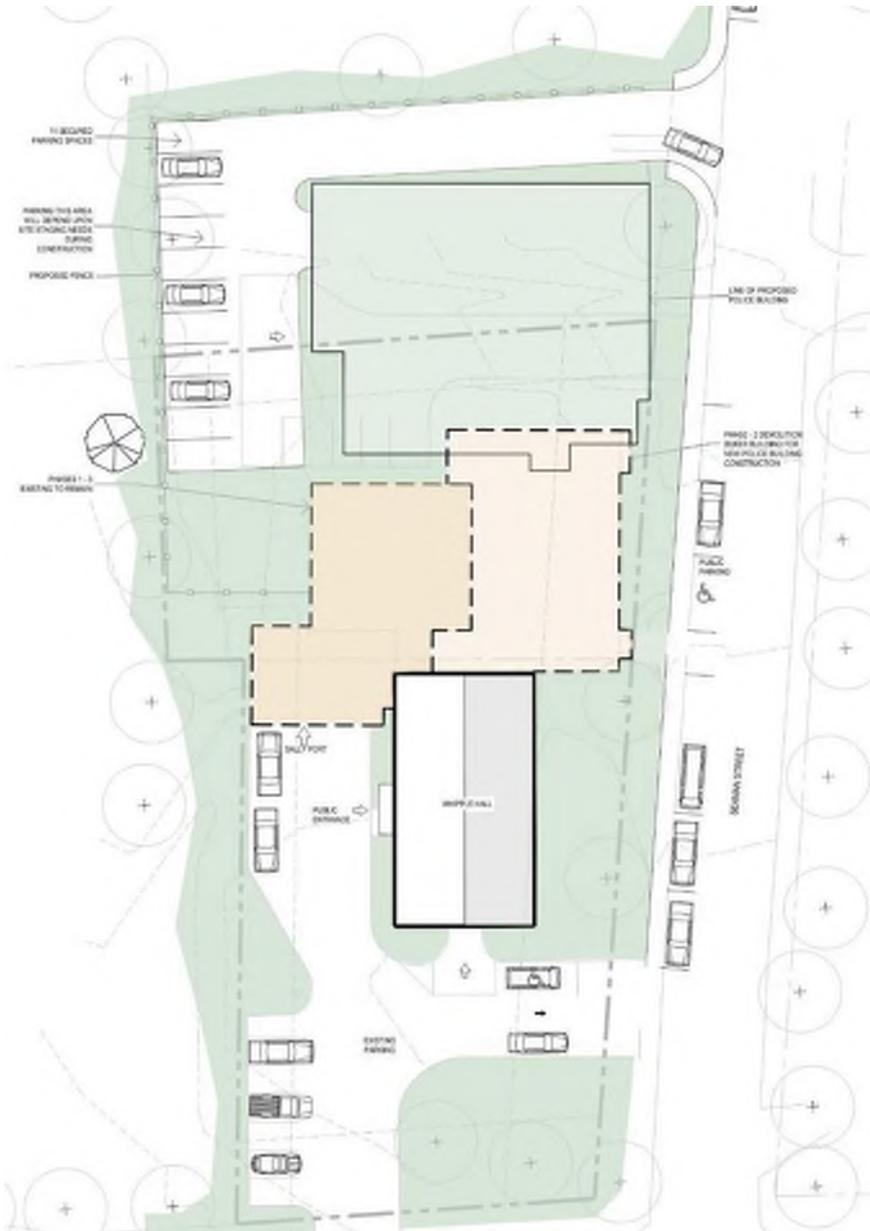


1 OPTION 1B GROUND LEVEL
SCALE: 1" = 10'

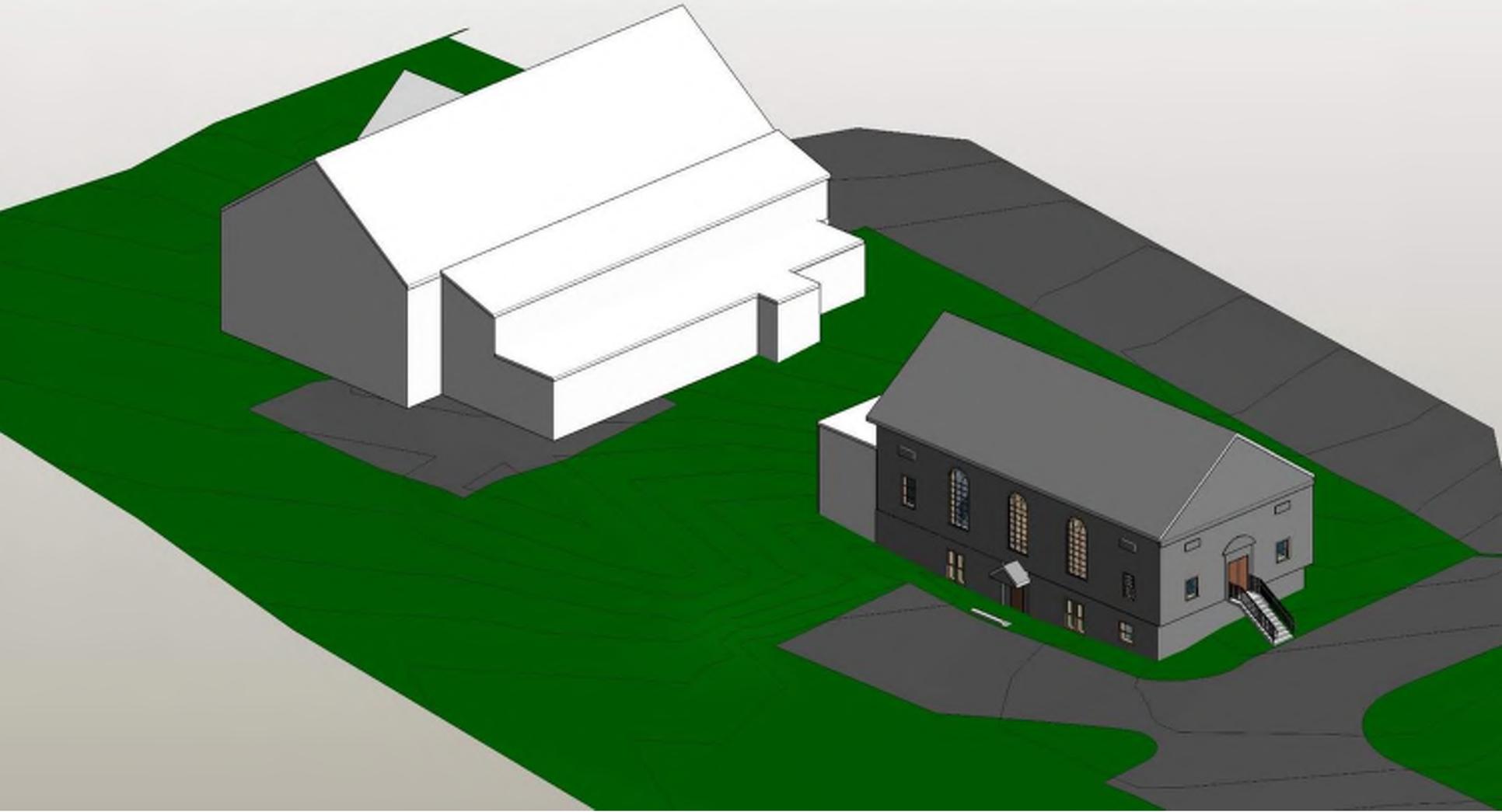
Current Options for Police only program

- **6: New stand-alone police facility, Whipple entry, and courtyard: 13,837 GSF Total**
 - Phased project to provide temporary PD during construction.
 - Phase 1: Police move into 1985 Buker and lower level of Whipple
 - Phase 2: 2000 Buker addition fronting Seaman St is demolished
 - Phase 3: New PD is constructed
 - Phase 4: Police move in and remaining Buker Building is demolished
 - Phase 5: New entry to Whipple and courtyard are constructed
 - 100% of Buker is demolished
 - Upper and lower levels of Whipple are not touched (5,600 GSF)
 - 13,252 GSF is constructed for PD
 - 585 GSF is constructed for a new entry, lobby and toilets for Whipple Hall
 - Option meets the overall space needs
 - Option restores historic Whipple Hall by removing the attached Buker elements
 - PD is constructed per current code requirements without having to gut and renovate the existing Buker building: superior long-term value

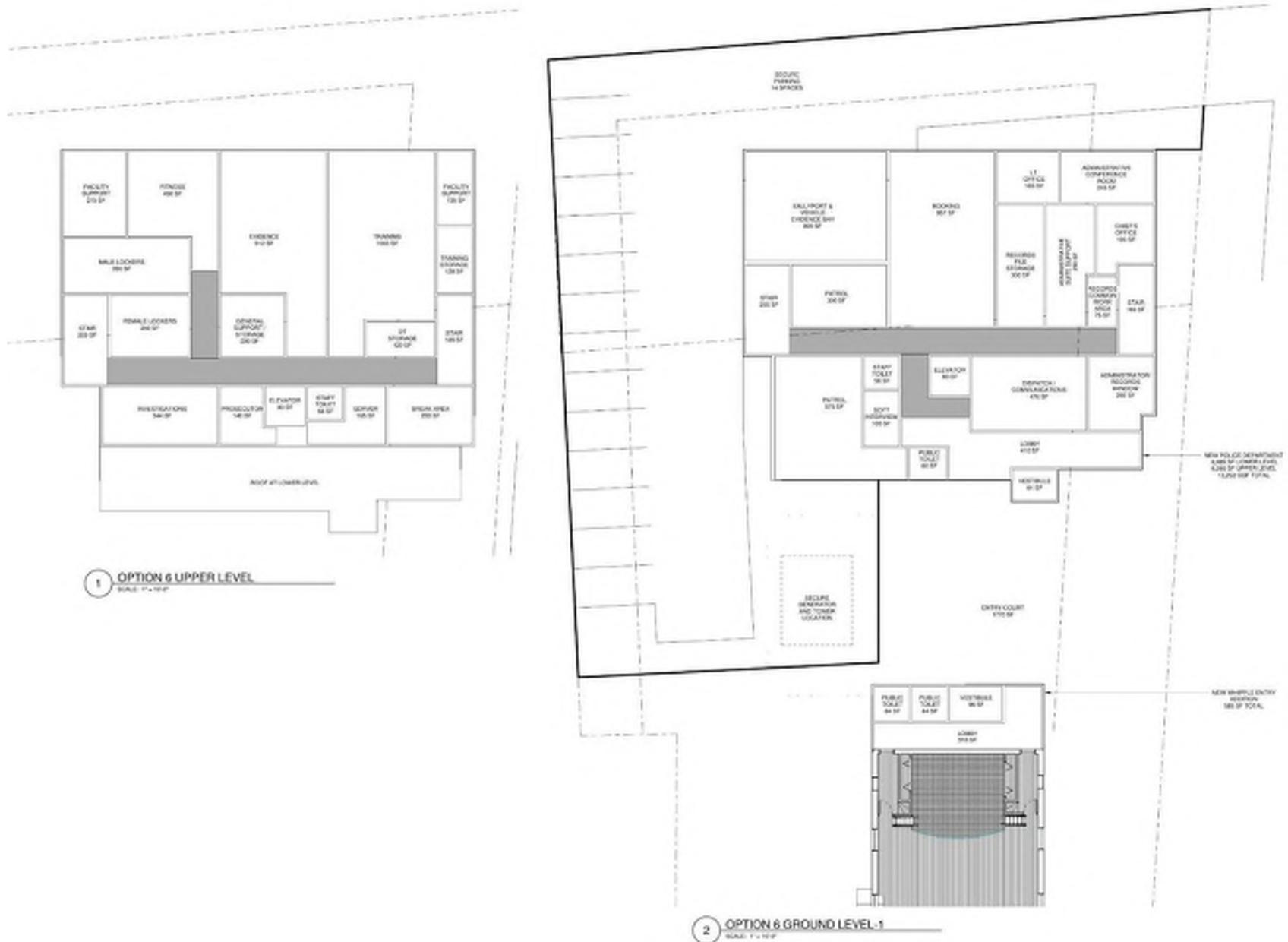
Option 6: New Stand-alone Facility



Option 6: New Stand-alone Facility



Option 6: New Stand-alone Facility



Space Needs Comparison: Previous Options

Description	Exist		Option 18	Deficiency compared to Space Need
	Current Area	Total Net Area Required (sf)		
Shared Building Program (Main level of Whipple not included)	600	460	720	260
1.0 Administration	424	1048	850	-198
2.0 Records	215	480	480	0
3.0 Communications	289	476	470	-6
4.0 Patrol	2,003	2632	3100	468
5.0 Training	950	1128	990	-138
6.0 Investigations	0	344	440	96
7.0 Property & Evidence	237	912	880	-32
8.0 Legal - Prosecutor	0	140	140	0
9.0 Common Facilities	1,526	2174	1800	-374
10.0 Other General-Specialty Areas	230	200	210	10
11.0 Facility Support	322	200	60	-140
12.0 Police Parking - Fleet	10,400 SF = 0.24 Acre:			
Total Net Square Footage	6,796	10,194	10,140	-54
Net to Gross Factor	1.276	1.30		
Total Gross Square Footage	8,674	13,252	14,332	

Space Needs Comparison: New Options

Description	Exist		Option 5-1	Deficiency compared to Space Need	Option 5-2	Deficiency compared to Space Need	Option 5-3	Deficiency compared to Space Need	Option 6	Deficiency compared to Space Need
	Current Area	Total Net Area Required (sf)								
Shared Building Program (Main level of Whipple not included)	600	460	130	-330	385	-75	385	-75	460	0
1.0 Administration	424	1048	850	-198	850	-198	850	-198	1048	0
2.0 Records	215	480	440	-40	440	-40	440	-40	480	0
3.0 Communications	289	476	470	-6	470	-6	470	-6	476	0
4.0 Patrol	2,003	2632	2648	16	2286	-346	2575	-57	2632	0
5.0 Training	950	1128	990	-138	1008	-120	1008	-120	1128	0
6.0 Investigations	0	344	0	-344	350	6	400	56	344	0
7.0 Property & Evidence	237	912	880	-32	0	-912	900	-12	912	0
8.0 Legal - Prosecutor	0	140	0	-140	140	0	140	0	140	0
9.0 Common Facilities	1,526	2174	1336	-838	2057	-117	2257	83	2174	0
10.0 Other General-Specialty Areas	230	200	180	-20	220	20	220	20	200	0
11.0 Facility Support	322	200	60	-140	60	-140	235	35	200	0
12.0 Police Parking - Fleet	10,400 SF = 0.24 Acre:									
Total Net Square Footage	6,796	10,194	7,984	-2,210	8,266	-1,928	9,880	-314	10,194	0
Net to Gross Factor	1.276	1.30								
Total Gross Square Footage	8,674	13,252	10,987		11,399		13,899		13,252	

Order of Magnitude Cost Breakdown

Option 5-1: Major renovation, no addition, no site expansion

	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	10,987		0	200 (Incl. in Reno)	
Cost/SF		\$260				
Construction Cost	\$0	\$2,856,620	\$350,000	\$0	\$150,000	\$150,000 Land cost not included
Construction Total						\$3,506,620
Administrative Cost & Reserve						\$660,993
Fees & Services						\$716,364
Grand Total						\$4,883,977

Order of Magnitude Cost Breakdown

Option 5-2: Major renovation, minor addition with site expansion

	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	9,864		1,535	200 (Incl. in Reno)	
Cost/SF		\$260		\$450		
Construction Cost	\$25,000	\$2,564,640	\$350,000	\$690,750	\$150,000	\$285,000 Land cost not included
Construction Total						\$4,065,390
Administrative Cost & Reserve						\$744,809
Fees & Services						\$803,963
Grand Total						\$5,614,162

Order of Magnitude Cost Breakdown

Option 5-3: Major renovation and addition with site expansion

	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	9,864		4,035	200 (Incl. in Reno)	
Cost/SF		\$260		\$450 / \$365		
Construction Cost	\$25,000	\$2,564,640	\$350,000	\$1,628,250	\$150,000	\$285,000 Land cost not included
Construction Total						\$5,002,890
Administrative Cost & Reserve						\$885,434
Fees & Services						\$950,937
Grand Total						\$6,839,260

Order of Magnitude Cost Breakdown

Option 1B: Major renovation and minor addition with site expansion

	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	11,828		3,345	200	
Cost/SF		\$260		\$375		
Construction Cost	\$0	\$3,075,280	\$350,000	\$1,254,375	\$150,000	\$450,000 Land cost not included
Construction Total						\$5,279,655
Administrative Cost & Reserve						\$926,948
Fees & Services						\$994,326
Grand Total						\$7,200,929

Order of Magnitude Cost Breakdown

Option 6: New stand-alone facility, Whipple entry, and courtyard with site expansion

	Demo	Reno / Phasing	New Entry to Whipple Hall	New PD New Entry	ADA Upgrades	Site
Area (GSF)	8,187	9,864	585	13,252	-	
Cost/SF	\$22.25	\$260	\$400	\$365		
Construction Cost	\$182,161	\$167,839	\$234,000	\$4,836,980	\$0	\$1,200,000 Land cost not included
Construction Total						\$6,620,980
Administrative Cost & Reserve						\$1,128,147
Fees & Services						\$1,204,608
Grand Total						\$8,953,735

Recommendations

- Options 5-3 and 6 are the only scenarios that meet the current and future operational needs of the New London Police Department.
- Entertaining anything less than Option 5-3 or 6 requires significant capital expenditure and will result in a temporary solution similar the current facility condition.
- Regardless of the desire to meet national law enforcement standards, the building needs to meet current building and life safety codes for critical facilities.
- Option 6 is the highest value and is the only scenario that:
 - Allows Whipple Hall to regain its independence as a single historic structure.
 - Creates operation separation for the police department which improves safety for users of Whipple and the PD.
 - Provides the most efficient building layout which results in officers spending more time patrolling in the community.
 - Truly provides the level of construction required to support a critical facility such as New London's dispatch which is relied upon regionally.
 - Offers a phasing plan that disrupts the police department twice rather than moving piecemeal throughout a long and complicated renovation project.

Buker Building Study

Concept Design Alternatives-Supplement
New London, NH



Board of Selectmen Presentation

15 October 2018



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Order of Magnitude Cost Breakdown

Existing Building Renovation without Program Adjustments (unoccupied)						
	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	10,987		0	200 (Incl. in Reno)	
Cost/SF		\$220				
Construction Cost	\$0	\$2,417,140	0	\$0	\$150,000	\$150,000 Land cost not included
Construction Total						\$2,717,140
Administrative Cost & Reserve						\$542,571
Fees & Services						\$592,596
Grand Total						\$3,852,307

Order of Magnitude Cost Breakdown

Existing Building Renovation without Program Adjustments (occupied)						
	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	10,987		0	200 (Incl. in Reno)	
Cost/SF		\$220				
Construction Cost	\$0	\$2,417,140	\$350,000	\$0	\$150,000	\$150,000 Land cost not included
Construction Total						\$3,067,140
Administrative Cost & Reserve						\$595,071
Fees & Services						\$647,466
Grand Total						\$4,309,677

Order of Magnitude Cost Breakdown

Option 5-1: Major renovation, no addition, no site expansion

	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	10,987		0	200 (Incl. in Reno)	
Cost/SF		\$260				
Construction Cost	\$0	\$2,856,620	\$350,000	\$0	\$150,000	\$150,000 Land cost not included
Construction Total						\$3,506,620
Administrative Cost & Reserve						\$660,993
Fees & Services						\$716,364
Grand Total						\$4,883,977

Order of Magnitude Cost Breakdown

Option 5-2: Major renovation, minor addition with site expansion

	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	9,864		1,535	200 (Incl. in Reno)	
Cost/SF		\$260		\$450		
Construction Cost	\$25,000	\$2,564,640	\$350,000	\$690,750	\$150,000	\$285,000 Land cost not included
Construction Total						\$4,065,390
Administrative Cost & Reserve						\$744,809
Fees & Services						\$803,963
Grand Total						\$5,614,162

Order of Magnitude Cost Breakdown

Option 5-3: Major renovation and addition with site expansion

	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	9,864		4,035	200 (Incl. in Reno)	
Cost/SF		\$260		\$450 / \$365		
Construction Cost	\$25,000	\$2,564,640	\$350,000	\$1,628,250	\$150,000	\$285,000 Land cost not included
Construction Total						\$5,002,890
Administrative Cost & Reserve						\$885,434
Fees & Services						\$950,937
Grand Total						\$6,839,260

Order of Magnitude Cost Breakdown

Option 1B: Major renovation and minor addition with site expansion

	Demo	Reno	Phasing Premium	New PD	ADA Upgrades	Site
Area (GSF)	0	11,828		3,345	200	
Cost/SF		\$260		\$375		
Construction Cost	\$0	\$3,075,280	\$350,000	\$1,254,375	\$150,000	\$450,000 Land cost not included
Construction Total						\$5,279,655
Administrative Cost & Reserve						\$926,948
Fees & Services						\$994,326
Grand Total						\$7,200,929

Order of Magnitude Cost Breakdown

Option 6: New stand-alone facility, Whipple entry, and courtyard with site expansion

	Demo	Reno / Phasing	New Entry to Whipple Hall	New PD New Entry	ADA Upgrades	Site
Area (GSF)	8,187	9,864	585	13,252	-	
Cost/SF	\$22.25	\$260	\$400	\$365		
Construction Cost	\$182,161	\$167,839	\$234,000	\$4,836,980	\$0	\$1,200,000 Land cost not included
Construction Total						\$6,620,980
Administrative Cost & Reserve						\$1,128,147
Fees & Services						\$1,204,608
Grand Total						\$8,953,735

Recommendations

- Options 5-3 and 6 are the only scenarios that meet the current and future operational needs of the New London Police Department.
- Entertaining anything less than Option 5-3 or 6 requires significant capital expenditure and will result in a temporary solution similar the current facility condition.
- Regardless of the desire to meet national law enforcement standards, the building needs to meet current building and life safety codes for critical facilities.
- Option 6 is the highest value and is the only scenario that:
 - Allows Whipple Hall to regain its independence as a single historic structure.
 - Creates operation separation for the police department which improves safety for users of Whipple and the PD.
 - Provides the most efficient building layout which results in officers spending more time patrolling in the community.
 - Truly provides the level of construction required to support a critical facility such as New London's dispatch which is relied upon regionally.
 - Offers a phasing plan that disrupts the police department twice rather than moving piecemeal throughout a long and complicated renovation project.

I. Construction	EXIST (encompassed)	EXIST (encompassed)	5-1	5-2	5-3	1B	6
Construction Cost							
Demolition	\$ -	\$ -	\$ -	25,000	25,000	\$ -	182,161
Renovation	2,417,140	2,417,140	2,856,620	2,564,640	2,564,640	3,075,280	\$ -
New Construction: Police Dept	\$ -	\$ -	\$ -	690,750	1,828,250	1,254,375	4,838,980
New Construction: Whipple Entry							234,000
ADA Upgrades	150,000	150,000	150,000	150,000	150,000	150,000	\$ -
Phasing Costs	0	350,000	350,000	350,000	350,000	350,000	167,839
Site	150,000	150,000	150,000	285,000	285,000	450,000	1,200,000
TOTAL	\$2,717,140	\$3,067,140	\$3,506,620	\$4,065,990	\$5,002,890	\$5,279,655	\$6,620,980
II. Administrative Cost & Reserve							
Land (rest TBD and added to budget)	0	0	0	0	0	0	0
FF&E (budget)	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Infrastructure Technology (budget)	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Advertising/Printing	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Insurance/Legal	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Bid Contingency (7.5%)	203,786	230,036	262,897	304,804	375,217	395,874	496,674
Construction Contingency (7.5%)	203,786	230,036	262,897	304,804	375,217	395,874	496,674
TOTAL	\$542,572	\$595,071	\$660,993	\$764,809	\$885,434	\$926,948	\$1,128,147
III. Fees & Services							
Total Basic Services Architect/Engineer	300,855	339,609	388,270	450,160	553,945	584,590	723,108
Additional Services Fees (budget)	20,890	23,694	27,089	31,425	38,647	40,785	51,147
FF&E Fee	12,000	12,000	12,000	12,000	12,000	12,000	12,000
TEL / Data Design	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Fee for HDC and Planning Board Permitting	30,000	30,000	30,000	30,000	30,000	30,000	30,000
A/E Reimbursable	8,526	10,188	11,848	13,504	16,618	17,538	21,983
Survey/Soils/Boings	20,000	20,000	20,000	20,000	20,000	20,000	20,000
CP&I Fee	97,725	109,975	125,357	144,514	177,726	187,413	234,359
Special Inspections	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Cost Estimating	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Commissioning	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Misc Fees and Expenses	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Testing and Balancing	20,000	20,000	20,000	20,000	20,000	20,000	20,000
TOTAL	\$592,596	\$647,466	\$716,364	\$803,963	\$950,937	\$994,326	\$1,204,608
Project Cost	\$3,852,307	\$4,309,677	\$4,883,977	\$5,614,162	\$6,839,260	\$7,200,925	\$8,953,735



Buker Building Study

**Facilities Improvement Prioritization
New London, NH**

Board of Selectmen Presentation

22 October 2018



HARRIMAN

BUSINESS				POLICE (for 3 years)		
	priority	cost	remarks	priority	cost	remarks
Electrical						
service entrance	none	\$ -		high	\$ 56,000	completely replace from building entrance
panel/ distribution	high	\$ 27,000	code improvements	high	\$ 160,000	completely replace
emergency power / generator	none	\$ -		high	\$ 58,000	need a larger fuel tank
communication	none	\$ -		high	\$ 25,000	security for communications tower and associated wiring infrastructure
Lighting						
Lighting	none	\$ -	LED fixtures (maintenance costs and energy efficiencies)	none	\$ -	LED fixtures (maintenance costs and energy efficiencies)
Lighting Controls	low	\$ 16,000	occupancy sensors	low	\$ 16,000	occupancy sensors
Life Safety						
Fire Alarm / Strobes	high	\$ 8,000	have to upgrade certain rooms with strobes to meet ADA	high	\$ 8,000	have to upgrade certain rooms with strobes to meet ADA
CO / Smoke Detectors	high	\$ 11,000	add CO Detectors	high	\$ 23,000	add CO Detectors
Exit Signs	none	\$ -		none	\$ -	
Emergency Lighting	none	\$ -		none	\$ -	
Plumbing						
Toilet Rooms	high	\$ 41,000	expand fixture count to meet code (cost for 2 add'l toilet rooms)	none	\$ -	
Kitchen	high	\$ 8,000	needs to be properly ventilated with exhaust fan	high	\$ -	needs to be properly ventilated
Domestic Water	low	\$ 11,000	increase capacity to service the building with hot water for the building	high	\$ 11,000	increase capacity to service the building with hot water for the building and showers
Sprinkler Riser	none	\$ -		none	\$ -	
Sprinkler Distribution	high	\$ 93,000	sprinkler the upper level and attic	high	\$ 93,000	sprinkler the upper level and attic
Showers	none	\$ -		high	\$ -	costs included in domestic water

BUSINESS				POLICE (for 3 years)		
	priority	cost	remarks	priority	cost	remarks
Mechanical						
Boiler	no work	\$ -	in good condition	no work	\$ -	in good condition
Fuel	high	\$ 17,000	boiler burns gas - chimney needs to be lined	high	\$ 17,000	boiler burns gas - chimney needs to be lined
HVAC	high	\$ 355,000	inadequate and needs to be replaced: install ERU at upper level in existing office next to lobby toilet	high	\$ 355,000	inadequate and needs to be replaced: install ERU at upper level in existing office next to lobby toilet
Vented Police Areas (Evidence and Sally Port)	no work	\$ -		high	\$ 117,275	need to be provide adequate ventilation at critical areas
Structure						
Observable Steel	no work	\$ -		no work	\$ -	
Observable Masonry	low	\$ -		low	\$ -	
Concrete Slab	low	\$ 316,000	pin concrete slabs at addition line: assumes testing & potential footing work	low	\$ 316,000	pin concrete slabs at addition line: assumes testing & potential footing work
Headers / Lintels	no work	0		no work	-	
Misc Metals / Stairs	high	\$ 20,000	Replace exterior stair at sallyport roof: includes new footings & slab	high	\$ 20,000	Replace exterior stair at sallyport roof: includes new footings & slab
Site						
Grading and Drainage at Police Entry	high	\$ 190,000	waterproof foundations and regrade	high	\$ 190,000	waterproof foundations and regrade
Grading and Drainage at Sallyport	high	\$ 127,000	assume other use for sallyport but it needs to be repaired waterproof foundations and regrade	high	\$ 127,000	assume other use for sallyport but it needs to be repaired waterproof foundations and regrade

BUSINESS			POLICE (for 3 years)		
priority	cost	remarks	priority	cost	remarks

Building Exterior					
Exposed Foundation	high	\$ -	See waterproofing in site scope	high	\$ - See waterproofing in site scope
Brick / Masonry	no work	\$ -		no work	\$ -
Siding / Cladding	no work	\$ -		no work	\$ -
Windows	minor	\$ 41,000	Replace and/or fix as needed	high	\$ 80,000 harden exterior window to ballistic rated at dispatch (up to 4 windows)
Doors	minor	\$ 25,000	Replace and/or fix as needed	minor	\$ 25,000
Canopies / Overhangs	no work	\$ -		no work	\$ -
Roof / Flashing	high	\$ 33,000	install spray foam insulation at attic rafter bays to resolve ice dams, heat loss, and air quality issues	high	\$ 33,000 install spray foam insulation at attic rafter bays to resolve ice dams, heat loss, and air quality issues

Interior					
Condition of Walls	minor	\$ 25,000	Patch / touch up / paint (15% of walls)	minor	\$ 25,000 Patch / touch up / paint (15% of walls)
Base	no work	\$ -		no work	\$ -
Flooring	minor	\$ 64,000	Replace older damaged flooring	minor	\$ 41,000 Replace older damaged flooring
Ceiling	moderate	\$ 33,000	Patch / replace damaged hard ceiling areas (20% of hard clgs)	moderate	\$ 33,000 Patch / replace damaged hard ceiling areas (20% of hard clgs)
Stairs	no work	\$ -		no work	\$ -
Handrails	no work	\$ -		no work	\$ -
Doors	no work	\$ -		no work	\$ -
Glazing	no work	\$ -		no work	\$ -

Values based on 2018 construction cost: add 6% per year to account for inflation beyond 2018

Total: Business \$ 1,461,000

Total: Police (3-year) \$ 1,829,275



APPENDIX

1 Existing Floor Plans by Department



HARRIMAN

AUBURN PORTLAND PORTSMOUTH BOSTON

BUKER BUILDING STUDY

NEW LONDON, NH

Harriman Project No. 18495

Key Plan

Proj North



Issues and Revisions	
Date	Description

PROGRESS

PRELIMINARY
NOT FOR
CONSTRUCTION

08-20-18

PA / PE: WHGG	© 2018 Harriman Associates
Drawn By: MZ	

EXISTING FLOOR PLANS
BY DEPARTMENT

A10.1



1 EXISTING LOWER LEVEL
SCALE: 1/8" = 1'-0"



2 EXISTING UPPER LEVEL
SCALE: 1/8" = 1'-0"

Plot Date: 8/19/2018 8:12:48 PM



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