



# TOWN OF TRURO NEW PUBLIC WORKS FACILITY



Schematic Design Project Update  
May 8, 2025

# FULL SCHEDULE

PHASE	Study	Concept Design	Schematic Design	Design Development	Construction Documents	Bidding	Annual Town Meeting April 2026
Start Date	✓	✓	March 1, 2025	Early June 2025	Early October 2025	Early March 2026	
Deadline	✓	✓	May 30, 2025	End of September 2025	End of February 2026	End of April 2026	

# A Look Back & Ahead

## Since we last meet on 3/27:

- Geotechnical borings and stormwater test pits completed
- Zoning / permitting analysis completed
- Design review meetings with DPW Users
- Industrial equipment inventory & layout review with DPW users
- Energy Analysis; use, production and incentives research
- Met with BoH to confirm existing septic conditions and discuss criteria for new septic
- Met with HRP to coordinate proposed DPW Facility with PFAS Capping effort
- Submitted the Schematic Design Pricing Set to cost estimators 5/2

## Next 3 weeks:

- Hazardous building material investigation 5/9
- Independent cost estimating & reconciliation +/- 5/27
- Final Schematic Design Package submission to client 5/30
- Coordinate electrical service from Route 6

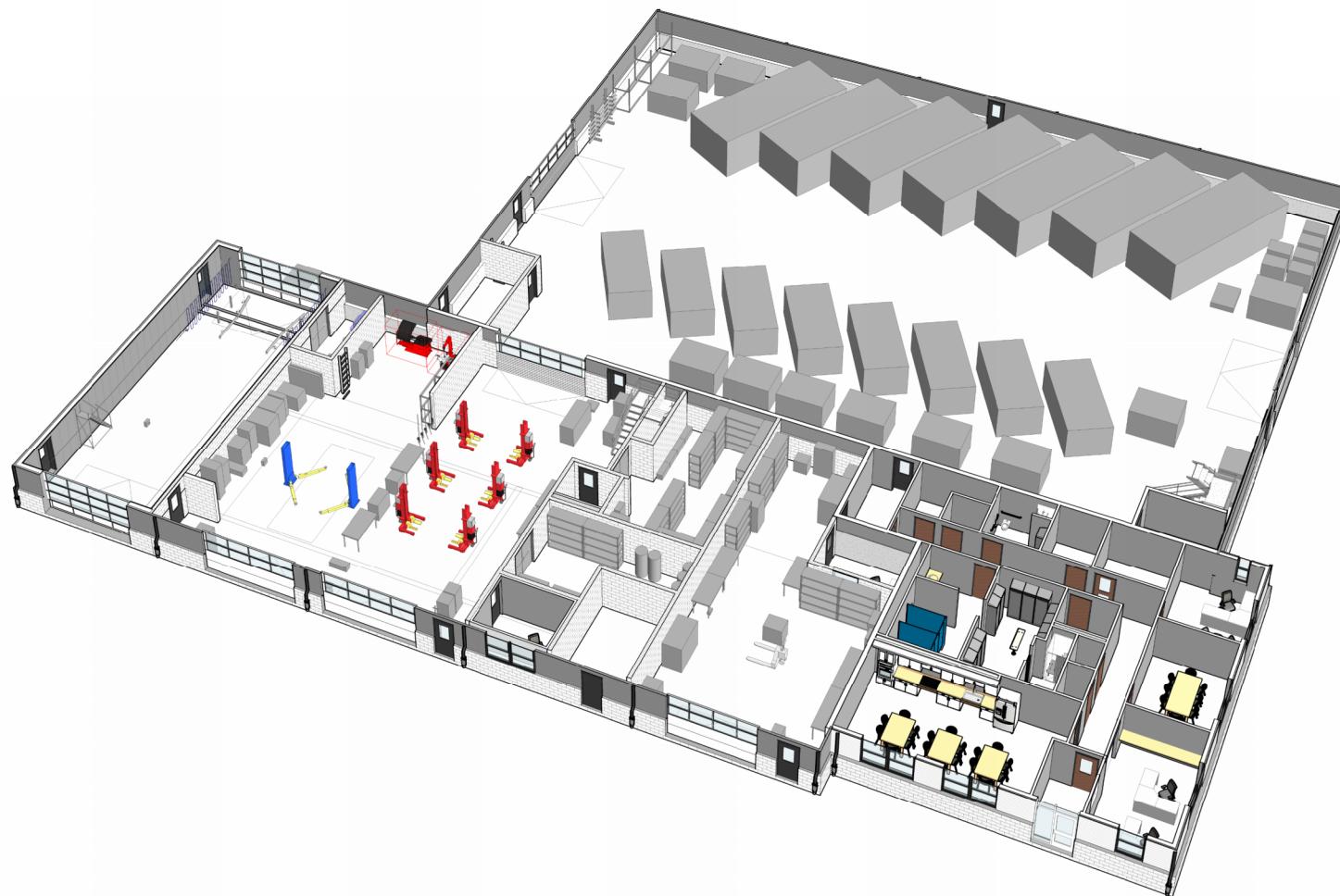
# Site Plan & Turning Templates



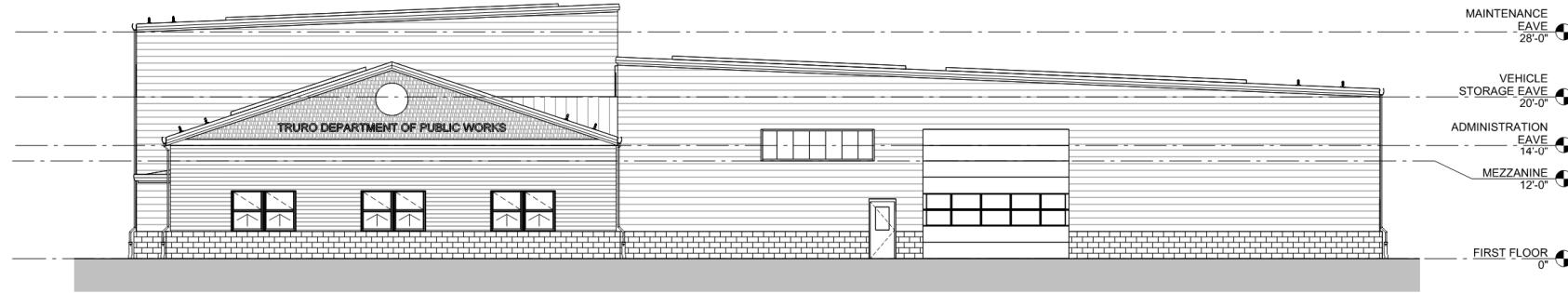
# Schematic Floor Plan



# Schematic 3D Section Cut



# Schematic Building Elevations



**South Building Elevation**



**West Building Elevation**

# Proposed Site Plan vs. Existing

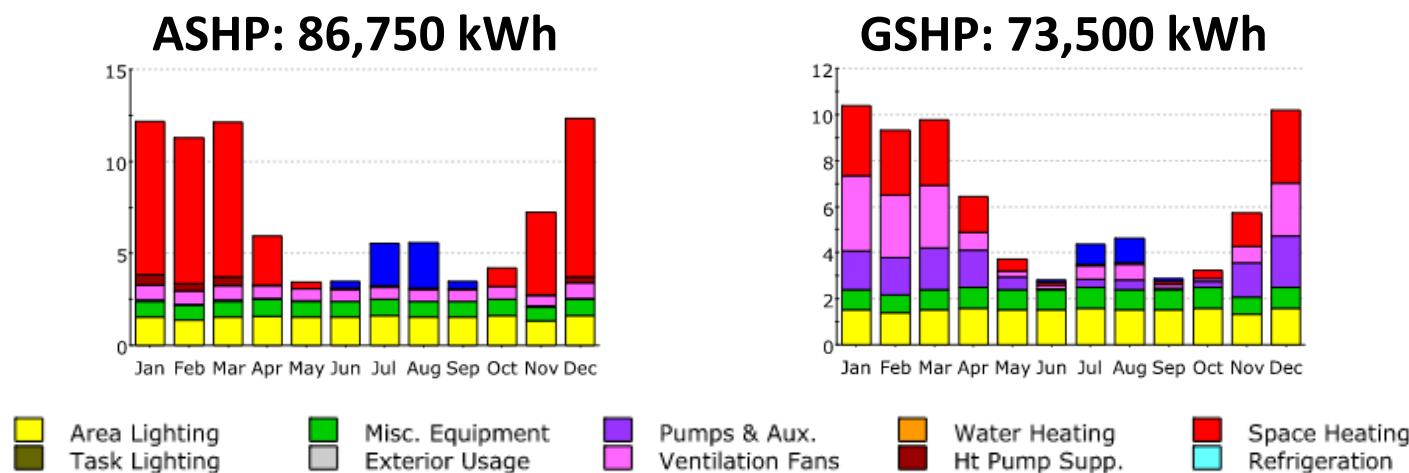


# 3D Rendering from Town Hall Road



# Energy Use, Production & Incentives

Energy modeling was conducted for the proposed DPW Facility.  
Estimated annual electricity energy usage as follows:

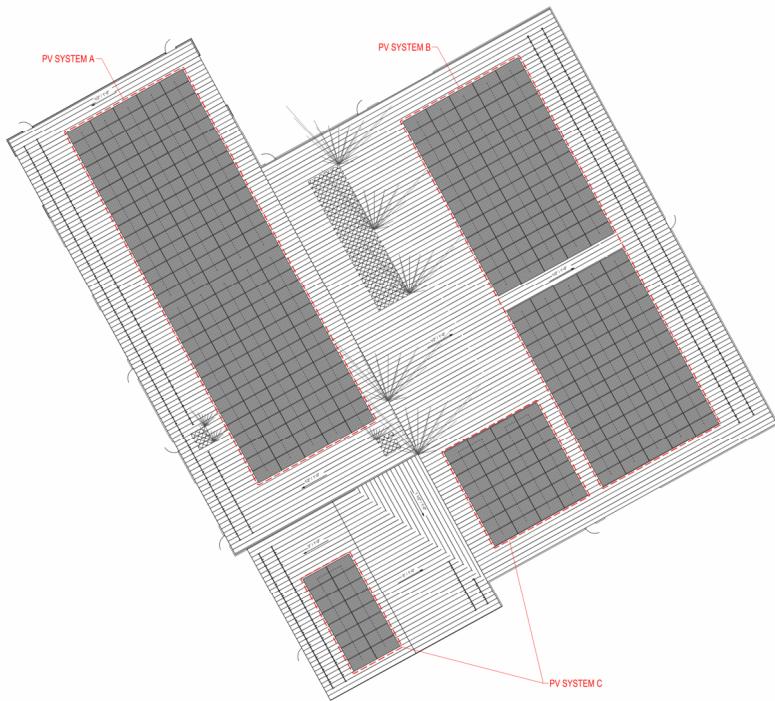


\* based on a set of assumptions / inputs.

Includes heating, cooling, ventilation, and standard office equipment and LED lighting.

Does not include air compressor, vehicle wash machine, lifts and other related equipment.

# Energy Use, Production & Incentives



SOLAR PHOTOVOLTAIC (PV) SYSTEM SUMMARY				
	SYSTEM A	SYSTEM B	SYSTEM C	NOTES
<b>MODULE QTY</b>	150±	150±	48±	348±
<b>MODULE POWER</b>	550 WATT	550 WATT	550 WATT	---
<b>DC NAMEPLATE</b>	82.5± KW DC	82.5± KW DC	26.4± KW DC	191.4± KW DC (TOTAL)
<b>INVERTER QTY</b>	2	2	1	---
<b>INVERTER RATING</b>	25 KW & 36 KW	25 KW & 36 KW	20 KW	---
<b>AC NAMEPLATE</b>	61± KW AC	61± KW AC	20± KW AC	142± KW AC (TOTAL)
<b>SYSTEM AZIMUTH</b>	241°±	61°±	61°± / 241°±	BLDG. ORIENTATION
<b>SYSTEM TILT</b>	1/2" / 1'-0"	1/2" / 1'-0"	3" / 1'-0" & 1/2" / 1'-0"	FLUSH (ROOF PITCH)
<b>RACKING</b>	RAIL/CLAMPED	RAIL/CLAMPED	RAIL/CLAMPED	---
<b>ENERGY PRODUCTION</b>	±90 - ±110 MWH/YR	±85 - ±105 MWH/YR	±25 - ±35 MWH/YR	±200 - ±250 MWH/YR

**200 mWh = 200,000 kWh**

# Energy Use, Production & Incentives

PATH 1: NET ZERO/LOW EUI BUILDINGS	
Customer Incentives	
Construction Incentive	up to \$2.00/sf
Post Occupancy Incentive	\$1.50/sf
Space Heating Heat Pump Adder*	
• Air Source Heat Pumps:	\$800/ton
• Variable Refrigerant Flow (VRF):	\$1,200/ton
• Ground Source Heat Pumps:	\$4,500/ton
ZNE Or PH Certification Incentive	\$3,000
Technical Assistance For Net Zero Expert Consultant Services	50% of fee up to \$10,000
Verification Incentive	50% of fee up to \$10,000



## Why 100 tons vs 45 ton?

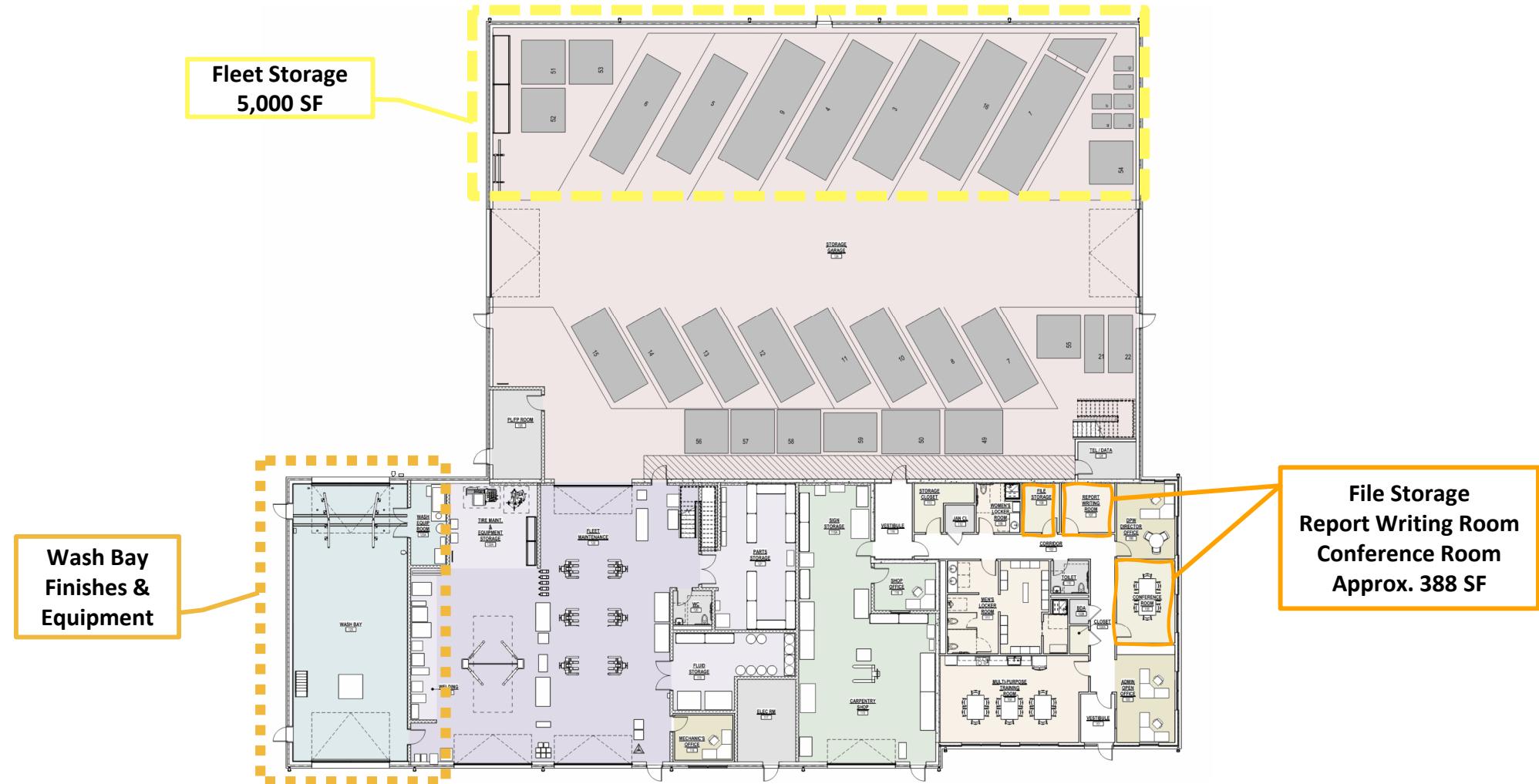
Answer:

- ❖ GSHP can put out full capacity all year; ASHP has more equipment requirements to operate during winter

## Example Heat Pump Adder Calcs:

- ASHP: 100 tons x \$800/ton = \$80,000
- GSHP: 45 tons x \$4,500/ton = \$202,500

# Potential Cost Reduction Efforts / Bid Alternates



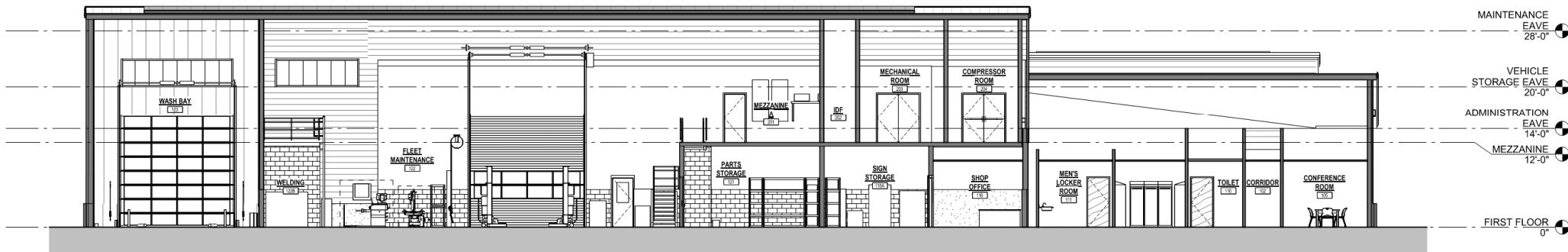


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# Schematic Building Sections



**Building Section Thru Fleet Storage & Maintenance**



**Building Section Thru Wash Bay, Maintenance & Admin**