

**JOINT WORKSHOP FOR
PLANNING COMMISSION
ENVIRONMENTAL PROTECTION ADVISORY BOARD
SHADE TREE COMMISSION**



JUNE 20, 2023



D'HUY Engineering, Inc.
Est. 1976



Aerial of Public Works Building Storm Damage September 2021

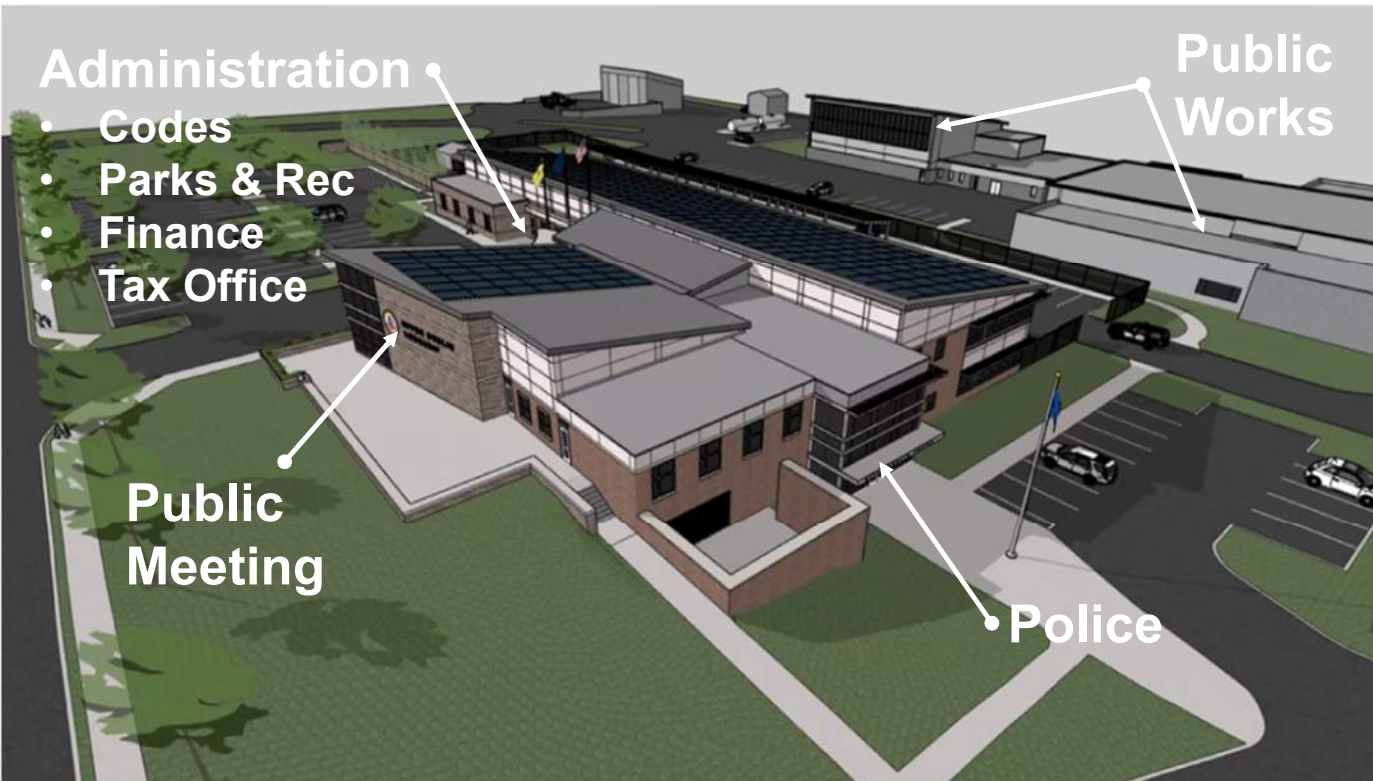
Aerial view of Township Building Storm Damage September 2021



Current Aerial View of Township and Public Works Facilities



UPPER DUBLIN TOWNSHIP – PROJECT GOALS



PROJECT GOALS

Efficient Site Layout

Reduce Building Size

Reduce Stormwater on site

Improve Traffic Flow

Incorporate Sustainable Design

Provide Civic Presence

Improve Community Access to all Public Services

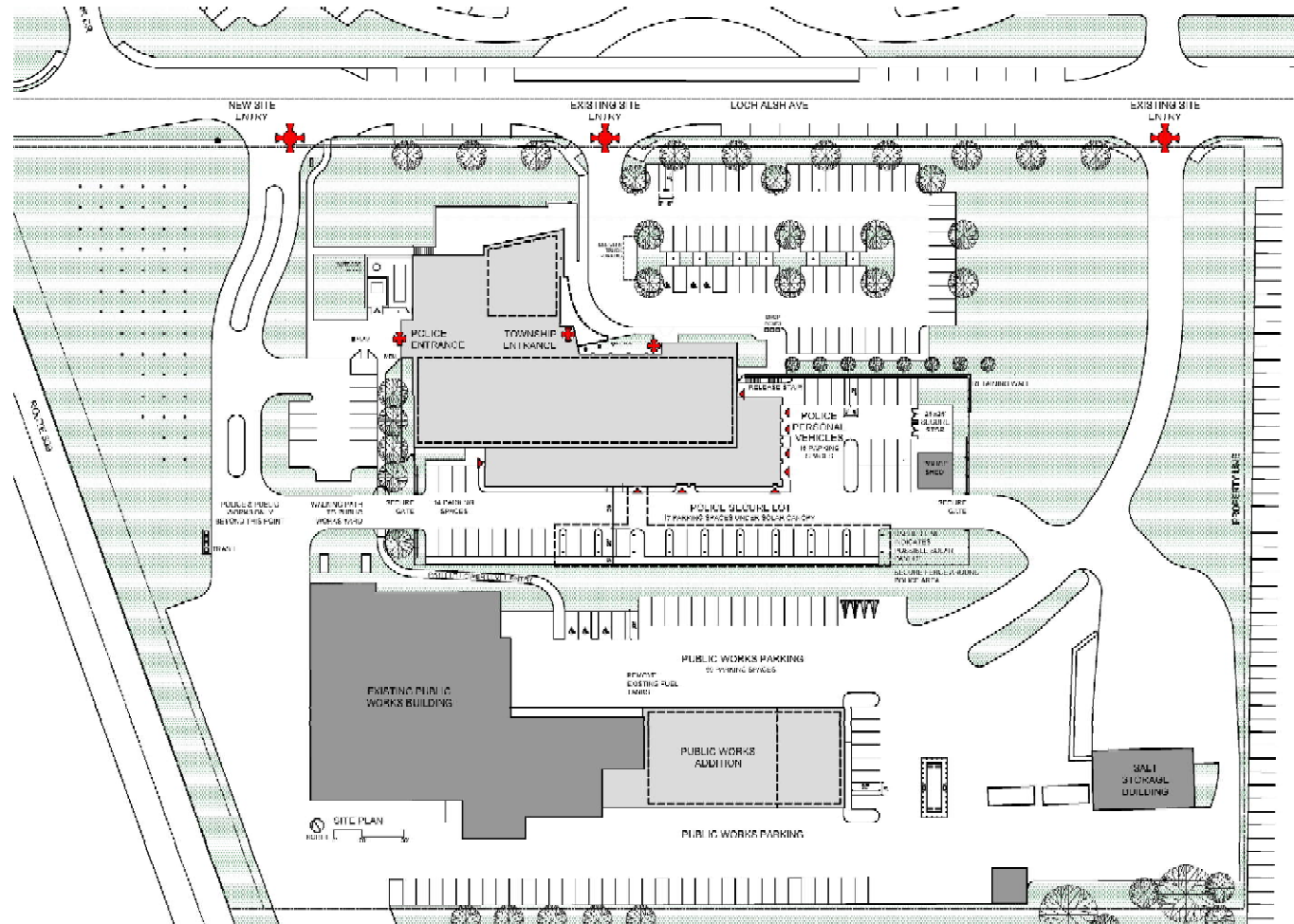
UPPER DUBLIN TOWNSHIP – PROPOSED SITE PLAN



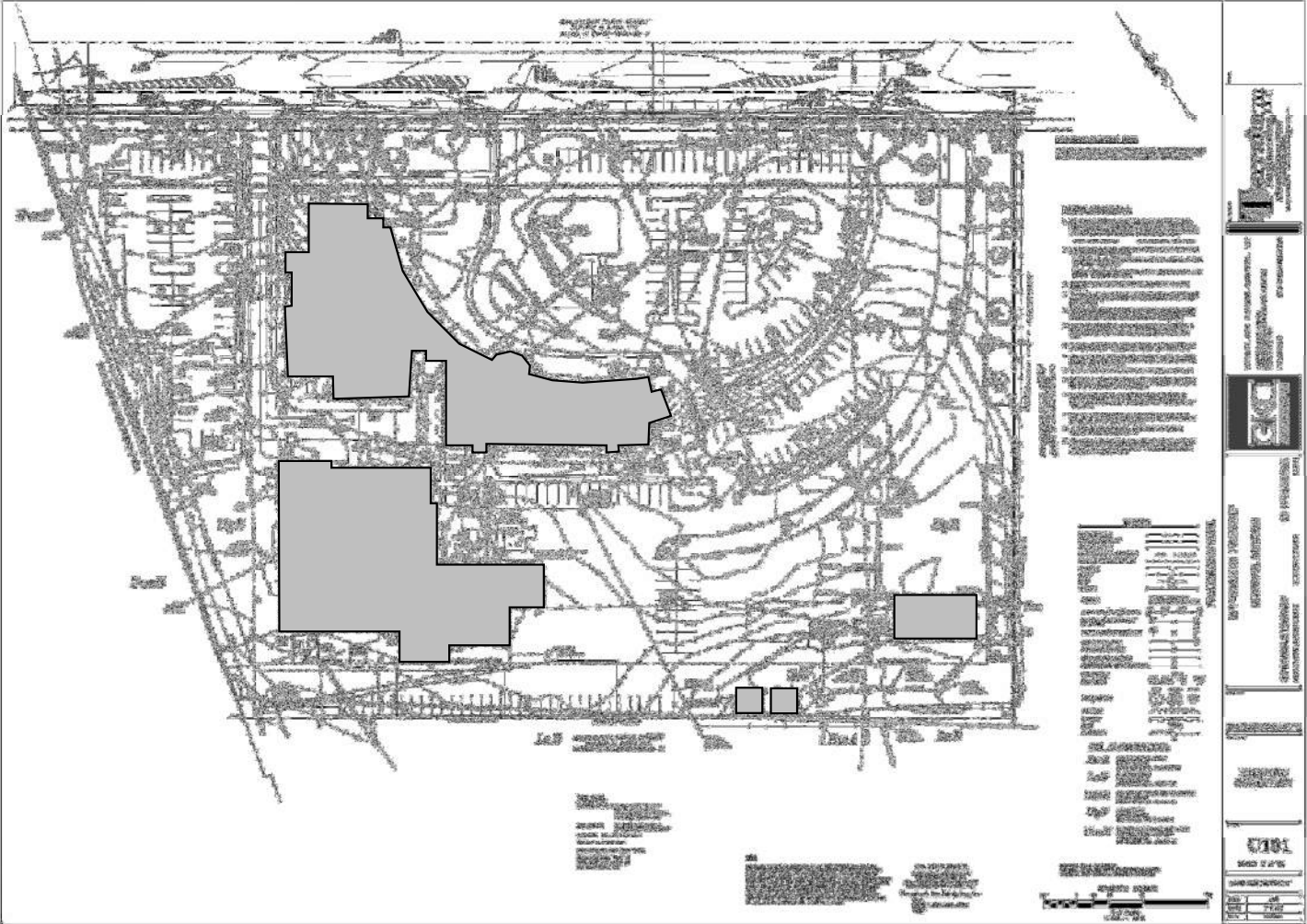
D'HUY Engineering, Inc.
Est. 1976

Summary / Comparison of Parking (current & Proposed)	Old 801 Facility:	Proposed Layout:
Public & Staff Parking (East & West Lots)	150	78
Police	36	47
Public Works	55	60
	241	185

Day-time Need (parking spcs)	In Public Lot	In Police Lot
Administration Staff	40	
Reception	2	
Tax Collector	2	
Manager	6	
Finance	5	
Communications, HR, IT	3	
Code Enf, Eng, Zoning	16	
Parks and Recreation	6	
Police (@ shift change)		47
Patrol Officers Personal	14	
Community Police	5	
Detectives (unmarked)	6	
Admin. (unmarked)	4	
Patrol cars - marked	18	
Civilians	6	6
Visitors	30	
Total	76	47



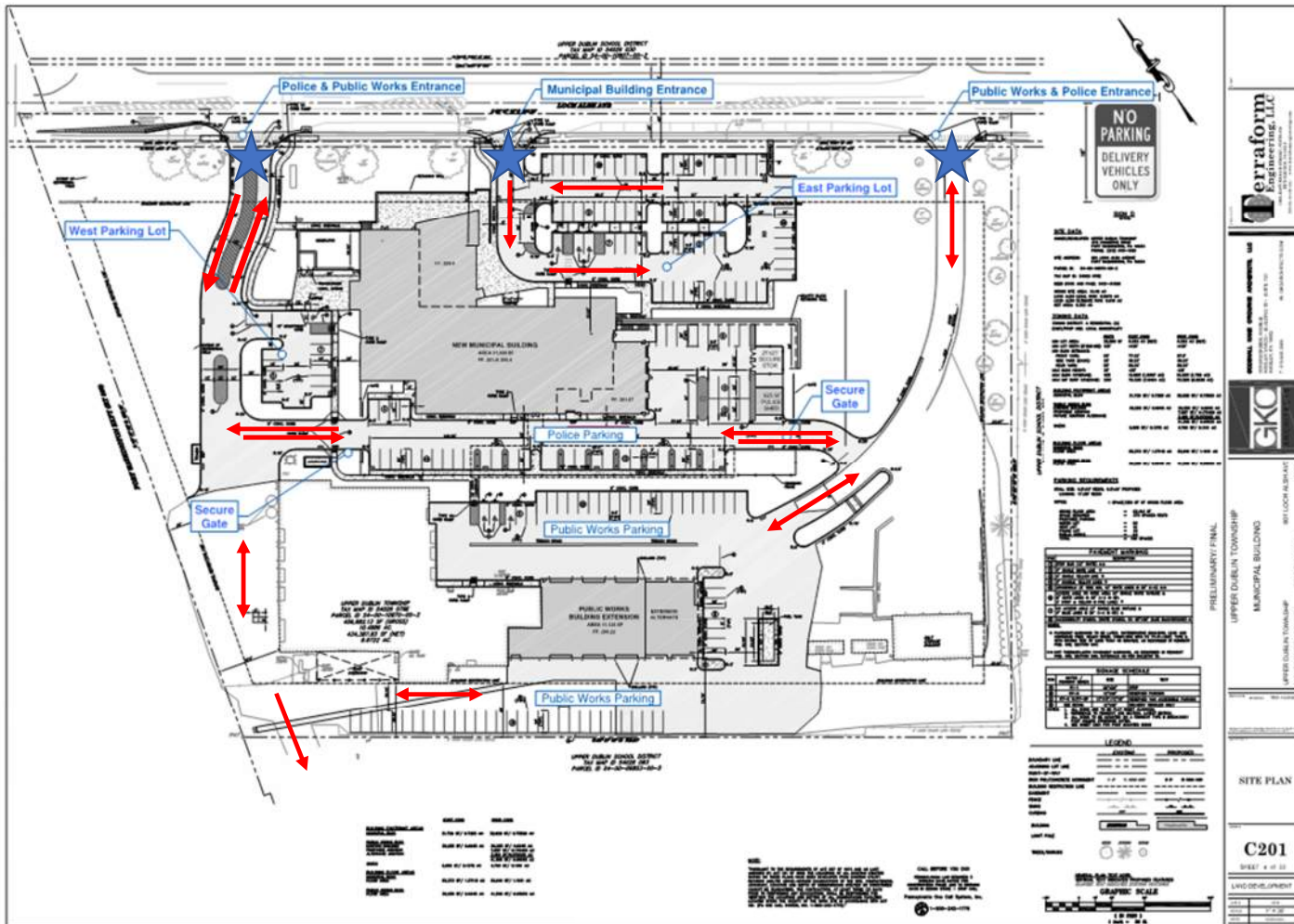
UPPER DUBLIN TOWNSHIP – EXISTING CONDITIONS PLAN



UPPER DUBLIN TOWNSHIP - PROPOSED SITE PLAN



D'HUY Engineering, Inc.
Est. 1976



Building Coverage

• Maximum Allowed	15%
• Existing	14.03%
• Proposed	16.81%

Impervious Surface Coverage

• Maximum	25%
• Existing	70.07%
• Proposed	67.95%

Building Size

Municipal Building

• Existing	59,373 SF
• Proposed	52,016 SF

Public Works Building

• Existing	30,255 SF
• Proposed	41,398 SF

Proposed Township Building Footprint

Municipal Building	31,924 SF
Public Works Building	30,255 SF
• Proposed Addition	7,687 SF
• Future Addition	3,456 SF

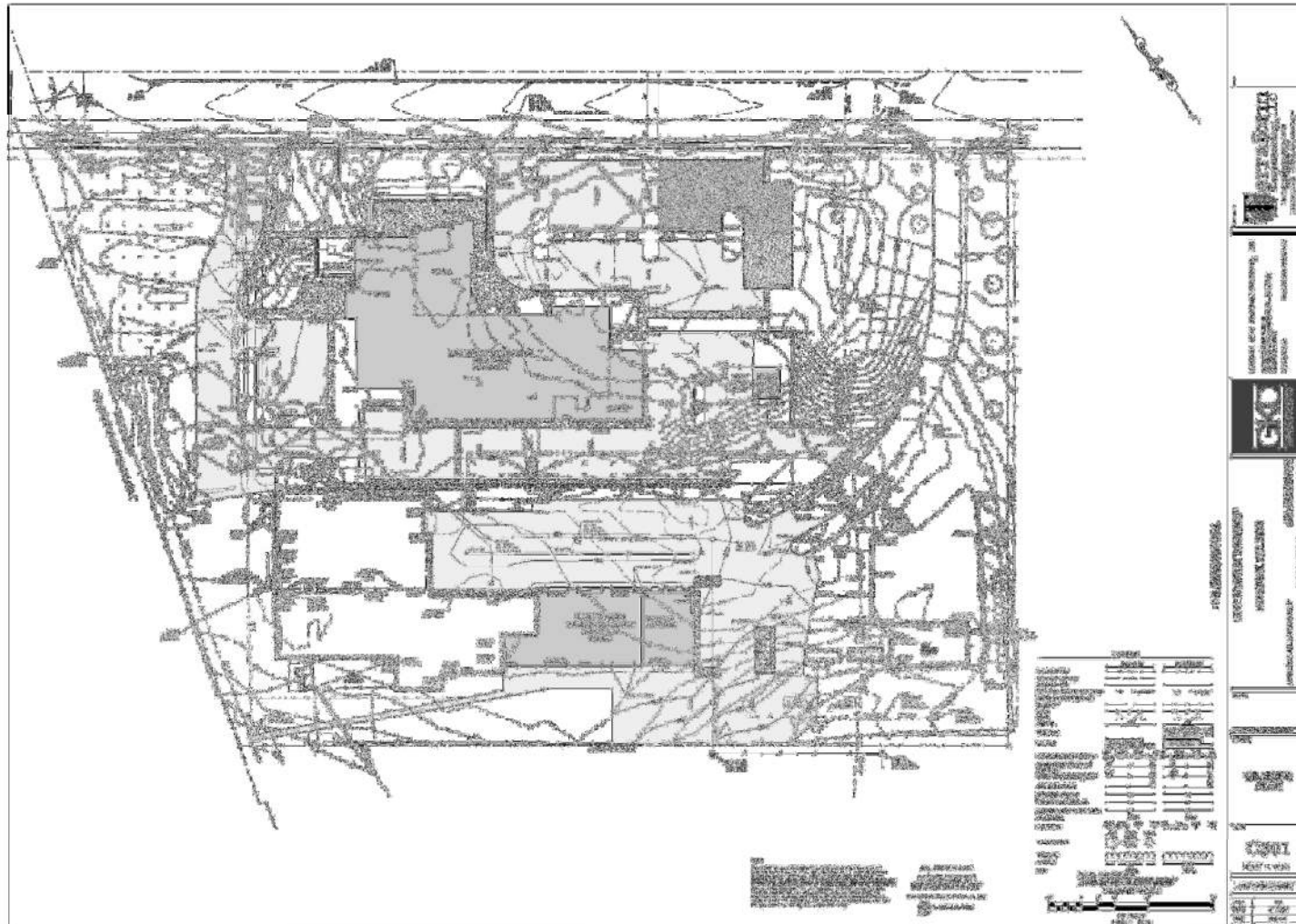


Public Access from Loch Alsh Avenue

UPPER DUBLIN TOWNSHIP – GRADING PLAN



D'HUY Engineering, Inc.
Est. 1976



Soil Types/Infiltration

Stormwater

Excess Topsoil

COMMITTEE REQUIREMENTS



ENVIRONMENTAL PROTECTION ADVISORY BOARD

- Parking
- Impervious Surface
- Public Access
- Soil Types/Infiltration
- Excess Topsoil
- Stormwater
- Tree Coverage
- Green Design



SHADE TREE COMMISSION

- Identify tree removals or modifications
- Itemize tree removal over 4" DBH or greater
- Special consideration for trees of 12" DBH or more
- Tree replacements
 - Replacement on an inch-by-inch basis
 - 2" or more in diameter
 - Native trees
 - Variety of species
 - Planted in natural clusters

UPPER DUBLIN TOWNSHIP – LANDSCAPING REQUIREMENTS



D'HUY Engineering, Inc.
Est. 1976

Upper Dublin Township Landscaping Calculations
5/30/2023

§212-32.F: Specific Planting Requirements				(5) Detention Basin Landscaping - Not Required																							
(1) Street Trees - Requirement Met				(6) Individual Lot Landscaping - Requirements Met																							
Requirement: 1 tree 50-75' on center				Requirement: (a)[2] Institutional use: 1 shade tree per 5,000 sf of gross floor area																							
Required: Loch Alsh Ave Row 904.38 / 75' 12 street trees required				Required: Municipal Bldg: 52,054 gross sf / 5,000 10.4 trees required																							
Provided: 6 Existing Trees (15" & 18") @ 2 credits each = 12 Total				Provided: 11 shade trees																							
(2) Softening Buffer - Requirement not met - see additional landscaping provided				(7) Landscaping on Slopes 4:1 and steeper - Not Required																							
Requirement: 2 Trees & 6 shrubs per 100 feet of property perimeter				§212-32.G. Preservation and Protection of Existing Trees																							
Required: Property Line FT. Trees (2) Shrubs (6)				Existing Trees To Remain Over 8" cal. Count towards the above requirements with the following credit ratio																							
North. (Loch Alsh ROW) 904.38 / 100 9.04 18 54				Tree Dia. Number of Credits																							
Eastern Prop. Line 569.54 / 100 5.70 N/A Per §212-32.B.(11)				8-12" 1																							
Southern Prop. Line 700.01 / 100 7.00 N/A Per §212-32.B.(11)				13-24" 2																							
Western (309 ROW) 605.12 / 100 6.05 12 36				§212-32.H. Replacing Trees Destroyed by Development																							
Total 30 90				Requirement: (1) upto 25% of the existing trees over 8" dia. Can be removed. Trees to be removed over 25% shall be replaced as follows:																							
Provided: None None				1/3: 1:1 with shade Trees																							
(3) Screen Buffer - Not required (Institutional land use next to Institutional land use)				1/3: 2:1 with Flowering or evergreen trees																							
(4) Parking Area Landscaping - Requirements met - see additional landscaping provided				1/3: 10:1 with shrubs or some part 40:1 with groundcover																							
Requirement: (a): 1 shade tree per every 10 parking spaces				Required: Existing Healthy Trees over 8" dia. Trees allowed to be removed without replacement																							
Required: 125 spaces / 10 = 12.5 trees required				24 x 25% 6																							
Provided: 12 shade trees and 1 flowering tree				Trees to be removed : 9 3 Trees to be replaced																							
Requirement: (b): 10% of any parking lot over 5,000 sf shall be devoted to landscaping				Shade Trees Required: 1																							
Required: A minimum landscape area of 10% (calculated with green space 5' beyond edge of pave)				Flowering Trees Req'd: 2																							
Provided:				Shrubs Required: 10																							
<table border="1"> <thead> <tr> <th>Lot</th> <th>Total Green Space</th> <th>Parking Lot area</th> <th>% of Parking Lot Devoted to Green Space</th> </tr> </thead> <tbody> <tr> <td>Municipal Bldg Lot</td> <td>5,167</td> <td>28,735</td> <td>17.98%</td> </tr> <tr> <td>Police Secure Lot</td> <td>1,362</td> <td>24,606</td> <td>5.54%</td> </tr> <tr> <td>Police Visitor Lot</td> <td>907</td> <td>5,164</td> <td>17.56%</td> </tr> <tr> <td>Cumulative</td> <td>7,436</td> <td>58,505</td> <td>12.71%</td> </tr> </tbody> </table>				Lot	Total Green Space	Parking Lot area	% of Parking Lot Devoted to Green Space	Municipal Bldg Lot	5,167	28,735	17.98%	Police Secure Lot	1,362	24,606	5.54%	Police Visitor Lot	907	5,164	17.56%	Cumulative	7,436	58,505	12.71%	Provided: Shade Trees: 1			
Lot	Total Green Space	Parking Lot area	% of Parking Lot Devoted to Green Space																								
Municipal Bldg Lot	5,167	28,735	17.98%																								
Police Secure Lot	1,362	24,606	5.54%																								
Police Visitor Lot	907	5,164	17.56%																								
Cumulative	7,436	58,505	12.71%																								
				Flowering Trees: 2																							
				Shrubs: To be determined, minimum of 10																							
Requirement (c): Parking Island with 1 tree per 12 parking Spaces				Additional Landscaping Provided																							
Parking Lot # spaces Trees Required Trees Provided				19 shade trees																							
Municipal Bldg Lot 69 / 12 6 6				15 flowering trees																							
Police Secure Lot 44 / 12 4 1				10 Existing trees over 8" dia. To remain																							
Police Visitor Lot 12 / 12 1 4				Foundation Plantings to be determined																							
Cumulative 125 / 12 11																											
Provided: 11 flowering trees																											
Requirement (f): Parking areas over 4,000 sf closer than 50 ft to a public ROW or a residential district shall have a parking lot screen																											
Provided: Suggested 52 Ilex verticillata (winterberry holly) & Clethra alnifolia (summersweet clethra) @ 4' O.C. - shown are 34 shrubs @ 6' O.C.																											

UPPER DUBLIN TOWNSHIP ENERGY INITIATIVE



The Board of Commissioners adopted Resolution 21-2446 on December 14, 2021 which outlined four Renewable Energy Goals

1. 100% renewable electricity for all Township municipal operations by 2025.
2. 100% renewable energy for all Township municipal transportation and heating by 2040.
3. 100% renewable electricity adoption by the community by 2035.
4. 100% renewable energy adoption by the community for transportation and heating by 2050.

Practical Energy Solutions (PES) was hired by the Township in 2022 to provide support for Township staff and the Environmental Protection Advisory Board (EPAB) to help meet aggressive energy goals.

The Upper Dublin Environmental Protection Advisory Board EPAB, created a Renewable Energy Transition Plan which outlines an actionable framework to organize and direct Township efforts



practical
energy
solutions

PES was asked to provide review and input on the design of the new UDT Administration and Police Building

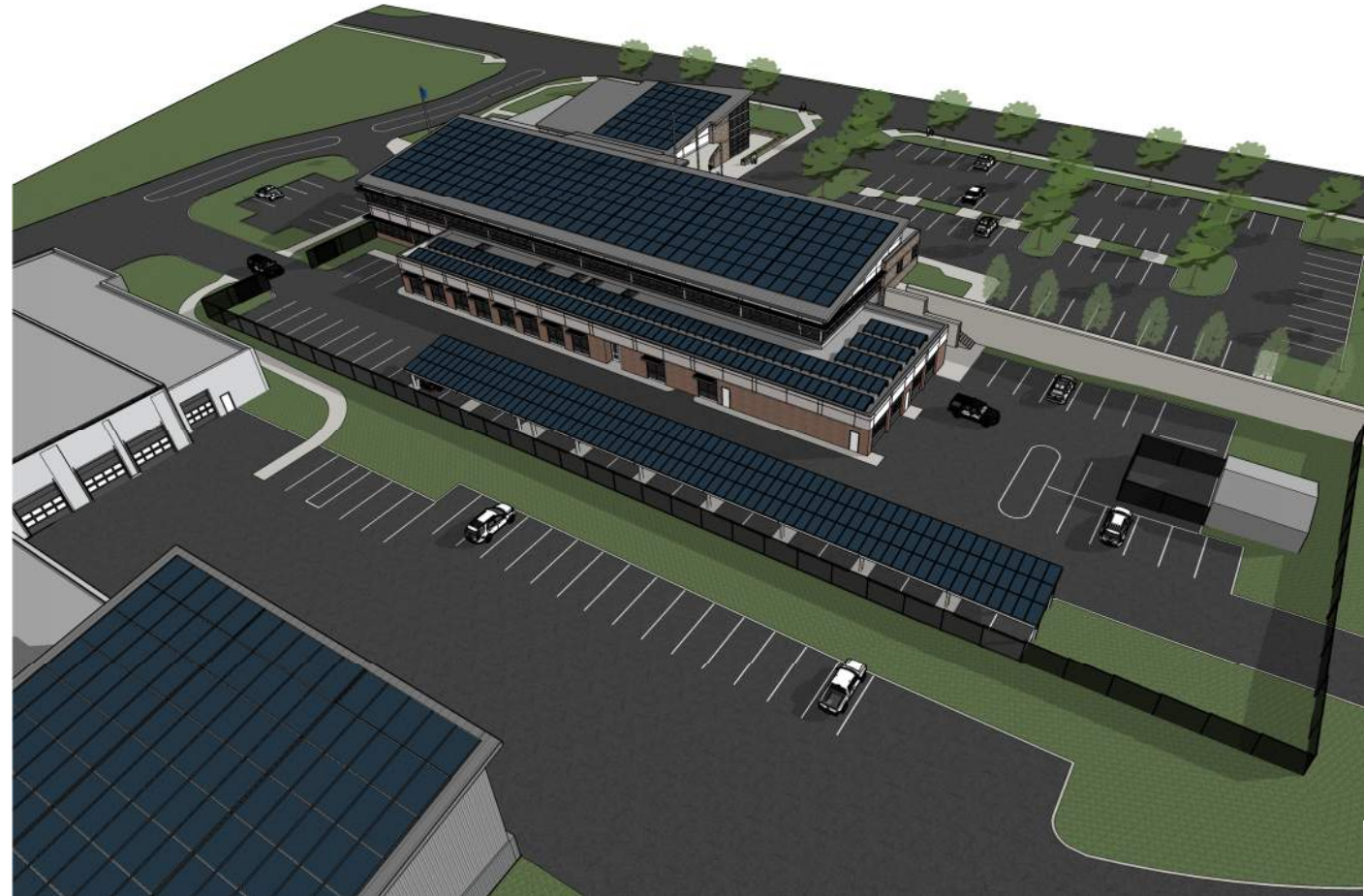
- Primary discussion was to find a path to minimize energy use in the HVAC systems, and to explore electrification options, to support Township energy commitments.
- The “Inflation Reduction Act” provides opportunities for financing renewable energy technologies at prices comparable to conventional systems.
- Design team did a great job exploring options and providing financial scenarios of both geothermal and more conventional systems, as well as solar generation including the financial analysis.



ENVIRONMENTAL CONSIDERATIONS



- Alternate for Solar Panels on Township Building, Public Works Building and over Police Patrol Vehicles
- Geothermal HVAC System
- Rough-in for EV Charging Stations
- Reduction in Impervious Surface



VIDEO OVERVIEW



RECOMMENDED DESIGN OPTION



D'HUY Engineering, Inc.
Est. 1976

- Brick
- Stone
- Metal Panels



NEXT STEPS



Planning Commission Review and Input

- Formal Preliminary/Final approval request - July 18, 2023
- Board of Commissioners formal approval - August 8, 2023

Review and Input by Environmental Protection Advisory Board

Review and Input by Shade Tree Commission

The GOAL is to incorporate the input where feasible from the above committees, in order to incorporate them into the design.

THANK YOU



D'HUY Engineering, Inc.
Est. 1976