

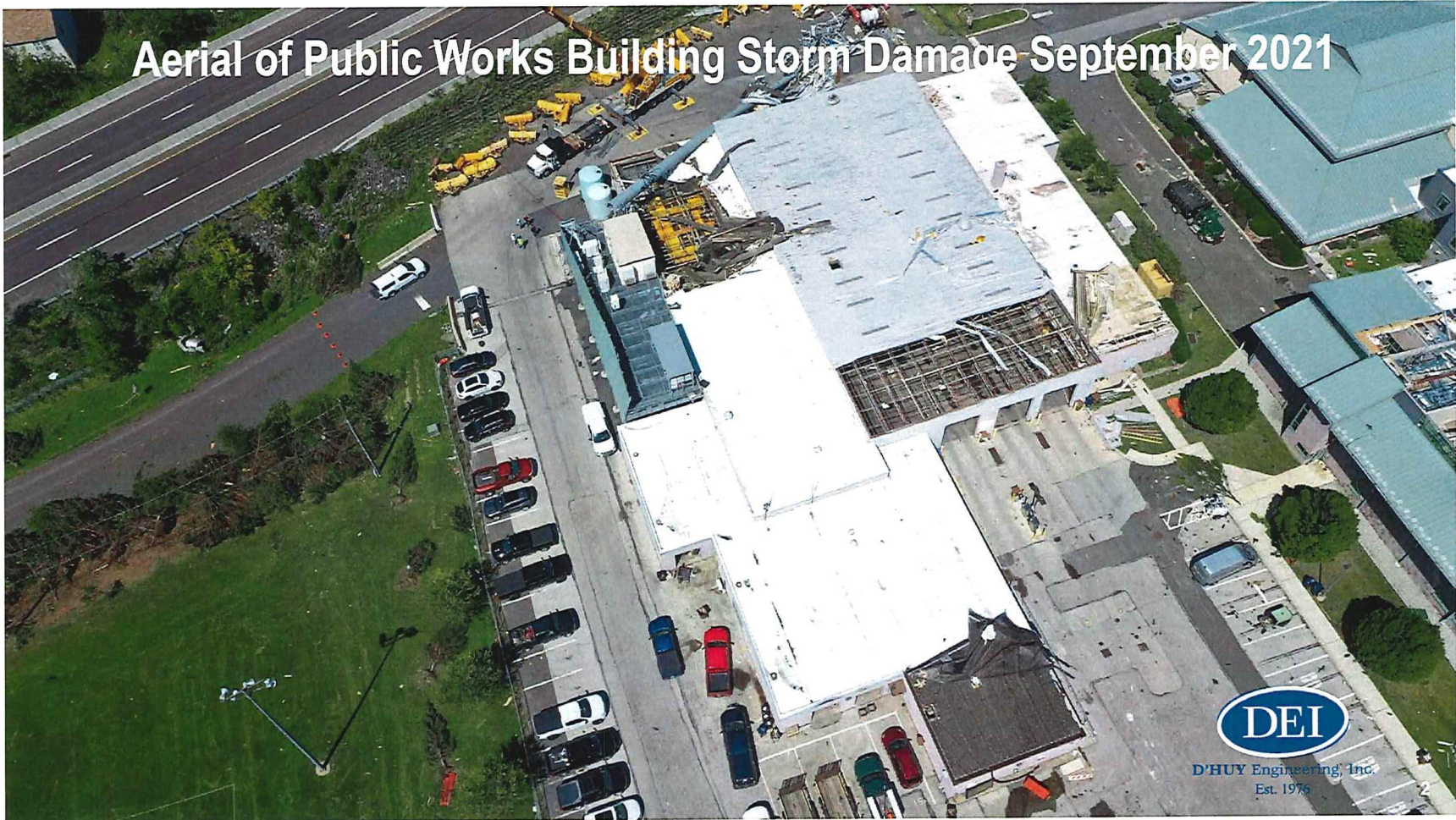
Upper Dublin Township
THE BOARD OF COMMISSIONERS

AUGUST 8, 2023



D'HUY Engineering, Inc.
Est. 1976

Aerial of Public Works Building Storm Damage September 2021



D'HUY Engineering, Inc.
Est. 1976

Aerial view of Township Building Storm Damage September 2021



D'HUY Engineering, Inc.
Est. 1976

Current Aerial View of Township and Public Works Facilities

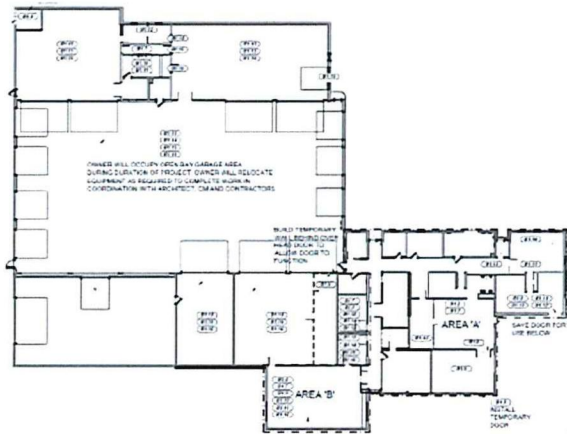


D'Arcy Engineering Inc.
Est. 1976

UPPER DUBLIN TOWNSHIP – PUBLIC WORKS PROJECT



Construction Milestone Dates (Phase 2 – Public Works Building)



UPPER DUBLIN TOWNSHIP PUBLIC WORKS GARAGE RENOVATIONS - PROJECT MILESTONE SCHEDULE		
6/20/23 through 1/12/24		PROJECT MILESTONE DATES
ID	PROJECT MILESTONE ACTIVITY	PROJECT MILESTONE START NO EARLIER THAN / PROJECT MILESTONE FINISH NO LATER THAN
B1.1	NOTICE TO PROCEED ON OR BEFORE	6/20/2023
B1.2	OWNER TO VACATE AREA 'A' BY NO LATER THAN 6/19/23	6/19/2023
B1.3	CONTRACTOR TO COMPLETE MASONRY INFILL OF EXISTING OPENING AND TEMPORARY DOOR AT EXTERIOR	6/20/2023 / 6/30/2023
B1.4	OWNER TO VACATE EXISTING PARTS STORAGE - AREA 'A'	7/3/2023 / 7/7/2023
B1.5	OWNER TO OCCUPY PARTS STORAGE - INSTALL NEW FINISHES, MEP IN OCCUPIED SPACE	7/3/2023 / 12/8/2023
B1.6	INSTALL TEMPORARY PARTITION AT VACATED VEHICULAR BAY - SEE DETAIL	7/3/2023 / 7/10/2023
B1.7	PERFORM SELECTIVE DEMOLITION INCLUDING GC, MC, EC, PC AND COMPLETE NEW WORK INCLUDING NEW MEP SYSTEMS	7/3/2023 / 7/17/2023
B1.8	CONSTRUCT NEW FIRE PUMP/WATER SERVICE ROOM	6/20/2023 / 7/21/2023
B1.9	INSTALL MEP ROUGH-INS FOR NEW WALLS AND CEILINGS	8/11/2023 / 8/18/2023
B1.10	INSTALL PARTITION WALLS	8/11/2023 / 8/18/2023
B1.11	MEP ROUGH-IN INSPECTIONS	8/19/2023
B1.12	COMPLETE GWB/MASONRY WALLS AND CEILING GRID INSTALLATION	9/1/2023 / 9/15/2023
B1.13	COMPLETE PLACEMENT OF FIRE PUMP, ROOFTOP EQUIPMENT, TERMINAL UNITS, AND ELECTRICAL MAIN DISTRIBUTION EQUIPMENT	11/10/2023
B1.14	COMPLETE COORDINATED INSTALLATION OF MEP WALL/CEILING EQUIPMENT, PLUMBING FIXTURES, AND INSPECTIONS TO ALLOW INSTALLATION OF CEILING TILE, FIXTURES, AND FURNISHINGS	11/30/2023
B1.15	COMPLETE ALL FINISHES AND INSTALLATION OF DOORS, SPECIALTIES, CASEWORK, FURNISHINGS, AND FIXTURES	12/22/2023
B1.16	COMPLETE MEP TRIM OUT AND FINAL CONNECTIONS, BEGIN EQUIPMENT START-UP AND COMMISSIONING OF MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL SYSTEMS NO LATER THAN	12/4/2023
B1.17	COORDINATED EFFORT BY ALL CONTRACTORS TO CLEAN ALL BUILDING AREAS TO BE PREPARED FOR EQUIPMENT START UPS	12/3/2023
B1.18	START UP AND COMMISSION ALL COMMUNICATIONS, DATA, SIGNALING, SECURITY AND SAFETY EQUIPMENT	12/5/2023
B1.19	PUNCHLIST PREPARATION AND CONTRACTORS TO BEGIN CORRECTION OF PUNCHLIST ITEMS	12/8/2023
B1.20	SCHEDULE AHI FINAL INSPECTIONS	12/5/2023
B1.21	CONTRACTORS TO COMPLETE ALL BUILDING PUNCHLIST ITEMS	12/20/2024
B1.22	COMPLETION OF ALL BUILDING CONSTRUCTION ACTIVITIES - SUBSTANTIAL COMPLETION	12/29/2023
B1.23	OWNER TO MOVE IN AND OCCUPY THE BUILDING	12/30/2023
B1.24	FINAL PROJECT COMPLETION	1/12/2024

Complete
Underway
Scheduled



UPPER DUBLIN TOWNSHIP – PUBLIC WORKS PROJECT



Managing Costs

Budget:

Contract	Contract Amount	Executed Change Orders	Change Orders to Date as % of Contract	Original Material Allowance	Remaining Material Allowance
General Contractor: LBI Construction, LLC	\$1,769,000	-	0.00%	\$79,609	\$79,609
Mechanical Contractor: Shannon A. Smith, Inc.	\$835,000	-	0.00%	\$29,612	\$29,612
Electrical Contractor: Brendan Stanton, Inc.	\$1,472,000	-	0.00%	\$50,370	\$50,370
Plumbing Contractor: Hirschberg Mechanical, Inc.	\$ 508,890	-	0.00%	\$14,625	\$14,625
Total:	\$4,584,890.00	\$ -	0.00%	\$174,217	\$174,217
Current Remaining Project Contingency: \$					

Project is under Budget as planned

UPPER DUBLIN TOWNSHIP – PUBLIC WORKS PROJECT



CMU for new offices complete



Locker Room shower reconstruction begins



New Crane Bay in use



Park and Rec Offices taking shape

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

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



UPPER DUBLIN TOWNSHIP – PROJECT GOALS



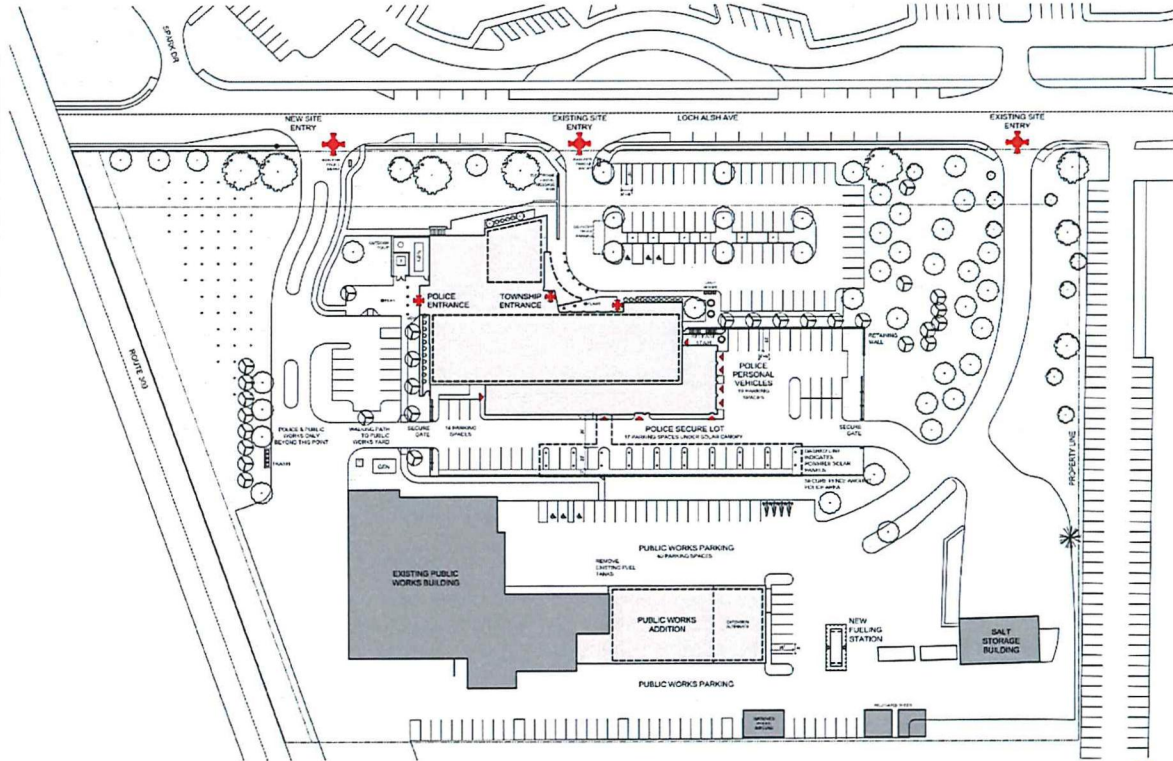
PROJECT GOALS

- 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



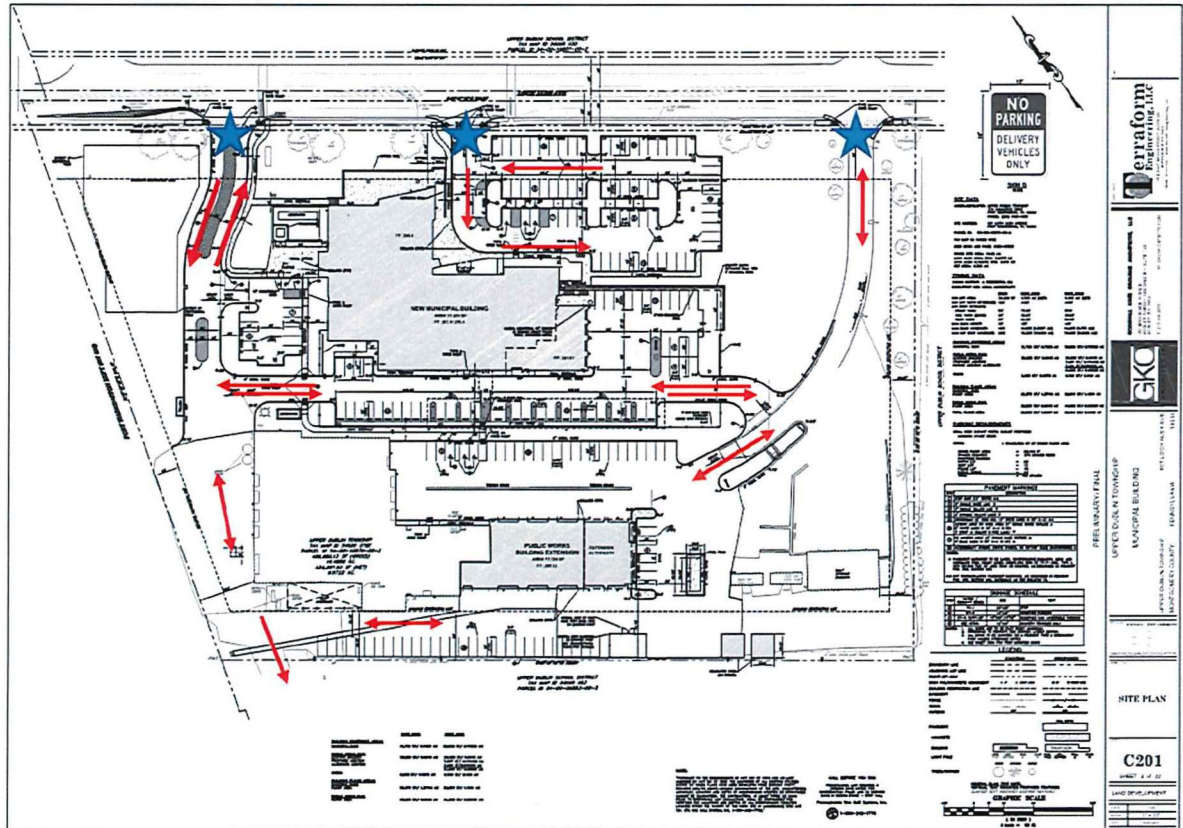
Summary / Comparison of Parking (current & Proposed)		
	Old 801 Facility:	Proposed Layout:
Public & Staff Parking (North & West Lots)	150	81
Police	36	44
Public Works	55	64
	241	189
Day-time Need (parking spcs)		
	In Public Lot	In Police Lot
Administration Staff		
Reception	2	
Tax Collector	2	
Manager	6	
Finance	5	
Communications, HR, IT	3	
Code Enf, Eng, Zoning	16	
Parks and Recreation	6	
Police (@ shift change)		
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 - PROPOSED SITE PLAN



D'HUY Engineering, Inc.
Est. 1976



Building Coverage

- Maximum Allowed 15%
- Existing 16.68%
- Proposed 19.20%

Impervious Surface Coverage

- Maximum 25%
- Existing 75.33%
- Proposed 73.28%

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** 32,028 SF
- Public Works Building** 30,255 SF
- Proposed Addition 7,687 SF
 - Future Addition 3,456 SF

★ Public Access from Loch Alsh Avenue

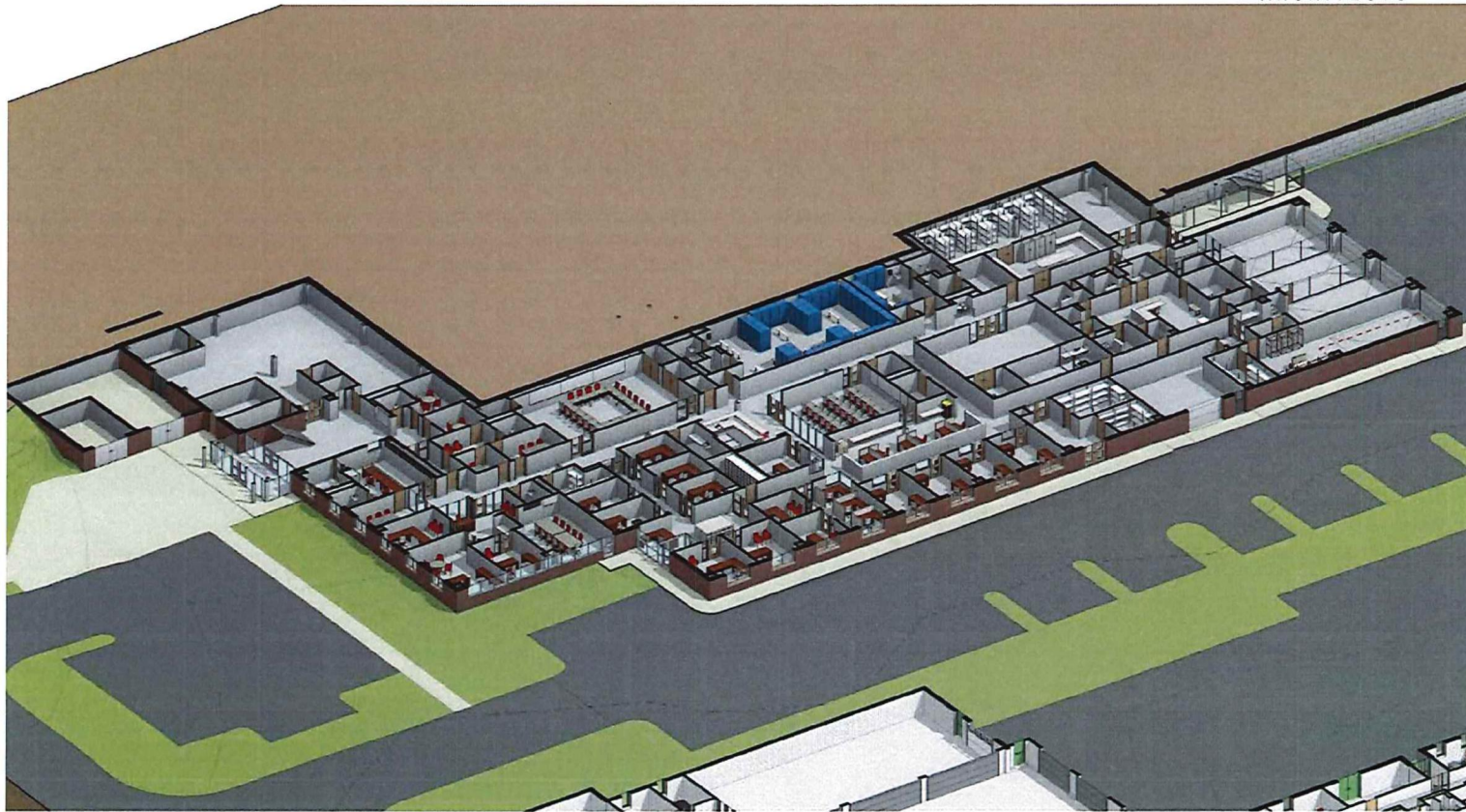
UPPER DUBLIN TOWNSHIP – LOWER-LEVEL FLOOR PLAN



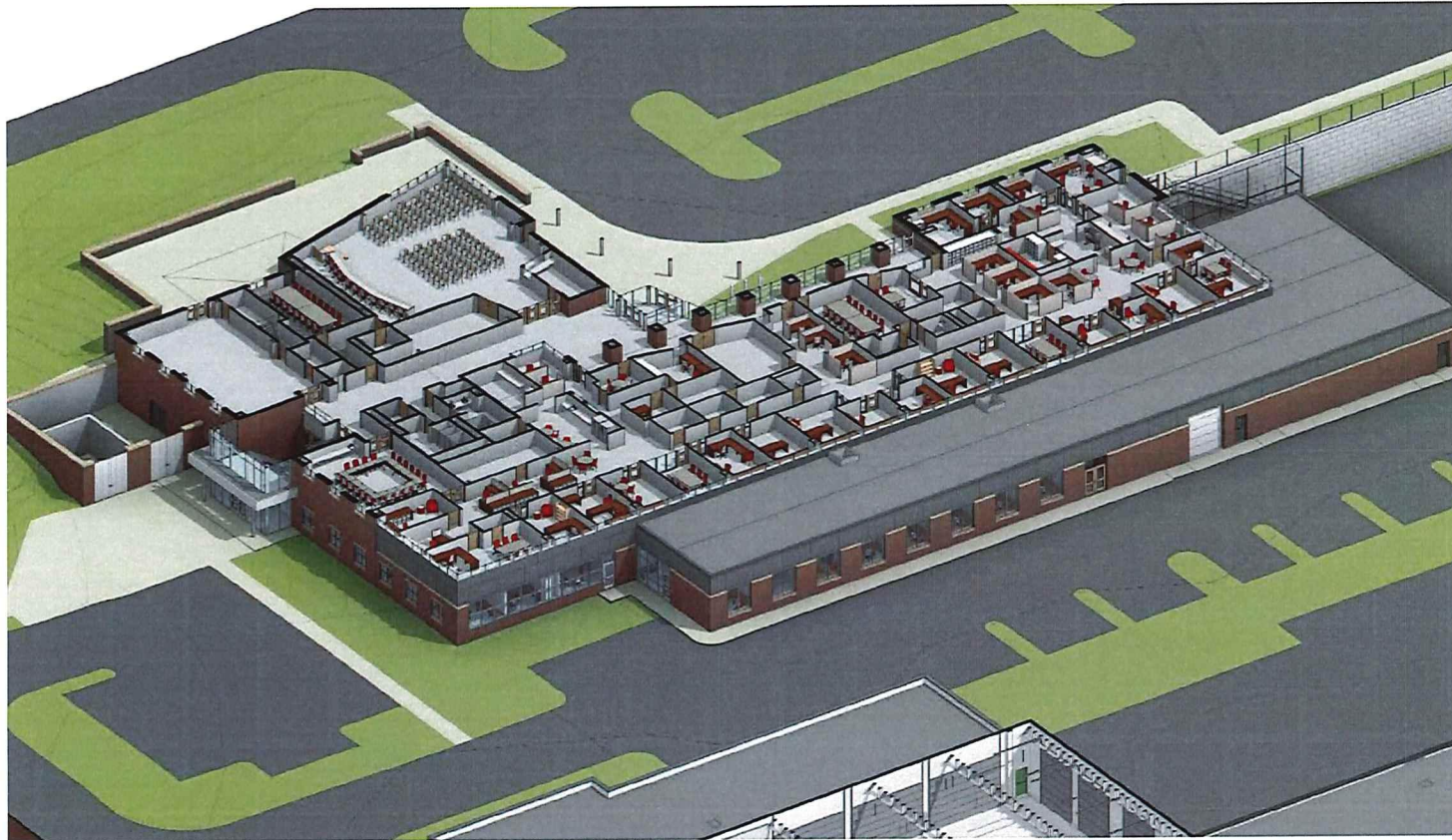
UPPER DUBLIN TOWNSHIP – UPPER-LEVEL FLOOR PLAN



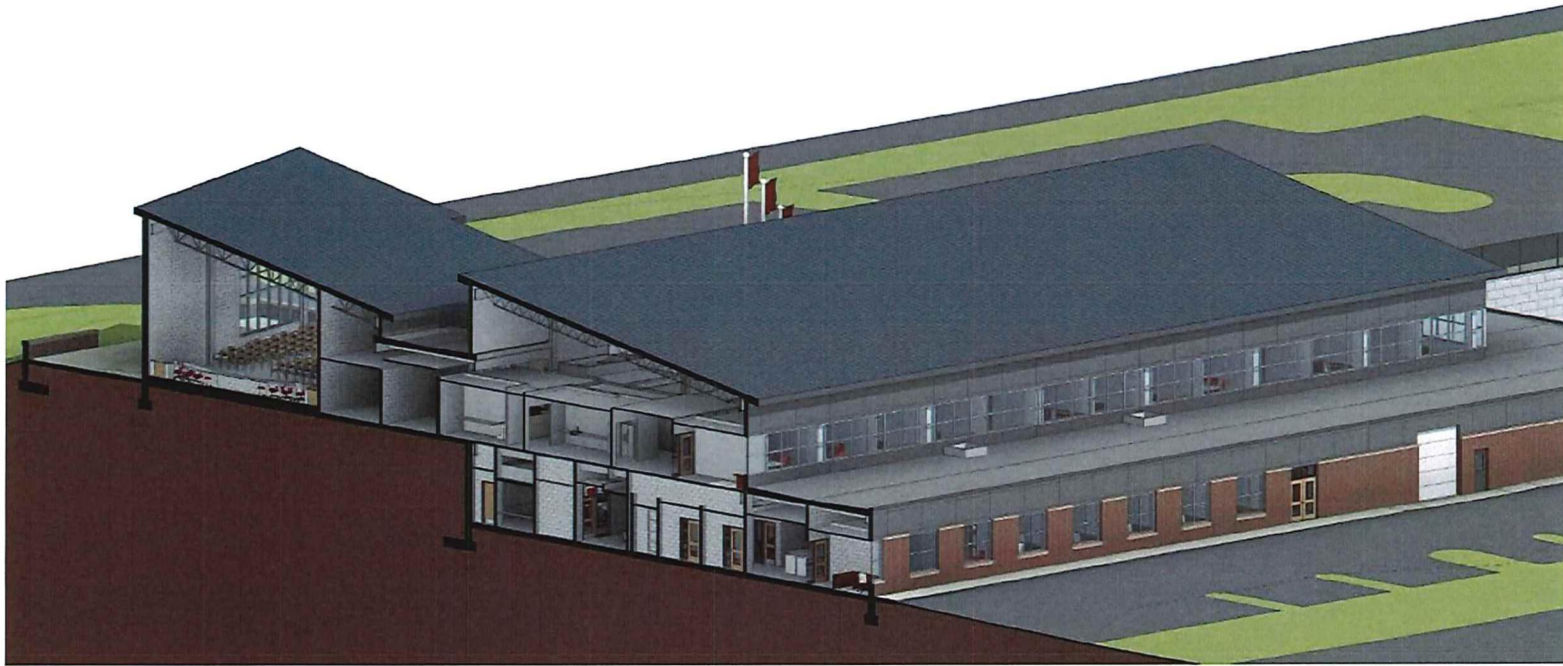
UPPER DUBLIN TOWNSHIP – LOWER-LEVEL AXON PLAN



UPPER DUBLIN TOWNSHIP – UPPER-LEVEL AXON PLAN



UPPER DUBLIN TOWNSHIP – BOARD ROOM SECTION



UPPER DUBLIN TOWNSHIP – VALUE ENGINEERING



Value Engineering Study Overview		
VE Phase	Description of Work Performed	Date
Phase 1	The Value Engineering ("VE") kickoff meeting was held. The team was introduced to the concept of value engineering. The team reviewed the current project scope, design drawings, and renderings.	May 25th
Phase 2	The team brainstormed and submitted a total of 109 different VE ideas, which were tabulated by trade along with advantages and disadvantages.	3 weeks
Phase 3	The team reviewed all VE ideas and scored them by Gut Feel Index (GFI), ranging from 0-3.	June 27th
Phase 4	DEI researched and produced estimated costs or savings for each of the 70 VE idea that had a score of "2" or "3".	3 weeks
Phase 5	Final meeting to report and review VE summary. The team discussed 14 VE ideas that had a score of "2" and made a final decision on each idea. All VE ideas that received a "3" were briefly reviewed and decisions were confirmed.	July 20th

The Value Engineering Study team was made up of individuals from Upper Dublin's Township Administration Staff, UDT Police, Godshall Kane O'Rourke Architects, Terraform Engineering, Snyder-Hoffman Engineering, D'Huy Engineering, Boles Smyth Associates, and Practical Energy Solutions.

UPPER DUBLIN TOWNSHIP – OVERALL BUDGET



Value Engineering Study Summary of Estimated Costs/Savings				
Row #	VE Description	Estimated Savings from VE Ideas	Estimated Cost of Added Value Ideas	Estimated Value of Defined Alternates
1	Reduce the size of the New Township Administration and Police Facility by approximately 7,400 SF.	\$ 2,700,000		
2	Document an Add Alternate for two additional garage bays for the Public Works Garage Addition.			\$ 1,000,000
3	Remove mill & overlay of existing asphalt paving to remain from project scope. Mill & overlay will be performed by UDT Public Works crews.	\$ 173,500		
4	Construct large retaining wall with segmented block in lieu of cast-in-place concrete with masonry veneer.	\$ 339,100		
5	Delete connecting-portion of Police Canopy.	\$ 73,800		
6	Provide a single-ply EPDM roof in lieu of a built-up roof for all of the New Township Building's low-sloped roof areas.	\$ 114,000		
7	Provide ground-source heat pump HVAC system with VAV's for new Township Building facility.		\$ 1,144,000	
8	Document a lightning protection system for the new Township Building as an add alternate.			\$ 203,400
9	Design emergency power generator system to allow for full-building emergency power in lieu of partial-building emergency power coverage.		\$ 218,000	
10	Document alternates for photovoltaic systems to serve the New Township Administration and Police Facility.			\$ 1,275,200
11	Value of All Other VE Ideas that were Evaluated During the VE Study	\$ 778,050	\$ 589,825	\$ 93,925
12	Total Estimated Values of All VE Ideas included in Budget	\$ 4,178,450	\$ 1,951,825	\$ 2,572,525

UPPER DUBLIN TOWNSHIP – BUDGET (February 2023)



Description	Estimated Cost
Option 3 New Township Project	\$37.5M
Crane Bay and Emergency Repairs Project	\$3.5M
Phase 1 of the Public Works Renovations Project	\$5.0M
Phase 2 of the Public Works Addition, Fueling Station, and Sitework (To be included with Township Building Replacement scope of work)	\$4.0M
Soft Costs for Phase 1 and Phase 2 of the Public Works Renovations and Additions Project.	\$2.2M
SUBTOTAL	\$52.2M
Insurance Reimbursement (\$20.5M + \$4.1M)	\$24.6M
Insurance Reimbursement Pending (TBD)	TBD
Township Funding	TBD

UPPER DUBLIN TOWNSHIP – BUDGET (August 2023)



Item	Option 3 New Township Building Project 52,000 SF DD Budget	Crane Bay and Emergency Repairs Project	Phase 2 Public Works Renovations Bids Received May 19th, 2023 (Base Bid)	Phase 3 Public Works Addition 60% CD Budget March 28th, 2023 (Base Bid)	Comments
General Construction Contractor	\$ 18,701,900		\$ 1,769,000	\$ 3,375,000	
#1 - Additional 2-Bay garage addition (including soft costs)				\$ 1,000,000	Cost of Add Alternate #1 is NOT included in the Phase 3 Budget
Mechanical Construction Contractor	\$ 4,004,000		\$ 835,000	\$ 335,000	
Electrical Construction Contractor	\$ 3,793,000		\$ 1,472,000	\$ 490,000	
Plumbing Construction Contractor	\$ 1,336,300		\$ 508,890	\$ 215,000	
TOTAL CONSTRUCTION COSTS	\$ 27,835,200	\$ 3,295,286	\$ 4,584,890	\$ 4,415,000	
Design Fees, Permits, Approvals, 3rd Party Inspections, and FF&E	\$ 4,404,800	\$ -	\$ 1,006,000	\$ 354,000	
Construction Contingency	\$ 2,500,000		\$ 290,000	\$ 550,000	
Design/Estimating Contingency & Current Market Conditions	\$ 2,760,000				
TOTAL SOFT COSTS	\$ 9,664,800	\$ -	\$ 1,296,000	\$ 904,000	\$2.2 million in total soft costs presented to BOC on 2-14-2023.
OWNER REQUEST & UNFORSEEN CONDITIONS		\$ 162,966			
TOTAL PROJECT COSTS without FINANCING	\$ 37,500,000	\$ 3,458,252	\$ 5,880,890	\$ 5,319,000	
TOTAL PROJECT COSTS OF NEW TOWNSHIP BUILDING AND PUBLIC WORKS ADDITION AND RENOVATIONS				\$ 52,158,142	
TOTAL PROJECT COSTS Presented to BOC on 2-14-2023.				\$ 52,200,000	

**UPPER DUBLIN TOWNSHIP – ALTERNATE BID –
EARLY COMPLETION INCENTIVE**



If Owner accepts the Alternate Bid for early completion:

Incentive will:

- 1. Reinforce completion date importance.**
- 2. Provide confidence to all primes of milestone dates = allocate resources = savings**
- 3. Enhances coordination, cooperation, and execution of all Primes = savings**

Conditions:

1. The Work of all Contracts must be substantially complete before December 12, 2025.
2. All local/state agency approvals for occupancy must be obtained.
3. All finishes except punchlist items must be complete.
4. All MEP and General systems must be tested and fully operational.
5. All site work must be complete except punchlist items.

The amount of payment for each calendar day starting for Work completed a minimum of 5 days prior to Substantial Completion and up to a maximum of 20 days prior to Substantial Completion shall be calculated as follows:

- General Construction: $\$50,000 + (\$10,000 \times 15) = \$200,000$
- Mechanical Construction: $\$20,000 + (\$3,500 \times 15) = \$72,500$
- Electrical Construction: $\$20,000 + (\$4,000 \times 15) = \$80,000$
- Plumbing Construction: $\$10,000 + (\$2,500 \times 15) = \$47,500$

Total Early Completion Incentive Value: \$400,000

EXTERIOR RENDERING OF NEW BUILDING



Main Drive

EXTERIOR RENDERING OF NEW BUILDING

GKO
ARCHITECTS

DEI
D'HUY Engineering, Inc.
Est. 1976



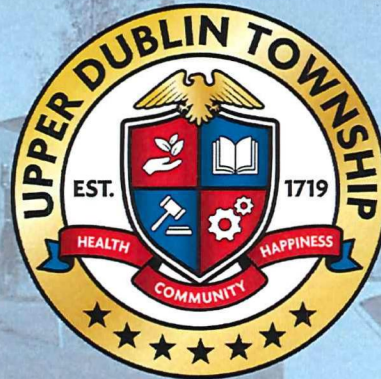
Main Parking Lot

EXTERIOR RENDERING OF NEW BUILDING



Police Entrance

THANK YOU



D'HUY Engineering, Inc.
Est. 1976