

THE INTERSECTION OF ACCOUNTING AND ENGINEERING MAHER DUESSEL



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DECEMBER 11, 2024

MDCPA.CNF.IO

- ▶ Navigate to <https://mdcpa.cnf.io> and tap the session titled "3: The Intersection of Accounting and Engineering"
- ▶ OR just point your phone's camera at the QR code to join directly



GOALS OF PRESENTATION

1. To outline where accounting and engineering come together to help make successful projects.
2. To provide examples of the use of accounting and data in engineering projects.
3. To provide exposure into various subjects where private consulting in engineering and accounting overlap.



SPEAKER INTRODUCTIONS

Daniel S. Deiseroth, P.E., President Emeritus

- Graduate of Bucknell University
- 39 Year employee, Shareholder 1989 to 2021, Past President and Board of Directors Member
- Current Practice Focus-Local Government representation, Private Consulting and Expert Work
- Registered professional engineer in seven states

Ryan R. Berner, GISP, Project Manager, Shareholder

- Graduate of Indiana University of Pennsylvania
- Started with Gateway in 2003
- Practice Focus-Geographic Information Systems for Public and Private Clients



AGENDA

- Gateway Engineers – Who we are and What we do
- Advisory and Consulting
 - Engineering Budgets
 - Bond Funded Projects
 - Contracting
 - GIS and Asset Management
 - Utility Fee Development
 - Expert Services
- Grants
- Questions



GATEWAY ENGINEERS – WHAT WE DO

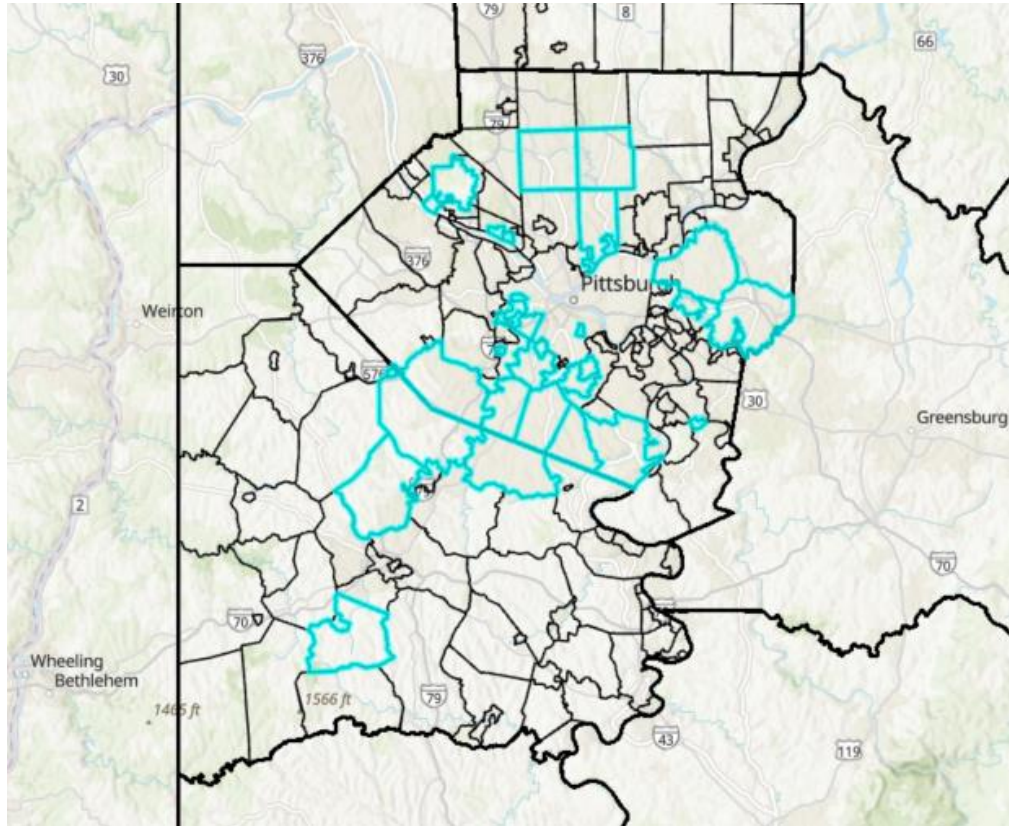
- Full service engineering firm – 70 years in the industry
- Offices in Pittsburgh, Butler PA and Selma, North Carolina
- Service municipal, private, and non-profit clients
 - 5,000+ projects completed last year for over 850 clients
 - Approximately 1/3 of our business is local government
 - We represent over 40 local governments and Authorities
 - Work with some of the largest non-profits in the area

“Full Service” in the Civil Engineering field means surveying, environmental engineering, geotechnical engineering (Underground Work), infrastructure for both public and private clients, traffic engineering and structural engineering.

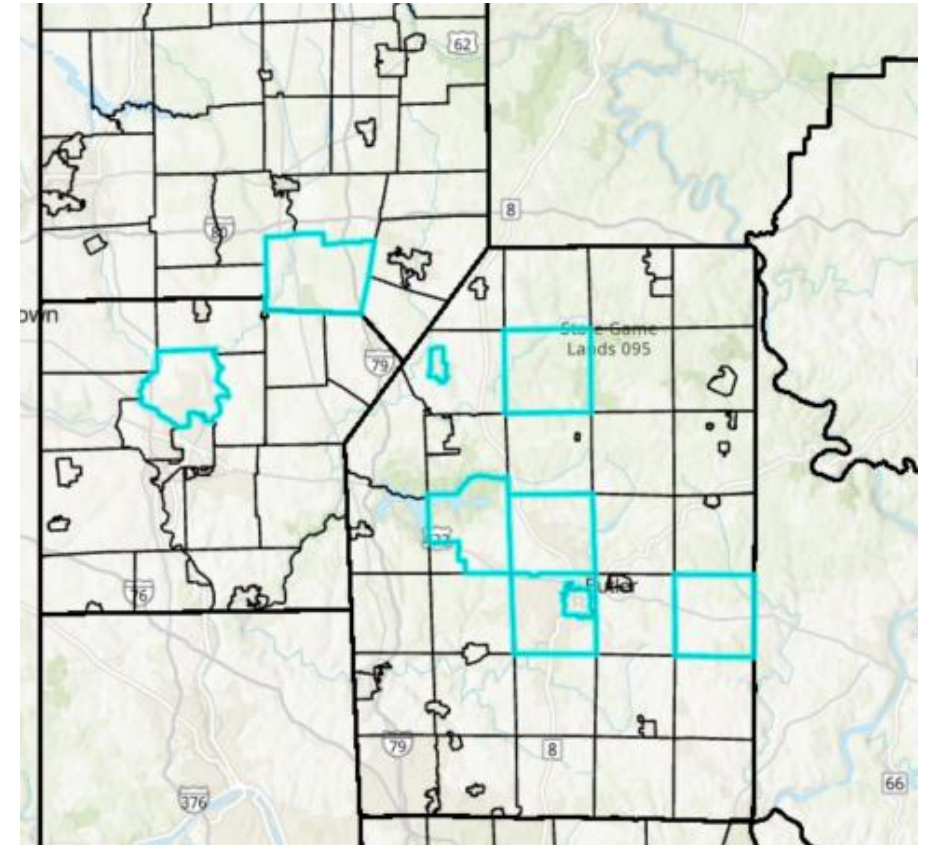
Project Focused Organization-Scope, Schedule, Budget and Client Satisfaction



MUNICIPAL CLIENTS



- Core of our municipal clientele is located in southwestern PA
 - Allegheny
 - Butler
 - Lawrence
 - Mercer
 - Washington
- Working with several municipal clients in Harrisburg area



REVIEW OF SERVICES ADVISORY AND CONSULTING



ADVISORY AND CONSULTING BUDGET REVIEW

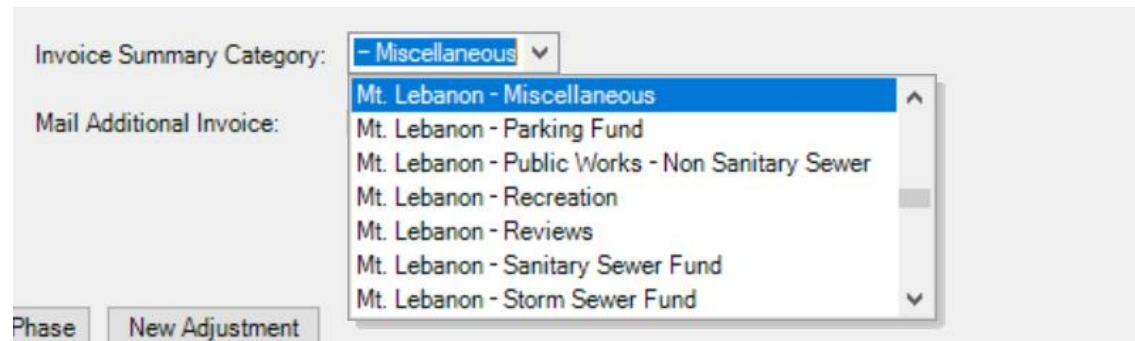
Background

Gateway uses Ajera as its accounting Software and has proprietary sequel systems to furnish financial data to Project Managers;

Weekly Project Financial Summary Reports (PFSR) are provided

Project Budgets established with labor and expenses

Categorized further into project types



The screenshot shows a software interface with a dropdown menu. The label 'Invoice Summary Category:' is followed by a dropdown box currently displaying '- Miscellaneous'. Below this, a list of categories is visible, including 'Mt. Lebanon - Miscellaneous' (which is highlighted in blue), 'Mt. Lebanon - Parking Fund', 'Mt. Lebanon - Public Works - Non Sanitary Sewer', 'Mt. Lebanon - Recreation', 'Mt. Lebanon - Reviews', 'Mt. Lebanon - Sanitary Sewer Fund', and 'Mt. Lebanon - Storm Sewer Fund'. To the left of the dropdown, the text 'Mail Additional Invoice:' is visible. At the bottom left of the interface, there are two buttons labeled 'Phase' and 'New Adjustment'.

ADVISORY AND CONSULTING BUDGET REVIEW



PROJECT FINANCIAL REPORT BY PM PROJECT MANAGER

DEISEROTH, DANIEL S.

WEEK OF: 11/24/2024 - 11/30/2024

Project #	Project Name	PIC	HOURS		LABOR			ODC		Contract Amount	Revenue	Total Billed	WIP	Total Received	Last Invoiced	NEM	
			Budget	Actual	Budget	Actual	%	Budget	Actual							Budget	Actual
☐ SUMMARY FOR 110 PROJECTS:			4,423	10,103	388,159	370,811	96%	37,311	48,794	1,443,883	1,337,307	1,314,171	30,808	1,197,147		3.62	3.47
☑ C-15522-0093	PA DOT Survey	ALR	6	13	333	437	131%	0	0	1,000	1,000	0	1,640	0		3.00	2.29
☑ C-19187-2024	FTS Report Revi	ALR	33	33	2,000	1,822	91%	0	0	10,000	8,643	8,400	243	8,100	11/14/2024	5.00	4.74
☑ C-19512	Elite Dance Exp	MGA	40	42	2,277	2,236	98%	0	0	8,200	8,024	8,024	0	8,024	9/1/2023	3.60	3.59
☑ C-19901-0001	Birmingham Ceme	ALR	0	2	142	157	111%	0	0	500	500	0	630	0		3.52	3.18
☑ C-25000-0029	Bulter Twp. Mis	ALR	8	3	285	92	32%	0	0	1,000	360	360	0	288	11/21/2024	3.51	3.92
☑ C-25000-2024	Butler Twp. Ret	ALR	30	24	1,600	1,192	74%	0	0	4,800	4,216	4,000	216	3,600	11/21/2024	3.00	3.54
☑ C-35000-2024	Misc.Engineerin	ALR	40	54	1,818	2,555	141%	0	12	6,000	7,439	7,729	1,255	7,439	11/1/2024	3.30	2.91
☑ C-35213-0007	Baierl Parking	MGA	60	56	1,973	1,800	91%	0	2	7,500	6,992	6,992	0	6,992	4/4/2024	3.80	3.88
☑ C-35514-0003	Clean Fill Har	MGA	16	0	789	0	0%	0	0	3,000	0	0	0	0		3.80	

ADVISORY AND CONSULTING BUDGET REVIEW

Clients Budget Annually for Engineering Services

Township of Upper St. Clair - Engineering Analysis 2013 - 2017 and 2018 Budget Planning

Engineering Categories	Annual Billings										5Yr Weighted Avg.	Gateway Client Average	2018 Budgets (Provided by Client)		
	2013		2014		2015		2016		2017				\$	%	
Street Improvements	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0	0%	\$0	0%	9%	\$0	0%
Zoning/Code Enforcement	\$9,924	7%	\$13,637	8%	\$5,517	3%	\$4,981	2%	\$6,328	2%	\$7,021	3%	3%	\$0	0%
Public Works	\$4,284	3%	\$17,504	10%	\$11,060	6%	\$64,922	21%	\$56,622	16%	\$41,018	15%	7%	\$76,600	25%
Parks	\$3,379	2%	\$31,584	18%	\$99,709	50%	\$110,883	36%	\$13,235	4%	\$58,359	21%	7%	\$0	0%
Storm Drainage	\$0	0%	\$7,615	4%	\$424	0%	\$0	0%	\$0	0%	\$1,100	0%	7%	\$60,000	19%
Sanitary Sewer	\$113,230	82%	\$75,263	44%	\$68,485	34%	\$92,594	30%	\$262,579	74%	\$143,499	52%	61%	\$175,000	56%
General/Other	\$7,341	5%	\$27,215	16%	\$15,224	8%	\$37,549	12%	\$16,418	5%	\$22,649	8%	6%	\$0	0%
Totals:	\$138,157	100%	\$172,819	100%	\$200,420	100%	\$310,928	100%	\$355,183	100%	\$273,645	100%	100%	\$311,600	100%
Land Development Review (Reimbursed 100% by Applicant)	\$37,457		\$59,097		\$49,059		\$46,157		\$73,429		\$56,973				



ADVISORY AND CONSULTING BOND AND DEBT REVIEW

Opinions of Cost

Engineers are asked to determine project budgets

Can only provide opinions of cost- Costs used are based upon past project costs and may not reflect current market conditions

Contingencies included and dependent upon level of information



ADVISORY AND CONSULTING BOND AND DEBT REVIEW



Date: September 20, 2024
Project: McNeilly Fields
Job No: C-97075-0010

Preliminary Design **Base** Opinion of Cost for Community Park Along McNeilly Road

	Units	Quantity	Unit Price	Cost	Subtotal
EASEMENT					\$110,000.00
Easement Acquisition (Allowance)	L.S.	1.0	\$110,000.00	\$110,000.00	
DEMOLITION					\$181,750.00
Clearing and Grubbing	Acre	19.0	\$8,250.00	\$156,750.00	
Miscellaneous Site Demolition	L.S.	1	\$25,000.00	\$25,000.00	
EROSION CONTROL					\$1,037,500.00
Per Acre (Allowance)	Acre	19.0	\$12,500.00	\$237,500.00	
Stream Mitigation (Allowance)	L.S.		\$800,000.00	\$800,000.00	
EARTHWORK					\$2,190,000.00
Cut Placed as Fill	C.Y.	300,000	\$7.15	\$2,145,000.00	
Benching Toe Key and Underdrain	L.F.	1,500	\$30.00	\$45,000.00	
UTILITIES					\$1,402,000.00
Storm Sewer System	L.S.	1	\$600,000.00	\$600,000.00	
Storm Water BPM's	L.S.	1	\$300,000.00	\$300,000.00	
Sanitary Sewer System	L.S.	1	\$255,000.00	\$255,000.00	
Gas Line	L.F.	1,000	\$45.00	\$45,000.00	
Water Line	L.F.	1,400	\$80.00	\$112,000.00	
Water Meter Pit	L.S.	1	\$60,000.00	\$60,000.00	
Electric Line	L.S.	1,200	\$25.00	\$30,000.00	
SITE IMPROVEMENTS					\$662,200.00
Standard Duty Asphalt Paving	S.Y.	5,000	\$60.00	\$300,000.00	
Concrete Pavement	S.F.	1,250	\$20.00	\$25,000.00	
Infield Mix	S.Y.	1,235	\$40.00	\$49,400.00	
Pitchers Mound and Batters Box Soil	S.Y.	70	\$40.00	\$2,800.00	
Site Signage	L.S.	1	\$20,000.00	\$20,000.00	
Dumpster Enclosure	L.S.	1	\$20,000.00	\$20,000.00	
Baseball Field	L.S.	1	\$245,000.00	\$245,000.00	

ADVISORY AND CONSULTING

BOND AND DEBT REVIEW

DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL
LANDSCAPE PLANTING				\$401,900.00
Deciduous Trees	Each	125	\$525.00	\$65,625.00
Evergreen Trees	Each	125	\$525.00	\$65,625.00
Seedlings	Each	300	\$100.00	\$30,000.00
Shrubs	Each	500	\$55.00	\$27,500.00
Athletic Seed Mix	S.Y.	32,000	\$4.00	\$128,000.00
Steep Slope Seed Mix with Blanket	S.Y.	8,700	\$4.50	\$39,150.00
Seed Mix	Acres	8.0	\$4,500.00	\$36,000.00
General Cleanup	L.S.	1	\$10,000.00	\$10,000.00
SUBTOTAL - BASE				\$5,985,350.00
Construction Contingency 20%				\$1,197,070.00
Engineering and Inspection				\$598,535.00
TOTAL				\$7,780,955.00

NOTES:

- A. All costs calculated above are based on publicly bid unit prices.
- B. The above prices represent a preliminary budget analysis and does not include the following:
 - 1. Permit Fees
 - 2. Geotechnical Investigation
 - 3. Offsite utility extensions
 - 4. Land Acquisition or Grading Easements
- C. Stream mitigation is a DEP allowance based on similar projects. Actual costs to be determined during the permitting process.



ADVISORY AND CONSULTING BOND AND DEBT REVIEW

Approach on Bond Issuance

First Issuance based upon engineer's opinion of cost

Public Bids requested

Second Issuance based upon bids received and contingency for change orders

Typically 5% of bids



ADVISORY AND CONSULTING BOND AND DEBT REVIEW



Photo taken
11/29/2023



ADVISORY AND CONSULTING BOND AND DEBT REVIEW

	Contract Amount	Pay App 1	Pay App 2	Pay App 3	Pay App 4	Pay App 5	Pay App 6
General Construction Contract - Uhl Construction Company	\$4,519,500.00	\$ 56,563.72	\$ 521,432.48	\$ 312,700.05	\$ 165,379.90	\$ 949,277.00	\$ 381,452.99
Sewer Extension Contract - J. Stewart Excavating	\$102,367.00	\$ 68,913.00	\$ 33,454.00				
Electrical Contract - SE Schultz Electric	\$735,000.00	\$ 11,265.30	\$ 4,230.00	\$ 23,118.84	\$ 8,326.88	\$ 33,039.66	\$ 34,814.06
Plumbing Contract - First American Industries, Inc	\$649,900.00	\$ 117,990.00	\$ 158,400.00	\$ 22,860.00	\$ 39,780.00	\$ 104,735.00	
Mechanical Contract - East West Manufacturing & Supply Co	\$1,088,700.00	\$ 117,972.00	\$ 97,612.00				
Fire Protection Contract - Alliance Fire Systems	\$250,000.00	\$ 26,325.00	\$ 8,775.00	\$ 67,410.00	\$ 37,655.00		
Fuel Station - A. Graziani & Company	\$430,000.00						
Final Payment to Mike Stewart on Early Site work Building Changer Orders Approved Shultz (Electric Service)	\$109,968.00						
	\$6,052.62						
	\$7,891,487.62						
AVAILABLE CASH FIRST Borrow	\$1,650,317.27						
AVAILABLE CASH Second Borrow	\$3,101,396.76						



ADVISORY AND CONSULTING BOND AND DEBT REVIEW

Total Available	\$4,751,714.03				
Excess After Payment of Contracts	\$1,258,760.76				
Public Works Equipment (Lifts and Cranes)	\$400,000.00				
Construction Administration (Gateway and LLI) Estimated	\$75,000.00				
Available for Change orders	\$783,760.76		9.93%	Percentage of Total Contract	



ADVISORY AND CONSULTING BOND AND DEBT REVIEW



And when you get all the numbers right, you celebrate by cutting the gold ribbon



ADVISORY AND CONSULTING CONTRACTING



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ADVISORY AND CONSULTING CONTRACTING

Background

Gateway assists local governments with public contracting of projects.

Process Includes:

Advertisement

Pre-bid meetings

Addendums to bids

Opening of bids

Analyzing and making recommendations for bids



ADVISORY AND CONSULTING CONTRACTING

Best Practices Bidding

Prevailing Wage Rates Required

Mathematical check and ability to withdraw bid

Non-collusion affidavit

Construction

Monitor progress and process pay estimates

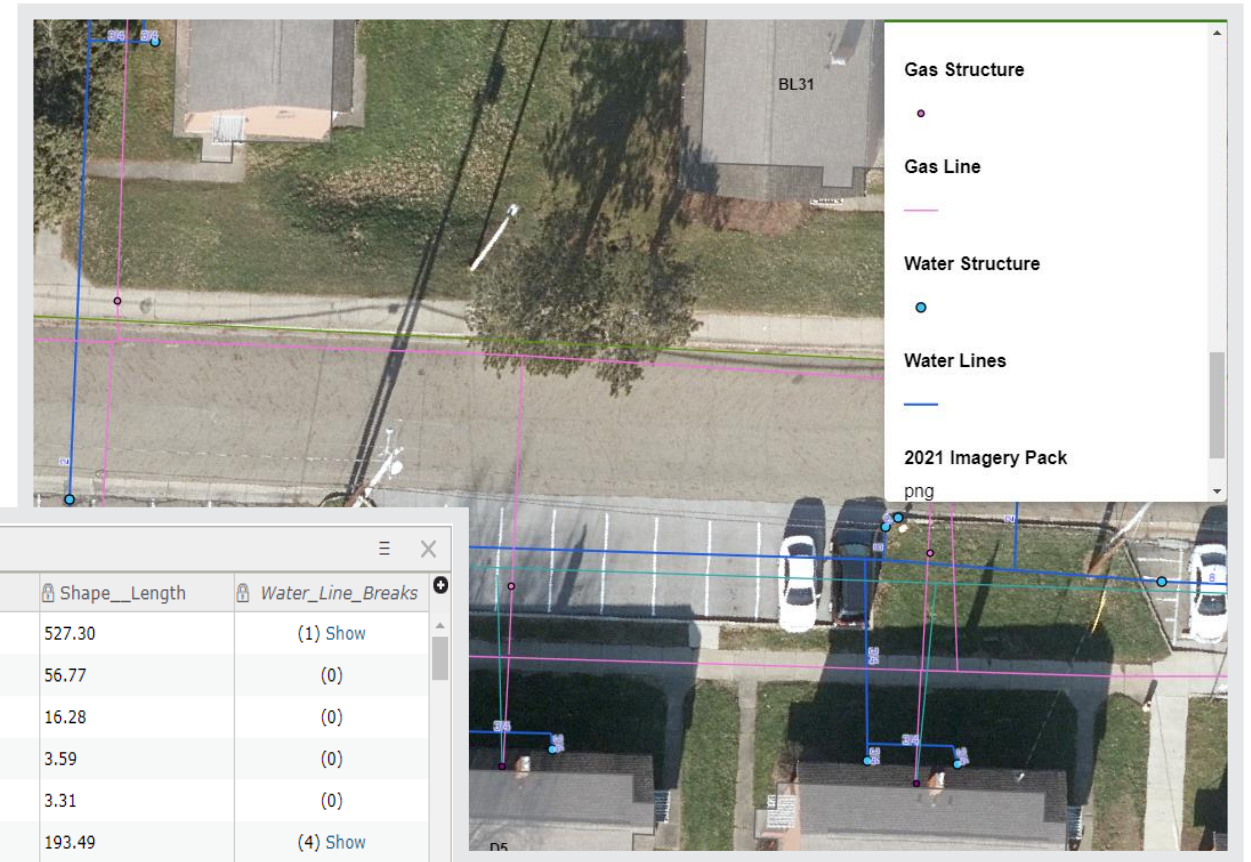
Review and recommend change orders

Address liquidated damages



ADVISORY AND CONSULTING – GIS AND ASSET MANAGEMENT (WHAT IS GIS?)

- GIS (Geographic Information System) what is it?
 - System of information that bridges two types of data
 - Location
 - Layers that make up the features on the map
 - Attributes
 - Information about the features on the map



ADVISORY AND CONSULTING GIS AND ASSET MANAGEMENT

- Analyze data more closely
 - Filter out items of interest
 - Location
 - Specific data

Filter: Water Lines

Create + Add another expression Add a set

Display features in the layer that match the following expression

Pipe_Material is Cast Iron Pipe Ask for values

Cast Iron Pipe
 Ductile Iron Pipe
 Polyethylene Pipe
 Polyvinyl Chloride Pipe
 Other



St. Francis Hall

Water Lines (Features: 464, Selected: 76)

Feature_ID	Status	Diameter	Pipe_Material	Year_Built	Notes	Shape__Length	Water_Line_Breaks
Waterline-18	Existing	4	Ductile Iron Pipe			15.83	(1) Show
Waterline-19	Existing	8	Ductile Iron Pipe	2003	12" Tie in to existing 8" line	559.36	(0)
Waterline-21	Existing	6	Ductile Iron Pipe	1995		128.55	(0)
Waterline-22	Existing	6	Ductile Iron Pipe	1995		303.75	(0)
Waterline-28	Existing	4	Ductile Iron Pipe			62.44	(0)
Waterline-29	Existing	6	Ductile Iron Pipe	1995		22.72	(0)
Waterline-34	Existing	4	Ductile Iron Pipe			216.81	(0)

ADVISORY AND CONSULTING - GIS AND ASSET MANAGEMENT – SANITARY SEWERS

Comprehensive Asset Manager - Sanitary CCTV Inspections

Sanitary CCTV Dashboard

Search by Segment ID: [] Date: []

Asset Category	Segment ID	Date	Action
CCTV	926-278/926-3786	3/14/2023	View
DEFECTS	926-299/926-278	3/14/2023	View
SEWER PIPES	926-437/926-299	3/14/2023	View
LINE REPAIR	926-4087/926-5061	2/27/2023	View
STRUCTURE REPAIR	926-947/926-944	2/27/2023	View
MANHOLE REHAB	926-946/926-947	2/27/2023	View
MANHOLE INSPECTION	926-5061/926-946	2/27/2023	View
TREATMENT	926-489/926-5087	2/27/2023	View
BACKWATER VALVES	926-4912/926-491	2/27/2023	View
ARCHIVE REPAIRS	926-565/926-549	2/17/2023	View
FLOW ISOLATION	926-547/926-565	2/17/2023	View
STORM ASSET O&M	926-549/926-4279	2/17/2023	View
CCTV	926-4286/926-4288	2/17/2023	View
DEFECTS	926-4289/926-4286	2/17/2023	View
ICE INCIDENTS	926-4279/926-4281	2/17/2023	View
LINE REPAIRS	926-4281/926-4280	2/17/2023	View
STRUCTURE REPAIRS	926-4280/926-4289	2/17/2023	View
STORM COMPLAINTS	819-7A/819-7	2/17/2023	View
INLET INSPECTIONS			
ROAD PROGRAM			
RECONSTRUCTION			
RESURFACING			

13 - 2023 Road SAN 3-14_3-16-23

OBJECTID	201396
Condition ID	10
Inspection Name	13 - 2023 Road SAN 3-14_3-16-23
Line to Point	b0dad92b-efcc-49d6-a7ab-3f54a5e0ad9
InspectionID	2
Distance	0.000000
Counter	0.000000
PACP Code	Manhole
Continuous	

Defects:

- Defect: Access Points | Grade: Distance: 0 | Time: 000000
- Defect: Miscellaneous | Grade: Distance: 0 | Time: 000042
- Defect: Tap | Grade: Distance: 67.5 | Time: 000220
- Defect: Miscellaneous | Grade: Distance: 100.1 | Time: 000403
- Defect: Roots | Grade: 1 Distance: 139.4 | Time: 000501
- Defect: Tap | Grade: 3 Distance: 157.1 | Time: 000540
- Defect: Roots | Grade: 1 Distance: 197.2 | Time: 000648

Operations and Maintenance

Documenting work completed on sanitary sewers for operations and maintenance requirements

Integrating Associated Data

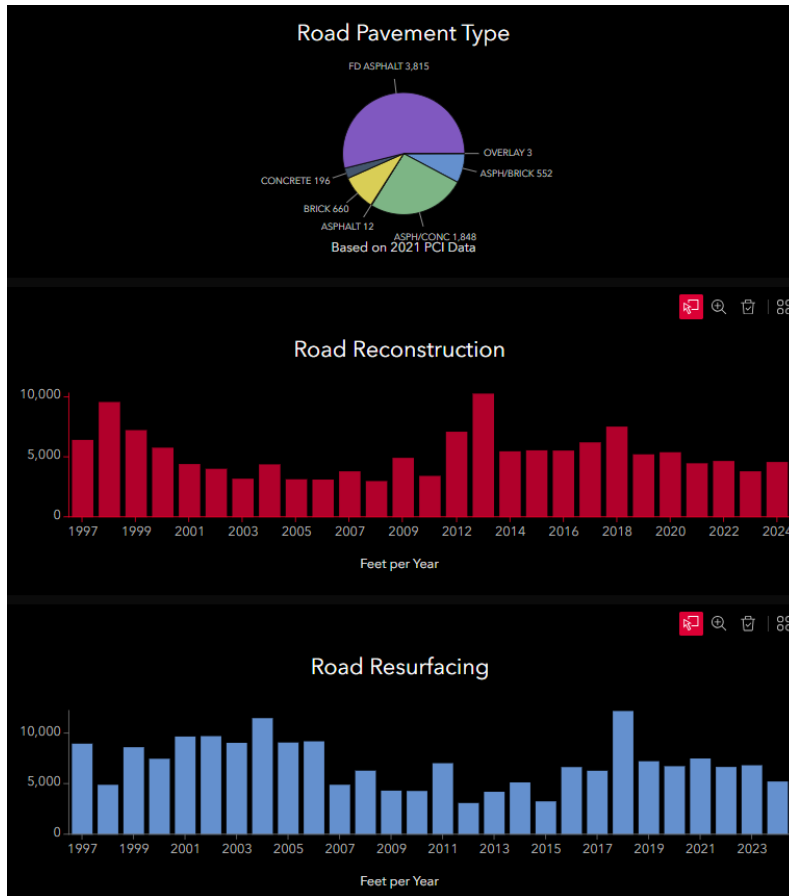
Link videos of CCTV inspections of sanitary sewer lines to sewer line layer

Data is well organized and visual

Videos are reviewed and used to propose repairs and budgets annually



ADVISORY AND CONSULTING - GIS AND ASSET MANAGEMENT – ROAD PROGRAMS



Third Party Data Analysis

Municipal road layer is analyzed through a 3rd party pavement program to determine road condition rating and provide recommendations for repair based on proposed budget

Repairs are tracked in GIS to provide annual analysis of lineal footage of repairs annually

Dashboards such as this are updated in real time as the database is updated

ADVISORY AND CONSULTING- GIS AND ASSET MANAGEMENT



Regulatory Compliance

Documenting efforts toward compliance with mandatory state and federal regulations associated with stormwater management under the MS4 (Municipal Separate Storm Sewer System) Permit



ADVISORY AND CONSULTING- GIS AND ASSET MANAGEMENT (REPORTING)

ANNUAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) STATUS REPORT

FOR THE PERIOD [] TO JUNE 30, []

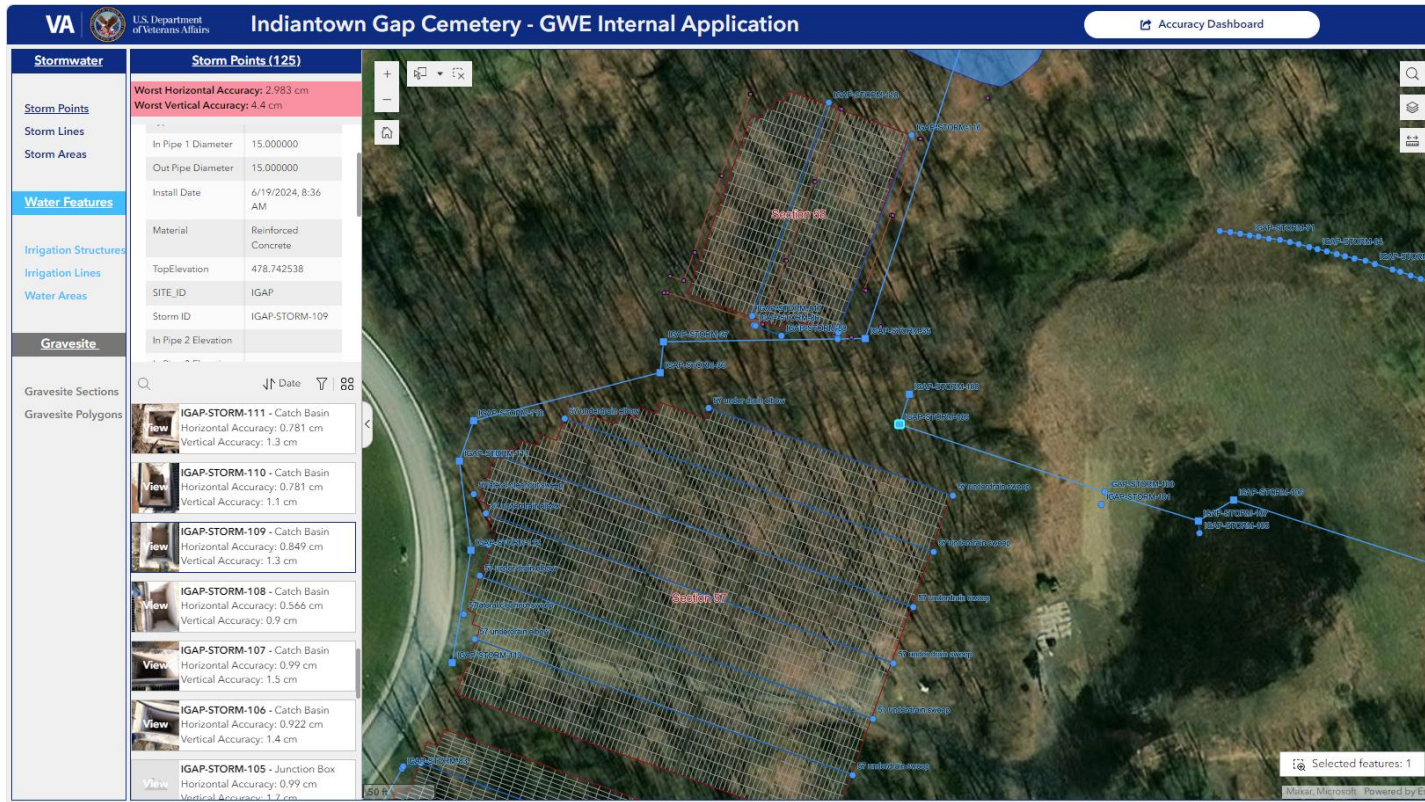
GENERAL INFORMATION					
Permittee Name: []	NPDES Permit No.: PA []				
Mailing Address: []	Effective Date: []				
City, State, Zip: []	Expiration Date: []				
MS4 Contact Person: []	Renewal Due Date: []				
Title: []	Municipality: []				
Phone: []	County: []				
Email: []					
Co-Permittees (if applicable): []					
Appendix(ces) that permittee is subject to (select all that apply): <input type="checkbox"/> Appendix A <input type="checkbox"/> Appendix B <input type="checkbox"/> Appendix C <input type="checkbox"/> Appendix D <input type="checkbox"/> Appendix E <input type="checkbox"/> Appendix F					
WATER QUALITY INFORMATION					
Are there any discharges to waters within the Chesapeake Bay Watershed? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Identify all surface waters that receive stormwater discharges from the permittee's MS4 and provide the requested information (see instructions).					
Receiving Water Name	Ch. 93 Class.	Impaired?	Cause(s)	TMDL?	WLA?
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]

MCM #3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDD&E)	
BMP #1: Develop and implement a written program for the detection, elimination, and prevention of illicit discharges into the regulated small MS4.	
1. For new permittees only, was the written IDD&E program developed within one year of permit coverage? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Date of latest annual review of IDD&E program: [] Were updates made? <input type="checkbox"/> Yes <input type="checkbox"/> No	
BMP #2: Develop and maintain map(s) that show permittee and urbanized area boundaries, the location of all outfalls and, if applicable, observation points, and the locations and names of all surface waters that receive discharges from those outfalls. Outfalls and observation points shall be numbered on the map(s).	
1. Have you completed a map(s) that includes all components of [] If Yes and you are a new permittee and have not submitted th [] If No, date by which permittee expects map(s) to be complete []	
2. Date of last update or revision to map(s): []	
3. Total No. of Outfalls in MS4: [] Total N []	
4. Total No. of Observation Points: [] Total N []	
5. During the reporting period, have you identified any existing NOI, application or annual report, or are any new MS4 outfalls: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, select: <input type="checkbox"/> Existing Outfall	

PCSM BMP INVENTORY								
Table 1. To complete the information needed for MCM #5, BMP #3, list all existing structural BMPs that discharge stormwater to the permittee's MS4 that were installed to satisfy PCSM requirements for earth disturbance activities under Chapter 102, and provide the requested information (see instructions).								
BMP No.	BMP Name	DA (ac)	Entity Responsible for O&M	Latitude	Longitude	Date Installed	O&M Requirements	NPDES Permit No.
1	[]	[]	[]	[]	[]	[]	[]	[]
2	[]	[]	[]	[]	[]	[]	[]	[]
3	[]	[]	[]	[]	[]	[]	[]	[]
4	[]	[]	[]	[]	[]	[]	[]	[]
5	[]	[]	[]	[]	[]	[]	[]	[]
6	[]	[]	[]	[]	[]	[]	[]	[]
7	[]	[]	[]	[]	[]	[]	[]	[]
8	[]	[]	[]	[]	[]	[]	[]	[]
9	[]	[]	[]	[]	[]	[]	[]	[]
10	[]	[]	[]	[]	[]	[]	[]	[]
11	[]	[]	[]	[]	[]	[]	[]	[]
12	[]	[]	[]	[]	[]	[]	[]	[]
13	[]	[]	[]	[]	[]	[]	[]	[]



ADVISORY AND CONSULTING- GIS AND ASSET MANAGEMENT – FEDERAL GOV'T



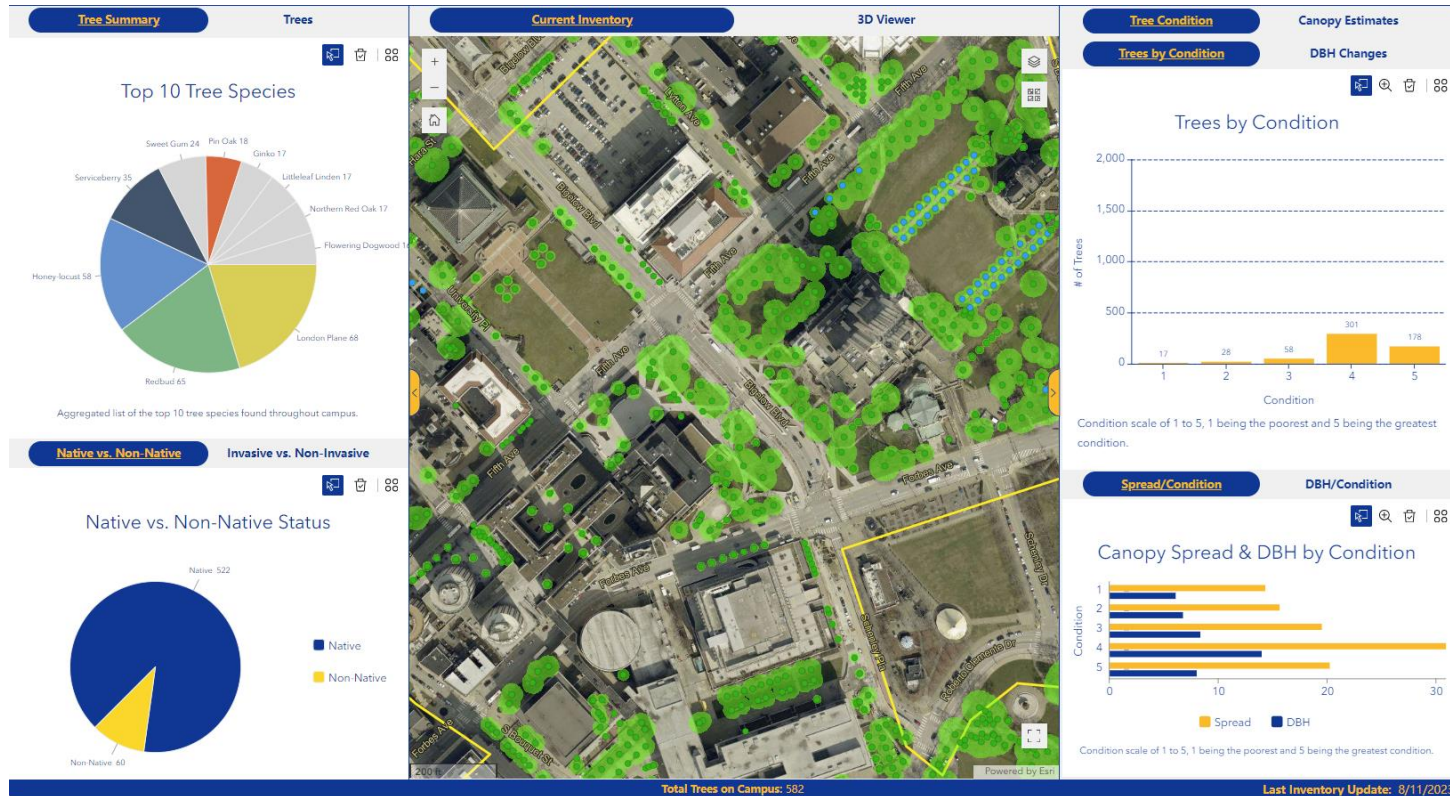
Indiantown GAP - VA Cemetery

Building GIS database of all utilities and site features for cemetery

Utilizing field data collection processes as well as survey information to build out GIS database

Strict compliance with federal government data standards and accuracy requirements

ADVISORY AND CONSULTING- GIS AND ASSET MANAGEMENT – UNIVERSITIES



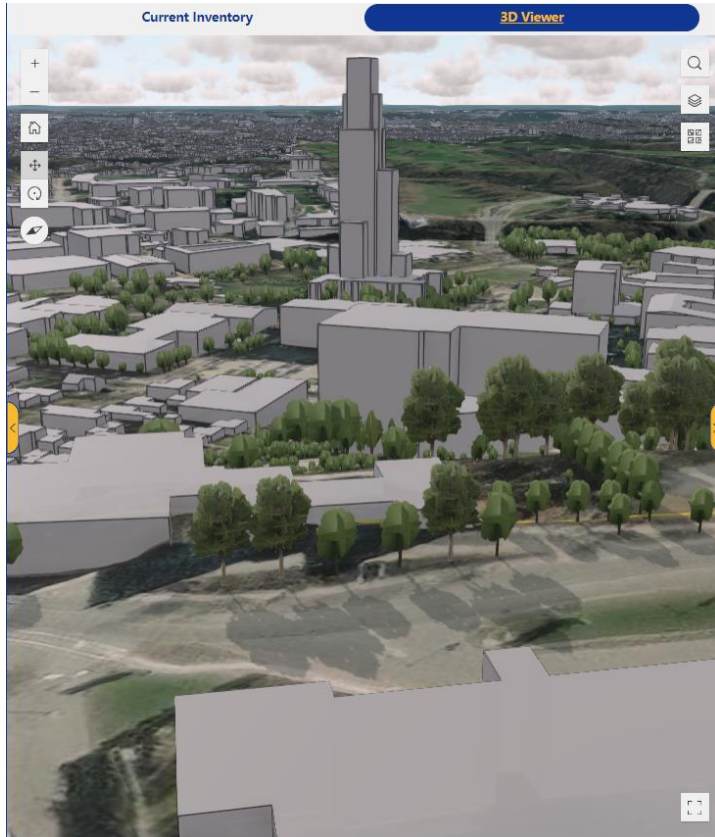
University of Pittsburgh

Conducted tree inventory for Oakland campus and documented in GIS database

Gathered information associated with species, condition, canopy spread, and trunk diameter

Used to meet city regulations for 10 and 20-year campus development plans and canopy coverage projections

ADVISORY AND CONSULTING– GIS AND ASSET MANAGEMENT – UNIVERSITIES



University of Pittsburgh

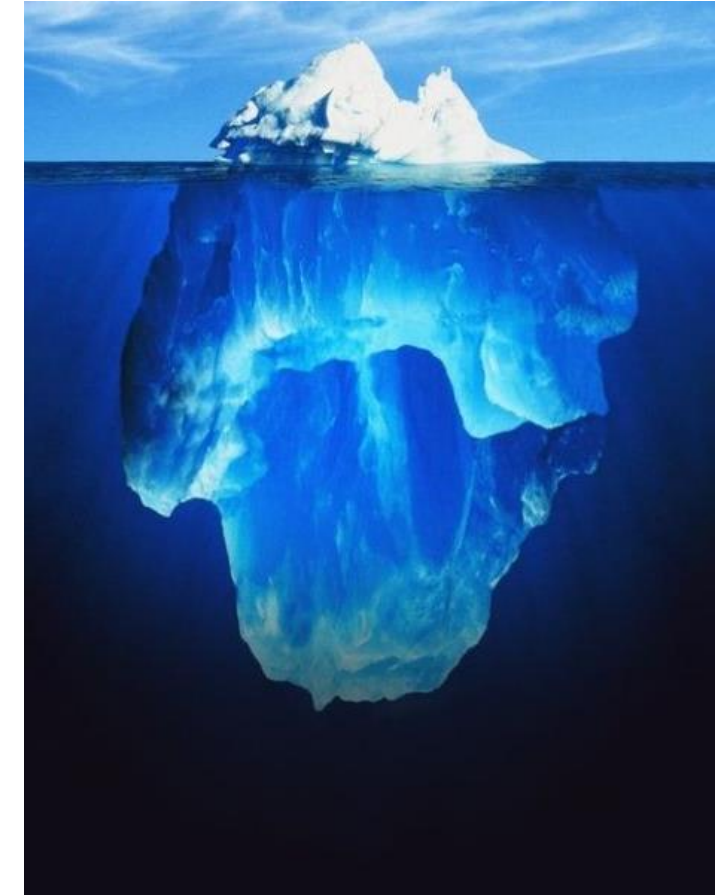
Getting the data into the database is just the beginning

Once the data is into the database, the power lies in the ability to analyze data through the combination of attribute data as well visual processes including 3D capabilities

In this image trees across campus are symbolized by deciduous and coniferous tree types, and the size is based on the actual height assessed in the field during data collection

ADVISORY AND CONSULTING– GIS AND ASSET MANAGEMENT

- Use this data to inform stakeholders and make decisions
- See what you typically can not see
 - Where are the most utility breaks happening?
 - How old is the conduit?
 - Where do we anticipate other breaks occurring/why?
 - How many lineal feet of conduit need replaced?
 - What parking areas have been paved recently?
 - Where are most trees that need maintenance?
 - What kind are they?
- Provide Municipalities with asset inventory for use in applying to GASB standards



ADVISORY AND CONSULTING- UTILITY DEVELOPMENT



ADVISORY AND CONSULTING– UTILITY DEVELOPMENT

Change in Legislation has allowed Municipalities to Charge for Stormwater services as a utility.

Gateway was involved in the development of the second stormwater utility in the State of Pennsylvania for the Municipality of Mt. Lebanon. Since that time, we have helped other communities develop the utility which helps pay for maintenance and capital improvements to the stormwater system based upon use of the system.

Process involves:

Determining a Budget

Analyzing impervious coverage

Determining a rate for an equivalent residential unit or ERU

Adopting an Ordinance to charge the fee

Allowing for credits

Implementing a system and billing the fee



ADVISORY AND CONSULTING– UTILITY DEVELOPMENT

Stormwater Cost of Service					
Cost of Service Analysis; Summary by Cost Subcategory by Year					
Major Cost Category	Year 1	Year 2	Year 3	Year 4	Year 5
Cost Subcategory					
Administration					
Billing, Finance and Customer Services	\$ 50,000.00	\$ 51,750.00	\$ 53,561.25	\$ 55,435.89	\$ 57,376.15
Legal Support Services	\$ 5,000.00	\$ 2,500.00	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00
Public Education Programs - General	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal:	\$ 55,000.00	\$ 54,250.00	\$ 54,561.25	\$ 56,435.89	\$ 58,376.15
Engineering and Master Planning					
System/project Design Engineering	\$ -				
GIS, Database, and Mapping	\$ 2,000.00	\$ 2,070.00	\$ 2,142.45	\$ 2,217.44	\$ 2,295.05
Subtotal:	\$ 2,000.00	\$ 2,070.00	\$ 2,142.45	\$ 2,217.44	\$ 2,295.05
Operations					
Storm Sewer and Culvert Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Repair/Replacement/Emergency Repairs	\$ 280,000.00	\$ 289,800.00	\$ 299,943.00	\$ 310,441.01	\$ 321,306.44
Road Program storm sewer Rehab	\$ 100,000.00	\$ 103,500.00	\$ 107,122.50	\$ 110,871.79	\$ 114,752.30
Video testing of storm sewers		\$ -	\$ -	\$ -	\$ -
Detention Pond Maintenance	\$ 20,000.00	\$ 20,600.00	\$ 21,218.00	\$ 21,854.54	\$ 22,510.18
Subtotal:	\$ 406,727.50	\$ 400,262.96	\$ 414,272.17	\$ 428,771.69	\$ 443,778.70
Capital Improvements					
Capital Improvement Project Management	\$ 500,000.00	\$ 515,000.00	\$ 530,450.00	\$ 546,363.50	\$ 562,754.41
Subtotal:	\$ 500,000.00	\$ 515,000.00	\$ 530,450.00	\$ 546,363.50	\$ 562,754.41
Stormwater Quality					
MS4	\$ 40,000.00	\$ 41,200.00	\$ 42,436.00	\$ 43,709.08	\$ 45,020.35
PRP Projects	\$ 110,000.00	\$ 113,300.00	\$ 116,699.00	\$ 120,199.97	\$ 123,805.97
Land Acquisition		\$ 50,000.00			
Detention Facility Inspection	\$ 4,100.00	\$ 4,223.00	\$ 4,349.69	\$ 4,480.18	\$ 4,614.59
Street Sweeping	\$ 15,000.00	\$ 15,450.00	\$ 15,913.50	\$ 16,390.91	\$ 16,882.63
Subtotal:	\$ 169,100.00	\$ 224,173.00	\$ 179,398.19	\$ 184,780.14	\$ 190,323.54
TOTAL:	\$ 1,132,827.50	\$ 1,195,755.96	\$ 1,180,824.06	\$ 1,218,568.66	\$ 1,257,527.84



ADVISORY AND CONSULTING– TAP IN FEES

Background

Act 57 of 2003 allows municipalities and authorities to charge tap in fees for sewer and water

Tap fees are based upon Capital Costs to construct new services and include components of:

Connection Fee-cost of the connection from the main to the customer

Distribution Fee-cost to convey the sewer and water to the treatment plant

Treatment Fee-cost of treatment



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ADVISORY AND CONSULTING– TAP IN FEES

Expert Services

In 2022 Gateway was asked to be an expert in review of an Act 57 calculation

Careful auditing of the fee calculation revealed that projects not associated with capital expansion to create more system capacity were included in the fee calculation.

In addition, new treatment capacity serviced existing customers but the cost was only assigned to new customers.

Result of Litigation yielded a refund to those new customers who overpaid.



REVIEW OF SERVICES GRANTS

- **Background**
- Gateway assists clients in grant writing to support project funding
- Local Level Funding Sources include
 - Federal-Community Development Block Grants
 - State-DCED, RCAP, DCNR
 - Local-Local Share



REVIEW OF SERVICES GRANTS

- **Process**

Budgeting

Letters of Support

Economic justification-creation of jobs

Applications



REVIEW OF SERVICES GRANTS

Best Practices

Master Planning to justify

Matching funds

Multi-municipal efforts

Seeking various grants for the same project



REVIEW OF SERVICES GRANTS

Example

Montour Trail Connection to Southpointe

Preliminary Plan Developed

Joint effort of Bureau of Tourism, Chamber of Commerce, Montour Trail Council and Cecil Township

Two grants DCNR and Local Share used along with Private Donations

No municipal funds required.



REVIEW OF SERVICES GRANTS



And when you get all the people involved you celebrate by cutting another gold ribbon



QUESTIONS?

