

VAIL PUBLIC WORKS MASTER PLAN 2019

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Town of Vail PEC Submittal

February 25, 2019

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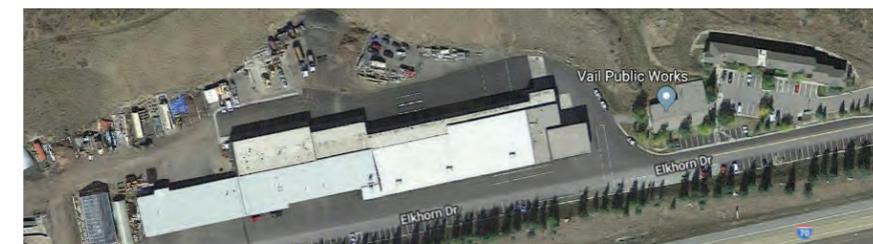
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1.1 Introduction

Public Works 20 Year Master Plan Update Summary

This document is intended to provide a summary of the immediate needs and the long-term use of the Public Works site in the Town of Vail. The intention of this document is to provide a roadmap forward which guides the development of this site while remaining aware of anticipated costs and allowing for flexibility in the future.

Employee Housing, Public Works Administration, Transit, Fleet Maintenance, Streets & Parks, and Facilities Maintenance are the Subjects of this Public Works 20 Year Master Plan Update along with Solar Energy Systems, Snow Dump/Storage, and Site Parking.

Included are the strategic findings from the Staff Interviews conducted in search of additional building areas, site functions, additional housing, and overall Public Works operational needs along with additional site parking in support of Staff and Facilities growth over the next 20 years.

It is generally understood that the growth throughout the next 20 years is driven by additional Public Buildings and Facilities to maintain along with other elevated Town Service levels.

Master Plan Update Priorities: The following are the Master Plan Update priorities.

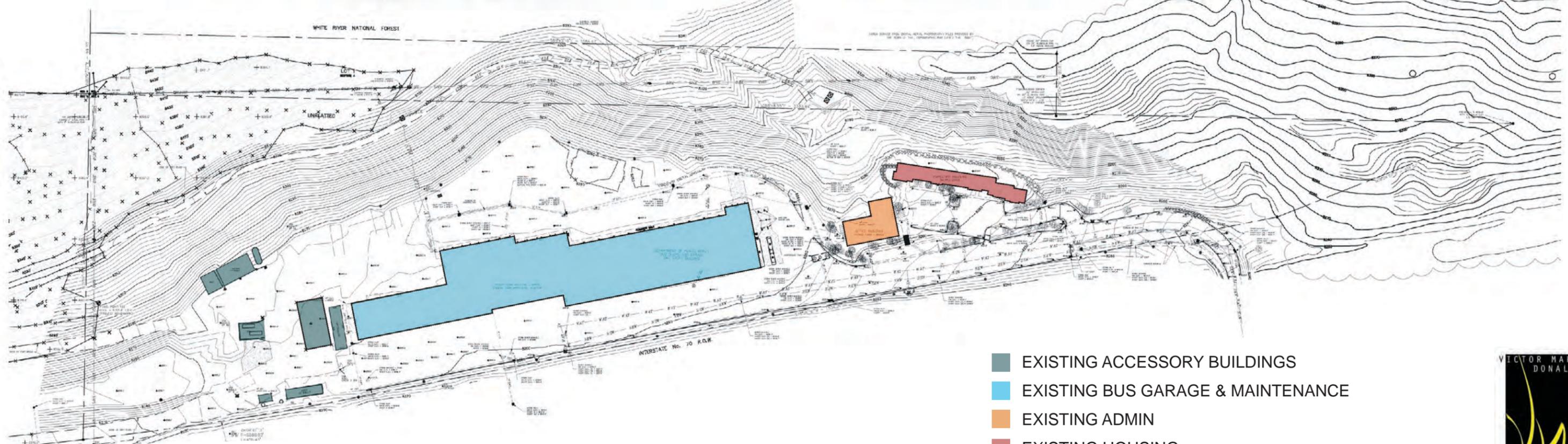
1. Streets and Parks Building expansion
2. Housing opportunities which may be available at this site
3. Solar opportunities to help offset Town of Vail energy consumption
4. Frontage road turn-lane and improvements to support future expansion
5. Snow Dump/Storage expansion
6. Site utility upgrades

This document includes:

1. Existing site conditions, including hazards and site limitations
2. Summary of user group needs
3. Options for consideration to address user group needs and opportunities
4. Suggested path forward

2.0 Existing Conditions

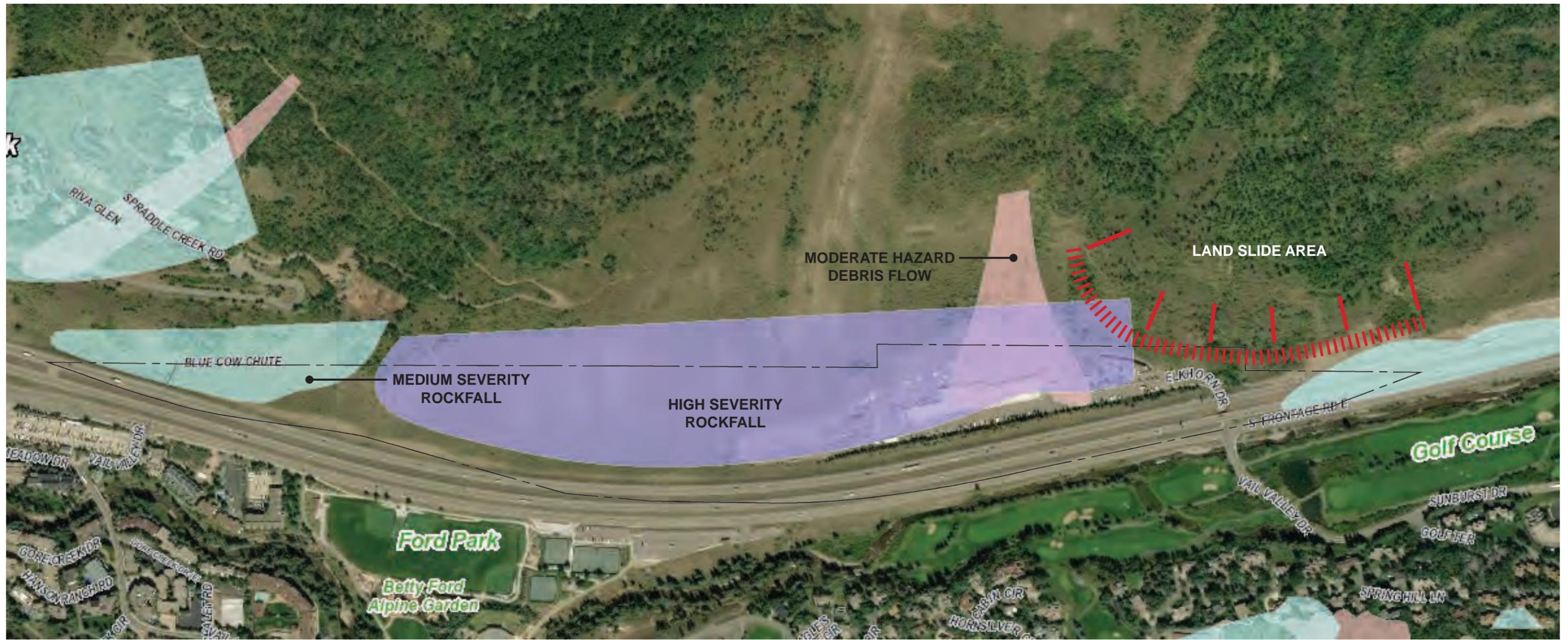
- 2.1 Existing Site Plan
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- EXISTING ACCESSORY BUILDINGS
- EXISTING BUS GARAGE & MAINTENANCE
- EXISTING ADMIN
- EXISTING HOUSING



- | | |
|---------------------------|-----------------------|
| 1. SNOW STORAGE | 5. FLEET MAINTENANCE |
| 2. SAND & CINDERS STORAGE | 6. BUS GARAGE |
| 3. GREENHOUSE | 7. ADMINISTRATION |
| 4. VEHICLE SHOP BAYS | 8. APARTMENT BUILDING |



ROCK FALL & DEBRIS FLOW

Mitigation notes

The site is in a moderate to high rockfall hazard area. Site Specific Rockfall Mitigation should be done for new buildings particularly on the West end of the property. HP Kumar provided a preliminary assessment of the Rock Fall and Debris Flow Hazards to the site.

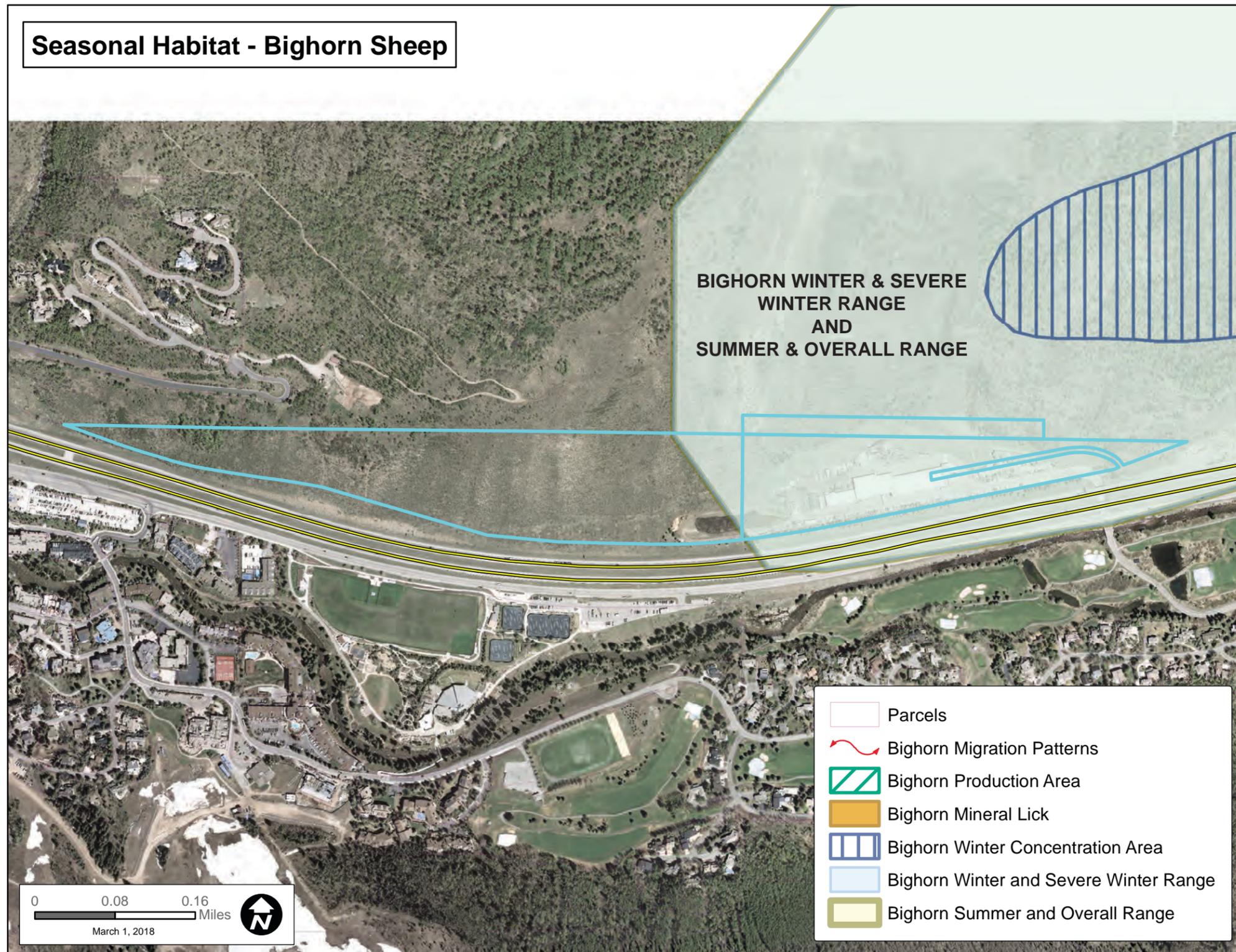
Suggested mitigation includes:

1. Meshing, bolting, and or shotcreting of entire rock outcrop in the source zone.
2. Stabilization or scaling of individual rock blocks in the source zone.
3. Installation of rockfall barrier and catchment area (rigid MSE wall, soil berm, or flexible fence) in the runout zone.

Recommended mitigation:

Option 3 with a combination of the MSE wall, soil berm, and fencing.

Seasonal Habitat - Bighorn Sheep



The Wildlife Habitat should be protected and should be enhanced where possible. In order to protect the Sheep Habitat, the following Guidelines should be followed:

1. No outdoor recreation should be allowed behind the buildings on site and the trail behind the Public Works site should be closed in winter.
2. Dogs should not be allowed on site.
3. Site specific Wildlife studies should be conducted for the implementation of Utility Grade Solar. Generally, priority for utility grade solar should be in the smooth brome stand area that has already been disturbed.
4. Site specific Wildlife studies should be conducted for Housing projects proposed on the existing administration and Buzzard Park sites. Housing generally does not create much of an impact. The housing that backs up the hillside should be kept below the rock areas on the hill.
5. Site Specific Wildlife studies should include specific criteria to mitigate the impacts on Wildlife.
6. The Town should commit to further Wildlife Habitat Enhancement where appropriate.

OTHER WILDLIFE SEASONAL HABITAT THROUGHOUT THE PROJECT SITE:

- BLACK BEAR
- BOREAL TOAD
- ELK
- MOOSE
- MOUNTAIN LION
- MULE DEER
- TERRESTRIAL GARTER SNAKE





SOUTH SIDE CIRCULATION LOOKING WEST

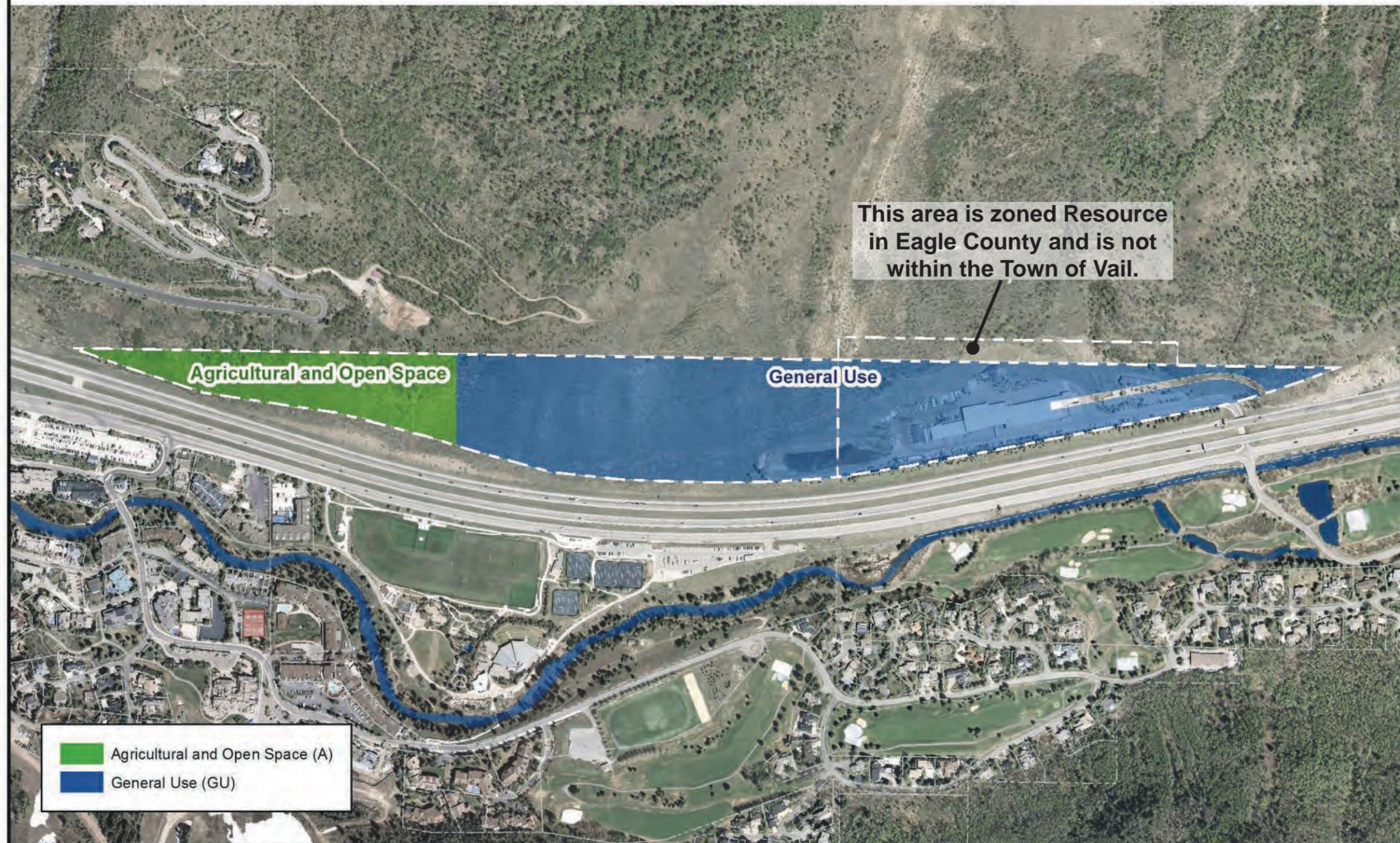


SOUTH SIDE CIRCULATION LOOKING EAST



NORTH SIDE CIRCULATION LOOKING WEST

Town of Vail Public Works Site



0 250 500 1,000 Feet

This map was created by the Town of Vail GIS Team. Use of this map should be for general purposes only. The Town of Vail does not warrant the accuracy of the information contained herein (where shown, parcel line work is approximate).

Last Modified: February 13, 2019



3.0 Staff Input / User Groups

- 3.1 Summary of Needs / User Group Input
- 3.2 Engineering Studies Summary
- 3.3 1994 Master Plan Recommendations
- 3.4 1994 Master Plan Implementation
- 3.5 Vehicle & Equipment Chart
- 3.6 Streets Vehicle Plan

3.1 Summary of Master Plan Needs Assessment

Below are Findings from Town Staff & User Interviews conducted in search of additional building area needs, site functions, housing, Public Works operational needs and more on-site parking in support of Staff and Facilities growth over the next 20 years.

The following Users are included within this Assessment Summary:

1. Employee Housing
2. Public Works Administration
3. Transit
4. Fleet Maintenance
5. Streets and Parks
6. Facilities Maintenance
7. Solar Energy Potential
8. Snow Dump / Storage Expansion
9. Additional Off-site User Groups
10. On-Site Parking

1. Employee Housing: The Objective is to maximize Work Force Rental Housing for Town Staff over the next 20 years. Half of the Buzzard Park Residents currently work on-site. The Housing Target is for Seasonal Bus Drivers, Landscape Staff and other Town Staff housing needs.

Development of further Housing at Public Works includes the following discussion:

- We don't have the option or luxury to not build housing on this site as it is one of the last development opportunities for Town owned/situated property.
- Perceived conflicts of Housing and Industrial Uses must be overcome via direct access for Housing, creative Land Planning and Sound Abatement techniques along with Passive Indoor/Outdoor Recreation. A Gym/Wellness Center could be considered to also serve on-site Staff to increase Employee Retention.
- Unit Types must be flexible for Seasonal FTEs, Transitional Housing and other Employment Profiles among Town Staff including Bunkrooms with Common Area Facilities (e.g. The Boarding House in Telluride, CO) which was well-received by their Residents and Town-wide.
- Optimization of Density to be achieved with smarter and smaller Unit Plans to better address the unique lifestyle for singles and families alike.
- Our extensive Bus and Transit System Modes and Bike Paths will assist in reducing parking requirements via Updated Zoning Regs and 'Community Rules' in lieu of Standard Zoning and conventional expectations.



2. Public Works Administration: Current personnel are 15 in the summer and 11 in the winter. Though additional on-site parking is needed, the Department functions well in the existing structure. Some remodel and technology upgrades should be addressed.

- The existing double Conference Rooms function well but need additional AV, Light Board Technology with TV screen, Cork & Dry Boards along with Cabinet and Seating Refurbishments.
- The Lunch/Break Room needs to be reconfigured to function as a 3rd 'overflow' Conference Room to accommodate days of over-flow meetings.
- The current Administrative Office Suites work well for privacy and for Staff collaboration but need to adjust some Office sizes/shapes, reorganize Storage, Mail Room, Layout areas and a full-length Copy Table.



3. Transit: Current personnel are 100 in the winter and 50 in the summer who manage 34 buses today. Ten additional employee parking spaces are needed. Buses will grow by 5-6 to 40+ by the best estimate to include in-town and outlying routes.

- The existing Bus Barn Break Room (about 1,000 SF) above Transit & Fleet Maintenance that serves all Public Works Staff needs to increase to 3,000–3,500 SF due to poor function and lack of operational facilities for the occupant load.
- The expansion of the Break Room would include a new Commercial Kitchen, increased seating, 70 lockers for 70 people, daily Check-In/Check-Out and larger Meeting space for morning Staff Meetings, Training, Safety Programs, Seminars and seasonal gatherings of Staff & families is needed with Computer Stations of 8-12 cubicles. AV equipment and radios are also stored & charged in this area.
- Transit Objectives are to reduce Carbon Footprint with reasonable pay-back period via alternatives to manage Opening/Closing of large overhead doors, morning start-up efficiencies and better diesel exhaust methodologies.
- Transit needs for Streets/Parks to relocate their large equipment storage elsewhere, allowing Transit complete functional use of their existing space.
- A DEF Fueling Station is needed to operate in concert with the other fuel types.
- A Storage Area needs to be integrated into the existing facility for the purchase and storage of bulk cleaning supplies that are difficult to keep in inventory.
- An additional 5-10' of Bus turning area is needed to the south of the Bus Barn which could impact parking for the length of Bus Storage.



4. Fleet Maintenance: Current personnel are 12 FTE along with parking for personal cars along with Truck Loading/Unloading of Shipping and Receiving items. The Fleet Maintenance facility is deemed complete except as noted in the following:

- Temporary Storage and Staging Areas are needed for the volume of incoming and outgoing deliveries in and around the Town.
- Consideration is needed for: “How can the Town expand a Centralized Purchasing Department to serve the entire Town efficiently?”
- Additional space is needed for Bulk Oil Storage beyond the existing 250 gallon and 2 – 125 gallon tanks.
- A new, single Parallelogram Lift (about \$100K) is needed to be installed within an existing bay to lift Fire Trucks.

5. Streets & Parks: Current personnel are about 35 in winter and 55-60 in summer who manages all Town Vehicles. 19 additional employee parking spaces are needed.

The proposed new 24,000 SF Streets/Parks Facility is planned to accommodate:

STREETS:

- Indoor Parking for Vehicle and Heavy Diesel Equipment Storage for pull-through bays for double and triple stacked large equipment and diesel vehicle storage.
- Dedicated Welding area and Secure Tools Cage.
- The Lunch Area needs expansion with larger Kitchen, Check-In/Check-Out Station with Lockers for 70 Employees.
- Additional Storage is needed to eliminate storage in Work Areas and eliminate the existing storage containers that are very inefficient for inventory needs.

PARKS:

- The Greenhouse (to be relocated) works for summer Landscape operations and allows Parks its own winter storage in their own Greenhouse.
- Landscape Office for 5, Tool & Parts Storage and Bay for 2 Riding Mowers. The Storage Bins at the north side need to be replaced and reconfigured for staff efficiency along with some additional cold storage of this type.
- A permanent location for manure, topsoil, cooking compost, cooked compost and mulch is needed on the site. Compost must be on the ground with Back-Hoe and Loader access. Cooking compost can be doubled with a barricade of silo cinder.

6. Facilities Maintenance: Current personnel are about 22 with 10-15 working out of the Vail Village Parking Garage and 6-7 are on-site at Public Works. The 20 year vision indicates more Town growth with more buildings to maintain and therefore more people, parking and equipment storage.

PUBLIC WORKS SITE:

- Facilities Maintenance will need new and expanded facilities for growth and operations with current Staff parking being tight on site.

- 3 existing vehicles are stored on site and used on and off site. A new Bucket Truck is needed for use by Facilities Maintenance and Streets to clean and repair Town Light Fixtures more frequently.
- Facilities Maintenance Manager's office location remains flexible based on the outcome of shuffling some of the Department spaces at the site.
- The Carpentry/Sign Shop needs another larger bay for operations of new Planer and additional space for materials storage. It appears a total of 1.5 to 2 full bays will be needed to fully accommodate all operations and storage requirements.
- The Electrical Bay is well-organized, has adequate space and is secure. Additional Outdoor Cold Storage is needed in addition to existing Cold Storage and should be located north of and proximate to the Electrical Building Bay.

VAIL VILLAGE PARKING STRUCTURE:

- This space is cramped for 10 personnel to work in and is short on actual Office and Computer Station space. Therefore some Staff will need to be moved to the Public Works Site within 2 years indicating more parking will be needed at the Public Works site for personal cars.
- This location, though tight allows good response time & access to Vail Village and other Town properties for maintenance and service work.
- Parking for 12 personal cars along with 2-deep Tandem Truck parking within the Village space
- Current storage of residential appliances, furniture and other Housing Inventory need to be removed and situated at Town Housing sites for better accessibility and to maximize this space for Staff and facilities maintenance operations.

7. Solar Energy Systems: Roof top and Utility Grade Solar Systems are proposed to offset Energy Costs including the charging of E-Buses, Town Snow-Melt Systems and to address the Objective of the Town becoming a Sustainable Community.

- Solar installations for new and/or remodeled structures are being considered.
- The Solar installations at Public Works Buildings will likely serve their direct needs. Utility Grade Solar on site, over time is intended to off-set Town Snow-Melt and other Town utilities.
- The Town will be seeking collaborations for Tax Credits, Grants and including Development Partners for development of these Solar Systems to dove-tail with the phases of development produced from the execution of this Master Plan Update as well as Town-Wide.

8. Snow Dump/Storage: The existing capacity is about 120,000 CY. About a 50,000 CY increase is needed for increased volumes throughout the varying levels of annual snowfall.

- About 5,000 CY can be increased without implementing significant retaining walls.

- Raising the roadway around Snow Dump area and/or extending the Snow Dump area to the west can accommodate additional Snow Dump needs but will include significant retaining walls – this will continue to be reviewed and priced.

9. Summary of Off-Site Department Space Needs within the Public Works Site: We summarize the Public Works Site needs of other Town Departments, as follows:

A. Information Services: The Fiber Optics and Cellular Towers reside on site along with Equipment Closets in PW Break Room and Administration Offices.

- In the near term a 288 count, single-mode fiber in 2" conduit could provide enough capacity for Housing and all Public Works upgrades.
- Town Fiber Optics must retain the line of sight to the Golf Course area; the Data Center at West Vail Fire Station may be relocated onto Public Works (800 SF).

B. Vail Recreation District: VRD needs storage for Sports Gear and Athletic Field #6 Equipment/Gear Storage along with the following vehicle/mower storage:

- 5 – Ford F250 Trucks and a single 20' Trailer
- 2 Fairway Mowers

C. Vail Fire Department: VFD requests the following storage and on-site facilities:

- 14' x 36' Storage Unit for 30' long, vintage Ford cab-over Fire Pumper Truck
- 50' x 300' Runway Pad for Fire Hose Testing and Staff Training operations

D. Vail Police Department: VPD needs the following storage:

- 14' x 48' Storage Unit for Mobile Communications Unit of about 40' in length
- Temporary vehicle storage while awaiting for Search Warrant (could be in Paint Booth if meets security requirements)
- Rescue Vehicle Storage that currently resides in the Avon Public Works Facility on a temporary basis
- Storage Lockers within Fleet Maintenance to secure vehicle Police Gear while the vehicle is being serviced and maintained

10. Site Parking & Other Department Storage Needs: About 100 Cars/Day enter the site with surface parking spaces maxed-out. Public Works and other Department's needs for Parking and Storage on-site are being addressed via development of 20' high Shoring Walls along the north side of the existing Bus Barn/Fleet Maintenance Buildings. These Walls will create about .75 acre of new, flat development area for Cold Storage and parking for other Departments along with vehicle maneuvering area and additional surface parking as the Master Plan Update is implemented.

- Exclusive of existing Buzzard Park residential parking, the existing site contains about 125 striped parking spaces for current use by Public Works Staff, guests and other parking needed by other Town Departments.
- Exclusive of existing Buzzard Park residential parking, the anticipated parking needs is about 160 striped parking spaces for use by Public Works Staff, guests and other Town Departments.

3.2 Engineering Studies

Summary of Engineering Consultants Findings

The following Engineering Consultants provided an assessment and reporting of the existing Mechanical, Electrical and Structural Systems, Traffic Carrying Capacity, and Civil Engineering for the Public Works site and for the Administration Building, Buzzard Park, Bus Barn/Fleet Maintenance and the Greenhouse.

- 1. Electrical Systems Narrative:** AEC Architectural Engineering Consultants, Inc. prepared the following electrical narrative for the existing buildings.
 - Overhead pole utility power is routed around the north and west portions of the property. The power poles and utility transformers are located up the mountainside. The electric services to the existing buildings are adequate. It is recommended to set utility transformers closer to the buildings they serve to reduce voltage drop and provide better utility access to transformers for maintenance and replacement in case of emergency.
 - Internal building electrical distribution is adequate throughout the Administration and Maintenance buildings. Any opportunity to rework the existing incoming distribution and replace some of the power distribution panels within the Maintenance Building should be pursued. Emergency Power Distribution is limited to a generator dedicated to the Fleet Fuel Pumps.
 - Interior lighting at both buildings is primarily fluorescent lights with retrofit LED lamping. At the Bus Barn/Fleet Maintenance Building new LED lighting with motion controls have been installed. Lighting throughout the facilities is adequate but should be improved for better operational illumination per Staff interviews. Lighting Controls are primarily on/off switches with some motion control.
 - Exterior lighting at both buildings is primarily wall and pole mounted fixtures with retrofit LED lamping. These fixtures are not cut-off type and are not considered Dark Sky compliant. Lighting controls are traditional photocell and timeclock controls.
- 2. Mechanical Systems Narrative:** Rader Engineering & Comfort Systems, Inc. prepared the following mechanical narrative for the existing buildings
 - Gas, Sewer, Domestic Water and Fire Protection systems and capacities have been observed and reported as being adequate for current uses. This information has been gathered to be used by Utility Companies and/or Civil Engineers for site utility capacity evaluations.
 - The available Gas Service includes capacity for a 23,000 CFM Make-Up Air Unit for the Paint Booth that has been designed but not installed.

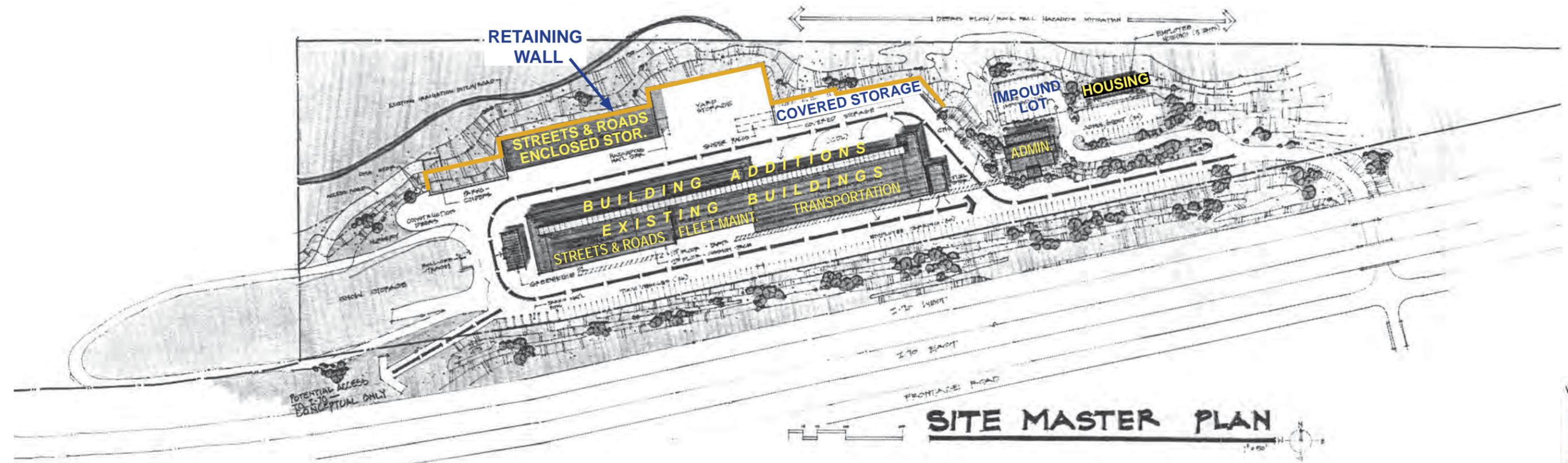
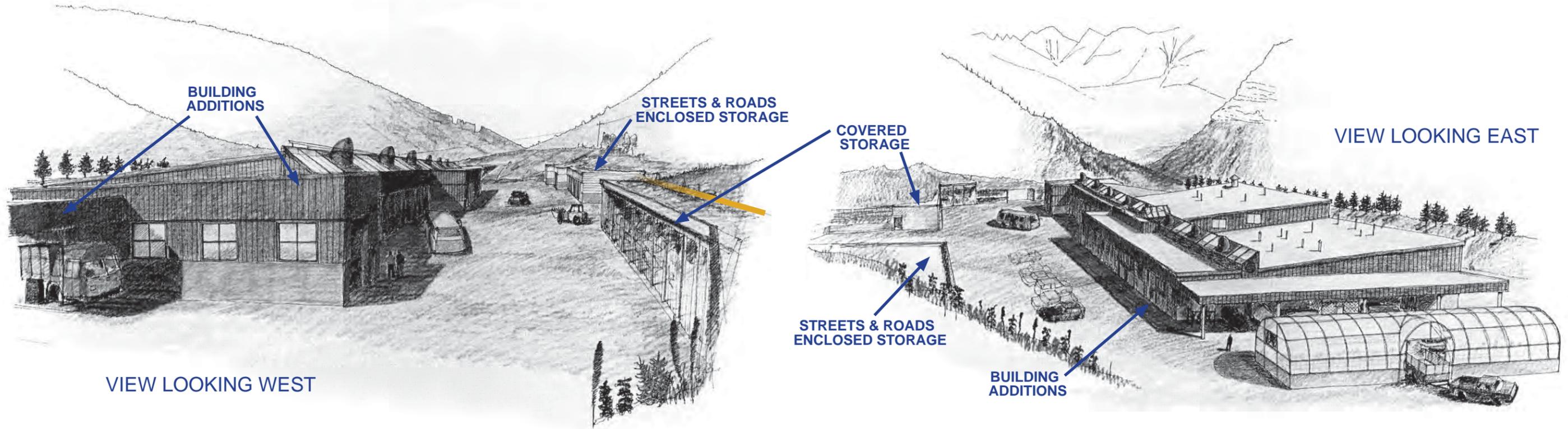
- 3. Structural Systems Narrative:** Martin/Martin Consulting Engineers, Inc. prepared the following structural narrative for the existing buildings
 - Administration Building: Constructed in 1978 with light frame timber and a 1997 office and file storage addition. Some roof leaks have occurred in the past with no structural damage. The structure remains useable and serviceable though additions or expansions would likely cause significant Building and Energy Code upgrades.
 - Bus Barn/Fleet Maintenance Building: Constructed in 1978 as a pre-engineered metal building with 1996 and 2002 additions, it appears to be code compliant construction. While there are minor deficiencies that can be corrected with a few steel cross braces, this structure is at its' capacity for gravity and wind loads, not rendering the structure to significant additions without systemic steel reinforcements. Additionally there are visible areas of vertical concrete cracks and various areas throughout of cracked slabs-on-grade. Otherwise the building remains useable and serviceable for the operations and functions intended.
 - Greenhouse: This structure was erected in 2009 with steel frame structure and strip concrete footings. This structure will be dismantled and relocated on-site as the next phase of construction begins. This structure continues to be adequate for the seasonal operations for which it was intended.
- 4. Civil Grading & Drainage:** Martin/Martin Consulting Engineers, Inc. prepared the following grading and drainage narrative for the existing and proposed structures based on the Preliminary Master Plan Update Program and Work Product and including addressing the following Site Development issues and benefits:
 - A Concept Plan for South Frontage Road widening of the East Bound existing Left Turn Lane at the intersection of Vail Valley Drive has been prepared based on the McDowell Engineering, LLC Preliminary Traffic Analysis Report.
 - Interior Roadways & Circulation from the point of arrival on-site and in and around existing and proposed structures along with circuitous Snow Storage Roadway. Drive lane widths and turning radii have been determined to accommodate the necessary Bus, Truck and Equipment along with access to all Operations areas.
 - Truck & Vehicle Turning Radii verification for vehicles and equipment turning in and out of existing Bus Barn/Fleet Maintenance Building and the proposed Streets/Parks Building.
 - The Shoring Wall Design proposed at the north side of the Bus Barn/Fleet Maintenance Buildings creates additional development area as well as Cold Storage and other structures to fulfill the Master Plan Update Programming for Public Works and other Departments.

- Additional height of the Shoring Walls may be required to address Debris Flow Capacity and Rock Fall Protection based on the HP Kumar Geologic Hazards Review.
- The Debris Flow Sediment Capture Basin Capacity has been addressed at the west end of the proposed Streets/Parks Building and east of the Snow Storage Roadway.
- A Driving Ramp up to future Structured Parking above the Streets/Parks Building Cold Storage and covered vehicle maneuvering area has been developed to arrive at the north side of the proposed Streets/Parks Building.
- The Snow Storage Area increase appears to be limited to about 5,000 Cubic Yards at this time due to slopes stability and cost of deep retaining walls; this will continue to be pursued with other solutions.

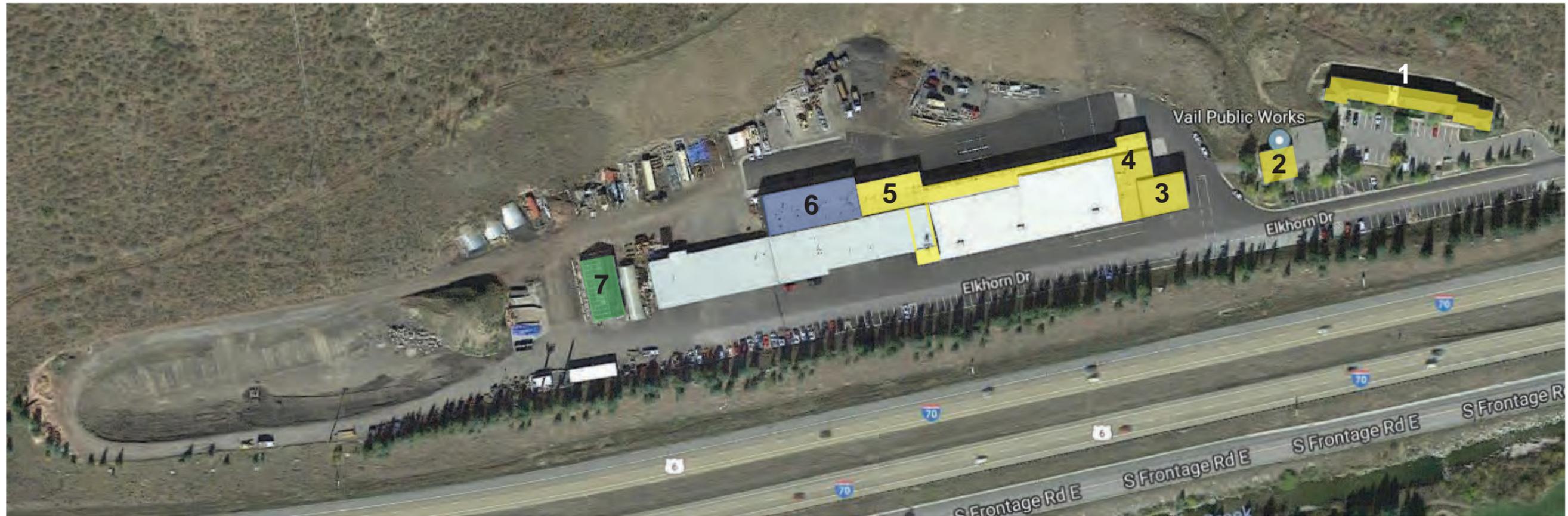
5. Traffic Engineering Narrative: McDowell Consulting Engineers

- McDowell Engineering has performed a Traffic Study at the site to determine the capacity of the existing access. Depending on the amount of anticipated increased use, access improvements will likely be required which may include a left turn lane from the frontage road and an increased access tunnel if the site is fully built out with all of the potential housing.

1994 Master Plan Recommendations



1994 Master Plan Implementation



1. Buzzard Park 24 unit housing structure
2. Admin building renovation and addition
3. Fueling area
4. Bus wash, crew area & offices
5. Fleet maintenance addition which included welding shop, chassis wash, body shop, paint booth
6. Fleet maintenance addition
7. Green house

- 1997: ADDITIONS AND NEW CONSTRUCTION
- 2002: ADDITION
- 2009: GREEN HOUSE

The 1994 Master Plan proposed building a retaining wall to the west carving into the hillside to create more usable site area (2.5 additional acres) and construct a Streets & Roads heated storage building and covered storage- none of which was built.

3.3 Streets Vehicle & Equipment Chart

	PROGRAM AREA	DIMENSIONS		AREA	CIRCULATION DIMENSIONS		FOOTPRINT AREA	QUANTITY	TOTAL NEEDED
	STREETS EQUIPMENT	Length	Width	SQUARE FT	Length	Width	SQUARE FT		AREA (SF)
A	Haul Truck	53	11	583	58	16	928	3	2784
B	Plow Trucks	33	11	363	38	16	608	8	4864
C	Loaders	30	13	390	35	18	630	7	4410
D	Motor Grader	42	14	588	47	19	893	1	893
E	Sweepers	26	11	286	31	16	496	2	992
F	Trackless Toolcat	20	7	140	25	12	300	3	900
G	Pickup trucks	25	8	200	30	13	390	2	780
H	Mongoose	25	8	200	30	13	390	1	390
I	Smooth Drum Roller	15	6	90	20	11	220	1	220
J	Air Compressor	12	6	72	17	11	187	1	187
K	Polaris	12	6	72	17	11	187	1	187
L	Duramax	25	6	150	30	11	330	1	330
M	Snow Blow Attacher	11	9	99	16	14	224	3	672
N	Misc. Equipment	8	10	80	13	15	195	1	195
O	Paint Striper	8	10	80	13	15	195	1	195
P	Pressure Washer	8	10	80	13	15	195	1	195
Q	Pumps	8	10	80	13	15	195	1	195
								38	18,389 SF

VEHICLE & EQUIPMENT REQUIRED AREAS ONLY. ADDITIONAL BUILDING CIRCULATION, SUPPORT SPACES, AND PARKS DEPT. NOT INCLUDED.

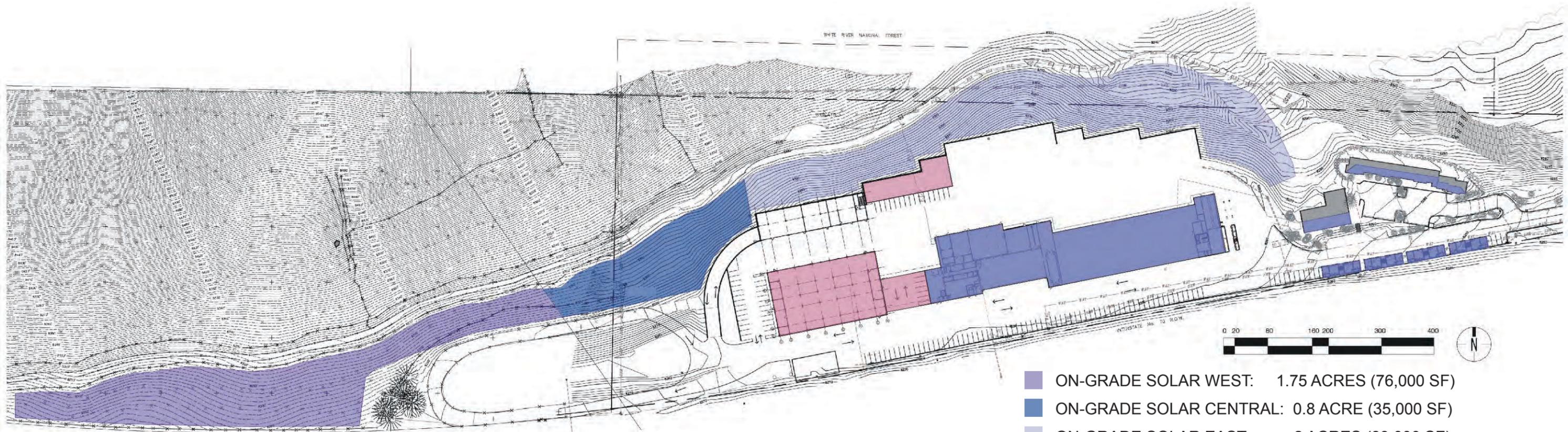




- 1. LANDSCAPE
- 2. LANDSCAPE OFFICE
- 3. MOWERS
- 4. STREETS OFFICES

4.0 Considerations for Streets, Housing, and Solar

- 4.1 Solar Oportunities
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- 4.3 Streets option B & Orientation Photos
- 4.4 Streets option C Phase-1 & Orientation Photos
- 4.5 Streets option C Phase-2/3 & Orientation Photos
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- 4.16 Housing, Multi-Unit Building Phase-2 & Orientation Photos
- 4.17 Site Access Plan and Photos



■	ON-GRADE SOLAR WEST:	1.75 ACRES (76,000 SF)
■	ON-GRADE SOLAR CENTRAL:	0.8 ACRE (35,000 SF)
■	ON-GRADE SOLAR EAST:	2 ACRES (89,000 SF)
■	POTENTIAL ROOF-TOP SOLAR AREA:	2.78 ACRES (121,300 SF)
■	REMAINING PW FACILITIES	52,000 SF
■	ADMIN BLDG	1,700 SF
■	BUZZARD PARK	2,600 SF
■	FUTURE PW BUILDINGS	35,000 SF
■	FUTURE HOUSING	5,500-30,000 SF

The Use of renewable energies should be encouraged at the Public Works site.

1. Priority should be given to placing Solar Panels on new structures.
2. Extent of utility grade solar installation will be determined from a cost benefit analysis and feasibility of placement on the hillside while being mindful of the impacts of solar panels on Wildlife Habitat.
3. On existing structures, cost benefit analysis should be done in conjunction with building upgrades to determine the feasibility of adding Solar Panels to the existing roofs.
4. Provide electric vehicle charging sites at Public Works facilities and housing sites.



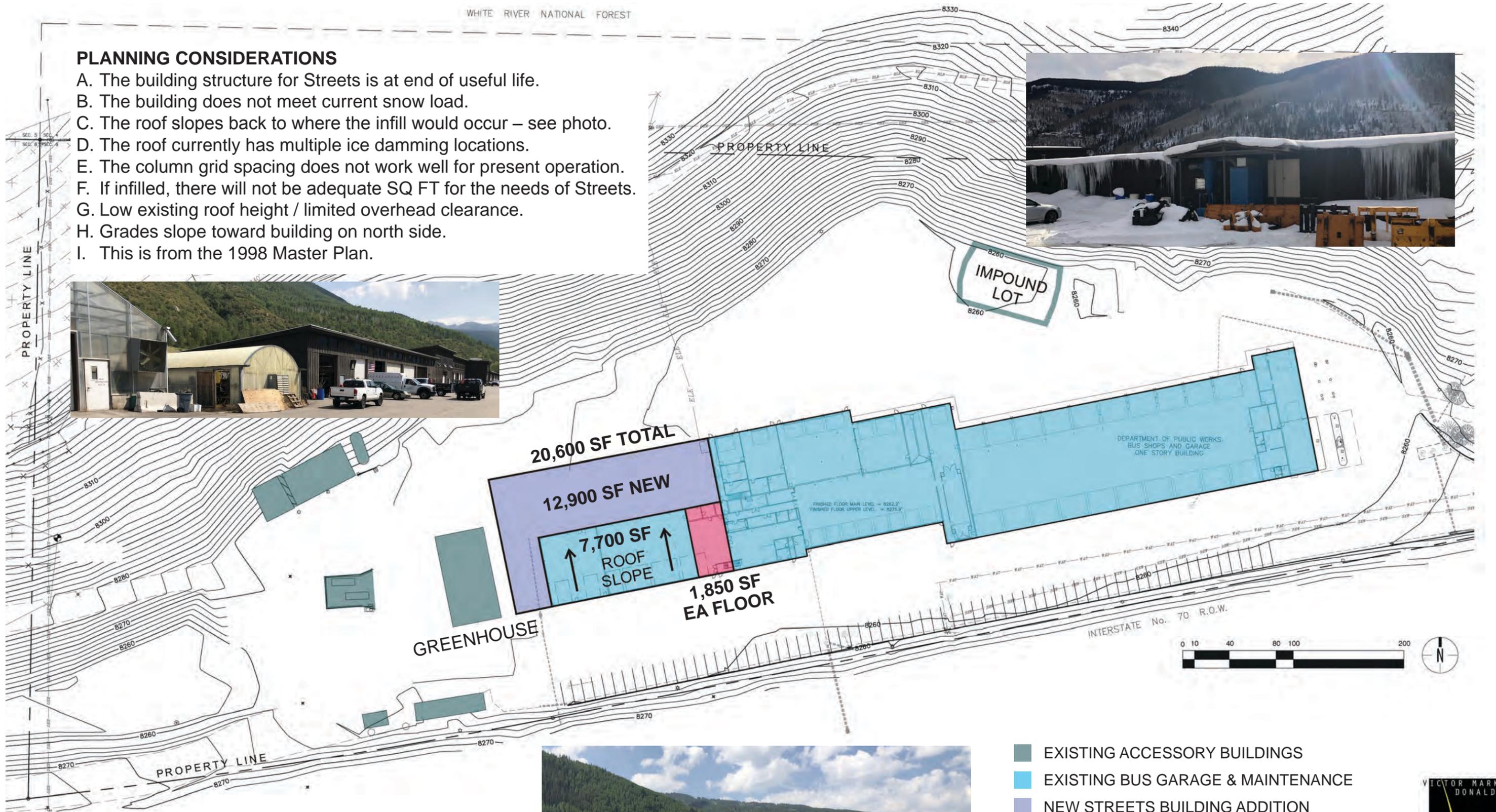
UTILITY GRADE SOLAR



LOW SLOPE "FLAT" ROOF SOLAR ARRAY

PLANNING CONSIDERATIONS

- A. The building structure for Streets is at end of useful life.
- B. The building does not meet current snow load.
- C. The roof slopes back to where the infill would occur – see photo.
- D. The roof currently has multiple ice damming locations.
- E. The column grid spacing does not work well for present operation.
- F. If infilled, there will not be adequate SQ FT for the needs of Streets.
- G. Low existing roof height / limited overhead clearance.
- H. Grades slope toward building on north side.
- I. This is from the 1998 Master Plan.

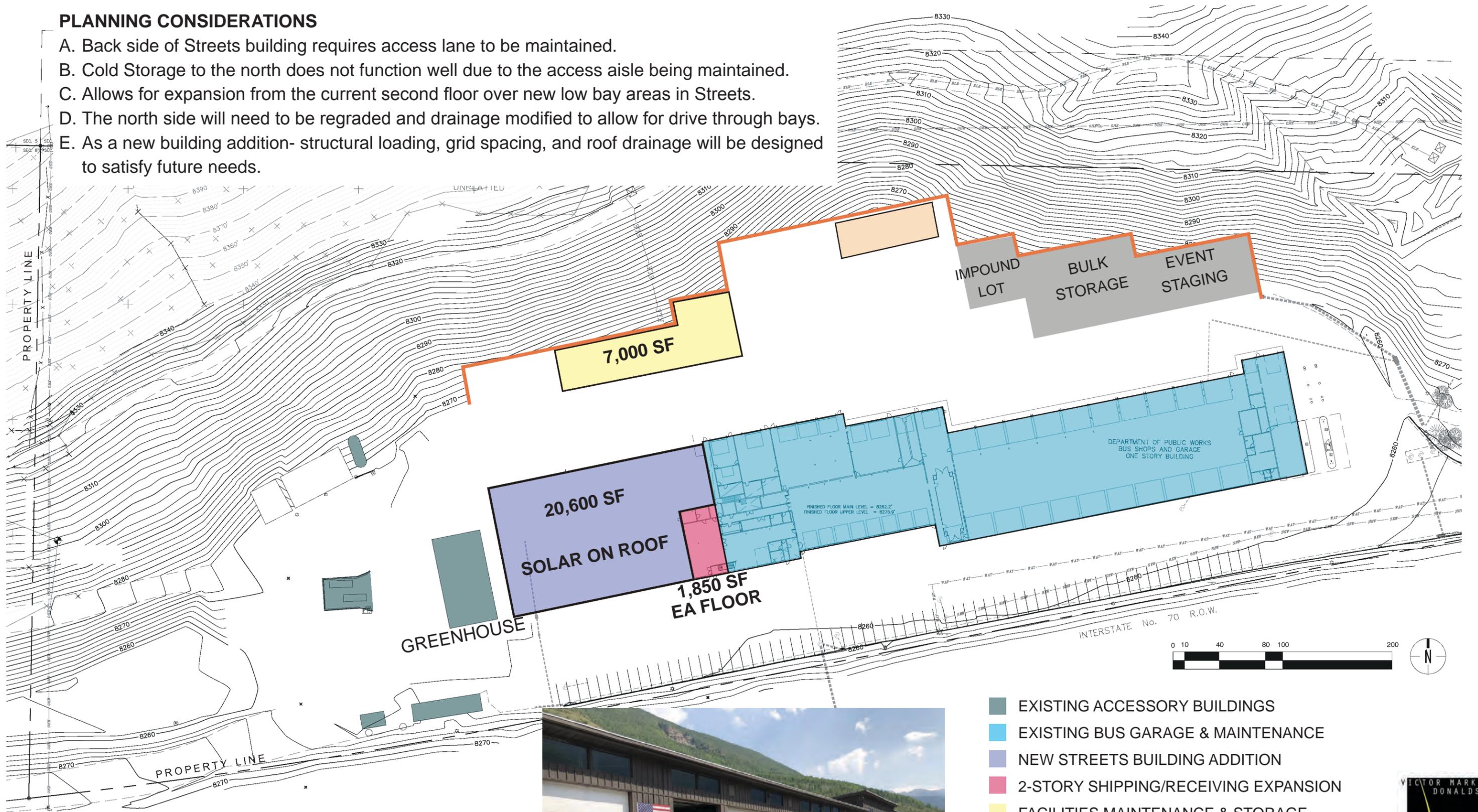


- EXISTING ACCESSORY BUILDINGS
- EXISTING BUS GARAGE & MAINTENANCE
- NEW STREETS BUILDING ADDITION
- 2-STORY SHIPPING/RECEIVING EXPANSION



PLANNING CONSIDERATIONS

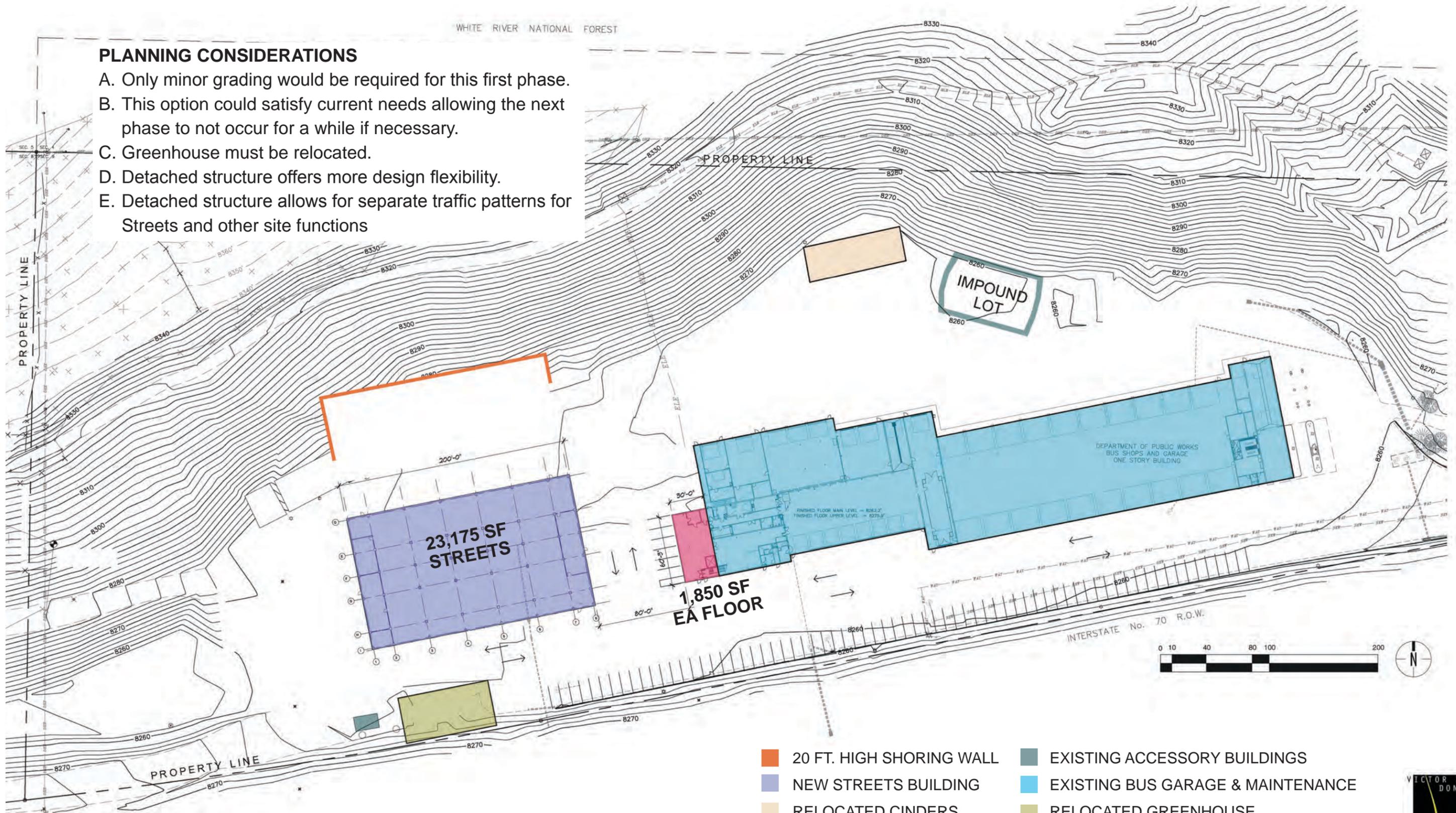
- A. Back side of Streets building requires access lane to be maintained.
- B. Cold Storage to the north does not function well due to the access aisle being maintained.
- C. Allows for expansion from the current second floor over new low bay areas in Streets.
- D. The north side will need to be regraded and drainage modified to allow for drive through bays.
- E. As a new building addition- structural loading, grid spacing, and roof drainage will be designed to satisfy future needs.



- EXISTING ACCESSORY BUILDINGS
- EXISTING BUS GARAGE & MAINTENANCE
- NEW STREETS BUILDING ADDITION
- 2-STORY SHIPPING/RECEIVING EXPANSION
- FACILITIES MAINTENANCE & STORAGE
- 20 FT HIGH SHORING WALL
- RELOCATED CINDERS
- IMPOUND LOT, BULK STORAGE, EVENT STAGING

PLANNING CONSIDERATIONS

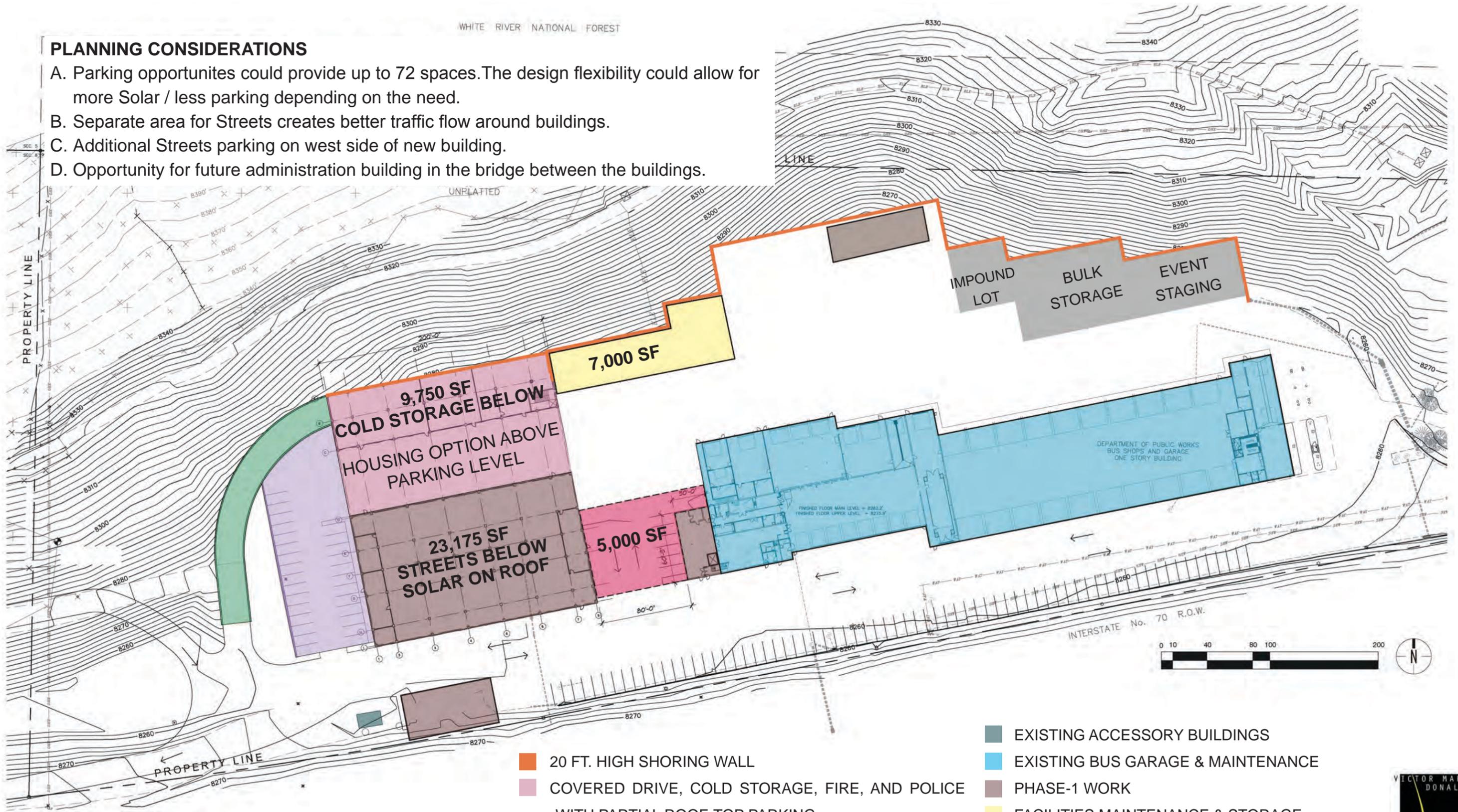
- A. Only minor grading would be required for this first phase.
- B. This option could satisfy current needs allowing the next phase to not occur for a while if necessary.
- C. Greenhouse must be relocated.
- D. Detached structure offers more design flexibility.
- E. Detached structure allows for separate traffic patterns for Streets and other site functions



- 20 FT. HIGH SHORING WALL
- NEW STREETS BUILDING
- RELOCATED CINDERS
- EXISTING ACCESSORY BUILDINGS
- EXISTING BUS GARAGE & MAINTENANCE
- RELOCATED GREENHOUSE
- 2-STORY SHIPPING/RECEIVING EXPANSION

PLANNING CONSIDERATIONS

- A. Parking opportunities could provide up to 72 spaces. The design flexibility could allow for more Solar / less parking depending on the need.
- B. Separate area for Streets creates better traffic flow around buildings.
- C. Additional Streets parking on west side of new building.
- D. Opportunity for future administration building in the bridge between the buildings.

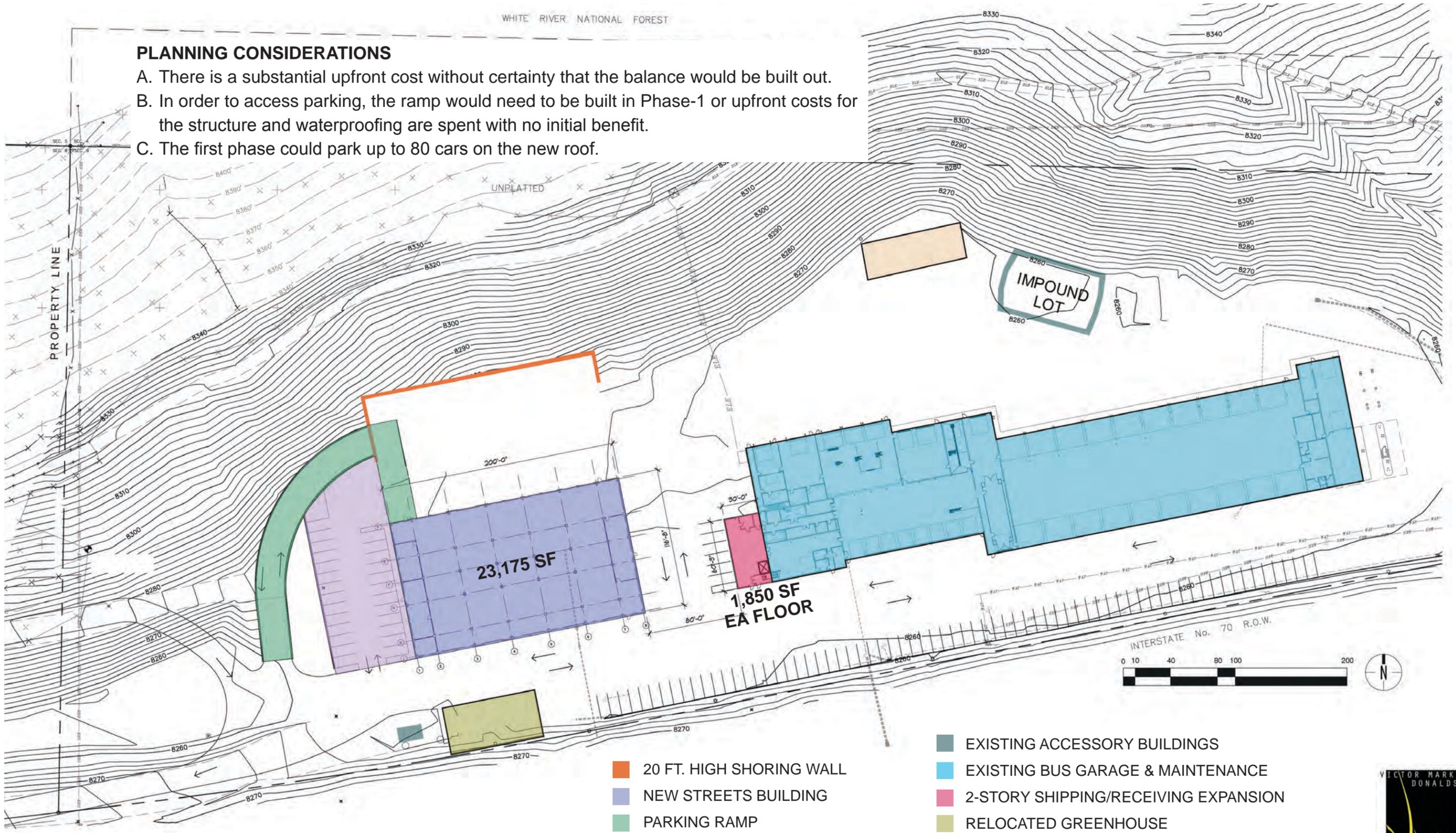


- 20 FT. HIGH SHORING WALL
- COVERED DRIVE, COLD STORAGE, FIRE, AND POLICE WITH PARTIAL ROOF-TOP PARKING
- PARKING RAMP
- PARKING LOT ON GRADE

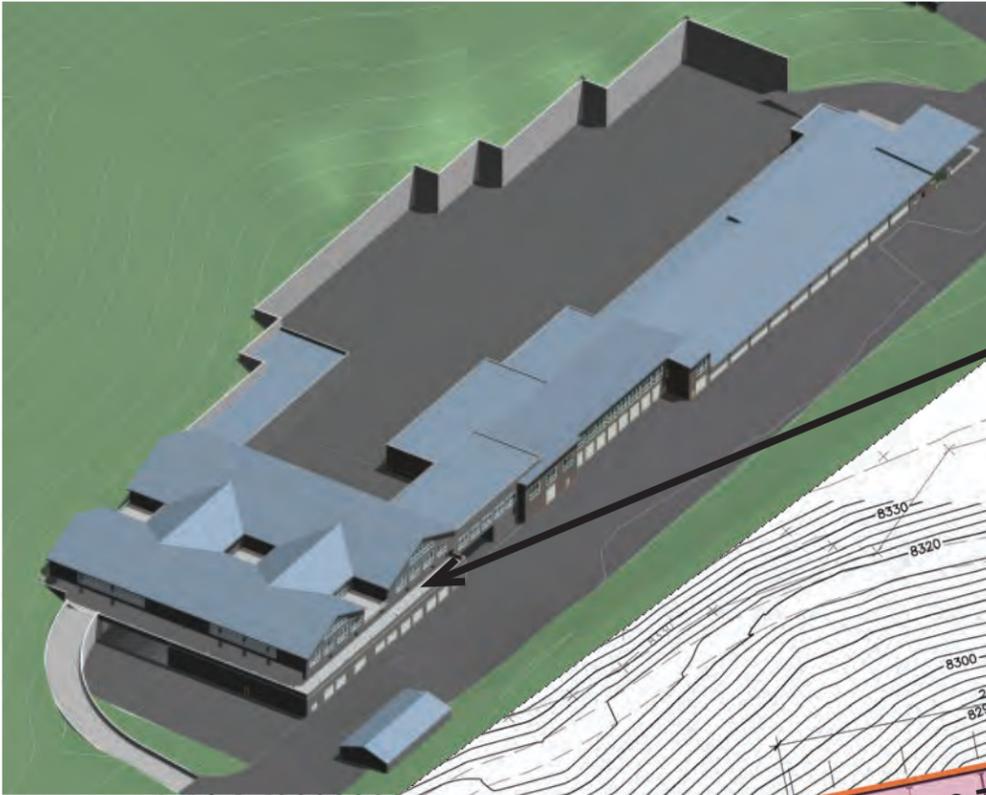
- EXISTING ACCESSORY BUILDINGS
- EXISTING BUS GARAGE & MAINTENANCE
- PHASE-1 WORK
- FACILITIES MAINTENANCE & STORAGE
- ADMIN OFFICES BRIDGE
- IMPOUND LOT, BULK STORAGE, EVENT STAGING

PLANNING CONSIDERATIONS

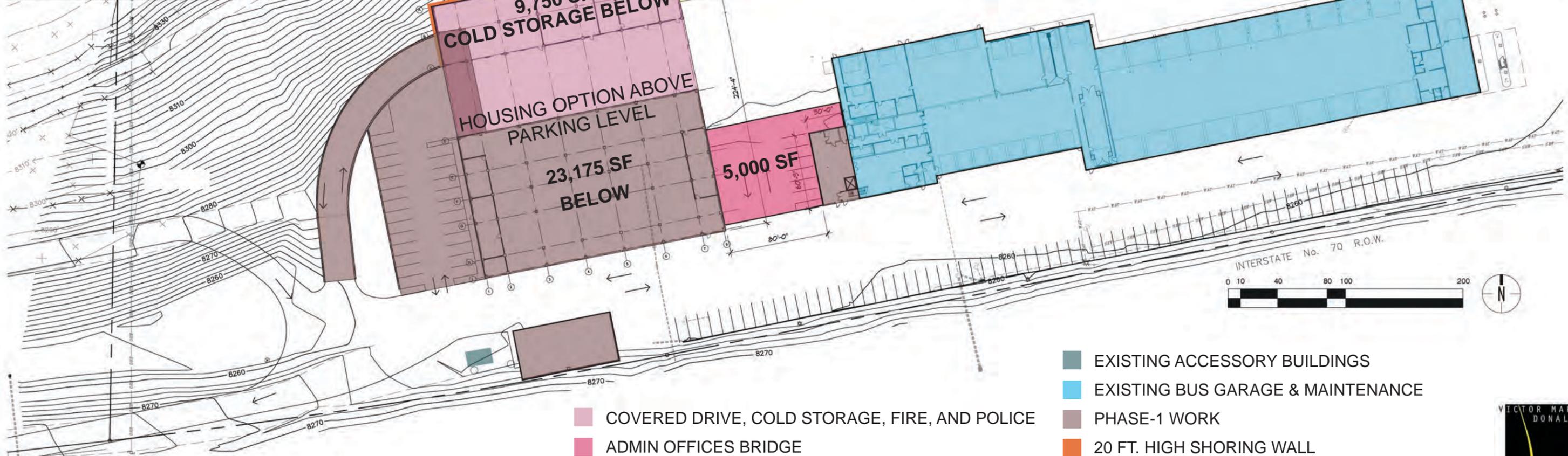
- A. There is a substantial upfront cost without certainty that the balance would be built out.
- B. In order to access parking, the ramp would need to be built in Phase-1 or upfront costs for the structure and waterproofing are spent with no initial benefit.
- C. The first phase could park up to 80 cars on the new roof.



- 20 FT. HIGH SHORING WALL
- NEW STREETS BUILDING
- PARKING RAMP
- PARKING LOT ON GRADE
- EXISTING ACCESSORY BUILDINGS
- EXISTING BUS GARAGE & MAINTENANCE
- 2-STORY SHIPPING/RECEIVING EXPANSION
- RELOCATED GREENHOUSE
- RELOCATED CINDERS



With limited buildable land available, this option provides opportunity for vertical expansion and future growth. The full build out could eventually park up to 160 cars across the entire new roof, which is likely more parking than is needed. The structure could be designed for a future floor over the roof-top parking which could be used for office expansion.



- EXISTING ACCESSORY BUILDINGS
- EXISTING BUS GARAGE & MAINTENANCE
- PHASE-1 WORK
- 20 FT. HIGH SHORING WALL
- IMPOUND LOT, BULK STORAGE, EVENT STAGING
- COVERED DRIVE, COLD STORAGE, FIRE, AND POLICE
- ADMIN OFFICES BRIDGE
- FACILITIES MAINTENANCE & STORAGE