

Conceptual Design

Following programming, several concepts were created and presented to the committee as initial conceptual designs. Those concepts were then refined to create the final concept presented on the following pages.

Larger format images of the sites and concept plans can be found in Appendix C.



Site:

Figure 3-1: Site Concept

Safety and minimization of response times are significant considerations when designing a public safety facility. The Village of Saranac Lake Emergency Service Facility (VSLESF) will house the Village’s Fire, Police, and Rescue departments. With all three departments being emergency services, the proximity of all these departments within the facility and their associated parking and response, provides significant challenges when sharing one facility. Parking and traffic flow on-site also presents a safety-related challenge and was addressed by dividing the site into police(west), visitor parking and the main entry (south), fire volunteer parking (south/east) fire apparatus return (south/east), and fire and EMS response (north).

The responding and return aprons are sized to allow the largest apparatus to be parked on the apron, and for the EMS apparatus to be turned around and backed safely into their bays. As a renovation project, the location of the facility on the site was predetermined. Because of this, the bays are situated further off Highway 3 (George H Lapan Memorial Highway) than is necessary for safe aprons and response. To reduce the amount of pavement from the building to the highway, the apparatus aprons are reduced down at the exit, to a narrower drive that eventually connects to the Highway.

Site Required Design Modifications

Wendel project leadership in conjunction with village representatives reviewed the existing site early on in the process and concluded that a site survey would be beneficial to review how the current conceptual plan within this report would function on the site. There was also a conclusion that wetland delineation would be required to determine the exact extent of the wetlands and how that affects any potential additions or site circulation. Attached to this report is Appendix C3 and Appendix C4. Appendix C3 depicts existing satellite imaging of the Pius school site with the site survey and wetland delineation overlaid. Appendix C4 depicts all of what Appendix C3 has but brings forth the conceptual plan in its current format, with areas of conflict that will need to be resolved should the village choose to move forward with additional design. Those areas of conflict consist of:

- A. Overhead Power Lines – As depicted in Pink on the drawing, conceptual additions for the police department are close to the OH power lines on the site. It is common to move power lines in a project of this magnitude, if need be, or the conceptual plan could be adjusted in the next phase of design.
- B. Grading Conflict at Police Area – As depicted in Green on the drawing, the grading from the site survey doesn't connect through the trees on the site survey but the police drive will need a small retaining wall that is 3 or 4 feet tall. In the next phase of design, turning the police addition to face East and using the buildings foundation system to build into the slight hill may be beneficial.
- C. Storm Drainage at Police Area – As depicted in Blue, there is a storm drain that is in the police bay area. The site survey did not indicate where that storm drainage went to, but our team assumes it goes East and connects to remaining storm drainage on that side of the facility. Additional exploration will need to occur in the next phase of design and this drain will need to be relocated, while following any stormwater requirements required by authorities having jurisdiction.
- D. Storm Drainage at Fire Bays – As depicted in Blue, conceptual fire apparatus bays go over the top of existing storm drainage piping as well as what is guessed to be the roof drains for the existing building. In the next phase of design, re-routing will need to be reviewed for overall stormwater design and existing roof drainage will connect into new roof drainage piping for any new additions, while following any stormwater requirements required by authorities having jurisdiction.
- E. Sanitary Easement – As depicted in Orange, there is an easement for sanitary and sanitary piping that currently interferes with conceptual additions. In the next phase of design, care will be taken to remove additions from the easement and to provide proper clearances.
- F. Wetland Delineation – As depicted in Magenta, conceptual additions for the fire apparatus bay are within the delineated lines of wetlands and will need to be adjusted/reviewed. This also includes the potential new emergency response driveway which can either be revised or reviewed with authorities having jurisdiction.
- G. Greenhouse Conflicts – As depicted in Red, conceptual site planning for response driven apparatus show conflict with the existing greenhouses. Additional considerations will need to occur in the next phase of design to alter appropriate site flow.



Figure 3-3: Overall Concept Plan

Concept Design

The existing Pius School facility (figure 3-3) will be renovated, with essential additions constructed to meet the needs of the Village of Saranac Lake’s Emergency Services Facility. In total, the new VSLESF will be comprised of 38,890 sf of renovated space, and 30,030 sf of new construction, for a total of 68,920 sf.

The above concept plan notes departmental use by color as noted in the legend.

BUILDING SQUARE FOOTAGE	
■	FIRE APPARATUS BAY = 18,820 SF
■	APPARATUS SUPPORT = 7,340 SF
■	CLASSROOM / TRAINING = 2,820 SF
■	ADMINISTRATION/ OFFICE = 7,130 SF
■	STAFF SUPPORT = 12,500 SF
■	PATROL = 910 SF
■	INVESTIGATIONS = 430 SF
■	OPERATIONAL SUPPORT = 390 SF
■	EVIDENCE & PROPERTY = 1,950 SF
■	BOOKING = 1,890 SF
■	FLEET SUPPORT = 3,420 SF
■	CIRCULATION = 8,860 SF
■	MECHANICAL = 2,460 SF
TOTAL	= 68,920 SF
PROGRAM	= 67,233 SF

Figure 3-4: Department Use Legend

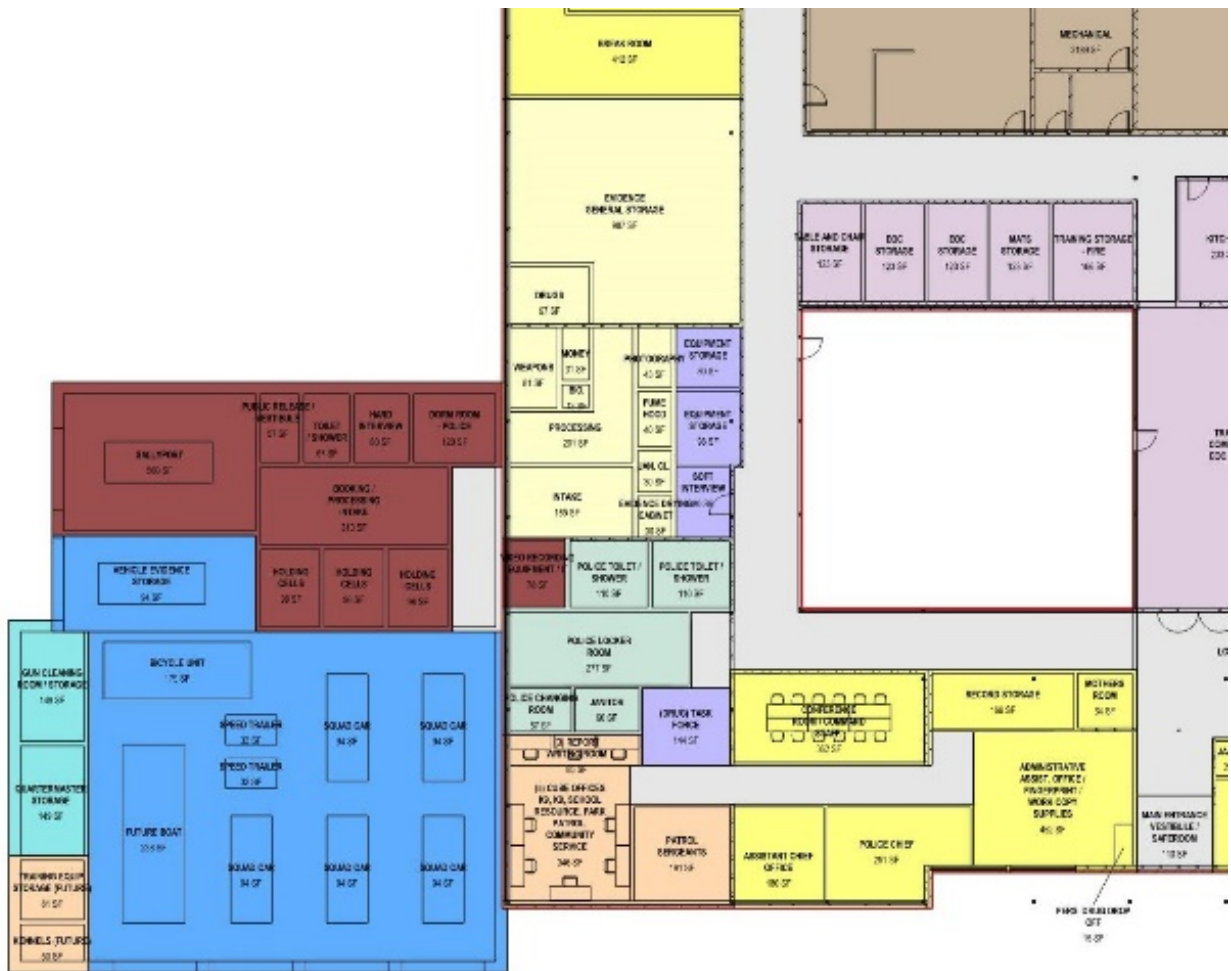


Figure 3-5: Concept – Police Areas

Police Department:

Visitor Entry and Police Admin: (noted in yellow)

Visitors will park in the visitor parking lot and enter the new ESF through a secured vestibule on the south side of the facility. This vestibule, located alongside the police administrative wing, will lead visitors into the lobby and community-zone of the facility. Located directly off the lobby space, visitors would have access to public toilets, a prescription drug drop box, a mother’s room, and the police administration offices.

After passing through a secure entry, the police administration will house two private offices, a record storage room, and a Command Conference room before heading into the patrol officer’s zone.

Patrol: (noted in peach)

Bridging the gap between the police administration and the patrol open office will be the patrol sergeants’ private office. An open office will be created to house the department’s patrol officers, the K9 office, the school resource officer, and the community services officer. This open office will be located just off the police garage for quick access.

Police Garage: (noted in blue)

A police garage will be located on the far west side of the facility. This space will allow for two police squads stacked two-deep, a third bay for an additional squad and two speed trailers, and a final bay for the departments bicycle unit and future boat. Along the far wall of the police garage will be support spaces including the K9 kennels, quartermaster storage, gun cleaning, and large vehicle evidence storage.

Booking: (noted in burnt sienna)

Located directly north of the police garage is the departments booking area. This space will include the sallyport, three holding cells, an individual toilet-shower room, and a public release vestibule.

Police Staff Support: (noted in mint)

Located off the police garage to the east will be the police locker room. This all-gender locker room will have one changing room, and two individual toilet-shower rooms. The locker room will also be accessible from inside the police department.

Evidence and Property: (noted in pale yellow)

Rounding out the designated police areas, the evidence and property spaces will include intake; processing with photography and a fume hood; and evidence storage with designated spaces for money, drugs, and weapons.

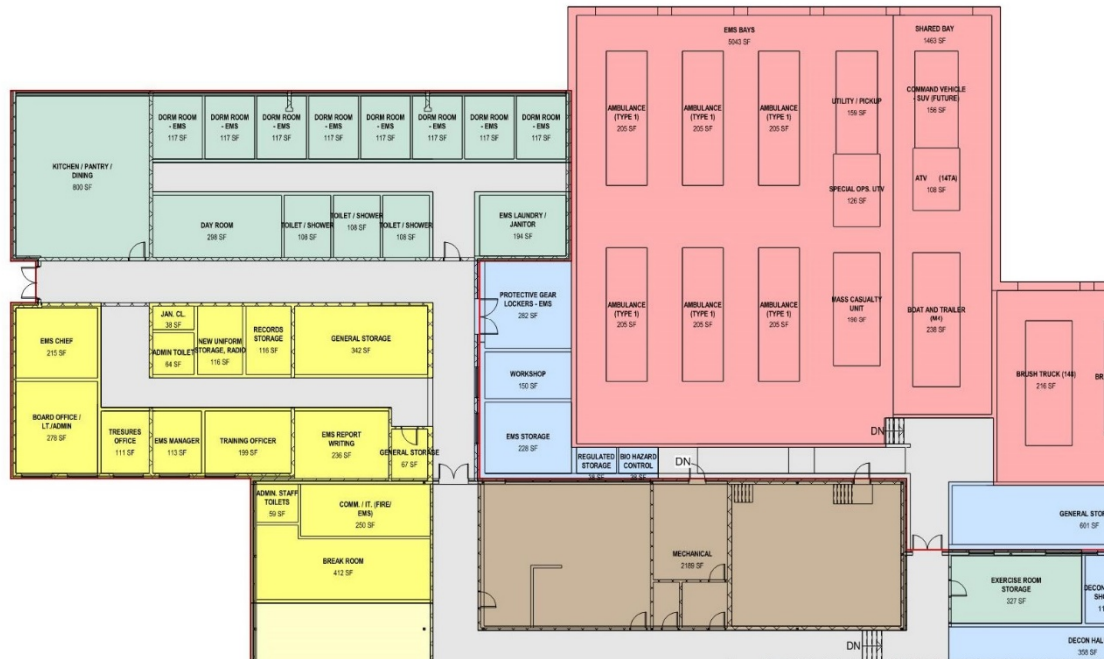


Figure 3-6: Concept – EMS Areas

Rescue Department:

Administration: (Noted in yellow)

When first entering the EMS area from the main hallway the department’s administration is located to the west. This area includes four private offices for the chief, treasurer, manager, and training officer; a shared office for the board office, lieutenant, and administration; a report writing room; and storage for uniforms, record, and general storage needs. The administration wing also includes one single-user all-gender toilet room.

Living Quarters: (Noted in green)

To the north of the administration area is the staff support area. This includes a series of eight (8) single-occupancy dorm rooms lining the exterior wall. These dorms are located with direct access to the response bay to provide responders with a rapid and direct pathway to the apparatus bay while responding to calls. In addition to the dorms, the EMS support spaces will include a dedicated Day Room, Kitchen, and Dining room, three single-user, all-gender toilet rooms, and a laundry room.

Apparatus Bays and Support: (Noted in Red and Blue)

The apparatus bay is designed with four back-in, double stacked bays. A fifth bay is located in this area that will be a shared use bay between the EMS and Fire Departments. Located on the south and west walls of the bays are support spaces for the EMS department, including a storage room for Personal Protective Equipment (PPE) Gear Lockers, a workshop, and EMS storage.

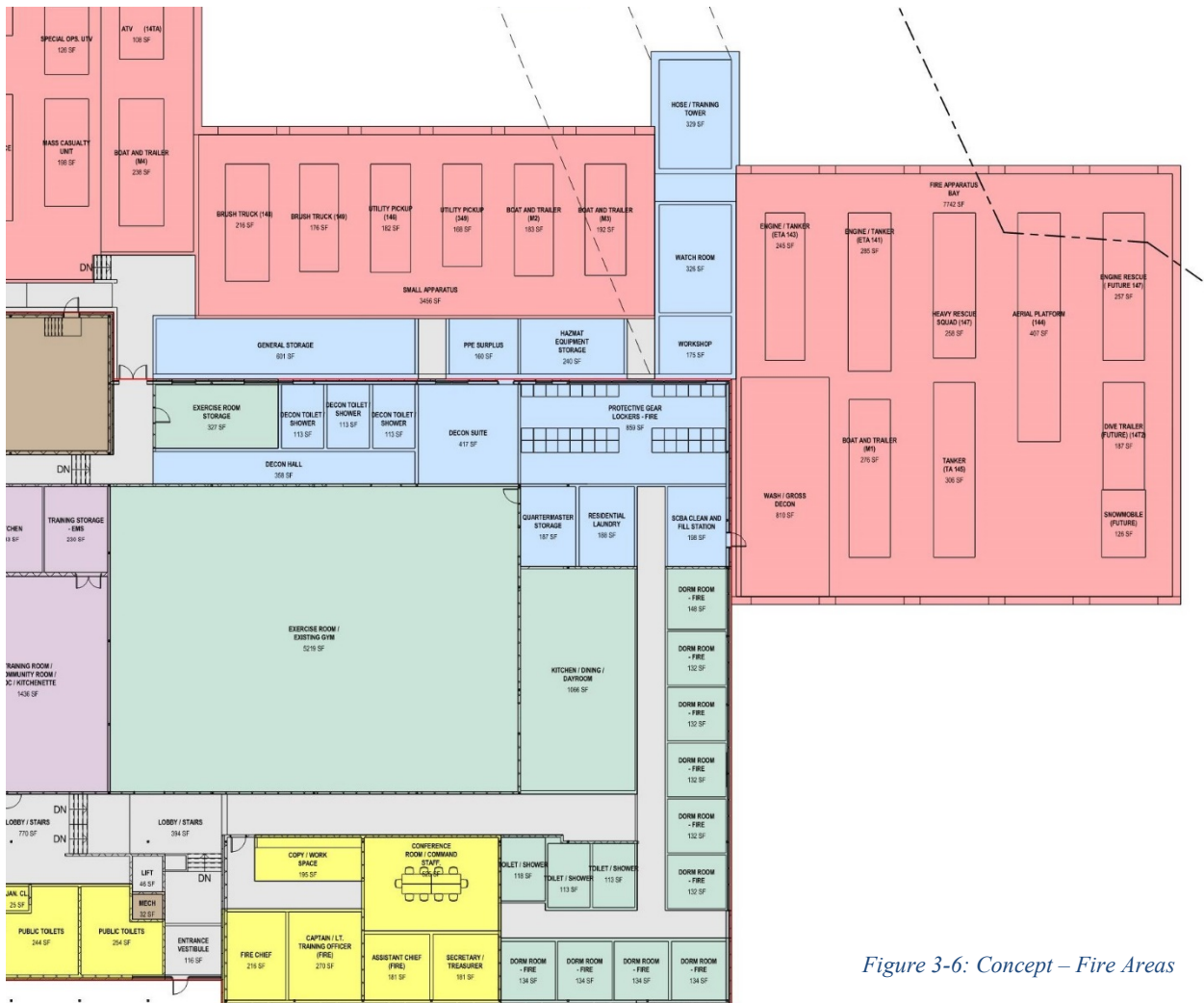


Figure 3-6: Concept – Fire Areas

Fire Department:

Apparatus Bays and Support: (Noted in Red and Blue)

The Fire department’s apparatus will be split into two distinct apparatus bays: one for smaller support vehicles and one for larger apparatus. The smaller support garage will be comprised of six, single depth spaces to house brush trucks, pick-up trucks, and trailers. These will be back in-only bays. The larger apparatus bay will include five drive-through apparatus bays, which will house double-stacked apparatus. Between the two bays will be the apparatus support spaces. These include the hose tower, Watch Room, workshop, hazmat equipment storage, PPE surplus storage, self-contained breathing apparatus (SCBA) clean and fill, and general storage.

Upon returning to the station after an incident, a series of rooms along the decontamination suite guide staff through the personal decontamination process. This process will be accessible from both fire apparatus bays. In this process, personnel will enter into the gear/laundry room where they are able to clean their outer layers of PPE. Once the PPE is clean, it can be returned to their turnout locker, located off both the primary apparatus bay and the gear laundry room. From the gear laundry, responders will enter the decontamination hallway featuring three single-occupancy, all gender

decontamination showers and toilets. Finally, after showering, staff members will wash their uniforms in a residential laundry machine, located just across the hall from the decontamination suite.

Living Quarters: (Noted in green)

To the south of the apparatus and support area, is the staff support area. This includes a series of ten (10) single-occupancy dorm rooms lining the exterior wall. These dorms are located with direct access to the response bay in order to provide responders with a rapid and direct pathway to the apparatus bay while responding to calls. In addition to the dorms, the Fire support spaces will include a dedicated Day Room, Kitchen, and Dining room, three single-user, all-gender toilet rooms, and a laundry room.

Administration: (noted in yellow)

The administration area for the fire department will be comprised of private offices for the Chief, Assistant Chief, secretary/treasurer, a shared office for the captains. Lieutenant, and training officer, and a shared conference room for the Command staff. These offices are also located adjacent to the visitor entry and lobby.



Figure 3-7: Concept – Shared Areas

Shared Spaces:

Located within the central core of the facility is a series of spaces that will be shared by the whole ESF staff.

Training: (noted in purple and mint)

The training room is sized to accommodate forty (40) people at tables and chairs. This room will be used by the PSB, the community, and as an Emergency Operations Center (EOC) for the Village. Located just off the training room are support spaces including dedicated storage spaces for the EOC, mats, and general training. A kitchen will also be located off this space.

An exercise room is located alongside the training room and accessed from the public lobby. This location allows for discussion to occur for public use of the training room and gym if the Village wishes to pursue that opportunity.

Opinion of Probable Costs

Probable cost for this work is developed using conceptual estimating practices to identify dimensions, volumes, systems, materials, and applicable industry standards. The process utilized a combination of the current programmatic floor plan and site layout developed by Five Bugles Designs in addition to construction documents from a previous design of similar size and program. The cost basis of the estimate is rooted in historical data, benchmarking studies of comparable projects, and current industry material and equipment evaluation. Once a particular site, floor plan option and building material expectation are established through the design process, additional estimates will be conducted to further refine these assumptions and will be reviewed for alignment before moving forward. It should be noted that with the various options; base plans, alternate plans, unknown site conditions, material costs, inflation, potential demolition costs, etc., estimates will fluctuate. Full estimates are included in the appendix.

Table 5 -1: New Fire Station on Unspecified Site

	Estimated Costs
Direct Trade Cost Total with Contingencies and Escalation	\$18,451,635
Owner Direct Costs Including AE Fees, Furniture and Equipment	\$2,109,164
Total	\$20,560,799

Table 5 -2: New Rescue/EMS Station on Unspecified Site

	Estimated Costs
Direct Trade Cost Total with Contingencies and Escalation	\$10,825,755
Owner Direct Costs Including AE Fees, Furniture and Equipment	\$1,346,576
Total	\$12,172,331

Table 5 -3: New Police Station on Unspecified Site

	Estimated Costs
Direct Trade Cost Total with Contingencies and Escalation	\$9,142,328
Owner Direct Costs Including AE Fees, Furniture and Equipment	\$1,178,233
Total	\$10,320,560

Table 5 -4: New Emergency Services Facility on Unspecified Site

	Estimated Costs
Direct Trade Cost Total with Contingencies and Escalation	\$36,356,100
Owner Direct Costs Including AE Fees, Furniture and Equipment	\$3,899,610
Total	\$40,255,710

Recommended Option:**Table 5 -5: Remodel and Additions for a New Emergency Services Facility (PIUS Building)**

	Estimated Costs
Direct Trade Cost Total with Contingencies and Escalation	\$25,160,063
Owner Direct Costs Including AE Fees, Furniture and Equipment	\$2,363,006
Total	\$27,523,069

Notes:

1. Due to the plans being on a conceptual level at this point, with many open-ended questions, it is important to note that the estimate includes 5% design contingency, 5% bid contingency, and 5% escalation. Future estimates will be refined at additional design development levels.
2. Estimates of probable cost are inclusive of escalation to account for projected cost of construction in late 2023/2024.
3. Geotechnical surveys were not taken at this time however costs were included in the estimate to account for standard overcut and fill of the site to account for probable conditions present in the area. Should subsequent geotechnical reporting indicate that additional soil stabilization is required, additional costs may be associated.
4. Preliminary layout of the site indicates a potential conflict with previously identified wetland areas. The project estimate has not included costs for wetland reconstruction on the current property and wetland delineation will occur in the Spring of 2023. All effort will be used to eliminate construction in wetland areas.

