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## Town of Truro New Public Works Facility

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Conceptual Alternatives Review

January 30, 2025

Weston & Sampson<sup>SM</sup>

Town of Truro  
**New Public Works Facility**

January 30<sup>th</sup> AD Hoc Meeting goals

- Present single facility with updated cost estimate.
- Present campus plan with updated cost estimate.
- Review the study groups campus plan and provide a cost estimate.
- Provide a cost for three material types (see attachment)
- Provide a cost estimates with each scenario showing gas vehicles stored outside and note the reduction in SF.

Town of Truro  
**New Public Works Facility**

## **Programming Summary**

## Town of Truro New Public Works Facility

### Proposed Program

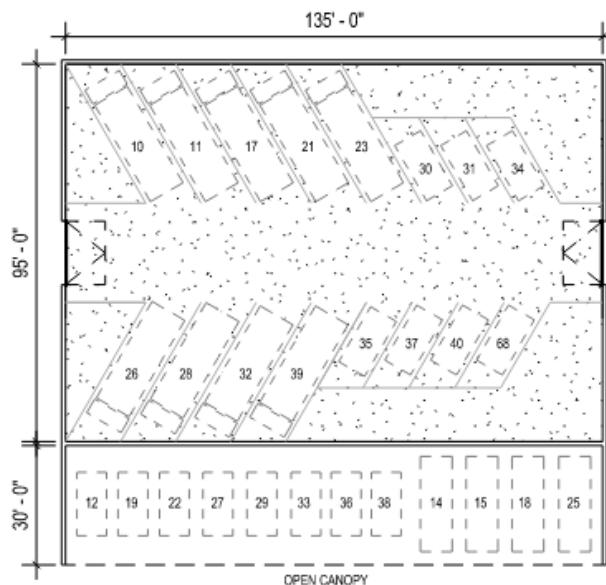
<u>Space Needs Assessment</u>	<u>Initial Needs</u>	<u>Rev 1</u>	<u>Rev 2</u>	<u>Final</u>
• Office / Office Support	2,035 SF	1,525 SF	1,300 SF	1,300 SF
• Employee Facilities	2,144 SF	1,936 SF	1,700 SF	1,700 SF
• Workshops	3,929 SF	3,192 SF	2,900 SF	1,700 SF
• Vehicle Maintenance	7,279 SF	5,532 SF	5,400 SF	4,200 SF
• Wash Bay	1,750 SF	1,350 SF	1,350 SF	1,350 SF
• Vehicle & Equipment Storage	19,551 SF	18,953 SF	16,958 SF	9,900 SF
<b>Subtotal:</b>	<b>36,689 SF</b>	<b>32,487 SF</b>	<b>29,608 SF</b>	<b>20,150 SF</b>

Note – the above totals do not include canopy storage

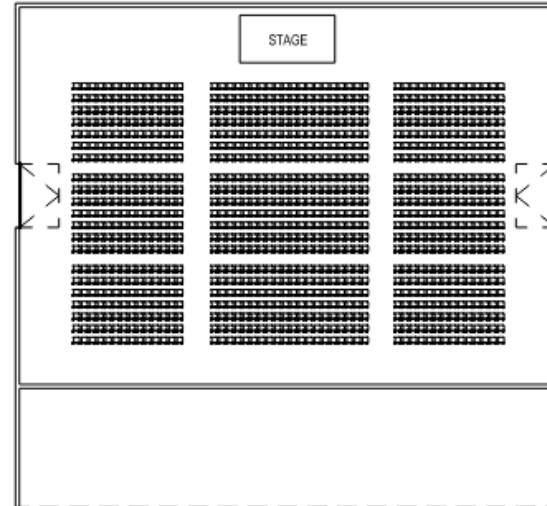
# Town of Truro New Public Works Facility

## Review & Confirmation Exercise

- Met with DPW to review current program
- Identified some minor increase in office area (100 SF) for future office
- Reviewed vehicle storage garage options to support future town meetings (+/- 3,000 SF in additional storage garage space to support +/- 900 seats)



FLEET STORAGE GARAGE; ASSEMBLY SPACE FOR TOWN MEETINGS



Town of Truro  
**New Public Works Facility**

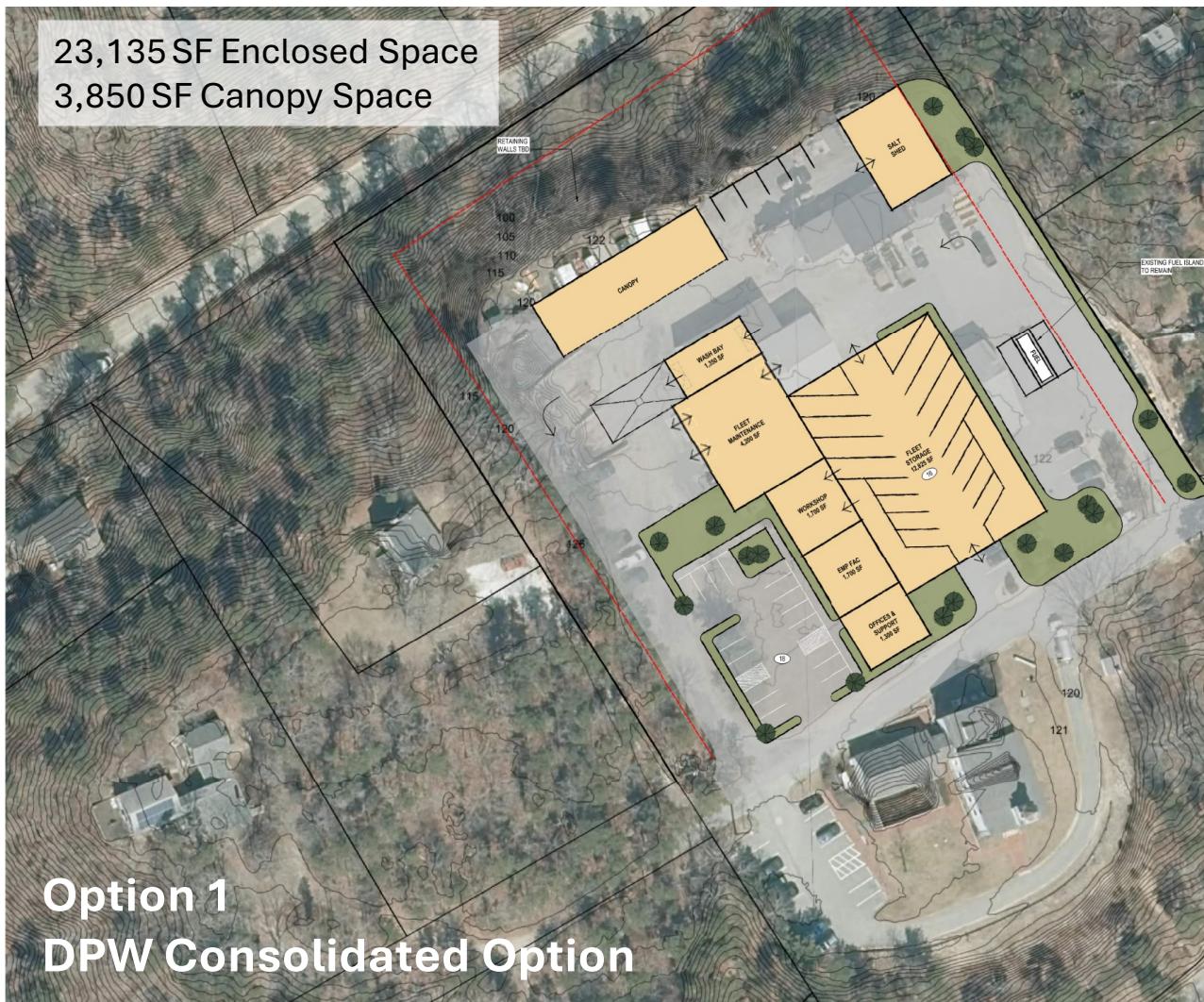
**Consolidated Option**

Town of Truro  
**New Public Works Facility**

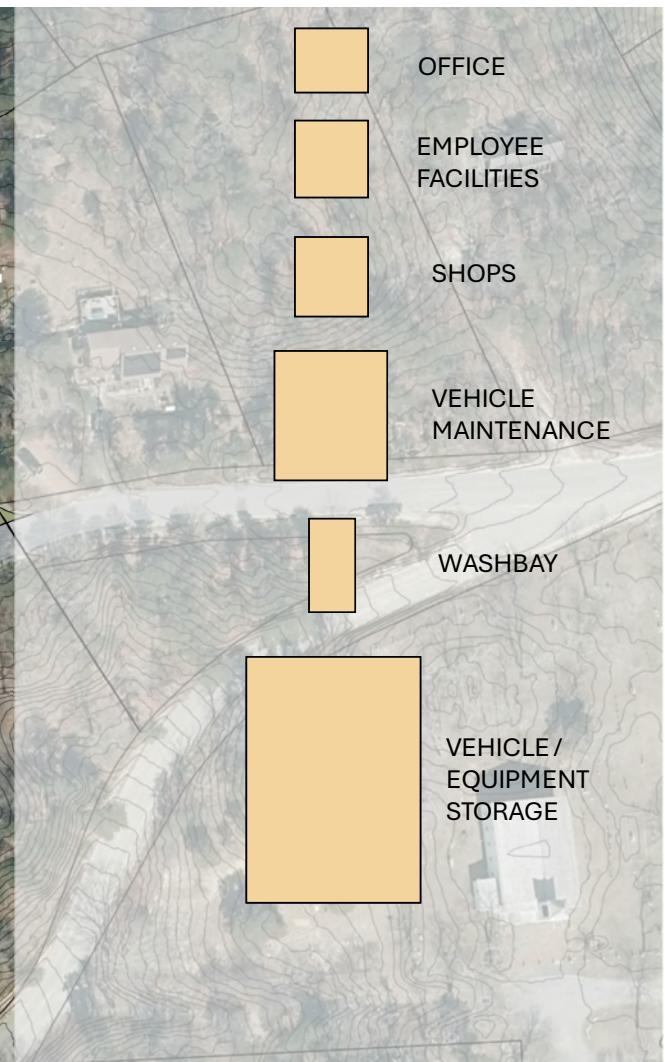


# Town of Truro **New Public Works Facility**

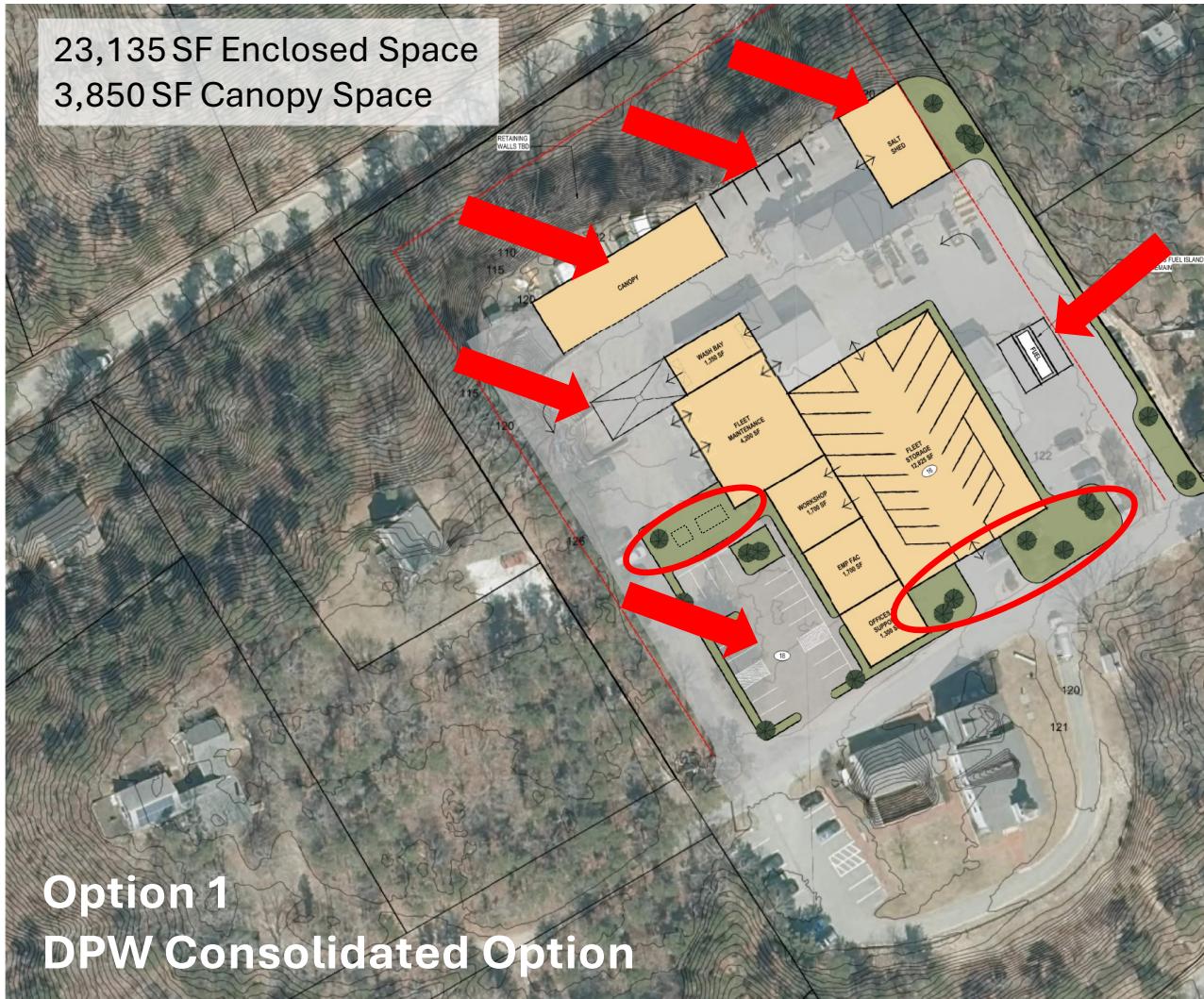
23,135 SF Enclosed Space  
3,850 SF Canopy Space



# Option 1 DPW Consolidated Option



## Town of Truro New Public Works Facility

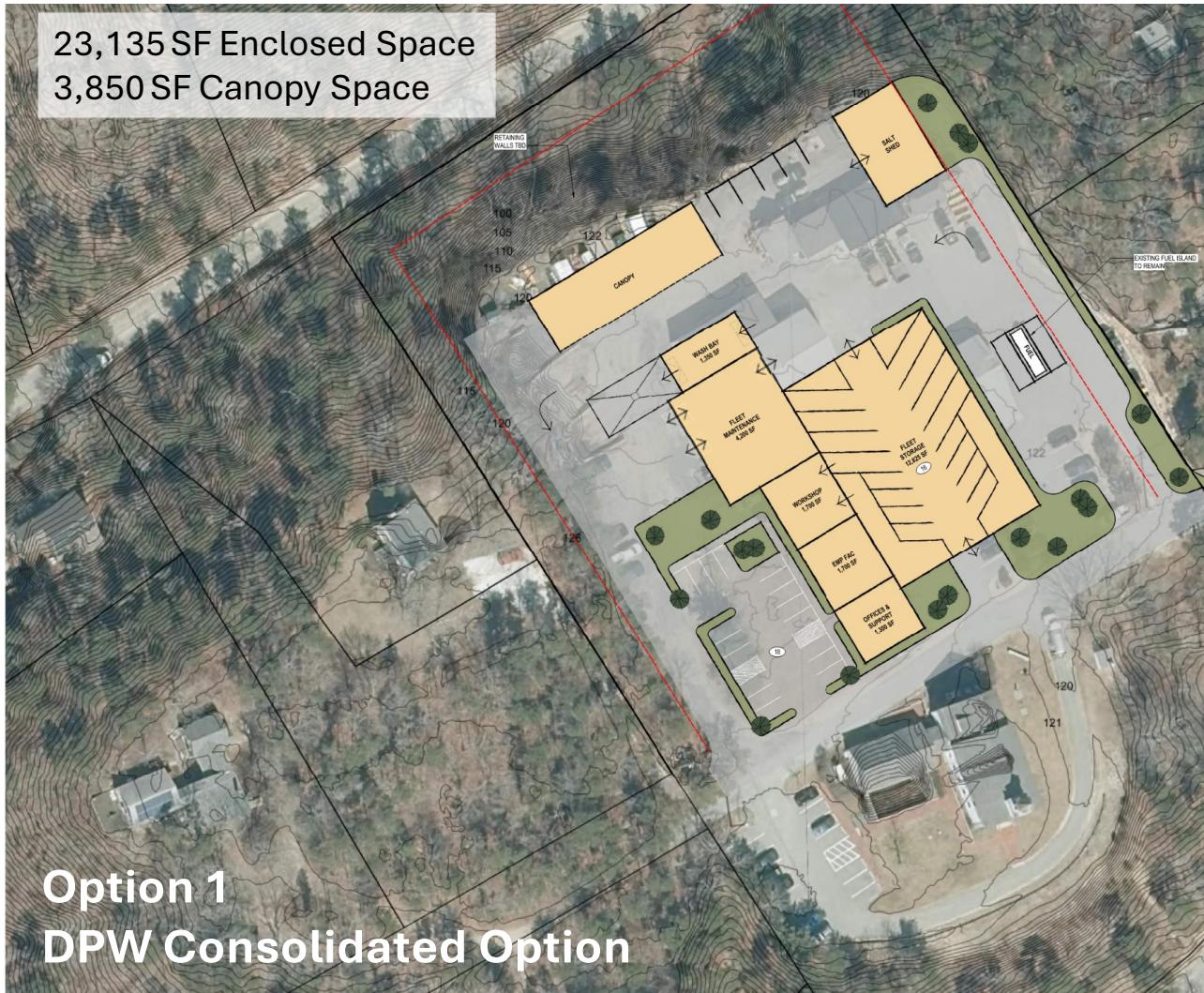


### KEY SITE FEATURES

- Salt Storage Structure
- Material Storage Bins
- Canopy
- Knockdown pad
- Dedicated area for transformer & generator
- Employee / public parking
- Planted buffer along road
- Existing fueling facility

# Town of Truro **New Public Works Facility**

23,135 SF Enclosed Space  
3,850 SF Canopy Space

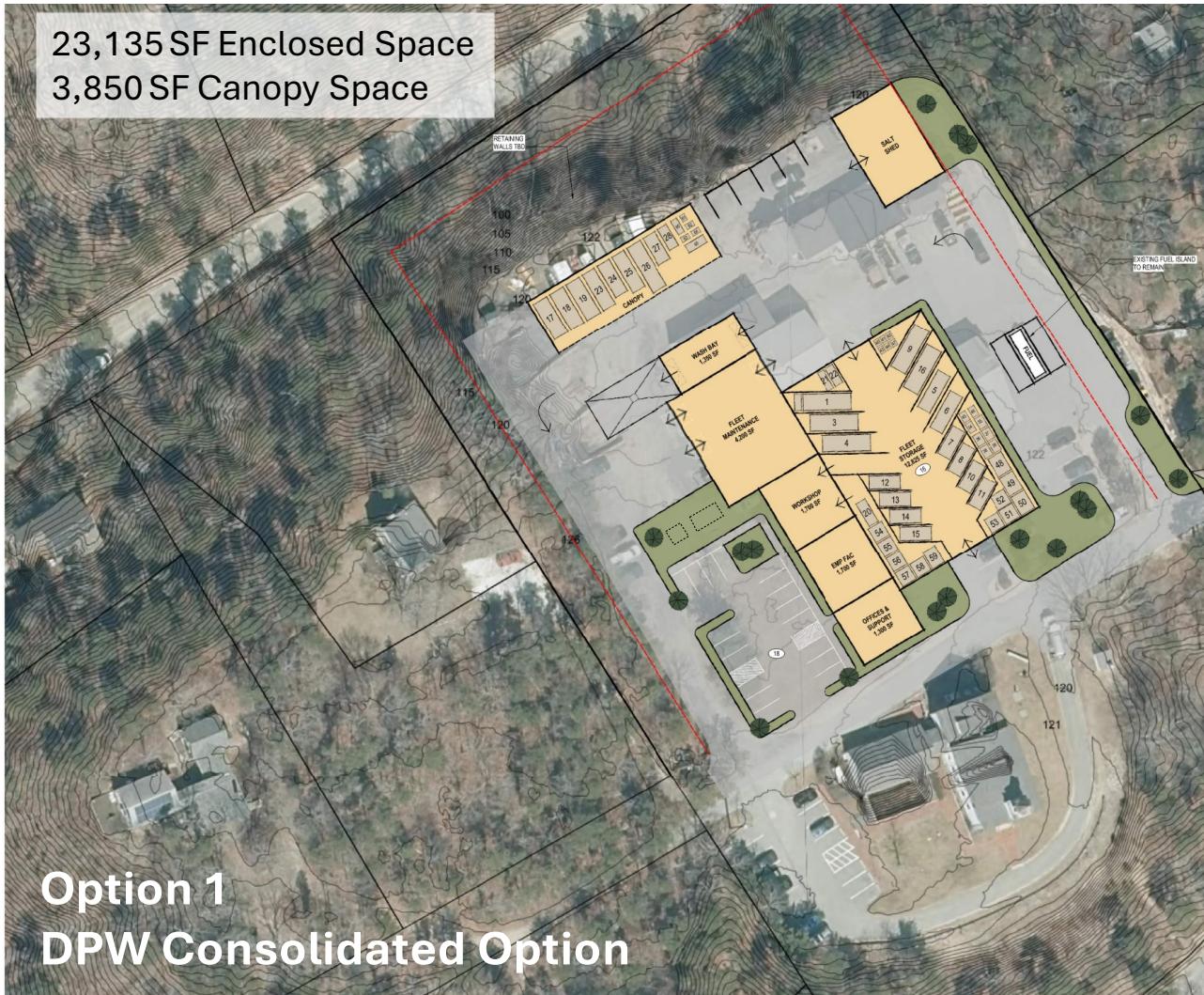


## CONCEPT CONSIDERATIONS

- Combined storage garage limits impacts to abutters by placing vehicle operations indoors (limits backup noise impacts)
- Drive-thru access for one maintenance bay
- Maintain existing fueling facility
- Salt operations located away from residences
- Salt Shed center access providing improved storage of salt and sand
- Counterclockwise circulation
- Ability to secure site from public
- Office / employee functions adjacent to Town Hall
- Parking located to allow for use by Town Hall (overflow)
- All equipment is under cover

# Town of Truro **New Public Works Facility**

23,135 SF Enclosed Space  
3,850 SF Canopy Space



## CONCEPT CONSIDERATIONS

- Combined storage garage limits impacts to abutters by placing vehicle operations indoors (limits backup noise impacts)
- Drive-thru access for one maintenance bay
- Maintain existing fueling facility
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Town of Truro  
**New Public Works Facility**

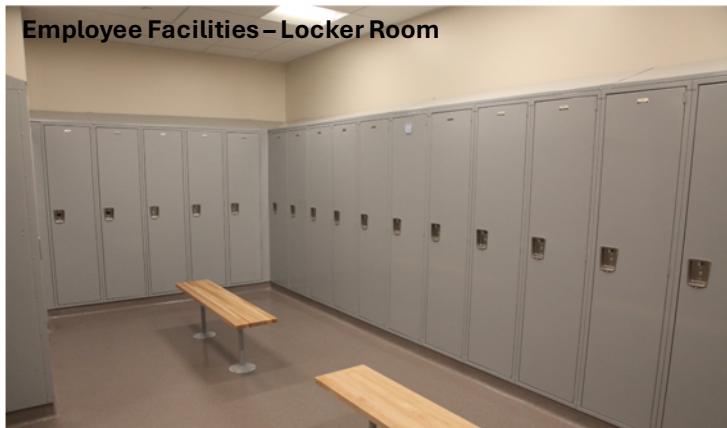
**Option 1**  
**DPW Consolidated Option**



Example of Massing for a Consolidated DPW Facility

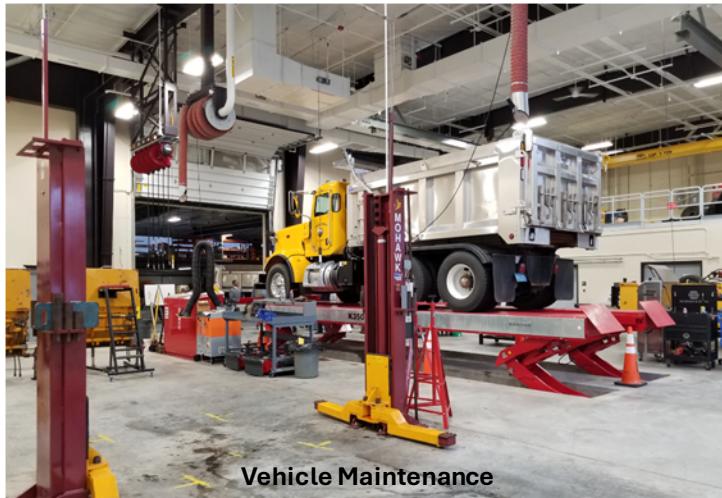


## Town of Truro New Public Works Facility



Example Photos of Office & Employee Support Spaces

## Town of Truro New Public Works Facility



Vehicle Maintenance



Workshops



Vehicle Maintenance



Workshops



Wash Bay

Example Photos of Vehicle Maintenance, Shops, and Wash Bay

## Town of Truro New Public Works Facility

**Vehicle / Equipment Storage**



Example Photos of Drive-Thru Vehicle Storage

## Town of Truro New Public Works Facility



**Fabric Salt Shed**



**Timber Salt Shed**

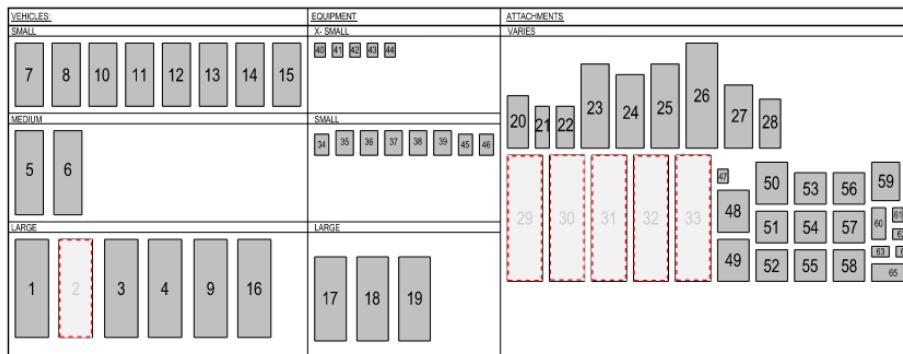
Example Photos of Salt Storage Structure Options

# Town of Truro

## New Public Works Facility

### Fleet & Equipment List

WSE ID #	TOWN ID #	DIVISION	MODEL TYPE	MAKE / MODEL	SIZE	FLEET TYPE	DIMENSIONS			STORAGE NEEDS			
							LENGTH	WIDTH	SF	STALL	FLOOR	CANOPY	OUTSIDE
1	T-29	DPW	TRUCK	PETERBILT 389	LARGE	VEHICLE	28	10	280	•			
2		DPW	TRACTOR	PETERBILT	LARGE	VEHICLE	28	10	280	•			
3		DPW	TRUCK	INTERNATIONAL 7400	LARGE	VEHICLE	28	10	280	•			
4		DPW	DUMP TRUCK	INTERNATIONAL 7400	LARGE	VEHICLE	24	9	216	•			
5	T-3	DPW	PICK UP TRUCK	FORD F450	MEDIUM	VEHICLE	21	8	168	•			
6		DPW	DUMP TRUCK	FORD F450	MEDIUM	VEHICLE	21	8		•			
7	T-6	DPW	PICK UP	FORD F350	SMALL	VEHICLE	18	8	144	•			
8	S-1	DPW	PICK UP	FORD F350	SMALL	VEHICLE	18	8	144	•			
9		DPW	DUMP TRUCK		LARGE	VEHICLE	24	9	216	•			
10	T-8	DPW	PICK UP	FORD F-350	SMALL	VEHICLE	18	8	144	•			
11	T-4	DPW	PICK UP	FORD F350	SMALL	VEHICLE	18	8	144	•			
12	T-2	DPW	PICK UP	FORD F350	SMALL	VEHICLE	18	8	144	•			
13	T-9	DPW	PICK UP	FORD F350	SMALL	VEHICLE	18	8	144	•			
14		DPW	PICK UP	FORD F350	SMALL	VEHICLE	18	8	144	•			
15		DPW	VAN	E150 ECONOLINE	SMALL	VEHICLE	18	8	144	•			
16		DPW	SWEEPER	ELGIN	LARGE	VEHICLE	26	9	234	•			
17		DPW	EXCAVATOR	JOHN DEERE 130G	LARGE	EQUIPMENT	21	9	189		•		
18		DPW	LOADER	JOHN DEERE	LARGE	EQUIPMENT	25	9	225		•		
19		DPW	LIFT	JLG 600S	LARGE	EQUIPMENT	30	9	270		•		
20		DPW	GENERATOR BOX TRAILER		MEDIUM	ATTACHMENT	15	6	90	•			
21		DPW	GENERATOR TRAILER		MEDIUM	ATTACHMENT	12	4	48	•			
22		DPW	WOOD CHIPPER	BANDIT	OBLONG	ATTACHMENT	12	5	60	•			
23		DPW	TRAILER	TIMpte	MEDIUM	ATTACHMENT	24	8	192		•		



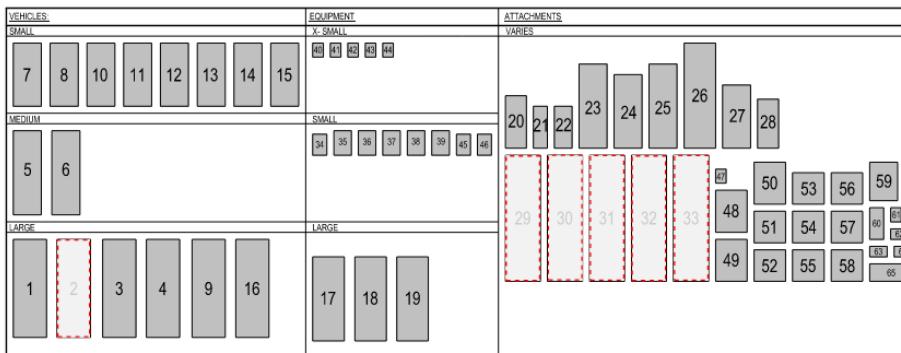
  Indicates storage at transfer station

# Town of Truro

## New Public Works Facility

### Fleet & Equipment List

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							LENGTH	WIDTH	SF	STALL	FLOOR	CANOPY	OUTSIDE
24		DPW	TRAILER	CAM	MEDIUM	ATTACHMENT	21	8	168			•	
25		DPW	TRAILER	KAUFMAN	MEDIUM	ATTACHMENT	24	8	192			•	
26		DPW	TRAILER	INTERSTATE	LARGE	ATTACHMENT	30	9	270			•	
27		DPW	TRAILER	BENCE	MEDIUM	ATTACHMENT	18	8	144			•	
28		DPW	TRAILER		SMALL	ATTACHMENT	14	6	84			•	
29	DPW/TS	TRASH TRACTOR	SPECTOR	X-LARGE	ATTACHMENT	36	10	360			•		
30	DPW/TS	TRASH TRACTOR	SPECTOR	X-LARGE	ATTACHMENT	36	10	360			•		
31	DPW/TS	TRASH TRACTOR	SPECTOR	X-LARGE	ATTACHMENT	36	10	360			•		
32	DPW/TS	TRASH TRACTOR	SPECTOR	X-LARGE	ATTACHMENT	36	10	360			•		
33	DPW/TS	TRASH TRACTOR	WARREN	X-LARGE	ATTACHMENT	36	10	360			•		
34	DPW	RIDE MOWER	JOHN DEERE	SMALL	EQUIPMENT	4	6	24			•		
35	DPW		HYSTER	SMALL	EQUIPMENT	7	5	35			•		
36	DPW	SKID STEER	JOHN DEERE 323E	SMALL	EQUIPMENT	7	5	35			•		
37	DPW	RIDE MOWER	TORO	SMALL	EQUIPMENT	7	5	35			•		
38	DPW	RIDE MOWER	TORO	SMALL	EQUIPMENT	7	5	35			•		
39	DPW	RIDE MOWER	BOB CAT	SMALL	EQUIPMENT	7	5	35			•		
40	DPW	??		X-SMALL	EQUIPMENT	4	3	12			•		
41	DPW	PUSH MOWER		X-SMALL	EQUIPMENT	4	3	12			•		
42	DPW	PAINT MACHINE		X-SMALL	EQUIPMENT	4	3	12			•		
43	DPW	POWER WASHER		X-SMALL	EQUIPMENT	3	3	9			•		
44	DPW	WALK BEHIND SAW	EDCO	X-SMALL	EQUIPMENT	3	4	12			•		
45	DPW	LIFT	JLG	SMALL	EQUIPMENT	6	4	24			•		
46	DPW	FORKLIFT	YALE	SMALL	EQUIPMENT	6	3	18			•		
47	DPW	MOWER	TIGER	X-SMALL	ATTACHMENT	3	4	12			•		



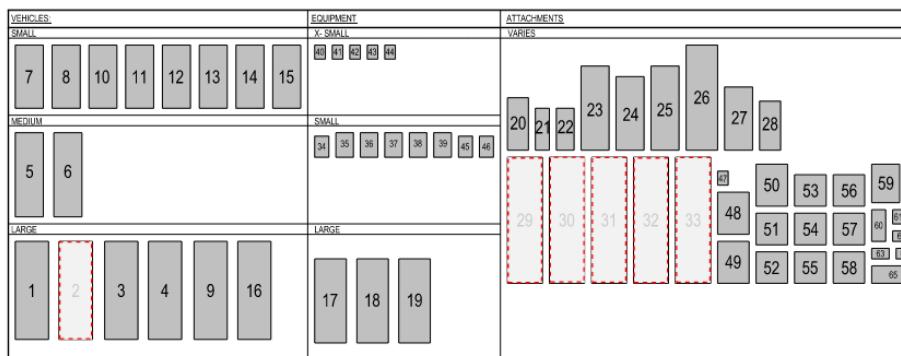
  Indicates storage at transfer station

# Town of Truro

## New Public Works Facility

### Fleet & Equipment List

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							LENGTH	WIDTH	SF	STALL	FLOOR	CANOPY	OUTSIDE
48		DPW	WING PLOW			ATTACHMENT	9	12	108	•			
49		DPW	WING PLOW			ATTACHMENT	9	12	108	•			
50		DPW	WING PLOW			ATTACHMENT	9	12	108	•			
51		DPW	STANDARD PLOW			ATTACHMENT	5	9	45	•			
52		DPW	STANDARD PLOW			ATTACHMENT	5	9	45	•			
53		DPW	STANDARD PLOW			ATTACHMENT	5	9	45	•			
54		DPW	STANDARD PLOW			ATTACHMENT	5	9	45	•			
55		DPW	STANDARD PLOW			ATTACHMENT	5	9	45	•			
56		DPW	STANDARD PLOW			ATTACHMENT	5	9	45	•			
57		DPW	STANDARD PLOW			ATTACHMENT	5	9	45	•			
58		DPW	STANDARD PLOW			ATTACHMENT	5	9	45	•			
59		DPW	PLOW (ORANGE)			ATTACHMENT	8	11	88	•			
60		DPW	LOADER PLOW			ATTACHMENT	4	9	36		•		
61		DPW	LOADER PLOW			ATTACHMENT	3	4	12		•		
62		DPW	SANDER BODY			ATTACHMENT	5	3	15		•		
63		DPW	SANDER BODY			ATTACHMENT	5	3	15		•		
64		DPW	SANDER BODY			ATTACHMENT	5	3	15		•		
65		DPW	FORKLIFT			ATTACHMENT	12	5	60		•		
		TRANSFER STATION	TRACTOR	WHGM-ACLA CL									
		TRANSFER STATION	TRACTOR	INTERNATIONAL									
		TRANSFER STATION	LOADER	JOHN DEERE 544H									

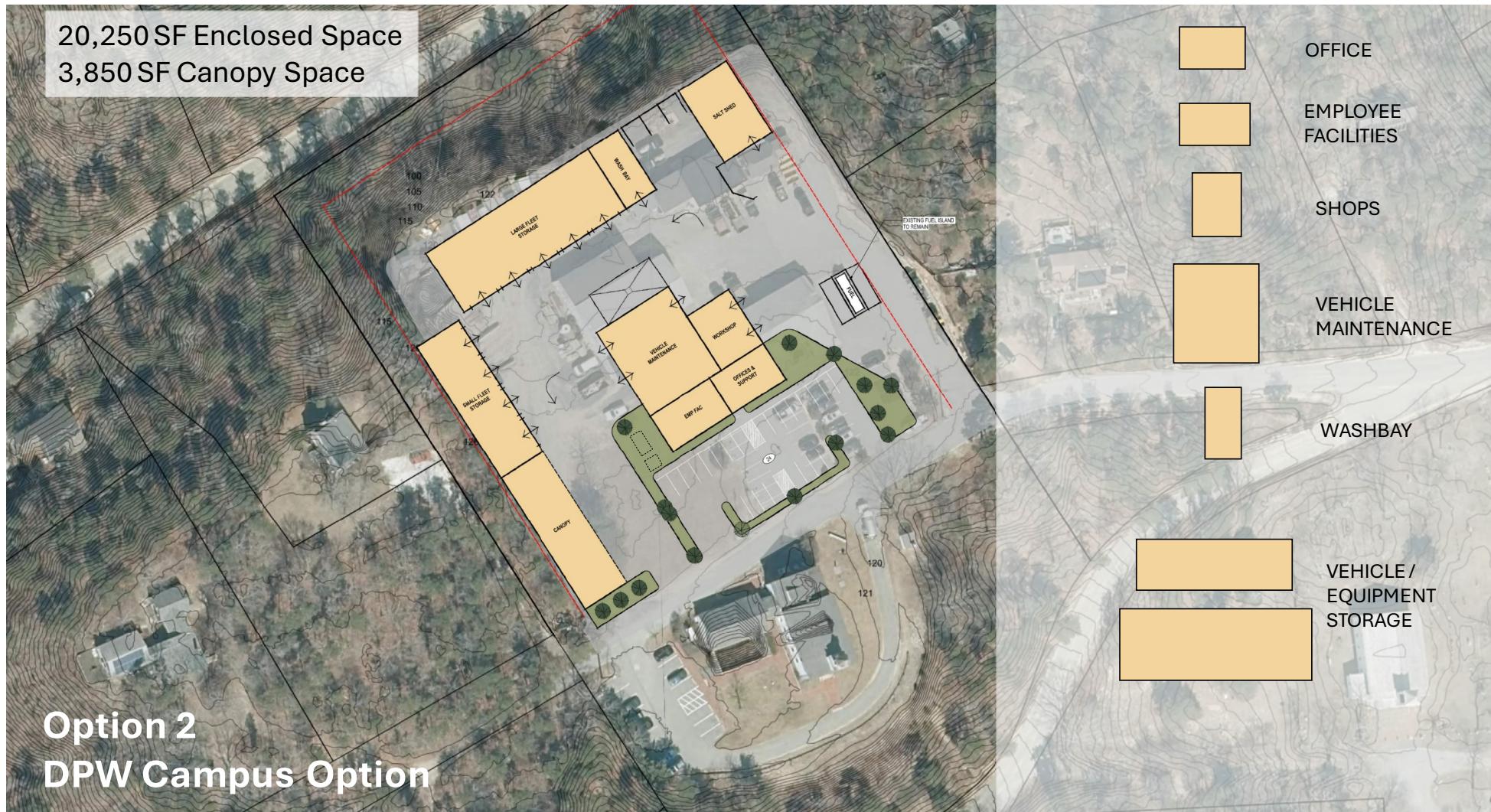


  Indicates storage at transfer station

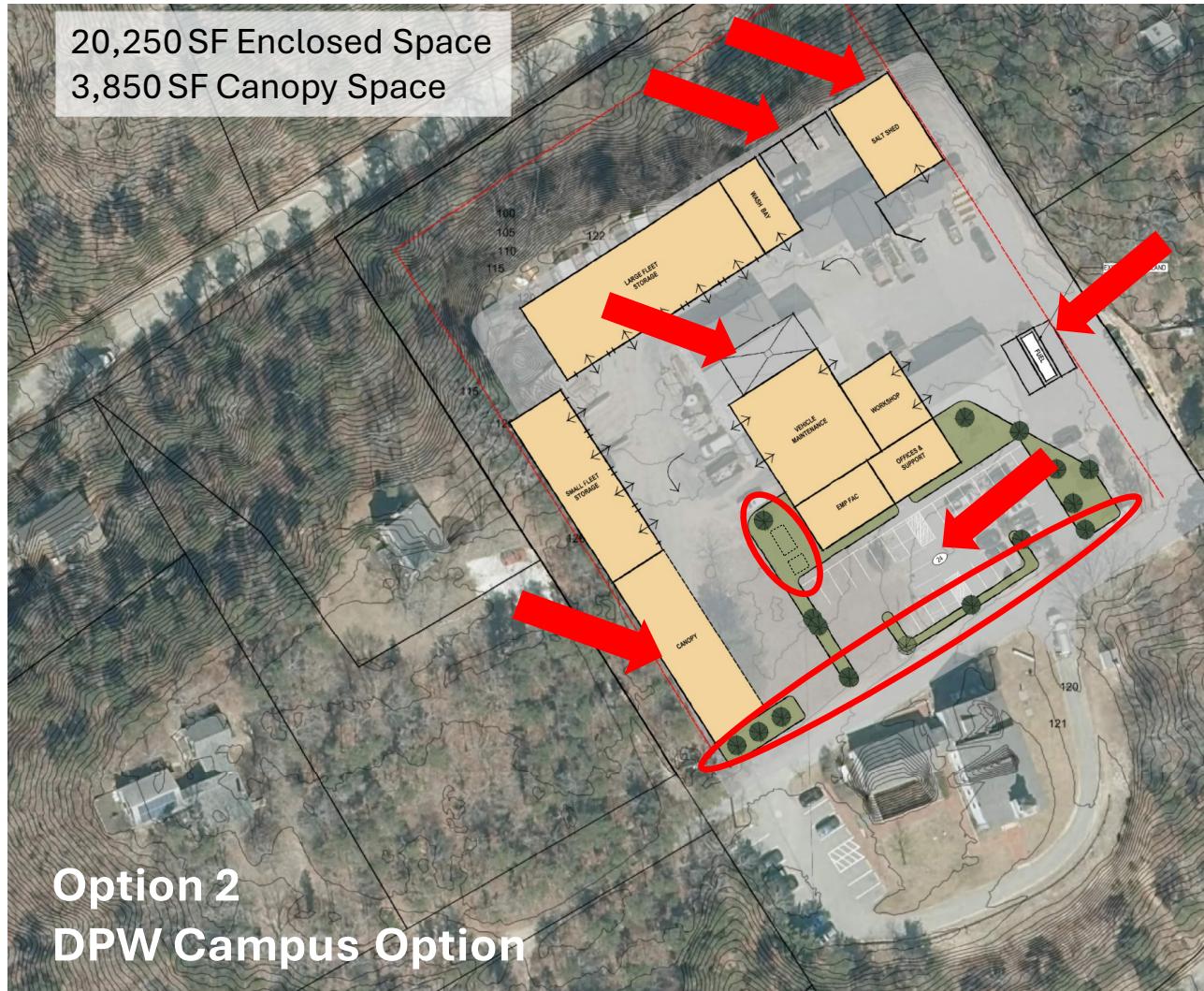
Town of Truro  
**New Public Works Facility**

**Campus Option**

## Town of Truro New Public Works Facility



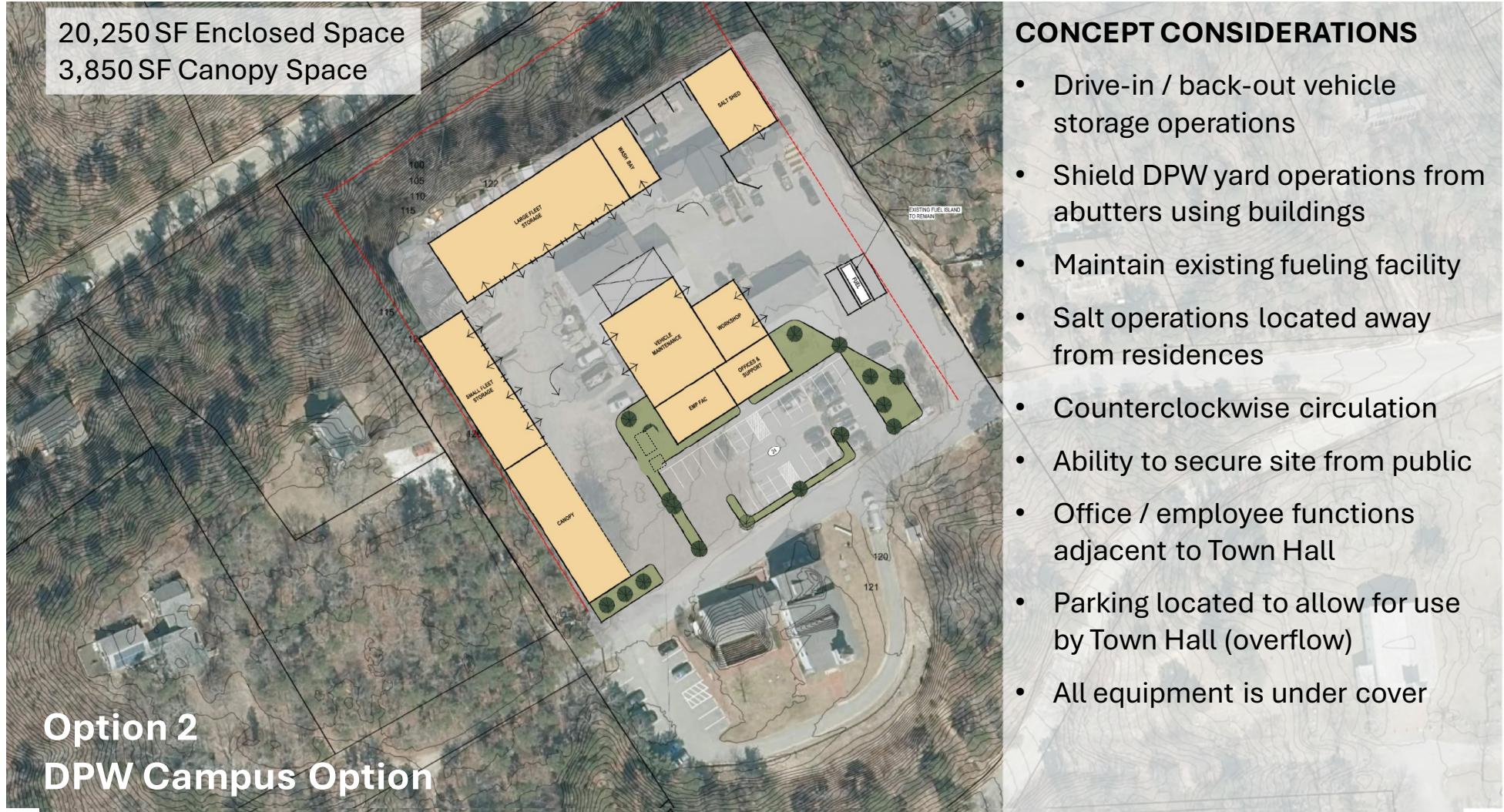
## Town of Truro New Public Works Facility



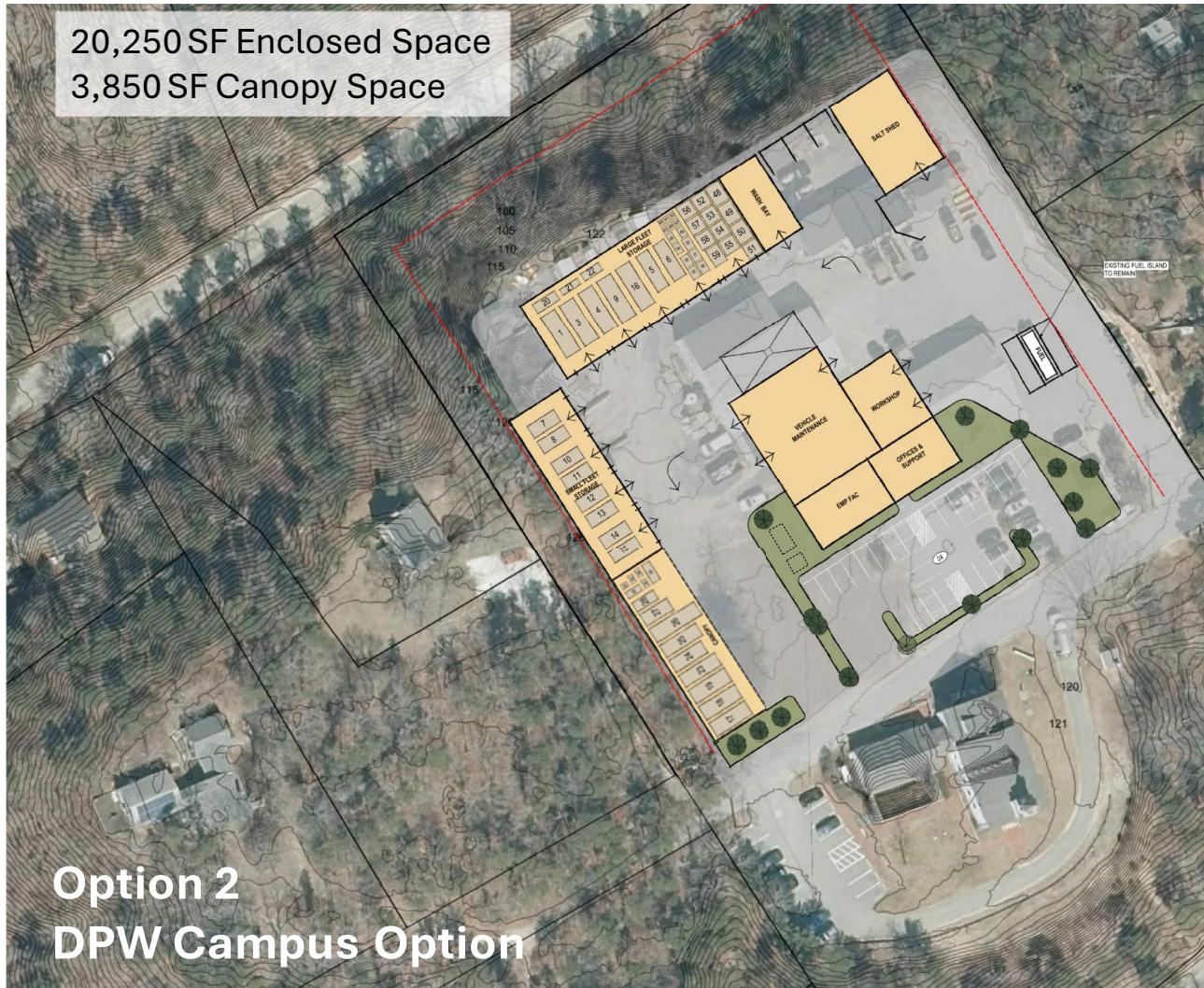
### KEY SITE FEATURES

- Salt Storage Structure
- Material Storage Bins
- Canopy
- Knockdown pad
- Dedicated area for transformer & generator
- Employee / public parking
- Planted buffer along road
- Existing fueling facility

## Town of Truro New Public Works Facility



## Town of Truro New Public Works Facility

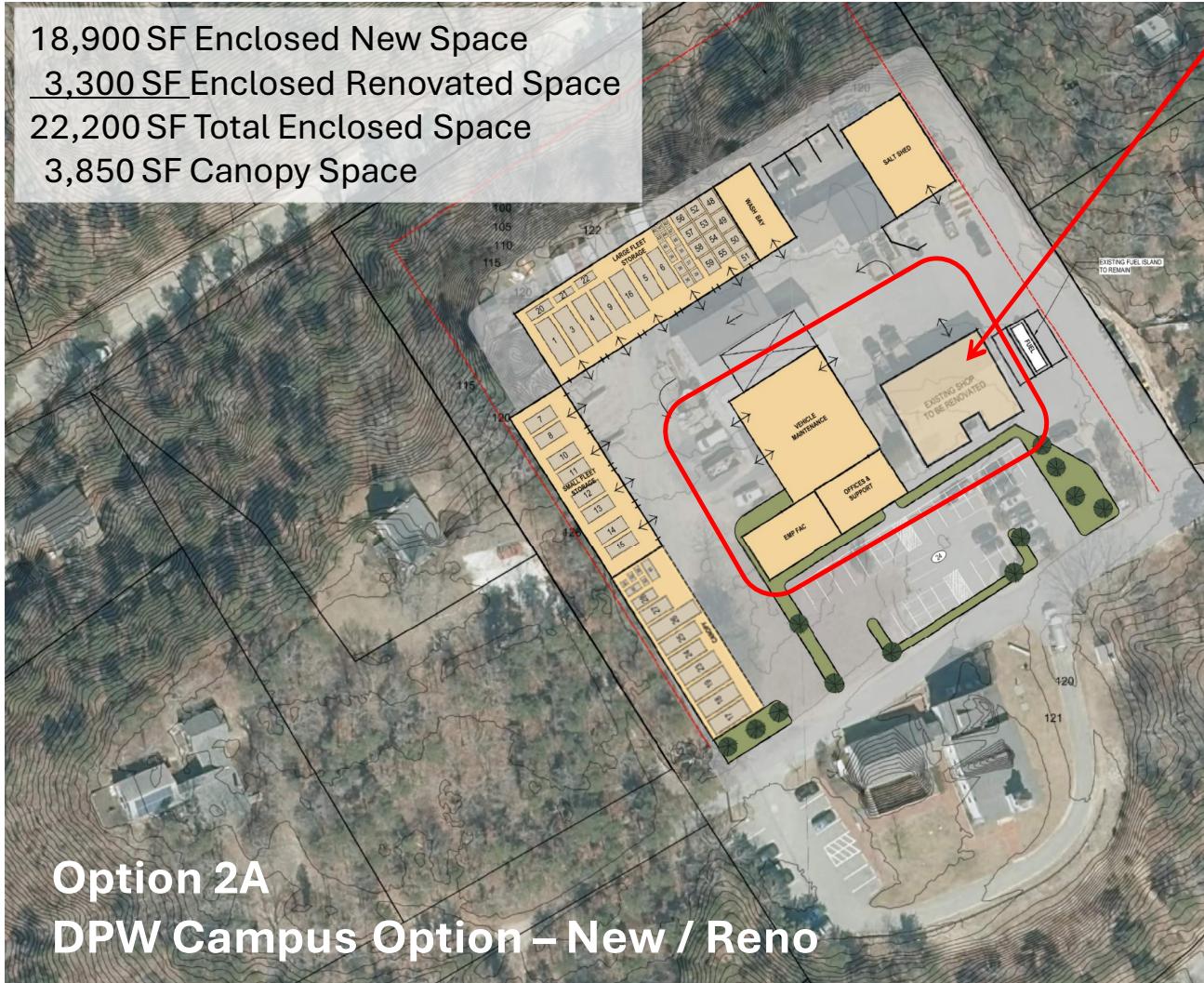


### CONCEPT CONSIDERATIONS

- Drive-in / back-out vehicle storage operations
- Shield DPW yard operations from abutters using buildings
- Maintain existing fueling facility
- Salt operations located away from residences
- Counterclockwise circulation
- Ability to secure site from public
- Office / employee functions adjacent to Town Hall
- Parking located to allow for use by Town Hall (overflow)
- All equipment is under cover

## Town of Truro New Public Works Facility

18,900 SF Enclosed New Space  
3,300 SF Enclosed Renovated Space  
22,200 SF Total Enclosed Space  
3,850 SF Canopy Space



### CONCEPT CONSIDERATIONS

- Reuse existing building for shop space
- Drive-in / back-out vehicle storage operations
- Shield DPW yard operations from abutters using buildings
- Maintain existing fueling facility
- Salt operations located away from residences
- Counterclockwise circulation
- Ability to secure site from public
- Office / employee functions adjacent to Town Hall
- Parking located to allow for use by Town Hall (overflow)
- All equipment is under cover

## Town of Truro New Public Works Facility

Vehicle / Equipment Storage



Example Photos of Drive-in / Back-out Vehicle Storage

Town of Truro  
**New Public Works Facility**

**DPW Study Group Option**

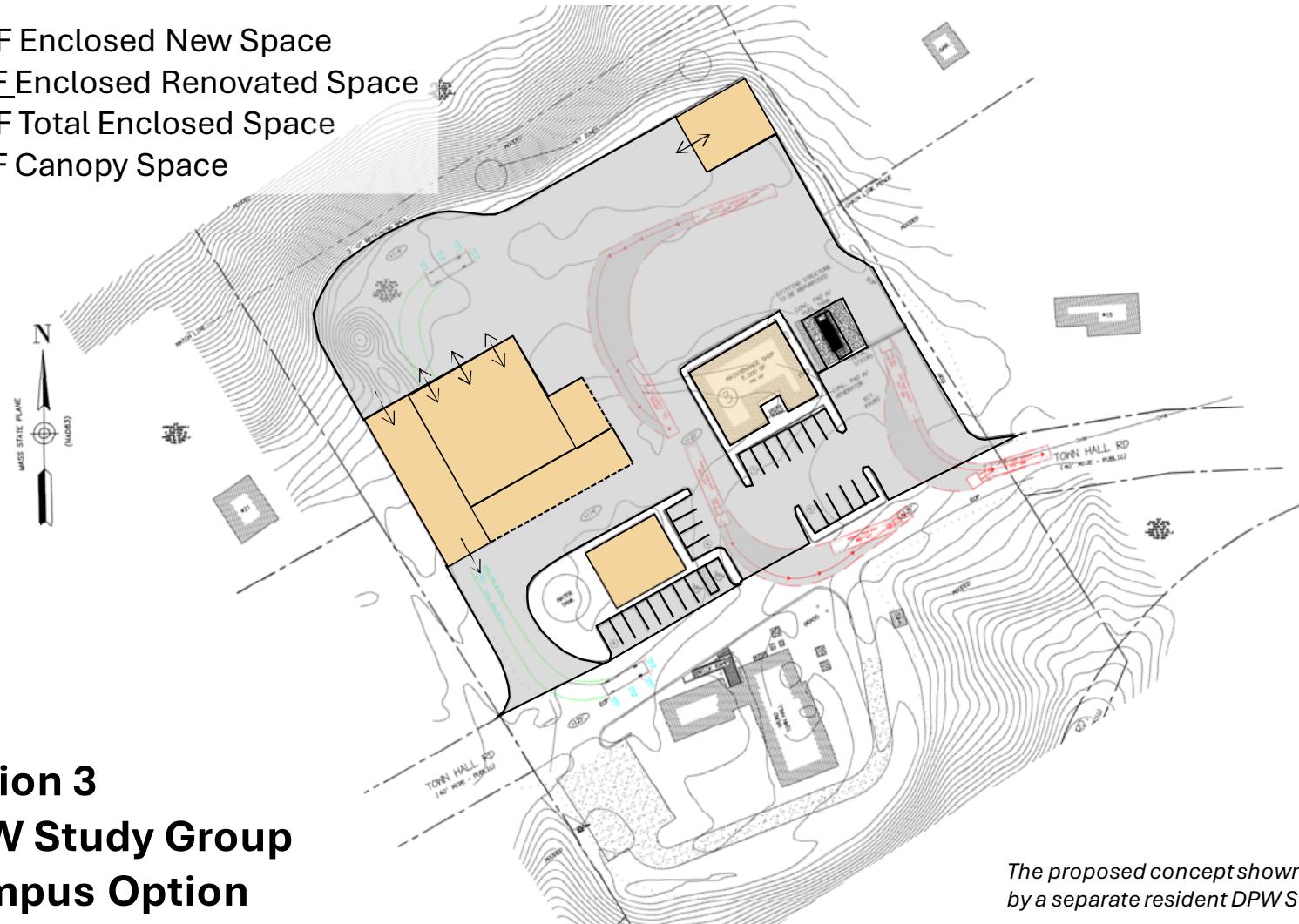
# Town of Truro **New Public Works Facility**

11,500 SF Enclosed New Space

3,300 SF Enclosed Renovated Space

14,800 SF Total Enclosed Space

3,525 SF Canopy Space



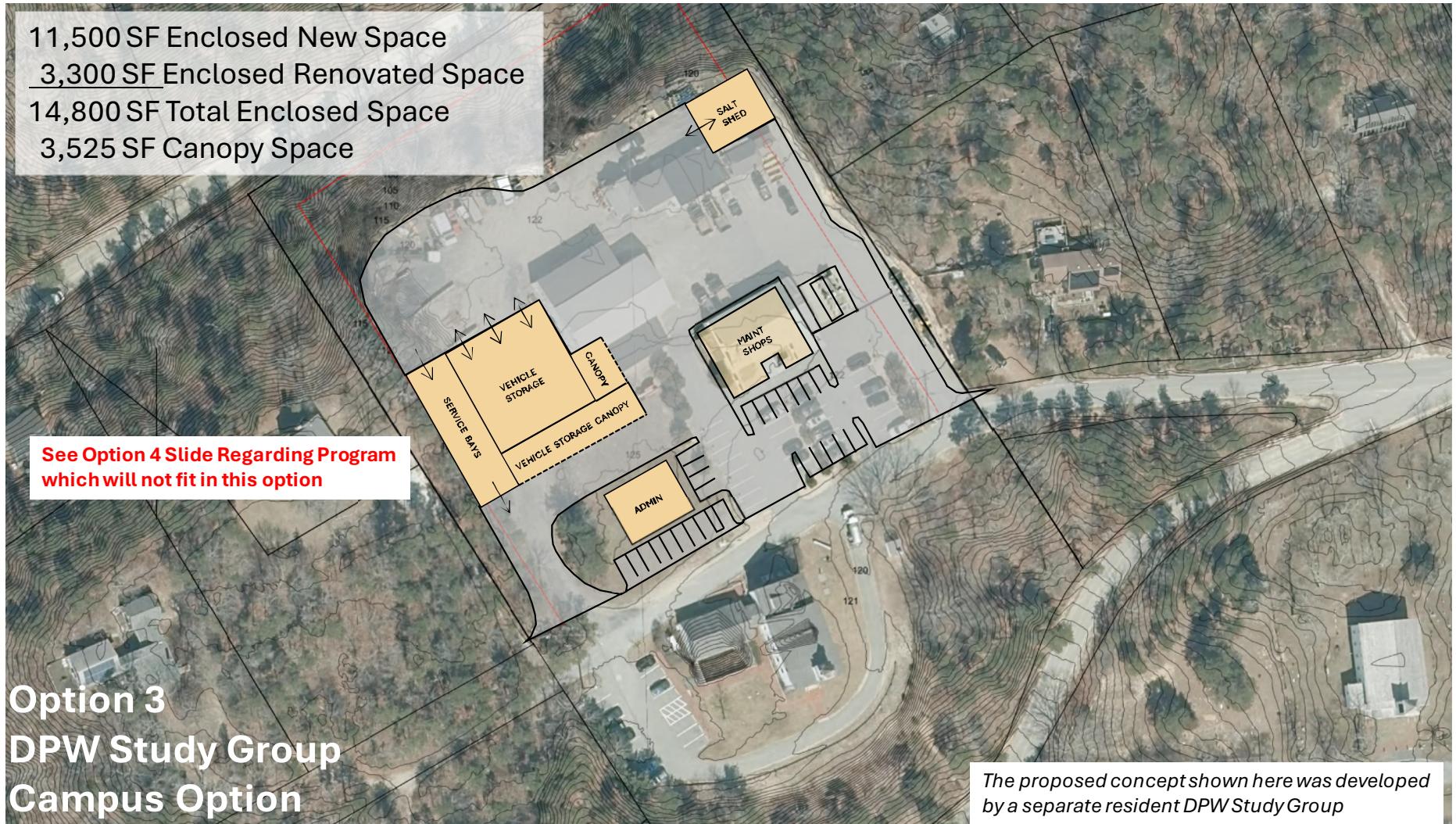
# Option 3

## DPW Study Group

### Campus Option

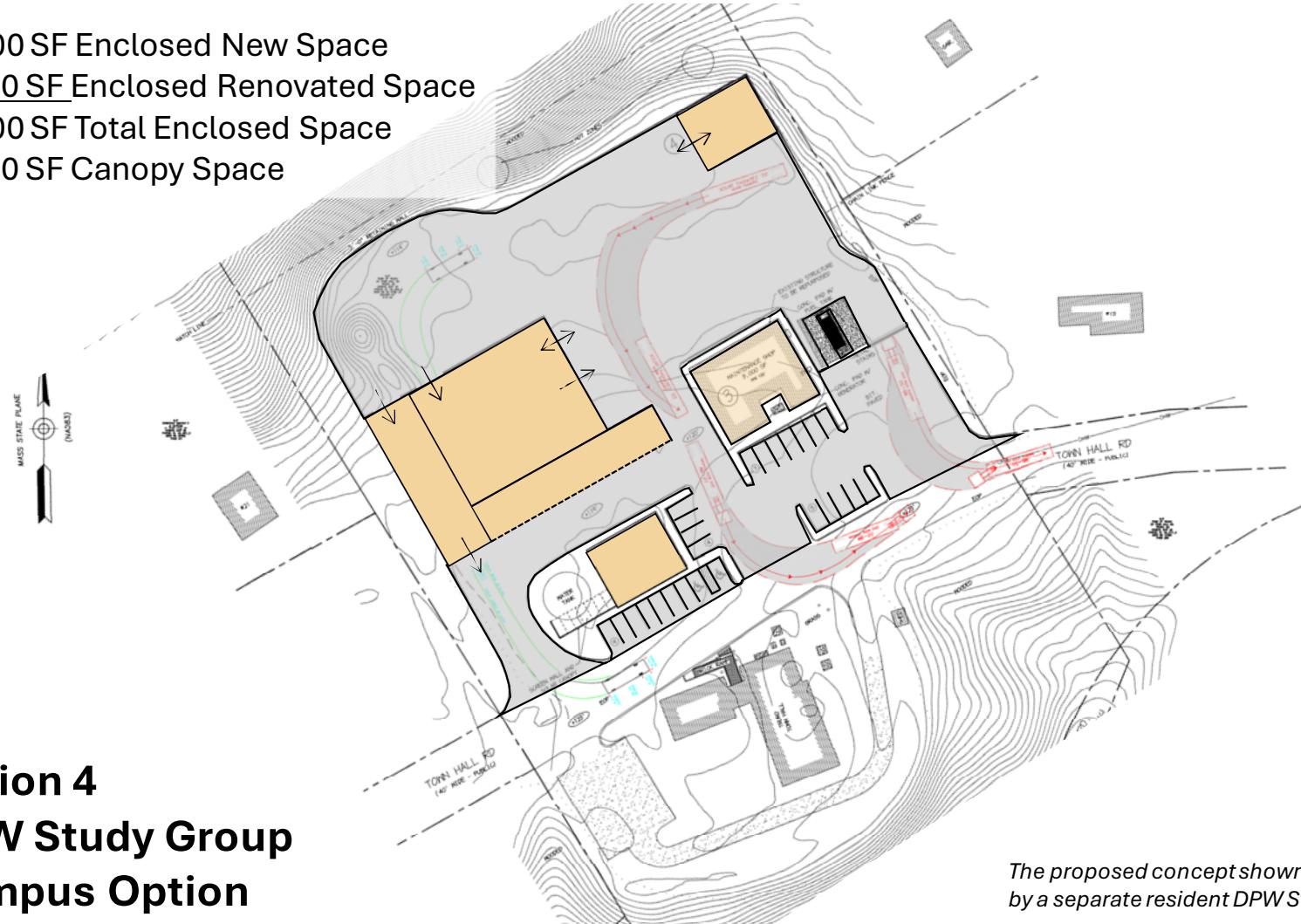
*The proposed concept shown here was developed by a separate resident DPW Study Group*

## Town of Truro New Public Works Facility



# Town of Truro **New Public Works Facility**

13,300 SF Enclosed New Space  
3,300 SF Enclosed Renovated Space  
16,600 SF Total Enclosed Space  
3,150 SF Canopy Space



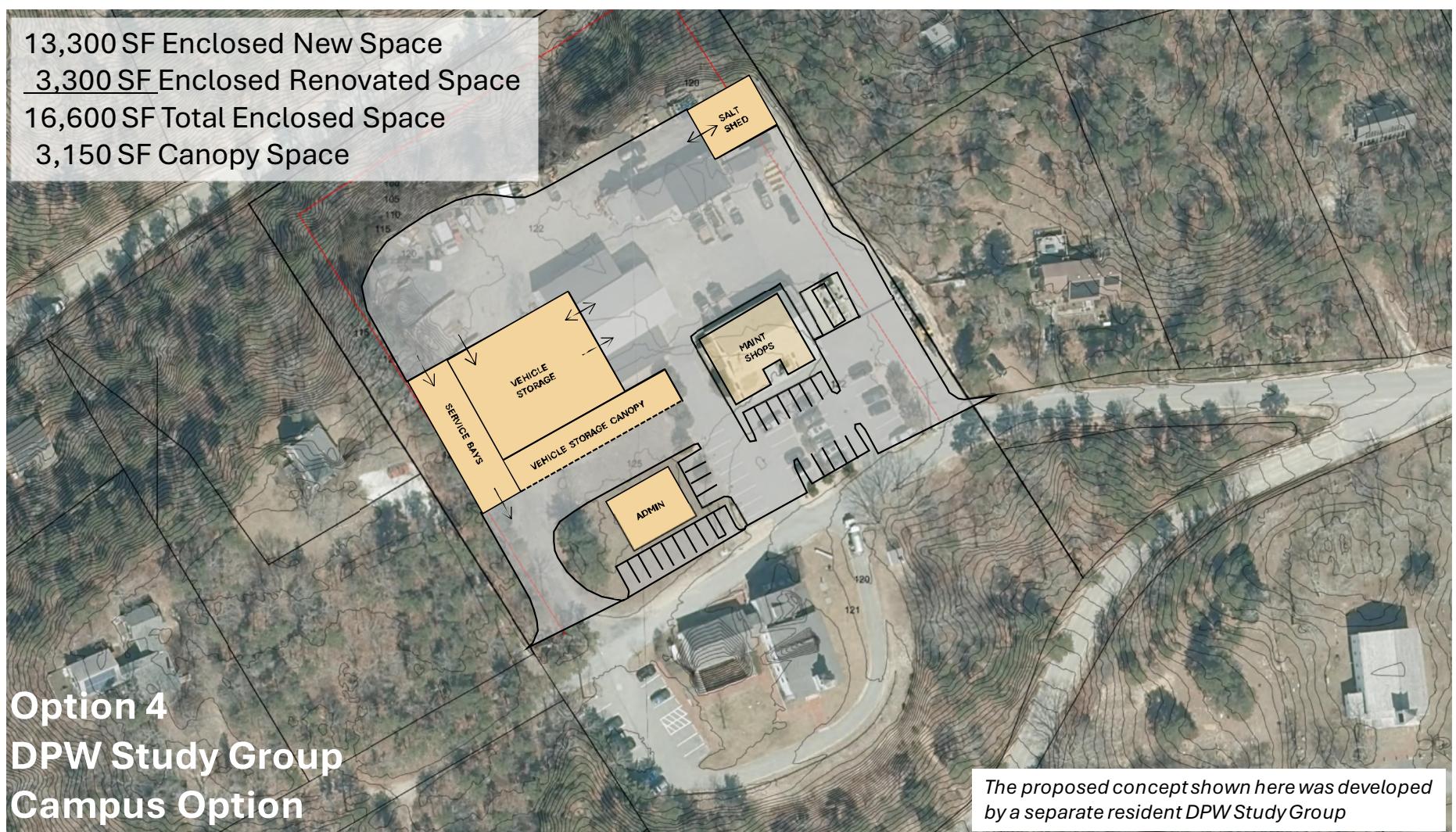
# Option 4

## DPW Study Group

### Campus Option

*The proposed concept shown here was developed by a separate resident DPW Study Group*

## Town of Truro New Public Works Facility



## Town of Truro New Public Works Facility



## Town of Truro New Public Works Facility

### **Reuse of Existing Building**

- Existing Building consists of:
  - Concrete base walls to approximately 5'-0" AFF
  - Upper walls at the garage are single-wythe CMU
  - Upper walls at the south additions are wood-framed
  - The roof is wood-framed. The main garage has gable trusses with 2x4 chord members and 2x6 rafters
  - The roof of the Maintenance shop is covered with standard asphalt shingles which are in poor condition
  - There is fiberglass batt insulation in the attic floor over the garage - the thickness of the insulation or the presence of any vapor barrier in the ceiling assembly was not noted
  - The walls of the original garage portion are uninsulated cast-in-place concrete and CMU, painted inside and out
  - There is no sprinkler system
  - Toilet facilities are outdated and limited. There are no separate male and female restrooms, and no showers
  - Mechanical system is lacking basic code required ventilation and is outdated
- Overall, the weathertightness and energy efficiency of the roofs and garage walls is substandard, leading to wind and water infiltration and excessive heating costs



## Town of Truro New Public Works Facility

### Reuse of Existing Building

- Suitability To Purpose:
  - The size and configuration of the building do not naturally accommodate any of the functional areas identified in the DPW building program without considerable modification
    - It is too small and lacks sufficient height for large vehicle storage, vehicle maintenance or a wash bay, although it could be used with modifications for some portion of the DPW's vehicle and equipment storage needs
    - It is about 47% oversized for workshops
    - It is about the right size for a combined office / office support and employee support facility, but would require extensive upgrades and renovations to accommodate those uses
  - Without major structural upgrades, any new attached construction cannot exceed the height of the existing roof due to snow drift
  - Generally, this suggests that the Maintenance Shop would need to remain free-standing and would require upgrades to building envelope and mechanical systems



Town of Truro  
**New Public Works Facility**

**OPTION SPACE COMPARISON**

**Town of Truro  
New Public Works Facility**

<b><u>Space Needs Assessment</u></b>	<b><u>2024 Final Program</u></b>	<b><u>W&amp;S Option 1</u></b>	<b><u>W&amp;S Option 2</u></b>	<b><u>DPW Study Group Option 3</u></b>	<b><u>DPW Study Group Option 4</u></b>
• Office / Office Support	1,300 SF	1,500 SF	1,450 SF	2,000 SF	2,000 SF
• Employee Facilities	1,700 SF	1,680 SF	1,500 SF	0 SF	0 SF
• Workshops	1,700 SF	1,680 SF	1,350 SF	3,300 SF	3,300 SF
• Vehicle Maintenance	4,200 SF	4,200 SF	4,200 SF	3,500 SF	3,500 SF
• Wash Bay	1,350 SF	1,250 SF	1,250 SF	0 SF*	0 SF*
• Vehicle & Equipment Storage	9,900 SF	12,825 SF	10,500 SF	6,000 SF	7,800 SF

**ENCLOSED PROGRAM**

<b><u>Subtotal:</u></b>	<b><u>20,150 SF</u></b>	<b><u>23,135 SF</u></b>	<b><u>20,250 SF</u></b>	<b><u>14,800 SF</u></b>	<b><u>16,600 SF</u></b>
• Canopy	3,850 SF	3,850 SF	3,850 SF	3,525 SF	3,150 SF
<b><u>TOTAL</u></b>	<b><u>24,000 SF</u></b>	<b><u>26,985 SF</u></b>	<b><u>24,100 SF</u></b>	<b><u>18,025 SF</u></b>	<b><u>19,450 SF</u></b>

**ENCLOSED AND CANOPY PROGRAM**

*\* Included in vehicle storage area*

Town of Truro  
**New Public Works Facility**

**Costs**

**Town of Truro**  
**New Public Works Facility**

Size (enclosed + canopy):      26,985 SF      24,100 SF      18,025 SF      19,450 SF

<b>Base Pricing</b>	<b>Option 1 Consolidated Option</b>	<b>Option 2</b>		<b>Option 3</b>		<b>Option 4 Drive Thru Campus Buildings</b>
		<b>Campus Buildings</b>	<b>Campus Buildings</b>	<b>Campus Buildings</b>	<b>Campus Buildings</b>	
<b>Item:</b>						
Construction Costs:	\$ 23,610,000	\$ 23,550,000	\$ 19,090,000	\$ 20,000,000		
New Energy Code Costs:	\$ 1,190,000	\$ 1,100,000	\$ 870,000	\$ 920,000		
Soft Costs:	\$ 7,270,000	\$ 6,860,000	\$ 5,850,000	\$ 6,050,000		
Subtotal:	\$ 32,070,000	\$ 31,510,000	\$ 25,810,000	\$ 26,970,000		
<b>Design Modifications:</b>						
Phased Construction (2 Phases), add:	N/A	\$ 1,560,000	\$ 1,560,000	\$ 1,560,000		
		\$ 33,070,000	\$ 27,370,000	\$ 28,530,000		
Re-Purposing of Building, add: Repurposed building increases total bldg by 1,300 sf	N/A	\$ (690,000)	Included	Included		
		\$ 30,820,000				
Replace Small Vehicle Storage with a Canopy, add:	\$ (795,000)	\$ (795,000)	Included	Included		
	\$ 31,275,000	\$ 30,715,000				
Hybrid Building (PEMB & Timber), add:	\$ (434,481)	\$ (403,057)	\$ (273,259)	\$ (273,259)		
	\$ 31,635,519	\$ 31,106,943	\$ 25,536,741	\$ 26,696,741		
Timber Building, add:	\$ (3,160,920)	\$ (2,766,745)	\$ (1,571,238)	\$ (1,817,171)		
	\$ 28,909,080	\$ 28,743,255	\$ 24,238,762	\$ 25,152,829		

Town of Truro  
**New Public Works Facility**

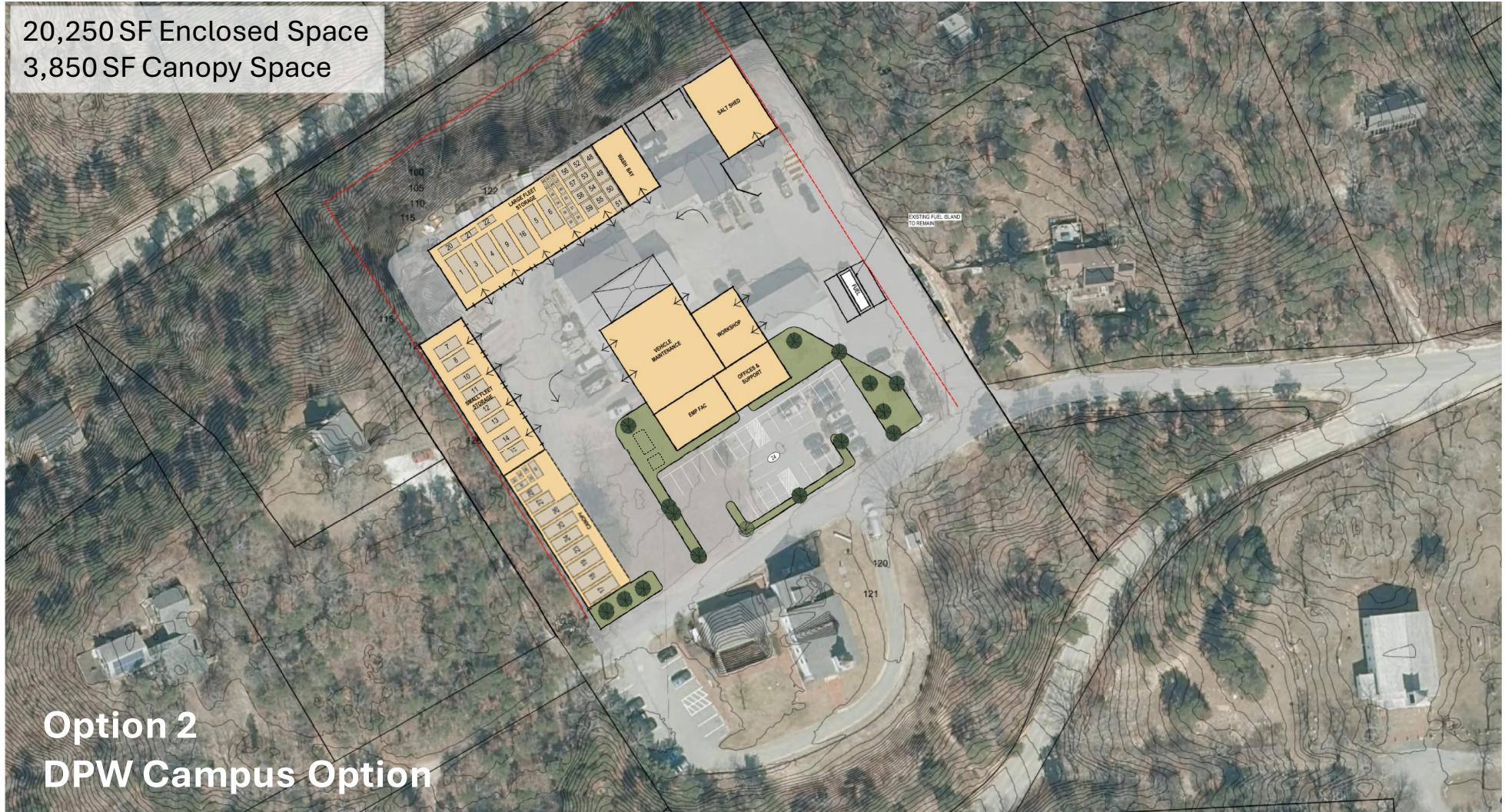
**Next Steps – Option Selection**

Town of Truro  
**New Public Works Facility**



## Town of Truro New Public Works Facility

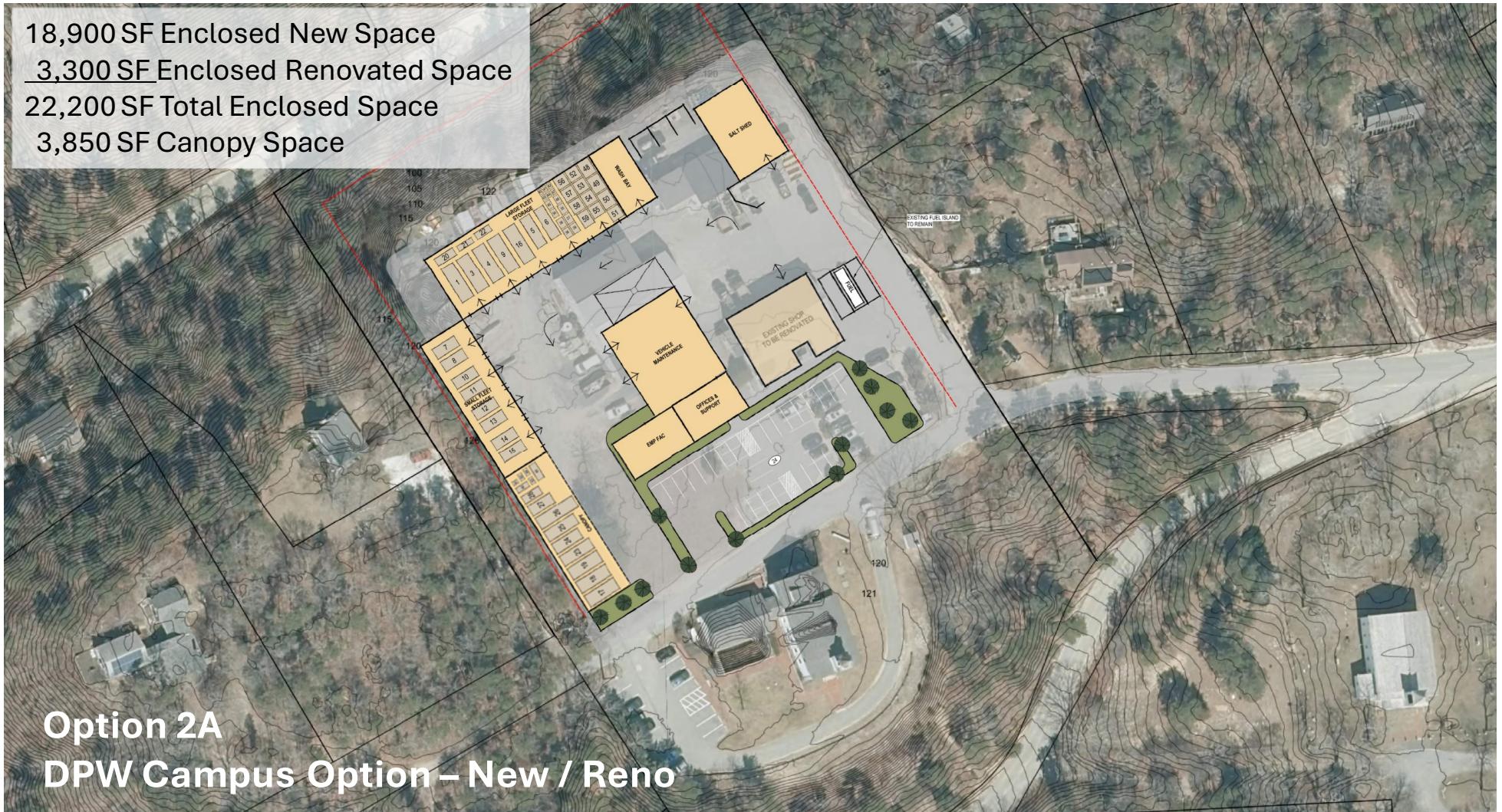
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3,850 SF Canopy Space



# Town of Truro

## New Public Works Facility

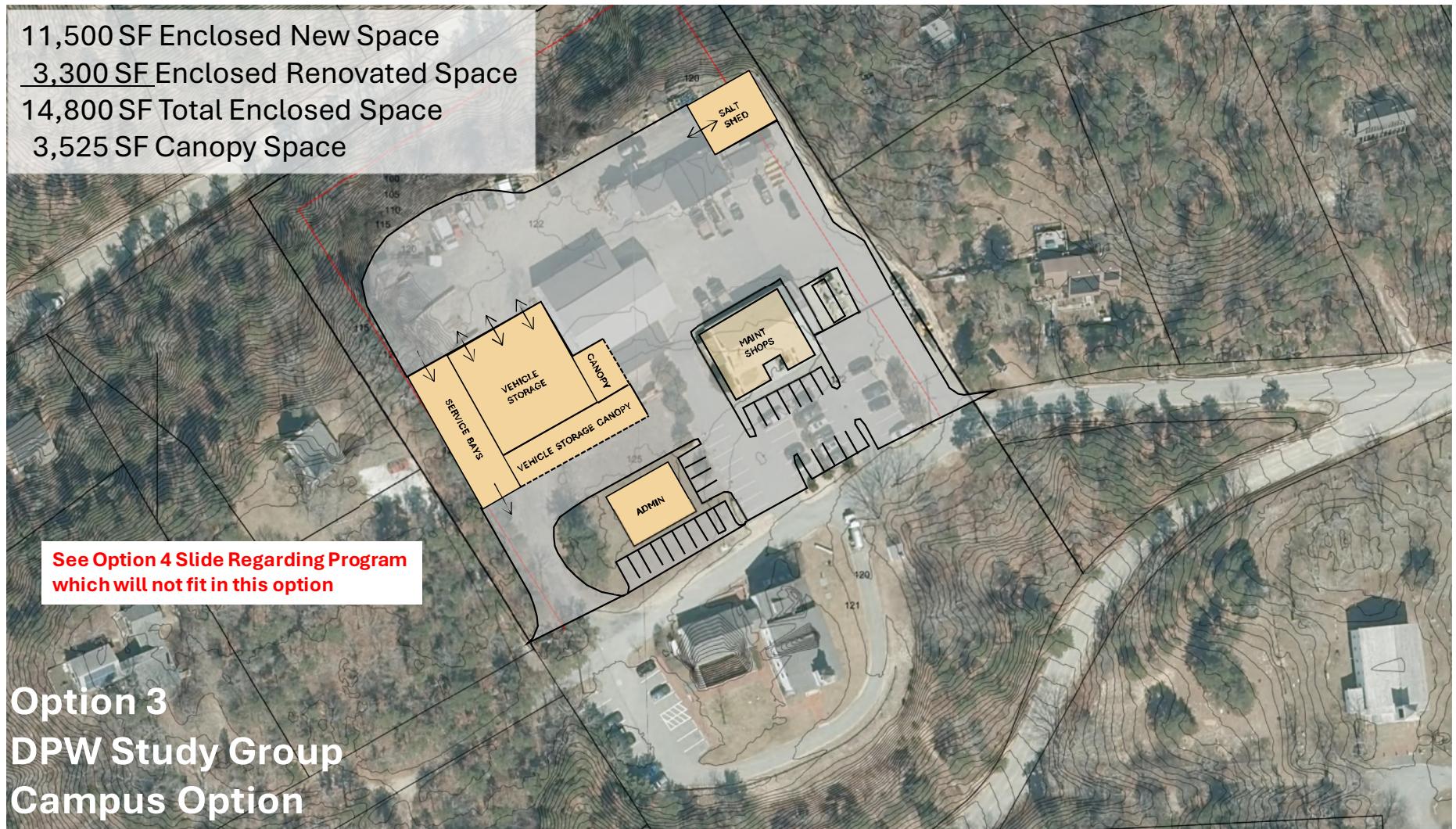
18,900 SF Enclosed New Space  
3,300 SF Enclosed Renovated Space  
22,200 SF Total Enclosed Space  
3,850 SF Canopy Space



Town of Truro  
**New Public Works Facility**

11,500 SF Enclosed New Space  
3,300 SF Enclosed Renovated Space  
14,800 SF Total Enclosed Space  
3,525 SF Canopy Space

See Option 4 Slide Regarding Program  
which will not fit in this option



## Town of Truro New Public Works Facility

13,300 SF Enclosed New Space  
3,300 SF Enclosed Renovated Space  
16,600 SF Total Enclosed Space  
3,150 SF Canopy Space

