NAVIGATION CENTER & SHELTER FACILITIES

LOCATION STUDY

Volume 3
Recommended Renovations

Table of Contents

1.0 Introduction

This section presents schematic diagrams for remodeling the three (3) existing buildings under consideration as navigation centers and homeless shelters (NC/HS) and provides a comparison of their conceptual bed capacities and rough order-of-magnitude (ROM) total development costs. These costs are then compared with those associated with two (2) new tensile structures advanced by RPM-Sprung and Orion-Legacy in unsolicited proposals to the Municipality.

Methodology

For purposes of evaluating these options with reasonably equivalent criteria, it was assumed that all alternative sites would contain the necessary components to function independently as NC/HS. It is recognized that the preferred program of improvements may disperse services across multiple facilities rather than embedding them in each site. Thus, this comparison of alternatives should be viewed as "screening tool" that validates feasibility (or infeasibility) and provides an overview of redevelopment costs for each option.

Code Studies and Conceptual Space Programs for Existing Buildings

As a first step, preliminary building code studies of the three (3) existing buildings' potential renovation were performed for each property. These studies incorporated the results of Volume 1 ("Site Characteristics") and Volume 2 ("Property Condition Assessments"). These code studies determined the extent of general fire and life safety upgrades that would be needed for the buildings' new use as NC/HS. Key code issues included sprinkler requirements, fire area separations, exiting requirements, and other safety criteria.

Each building was then analyzed to develop a conceptual space program for dormitory and "wrap-around" services. The results of these analyses are presented in schematic diagrams for each building. The diagrams illustrate a possible scenario of how the three (3) existing buildings can accommodate the program areas needed for the homeless shelter. They were developed as a tool for the architectural and engineering analysis of required fire and life safety upgrades, and for determining the scope and extent of the renovations for preliminary cost estimates.

Qualitative recommendations for the renovations were developed by our team from on-site condition assessments and are listed following the diagrams for each building.

Proposals for New Tensile Structures

The two (2) proposals for new tensile structures were also reviewed. The RPM-Sprung submittal provided 35% Schematic drawings and facilitated a more thorough analysis than the Orion-Legacy proposal, which presented narrative description, general schematics and associated pricing for its proposed facilities.

Cost Estimates

Rough-Order-of-Magnitude (ROM) Total Development Costs for remodeling of existing buildings and construction of new buildings are summarized in the Project Development Cost table. These costs are inclusive of design, construction, project management, hazardous materials abatement, and contingencies. It is emphasized that the limited assessment and design development accomplished to date renders these estimates conceptive although conservative estimating values were used.

Project Development Schedules

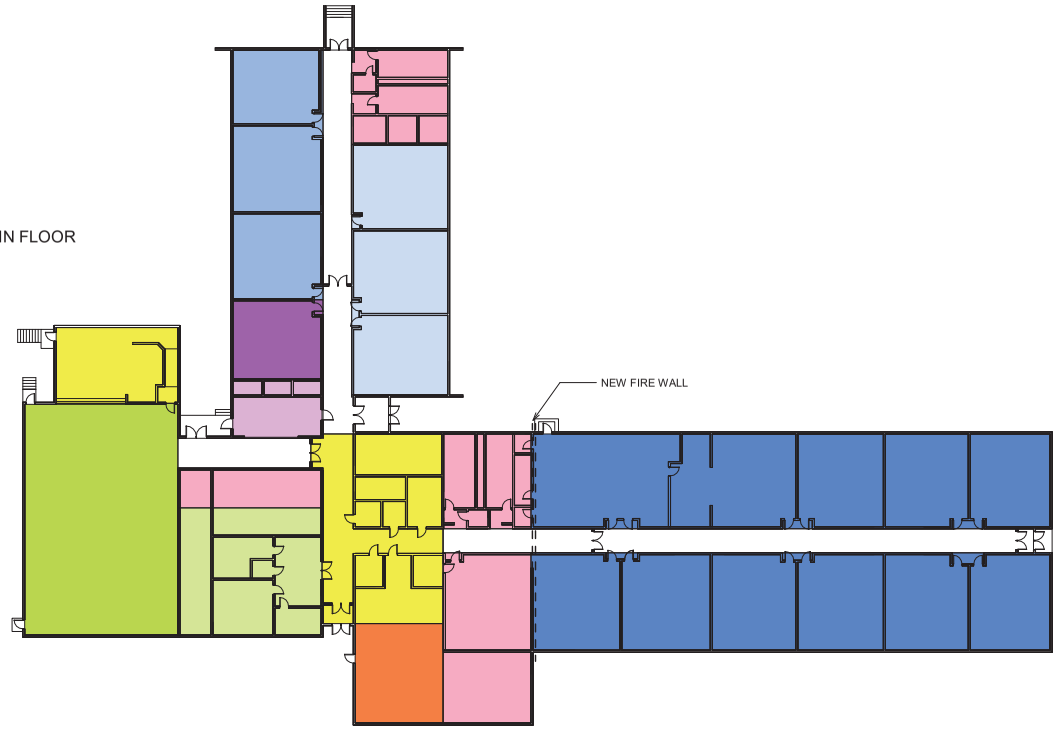
An accelerated schedule for design, permitting and construction was developed for the three (3) existing buildings evaluated in remodeling scenarios. Proposals for new structures submitted by RPM-Sprung and Orion-Legacy provided schedules for design and construction of new tensile structures and are summarized herein.

Project milestones and potential duration of total design, permitting and construction timelines for each of the three scenarios (facility remodel, RPM-Sprung and Orion-Legacy) have been summarized in the Project Development Schedule table.

550 BRAGAW STREET PRELIMINARY CAPACITY ANALYSIS DIAGRAM

SCOPE: RENOVATION OF THE EXISTING SCHOOL BUILDING INTO A MASS SHELTER
CAPACITY: TOTAL 38,213 SF (344 BEDS)

MAIN FLOOR



LEGEND

SLEEPING ROOMS - 17,215 SF
- DORMITORY - 11,736 SF
- DETOX - 2,646 SF
- ELDER & SPECIAL NEEDS - 2,833 SF

ASSEMBLY SPACES
- COMMON - 2,154 SF
- DINING - 4,172 SF
- WAITING - 1,033 SF

SUPPORT AREAS
- OFFICE & SUPPORT - 3,836 SF
- KITCHEN & MPOE - 600 SF
- LAUNDRY - 851 SF
- TOILET/ SHOWER & LOCKERS - 4,748 SF
- CIRCULATION - 3,604 SF

N

10' 50' 100'

CAPACITY

TOTAL MAX. OCCUPANTS, ALL AREAS:	872
TOTAL BEDS @ 50 SF (DORMITORY) :	344
TOTAL BEDS @ 113 SF (COVID) :	152

PLUMBING FIXTURE REQUIREMENTS

WATER CLOSETS:	44
LAVATORIES:	39
SHOWERS:	44
DRINKING FOUNTAINS:	5

BUILDING CODE CONSIDERATIONS

CALCULATIONS BELOW FOR COMBUSTIBLE, NON-RATED CONSTRUCTION: TYPE VB, SPRINKLERED, ONE STORY, WITH ADDED FIRE WALL:

SOUTH OF FIRE WALL:
OCCUPANCY A-3, A-2, R--2, F-1, AND B - NON-SEPARATED AREAS:
FRONTAGE INCREASE = F/P - 0.25 = 890/965 - 0.25 = .67
ALLOWABLE AREA: 24,000 SF + .67(6,000 SF) = 28,020 SF ALLOWABLE AREA PER FLOOR
ACTUAL AREA = 25,071 (WITHIN ALLOWABLE)

NORTH OF FIRE WALL:
OCCUPANCY R--2
FRONTAGE INCREASE = F/P - 0.25 = 432/507 - 0.25 = 0.6
ALLOWABLE AREA: 28,000 SF + 0.6 (6,000 SF) = 32,200 SF ALLOWABLE AREA PER FLOOR
ACTUAL AREA = 13,142 SF (WITHIN ALLOWABLE)

2.0 550 Bragaw Street

2.1 Civil / Landscaping

- Demolish and remove all playground equipment.

- With approximately 3.0 acres of outdoor space, there is sufficient space on the property to construct additional ancillary structures on-site. Recommend developing a master plan to guide this development.

2.2 Structural

- Replace roofing and replace any rotten wood decking that is found.

- Overlay existing wood decking with plywood and strapping to upgrade roof diaphragm.

- Confirm if top of CMU wall to roof diaphragm connection is lacking (destructive evaluation likely required), and if lacking, strengthen this connection.

- Refinish exterior wood portions of building with pressure treated lumber / plywood or other material intended for exterior usage (metal wall panels, veneer, etc).

2.3 Architectural

- A 2-hour fire wall will need to be constructed between the north dormitory wing and rest of the building. Passage through the corridor can be maintained through the addition of a pair of 90-minute doors, swinging in opposite directions, with magnetic hold opens tied to the fire alarm system.

- The Toilet/Shower/Locker rooms will need to be reconfigured and greatly expanded to support the new facility, including ADA bathroom and shower facilities.

- Existing interior partitions in the future Common and Office areas should be demolished and the spaces reconfigured with new partitions to meet the new use.

- A new main entrance should be created for direct entry into the reconfigured Waiting area.

- New finishes, furnishings and equipment will be required throughout the facility to support the new use.

2.4 Plumbing

- It appears that most of the existing piping is original to the building. This puts the age of the piping at around 45 years old which is about the expected service life for copper. All new water piping is recommended.

- New, larger water heaters will need to be installed to meet capacity demands.

- All new plumbing fixtures will need to be installed to accommodate new usage and meet capacity demands.

2.5 HVAC

- Due to the age of the existing mechanical equipment, all new HVAC systems are recommended to be budgeted for.

- A makeup air unit would need to be installed for the new laundry room area(s). Size would depend on the number of dryers installed.

- A new dedicated outdoor air system (DOAS) could be utilized to supply air to the unventilated areas of the building as well as take the place of the existing rooftop exhaust fans for ventilating lockers/restrooms. Provided that the existing ductwork is serviceable and in good condition, may be able to be reused.

- There are no air conditioning systems present in the building, recommend installation.

2.6 Electrical

- Building Electrical Service: As long as AC cooling is not added to the building, the existing electrical service should be adequately sized for the change of use. However, to extend the life of the building, it is recommended to install a new exterior CT, meter, service disconnect, and new interior MDP along with replacement of all electrical panels such that new circuit breakers are provided with 30 to 40 years of reliable operation. Existing feeders, if adequately sized, can likely be reused.

- Renovated Areas: Complete demo and replacement of electrical wiring, devices, lights, and special systems in support of architectural and mechanical renovations.

- AFCI Receptacles: All receptacles in the dormitory unit bedrooms, living rooms, hallways, closets, and bathrooms are required to be AFCI protected. AFCI circuit breakers or AFCI receptacles will need to be installed. The branch circuit wiring will likely need to be replaced because dedicated neutral conductors are required for proper AFCI circuit breaker operation.

- Tamper Resistant Receptacles: All receptacles in the dormitory unit bedrooms, living rooms, hallways, closets, and bathrooms are required to be replaced with tamper resistant receptacles.

- GFCI Receptacles: All receptacles in the kitchen are required to be GFCI protected. GFCI circuit breakers or GFCI receptacles will need to be installed in the warming kitchen.

- Normal Lighting: Although the existing HID exterior lighting and fluorescent interior lighting is functional, it is at the end of its useful life, energy inefficient, and will require extra maintenance. We recommend replacing all interior and exterior lighting in the near-term to reduce the maintenance cost and realize immediate energy cost savings.

- Emergency Lighting: It appears that most of the egress path has code compliant emergency lights. However, there are a number of areas that appear to be missing coverage such as restrooms, mechanical rooms, and portions of the hallways.

- The security system will require testing to determine if it is functioning. If a reliable security system is desired, it is recommended to install a new security system with new equipment. This will reduce future maintenance costs.
- Recommend installing CCTV cameras at each exit/entry for additional safety and security of the occupants and staff.

- The existing telecom distribution system could most likely be used without any significate upgrades. New technology equipment will be required.

2.7 Fire Protection

- Depending on fire suppression upgrades for the new renovation, a new water main will likely be required to increase the available flowrate to the building.

- Based on the preliminary code analysis a manual fire alarm system and automatic smoke detection system with smoke detection in the public and common use areas and smoke alarms in all sleeping units is required for the new use. Although it may be possible to extend the existing fire alarm system coverage to meet these new requirements, a complete replacement of the fire alarm system is recommended because the existing fire alarm system was discontinued by the fire alarm manufacturer. It will eventually need replacement and if the city is going to own this building for an extended period, replacing the fire alarm system now would be money well spent.

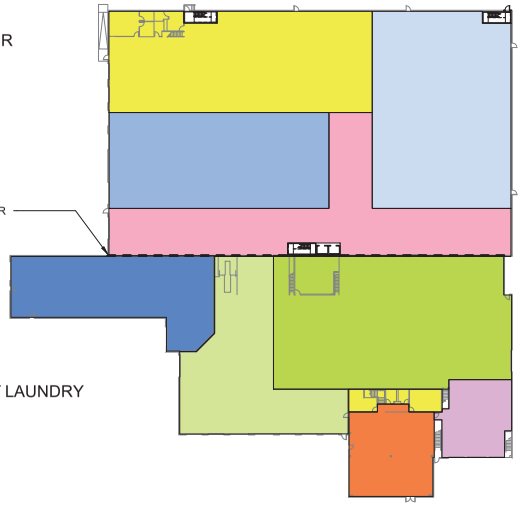
2.8 Hazardous Building Materials

- Given the age of this building, there is a potential for the existence of hazardous materials on-site. It is recommended to complete Hazardous Building Materials sampling and testing.

300 CALAIS STREET PRELIMINARY CAPACITY ANALYSIS DIAGRAM

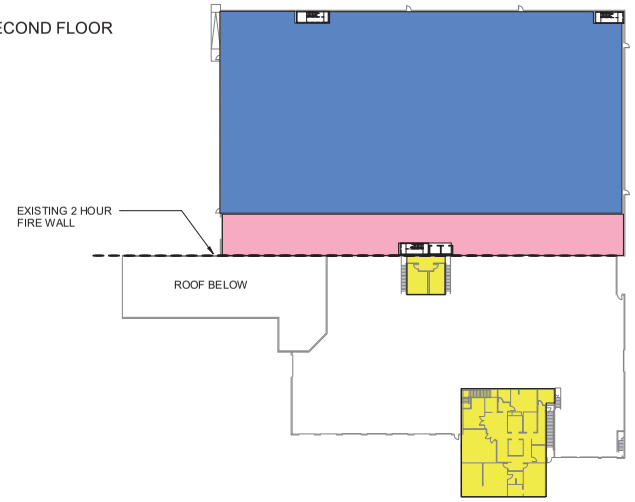
SCOPE: RENOVATION OF THE EXISTING LIGHT INDUSTRIAL COMPLEX, INCLUDING ADDING A SECOND FLOOR WITHIN THE EXISTING WAREHOUSE, INTO A MASS SHELTER
CAPACITY: TOTAL 120,562 SF (1,176 BEDS)

MAIN FLOOR



BASEMENT LAUNDRY

SECOND FLOOR



LEGEND

SLEEPING ROOMS - 58,794 SF	ASSEMBLY SPACES	SUPPORT AREAS	
DORMITORY - 38,940 SF	COMMON - 6,984 SF	OFFICE & SUPPORT - 16,101 SF	TOILET/ SHOWER & LOCKERS-16,021 SF
DETOX - 8,701 SF	DINING - 12,792 SF	KITCHEN & MPOE -2,105 SF	OTHER-2,483 SF
ELDER & SPECIAL NEEDS - 11,153 SF	WAITING -3,058 SF	LAUNDRY-2,224 SF	

N

1' 5' 10'

CAPACITY

TOTAL MAX. OCCUPANTS, ALL AREAS: 2,838
TOTAL BEDS @ 50 SF (DORMITORY) : 1,176
TOTAL BEDS @ 113 SF (COVID) : 520

PLUMBING FIXTURE REQUIREMENTS

WATER CLOSETS: 146
LAVATORIES: 132
SHOWERS: 147
DRINKING FOUNTAINS: 16

BUILDING CODE CONSIDERATIONS

BUILDING TYPE: CONSTRUCTED AS TYPE II-N (SPRINKLERED), 1991 UBC - EQUIVALENT TO TODAY'S TYPE II-B (NONCOMBUSTIBLE) CONSTRUCTION, 2018 IBC

WEST OF 2 HR WALL - OCCUPANCY R-1 & B, NON-SEPARATED USE:
FRONTAGE INCREASE = F/P - 0.25 = 700/960 - 0.25 = .479
ALLOWABLE AREA : 64,000 SF + .479(16,000 SF) = 71,664 SF ALLOWABLE AREA
ACTUAL AREA LEVEL 1 : 40,587 SF (WITHIN ALLOWABLE)
ACTUAL AREA LEVEL 2 : 40,587 SF (WITHIN ALLOWABLE)

EAST OF 2 HR WALL - OCCUPANCY A-2, A-3, B, F-1 NON-SEPARATED USE:
FRONTAGE INCREASE = F/P - 0.25 = 577/837 - 0.25 = .439
ALLOWABLE AREA: 38,000 SF + .439(9,500 SF) = 42,170 SF ALLOWABLE AREA PER FLOOR
ACTUAL AREA BASEMENT (LAUNDRY) = 2,224 (WITHIN ALLOWABLE)
ACTUAL AREA LEVEL 1 = 31,736 SF (WITHIN ALLOWABLE)
ACTUAL AREA LEVEL 2 (OFFICES 1 & 2) = 4,457 SF (WITHIN ALLOWABLE)

3.0 300 Calais Drive

3.1 Civil / Landscaping

- With approximately 2.2 acres of outdoor space, there is a potential to provide additional outdoor spaces on-site. Recommend developing a master plan to guide this development.

3.2 Structural

- Offices and mezzanine in the south-west warehouse corner would be demolished.

- A second-floor deck should be constructed in the existing warehouse area of the building. This second-floor warehouse infill would consist of:
    - Strengthening (24) existing columns from the second floor down by adding (2) L6x6x5/16 (8,400 lbs of steel)

    - Enlarge (24) existing footings by adding 18" each side and 8" on top of each (82 cubic yards of concrete)

    - Construct (35) bays of 2nd floor framing with W27x84 girders spanning 36', W18x35 joists @ 12' on-center spanning 31', and 3"x20 ga metal deck spanning between the joists with 2.5" of concrete fill (202,000 lbs of steel, 500 cubic yards of concrete)

    - Replace all braces in the warehouse space with 2-story X-configurations. Cost for this item is already included in basic renovation cost above – if 2nd floor is added, it will just affect the geometry of the brace layouts.

3.3 Architectural

- Exterior overhead sectional doors would be removed, and exterior wall assemblies matching adjacent construction and new window would infill the openings.

- Offices and mezzanine in the south-west warehouse corner would be demolished. A second-floor deck should be constructed in the existing warehouse area of the building.

- The 187 SF floor depression in the Southwest corner of the existing tire center should be infilled.

- An elevator, and 3 new stairways would be required to provide accessibility and meet egress requirements from the new second floor. A new exterior door should be added to the northwest-corner stair for exiting from the new stairwell.

- A dumbwaiter lift may be needed for laundry operations.

- The Toilet/Shower/Locker rooms will need to be reconfigured and greatly expanded to support the new facility.

- Existing interior partitions in office & support areas should be demolished and the spaces reconfigured with new partitions to meet the new use.

- Approximately (4) 90-minute fire doors would be installed to provide additional passages through the existing 2-hour fire wall.

- Existing partitions in the current second floor areas in the Tire Center should be demolished, and the spaces reconfigured with new partition to support the new uses.

- All equipment related to the garage, car wash and warehouse operations would be demolished.

- New finishes, furnishings and equipment will be required throughout the facility to support the new uses.

3.4 Plumbing

- The existing piping is inadequately sized for any arrangement of group shower and toilet facilities. Redesign and replace the plumbing systems to accommodate the expected restroom/shower/laundry facilities that will be required.

- The existing electric water heaters are well past their service life, and do not have sufficient capacity for the group shower facilities. Remove and replaced with large gas-fired equipment. Preliminary sizing of the water heater indicates one with 1,200 GPH recovery and a 1,200-gallon storage tank.

- The underfloor waste piping will likely remain serviceable. Abandon in-place the oil water separator and re-route the piping. Install a lift station in the laundry area to pump the washer drains up to the level of the existing waste lines.
- The rain leader piping can remain in place. Repair/replace the insulation at the piping near the floor level.

- The air compressors and piping can be removed as they will have no useful function in a shelter facility. The air compressors may have some salvage value.

3.5 HVAC

- Ventilation of the large common spaces can be provided with Dedicated Outside Air Systems (DOAS) using heat recovery and indirect gas burners for heat. One 11,000 CFM unit would be used to exhaust the restroom and shower areas and supply fresh air to the dormitory sleeping areas. The other 11,000 CFM unit would supply and exhaust the dining area.

- The heating and cooling of the dormitory areas would be by conventional packaged roof top equipment. This could be accomplished with a pair of 20-ton units and one 10 ton unit for the dormitory areas.

- The high ceiling structure of the dining area could be heated by infrared radiant heaters just as the shop is now. Due to the age and condition of the existing

equipment, it is recommended to replace with modern, radiant heat. The cooling would be done with a pair of 20-ton cooling-only packaged rooftop units.

- The Detox area is fairly small, but still needs a good amount of ventilation. This could be done with a 15-ton packaged rooftop unit with integral heat recovery.

- The Elder Care area can be served with a 15-ton packaged rooftop unit with integral heat recovery.

- The various office and support areas can be served by conventional packaged rooftop units as their ventilation rates are comparatively small. These areas can be served by five 10-ton units.

- The kitchen area can be served by one 10 ton packaged rooftop unit. A Type 1 exhaust hood is not anticipated for this facility.

- The laundry dryers will need to be vented through the roof and a variable speed inducer fan will likely be required for this run of ductwork. Dryer makeup air will be vented down from the roof.

- The existing gas piping will likely need to be rerouted to an extent that most of the existing piping will not be able to be reused. All new 2 PSI gas piping across the roof should be routed to the new equipment.

3.6 Electrical

- A new exterior 3000-amp, 480 volt, 3-phase electrical service and coordination with the electric utility company to provide an adequately sized utility transformer and new underground electrical service lateral.
- A new interior 3000-amp, 480 volt, 3-phase main distribution panel with new distribution panels, step down transformers, and branch panels strategically located to serve the distinct building use areas.

- New LED lighting and convenience receptacles throughout the entire the building.
- New electrical connections for all new mechanical equipment, kitchen equipment, laundry equipment, and other special equipment.

- New panel feeders, branch circuit wiring, and overcurrent protection.

- Although the existing exterior HID lighting is functional, to reduce electrical usage and reduce future maintenance issues, exterior LED replacement lighting is recommended.

- A new telecom system with new MDF/IDF telecom rooms, CAT6 horizontal cabling, and fiber optic backbone cabling would be required for the proper function of the office and support areas.

- A new telecom room and CAT6 horizontal cabling for the dormitory area is recommended to provide employees and occupants with Wi-Fi and telephone.

- Installation of a 500 KW standby generator and automatic transfer switch to allow occupancy during an extended utility outage since the occupants would likely have no other options for shelter. This is not code required and is optional.

- Installation of a CCTV system at all points of entry/exit for security and safety of staff and occupants. This is not code required and is optional.

- Installation of an access control system with card readers on all exterior doors, support areas and office areas to reduce overhead cost of issuing keys to new employees and re-keying locks when keys are lost. This is not code required and is optional.

3.7 Fire Protection / Life Safety

- Portions of the building will be designated as 'A Occupancies' and the total occupant load is over 1000 people. Therefore, a new voice evacuation fire alarm system with speakers, notification appliances, and smoke detectors throughout the building is required by code.

- Replace sprinkler system piping that is constructed of Allied XL pipe (schedule 7 light wall pipe).

- An additional layer of sprinkler heads will be needed on the new first floor area under the new second floor platform. This will be a light hazard occupancy. The existing risers will be able to support this new area of sprinkler heads.

3.8 Hazardous Building Materials

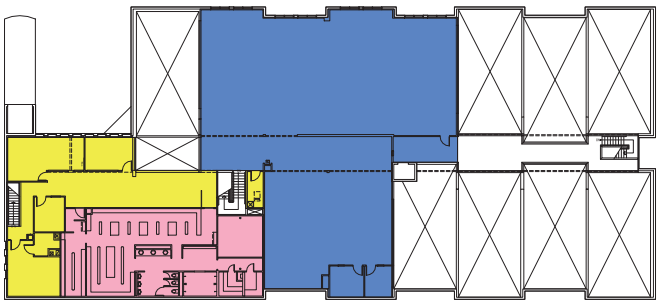
Given previous use as an auto parts and service center, there is a potential for the existence of hazardous materials on-site. It is recommended to complete Hazardous Building Materials sampling and testing.

630 EAST TUDOR ROAD PRELIMINARY CAPACITY ANALYSIS DIAGRAM

SCOPE: RENOVATION OF THE EXISTING GYMNASIUM BUILDING INTO A MASS SHELTER
CAPACITY: TOTAL 28,088 SF (249 BEDS)

MAIN FLOOR

SECOND FLOOR



LEGEND

SLEEPING ROOMS - 12,496 SF
- DORMITORY - 9,131 SF
- DETOX - 1,700 SF
- ELDER & SPECIAL NEEDS - 1,665 SF

ASSEMBLY SPACES
- COMMON - 1,187 SF
- DINING - 2,525 SF
- WAITING - 762 SF

SUPPORT AREAS
- OFFICE & SUPPORT - 3,379 SF
- KITCHEN & MPOE - 496 SF
- LAUNDRY - 609 SF
- TOILET/ SHOWER & LOCKERS - 3,632 SF
- OTHER - 2,458 SF

N

10' 50' 100'

CAPACITY

TOTAL MAX. OCCUPANTS, ALL AREAS:	579
TOTAL BEDS @ 50 SF (DORMITORY) :	249
TOTAL BEDS @ 113 SF (COVID) :	110

PLUMBING FIXTURE REQUIREMENTS

WATER CLOSETS:	31
LAVATORIES:	28
SHOWERS:	31
DRINKING FOUNTAINS:	4

BUILDING CODE CONSIDERATIONS

BUILDING TYPE: CONSTRUCTED AS TYPE IV 1-HR, 1973 UBC , AND OWNER INTENDS TO ADD A SPRINKLER SYSTEM.
ANALYSIS PROVIDED BELOW FOR TYPE VB (COMBUSTIBLE) SPRINKLERED CONSTRUCTION, 2018 IBC

OCCUPANCY A-2, A-3, B, F-1, R-1, NON-SEPARATED USE: 2 STORIES ALLOWED
ALLOWABLE AREA : 18,000 SF + .75(6,000 SF) = 22,500 SF ALLOWABLE AREA PER STORY

ACTUAL AREA LEVEL 1 : 17,354 SF (WITHIN ALLOWABLE)
ACTUAL AREA LEVEL 2 : 9,925 SF (WITHIN ALLOWABLE)

4.0 630 E. Tudor Road

4.1 Civil / Landscaping

- Regrade, repave and stripe parking lot.
- Repair exterior wall and parking lot interface at west façade to drain away from foundations

4.2 Structural

- Repair undermined southeast foundation corner. Fill gap with controlled-density fill (CDF). Fix site grading and pavement to direct water away from foundation.
- Demolish the level 2 concrete hot tub
- The metal grating inset into the sidewalk at the main entry door is unsupported. Replace and properly support with new steel angle and/or repair the sidewalk opening with concrete. Reconstruct main entry door per ADA standards.
- The wood wall infill in the west side CMU wall has portions of the wood sheathing pulling away from the underlying framing in several locations. Replace sheathing. The underlying framing should be evaluated for water damage.
- The ground level mechanical room is located directly beneath a hot tub on level 2. The hot tub is constructed of concrete and the underside of the hot tub is visible from below. There are cracks in the concrete and evidence of substantial corrosion on the underside of this hot tub. The hot tub should be demolished.
- The entrance canopy columns, framing, baseplates, and anchor bolts have moderate corrosion. This canopy should be removed, rehabilitated, or replaced.

4.3 Architectural

- Replace 20 Feet of exterior plywood siding, at west façade, and plywood signage backer board above main entry.
- Replace damaged exterior glass blocks.
- Replace original windows and/or the insulated glass units, at Level 2.
- Replace 2 secondary exterior doors. Provide ADA compliant landings and thresholds.
- Replace exterior seals at main entry door.
- Replace racquetball court hatches with doors, provide 2" floor transitions at doors.
- Complete gypsum wallboard sheathing on several interior partitions.

- Patch, repair, and repaint interior walls.

- Repair or replace damaged, misaligned, or missing doors.

- The building is not currently ADA compliant. To bring the building into compliance many changes to the building would be required. Below is a list of issues which would need to be addressed for the building to become accessible.

    - No accessible entries currently exist.
    - No accessible access to the second floor is provided.
    - No accessible bathrooms/shower rooms are present.
    - Most areas in the interior of the building do not have the clearances to allow wheelchair access.
    - Doors in the main public corridors have ADA hardware, doors in other areas do not.
    - Provide ADA and code compliant floor transitions where floors are at different levels.

- When the building is reconfigured, ADA compliance in altered areas will likely be required. If level 2 barrier-free access is necessary, an elevator or wheelchair lift will be required.

- Replace worn and damaged floors.

- Ensure accessible parking spaces are signed and painted in compliance with ADA standards.

4.4 Plumbing

- Gas-fired water heaters do not appear to be seismically braced. Recommend adding earthquake straps per UPC 507.2.

- Replace one water heater.

- A 2-inch copper pipe off the water meter was valved off, but not capped. Recommend capping all open pipes.

- The wash basin in the janitor's closet, the mop sink on level 2 and the hose bibb in the steam room do not have vacuum breakers installed. Recommend installing faucets and hose bibbs with built in vacuum breakers as per UPC 603.5.7.

- Remove the plumbing to special fixtures/spas.

4.5 HVAC

- The rooftop units vary in ages, some are due for replacement.

- The 2 gooseneck ducts located on the roof terminate too close to the roof's surface. One supplies the mechanical room with combustion air and the other is an exhaust duct from the old spa room. The 2 ducts could become clogged with snow buildup during the winter, limiting airflow. Recommend raising ducts to prevent restricted airflow.

- There are broken/missing roof drain grates and gas pipe supports on the roof. Recommend installing new grates and pipe supports.

- There are many ceiling exhaust fans that are noisy and/or not functioning.

- Single toilet room on level 1 has no exhaust.

- The louvers located in the 'aerobics' room and Alaska Fitness Center are plugged with insulation and/or the dampers are not functioning properly.

- There appears to be no source of heat for the Alaska Fitness Center area.

- While parts of the building have operable windows for ventilation, there are some areas in the interior of the building that are not properly vented. Specifically, in the women's locker room, single use restroom and the room adjacent to laundry room with the installed washer box. Recommend bringing all unvented areas up to code as per IMC Table 403.2.1.1.

4.6 Electrical

- Wiring is not compliant with current fire/building codes and major components past their useful lifespan. Complete renovation is recommended

- Recommended to replace the lights with LEDs through out.

4.7 Fire Protection / Life Safety

- The fire alarm was last inspected in March of 2019 by GMW.

- Service and inspect Fire alarm system annually.

4.8 Hazardous Building Materials

The Limited Hazardous Building Materials Inventory conducted in October 2020 identified areas within the building containing lead-based paint (LBP). Mitigation is required.

- Remove 1,025 sq. ft. of tile and board containing lead.

- Remove LBP from miscellaneous surfaces.

5.0 Project Development Costs

The table presents Rough-Order-of-Magnitude (ROM) development costs for remodeling existing buildings and construction of new buildings. The following is noted:

1 "Asking Prices for Property" are prices published by the real estate broker representing the property or (in the case of the Alaska Club), the price agreed-to in recent negotiations between the owner and the Municipality. It is noted that the final purchase price is often lower than the asking price.

2 "New Construction ROM Costs" were either submitted by the two proposers or (for "standard construction") calculated from a unit cost ($/SF) derived from recent bid history in Anchorage.

3 "Remodel ROM Costs" were estimated by a construction contractor with over 20 years of experience with Anchorage commercial/industrial remodeling projects. Additional research and consultation were undertaken with construction contractors throughout the Pacific northwest with specific experience in shelters and case management facilities. Special considerations for each facility (age, condition, etc.) were also considered in costing.

4 "Total Development Costs" reflect either the sum of "asking prices" and "remodel ROM costs" or the "new construction ROM costs". Costs are inclusive of: project management, design/permitting, environmental abatement, construction, construction administration and a 10% contingency for development unknowns.

5 "Unit Prices" were calculated by dividing the Total Development Cost by the number of beds proposed for the facility.

Sites	Proposed Dorm (SF)	Proposed Wrap-around Services (SF)	Beds - Standard Protocol	Beds - COVID Protocol	Asking Prices for Property	New Construction ROM Costs	Remodel ROM Costs	Total Development Costs	Unit Price - standard ($/occupant)	Unit Price - COVID ($/occupant)
300 Calais Dr.- Johnson's Tire	58,794	61,768	1,176	520	$6,600,000	NA	$28,500,000	$35,100,000	$29,847	$67,500
550 Bragaw - PNA Building	17,215	20,998	344	152	$5,500,000	NA	$11,000,000	$16,500,000	$47,965	$108,553
630 E. Tudor Rd - Alaska Club	12,496	15,048	249	110	$3,500,000	NA	$6,700,000	$10,200,000	$40,964	$92,727
RPM-SPRUNG Structure	47,463	41,400	950	420	NA	$19,289,292	$0	$19,289,292	$20,305	$45,927
Orion-Legacy Structure	42,000	42,000	840	372	NA	$14,101,000	$0	$14,101,000	$16,787	$37,906
Standard Construction (ROM)	42,000	42,000	840	372	NA	$37,800,000	$0	$37,800,000	$45,000	$101,613

6.0 Project Development Schedule

Development of low barrier navigation center(s) is a high priority for the Municipality. Consequently, the two proposals received for construction of new facilities reflect accelerated design, permitting and construction schedules. The table below summarizes the major phases for the proposals from RPM-sprung and Orion-Legacy, as well as an accelerated schedule for remodeling one or more of the facilities under consideration for acquisition and repurposing. Some phase durations are annotated to call attention to assumptions and potential complications. In the right-most column, phase durations based on the project team's professional judgment are included, for comparison.

Phase	***Facility Remodel (JT, AK Club, 550 Bragaw)***	***RPM-sprung***	***Orion-Legacy***	***Estimated Time***
Acquire Muni Site Control	5 weeks	0 weeks	0 weeks	5 weeks for Purchase Agreement
Land Use Permitting	Assume waiver of AMC Title 21 requirements			
Contractor Selection	Design consultants already under Muni contract	Assumes sole-source	Assumes sole-source	5 weeks for RFP/D-B team selection (concurrent with site acquisition)
Footing/Foundation/ Utility Design and Permitting	NA	2 weeks (seems highly optimistic)	4 weeks	4-8 weeks
Footing/Foundation/ Utility Construction	NA	3 weeks (no time for ground thaw)	12-14 weeks	12 weeks
Arch/Structural Design and Permitting	10-12 weeks (select construction contractor during design)	2 weeks (seems highly optimistic)	9 weeks	10-12 weeks (concurrent with F&F)
Shell Construction	NA	8 weeks	8 weeks	8 weeks
Demolition/Abatement	5 weeks	NA	NA	5 weeks
Interiors	18 weeks	Unknown (assume 9 weeks)	9 weeks	13-18 weeks
Totals	**38-40 weeks**	**24-27 weeks**	**42-44 weeks**	**39-48 weeks**