



Capital Stormwater Report  
October 18, 2023



A FULL-SERVICE CIVIL ENGINEERING FIRM

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Exhibit A – List of Stormwater Fund Projects Completed to Date or Committed

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## Purpose

On an annual basis, the Municipal Engineer provides this report and recommendations to the Mt. Lebanon Commission for the purpose of prioritizing and budgeting for the Stormwater Utility Fund.

## Executive Summary

In the fall of 2011, the Municipality of Mt. Lebanon adopted a stormwater fee for use in the operation, maintenance and capital improvements to the approximately 75-mile sewer system. The use of the fund had four main purposes:

1. Complete operations for maintenance of the system including labor and materials completed by Public Works.
2. Complete capital projects, including curbs, as part of the annual street reconstruction program and to expand and improve the storm sewer system to address flooding, icing, and other problems associated with stormwater runoff and discharges.
3. Address water quality issues and requirements of the NPDES Permit for the storm sewer system as a federally designated MS4 operator, including design and installation of the PRP projects.
4. Complete annual contracts for upgrades and emergency repairs to the system.

Since its inception, the fund has been used to complete numerous projects to maintain and enhance existing systems and expand the system to areas deficient of storm sewer infrastructure. A summary of projects completed or committed to since the inception of the fund are listed as Exhibit A and total \$14,761,639.95, of which more than half was spent on curbs and storm sewers associated with street reconstruction.

In the fall of 2022, ordinance 3349 was approved amending the stormwater fee to reflect future capital needs in the storm sewer system.

## Capital Project List

The capital project list priorities are defined as follows:

A **PRP Project** is defined as a project that provides a reduction to the sediment and phosphorous loading of the watersheds that are identified as being siltation or nutrient impaired within the Municipality, as required by the MS4 Permit. PRP Projects are to be installed by January 2024, which is the end of the current permit cycle. Currently all projects are complete and we are awaiting guidance from PA DEP on the next permit cycle's requirements. The total of the Future Potential PRP Projects is estimated at \$790,000.00.

A **Priority IA Project** is defined as one where damage occurred to an occupied structure due to a backup in the sanitary sewer system. The total of IA Priorities is estimated at \$250,000.00.

A **Priority IB Project** is defined as one where damage occurred to an occupied structure due to a lack in the number of existing storm structures or capacity in the existing storm sewer system. The total of IB Priorities is estimated at \$1,817,500.00.

A **Priority II Project** is defined as one where damage occurred to a property but not to an occupied structure. The total of II Priorities is estimated at \$972,500.00.

A **Priority III Project** is defined as one where damage did not occur to an occupied structure or property, however, upgrades to the stormwater system would improve its operation or decrease maintenance for Public Works. The total of III Priorities is estimated at \$8,558,937.50. This also includes any emergency repairs and ice spots.

- Of this number, \$4,634,737.50 is estimated for ice spot repair.

A capital project list is included as Exhibit B and totals approximately \$12,438,937.50 for **PRP Projects, Priority IA Projects, Priority IB Projects, and Priority II Projects**. **Priority III Projects** have not yet been fully defined in terms of scope and cost; however, preliminary opinions of cost have been estimated based on average costs of similar repairs.

In addition, capital funds for stormwater associated with street reconstruction, not including curbs, is recommended for funding in the amount of \$200,000 per year.

## **2022/2023 Summary**

In 2022 there were a few large storm events that resulted in minor reports of flooding along roadways in known problem areas and minor residential flooding. On June 20<sup>th</sup>, 2018, the Municipality experienced a storm event that produced over 3 inches of rain in a very short period of time. This amount of rainfall in a 24-hour period typically causes flooding in known problem areas, however, the majority of the storm event that day occurred within a 3-hour timeframe, causing significantly more damage.

Storm events such as the ones that occurred on June 20<sup>th</sup>, 2018 and March 28<sup>th</sup>, 2020 are becoming more frequent; high-intensity rainfall over a shorter time duration. This not only causes problems in areas lacking in stormwater management facilities but more importantly areas with insufficient storm infrastructure to adequately capture and convey stormwater through the existing storm sewer system. Without adequate storm infrastructure, stormwater can infiltrate and overwhelm existing sanitary sewer systems and cause increased surface runoff problems, resulting in damage to properties and occupied structures.

Due to the trend in recent storm events, the capital project list was revised in 2018 to include categories of priorities to better reflect the occurrences of residential flooding from both a sanitary sewer (Priority IA) and stormwater (Priority IB) perspective. During the June 20<sup>th</sup>, 2018 storm event, some areas experienced both sanitary sewer and stormwater issues at the same time, which is reflected by those projects that carry both an IA and IB designation. Refer to Exhibit B for the current status of flooding investigations.

Based upon issues related to deteriorated pipe, additional inspections have been made to existing storm sewers and outfalls to evaluate critical repairs required in the municipality. This has led to identifying required outfall repairs and various corrugated metal pipes throughout the municipality that require or will need to be monitored over time to ensure repair prior to failure.

Below is an outline of the Short-Term Capital projects that were completed at the end of 2022 and into 2023:

- Continued yearly maintenance of existing backwater valves

- Continued repairs and inspection to the Public Works Yard Culvert
- Review of the Shadowlawn Avenue watershed, leading to:
  - The continued installation of cured-in-place-pipe (CIPP) lining through the sanitary sewer main that runs through Shadowlawn Avenue, to reduce the amount of stormwater that infiltrates into the sanitary sewer main and thus reduce the chance for sanitary backups to occur
- Design, coordination, and construction of storm sewer repairs located at 752 Pinetree Road to repair damaged pipe to a pipe that leads to an outfall.
- Design, coordination, and construction of storm sewer repairs located at 1308 Lakemont Drive to repair damaged pipe to a pipe that leads to an outfall. The outfall was buried and additional work will be required to improve the outfall. That work is ongoing.
- Improvements to inlets located at Cedar Blvd and Cochran Road were completed ahead of the road program.
- Ice spot repairs located at 116 and 160 Oak Park place were completed ahead of the road program.
- Work was completed near 736 Rockwood Ave to replace deteriorated corrugated metal pipe.
- Design and construction was completed to slip line the corrugated metal pipe outfalling near 1069 Lindendale Drive. This project was a proactive repair to protect the existing sanitary sewer and roadway and extend the life of the sewer by another 75 years without digging.
- Folkstone drive storm sewer outfall is an on-going project that is designed to repair and replace damaged storm sewers along a steep slope that leads to an outfall.
- Magnolia drive storm sewer is an on-going project that is designed to repair and replace damaged storm sewer ahead of future road programs.
- Continued execution of a more comprehensive storm sewer televising program focusing on the existing outfall pipes and pipes constructed out of corrugated metal.
- Continued sanitary sewer lining as part of the ALCOSAN GROW Grant projects to remove additional sources of I&I causing property damage.

## **2023/2024 Projects and Recommendations**

Continuing into 2024 and beyond, when reviewing the capital project list provided in Exhibit B, it is our opinion that a focus should be put first to those projects that will mitigate flooding impacts to private property (Priorities IA, IB, and II). In addition, as we await new MS4 requirements, we will be able to provide recommendations to the PRP requirements of the MS4 Permit. The PRP projects required to be installed by the end of the current MS4 Permit cycle (January 2024) have been completed. We recommend continued televising of storm sewers to monitor critical points of focus within the Municipality's infrastructure. This will allow more proactive repairs to take place. Additionally, we recommend completing outfall repairs to ensure stormwater is safely conveyed into their waterways.

Projects supporting the above efforts include:

- Storm sewer extensions (during the road reconstruction projects)
- Storm sewer installation or re-route projects that benefit multiple properties
- Projects associated with eliminating existing ice spots
- Maintenance of the existing storm sewer system (mapping, CCTV, point repairs, etc.)
- Compliance with the MS4 Permit
  - 6 Minimum Control Measures and submitting the Annual Progress Report to DEP
  - Addressing the PRP requirements (design and installation of the proposed stream restoration project)

- Completion of outfall repairs and improvements to existing corrugated metal pipes

Furthermore, the Municipality will need to continue to utilize funds for the existing curb replacement projects during the road reconstruction project, and address flooding issues as they arise.

In summary, much has already been accomplished with the stormwater fund as evidenced by Exhibit A. However, as can be seen on the list of projects to be completed within the capital project list, the amount of Priority PRP, IA, IB, and II projects far exceeds the available funding and a further prioritization of the projects and/or additional funding will be required. As these projects are completed, funds to upgrade the existing sewer system and maintain compliance with state/federal permit requirements will continue to increase.

# EXHIBIT A

Project Name	Cost
<b>Reconstruction</b>	
2012 Curbs	\$ 377,179.50
2012 Storm Extension	\$ 96,140.00
2013 Curbs	\$ 432,072.50
2013 Storm Extension	\$ 232,196.36
2014 Curbs	\$ 420,749.00
2014 Storm Extension	\$ 190,806.00
2015 Curbs	\$ 546,314.05
2015 Storm Extension	\$ 117,019.24
2016 Curbs	\$ 487,823.60
2016 Storm Extension	\$ 238,541.80
2017 Curbs	\$ 515,716.54
2017 Storm Extension	\$ 180,948.96
2018 Curbs	\$ 540,255.00
2018 Storm Extension	\$ 140,869.60
2019 Curbs	\$ 523,605.60
2019 Storm Extension	\$ 222,273.50
2020 Curbs	\$ 594,926.50
2020 Storm Extension	\$ 135,521.00
2021 Curbs	\$ 523,387.00
2021 Storm Extension	\$ 211,366.00
2022 Curbs	\$ 588,120.86
2022 Storm Extension	\$ 231,747.00
2023 Curbs – Not Finalized Yet	\$ 500,748.45
2023 Storm Extension – Not Finalized Yet	\$ 144,215.52
<b>Sub-Total Reconstruction</b>	<b>\$ 8,192,543.58</b>

<b>2012 Storm Sewer Projects</b>	
Serpentine Storm Sewer	\$ 61,520.08
Lindendale Storm Sewer	\$ 35,640.01
Adeline Storm Sewer	\$ 32,854.10
Sunrise Storm Sewer	\$ 8,060.00
Elatan Storm Sewer	\$ 57,414.06
Abbeyville Storm Sewer	\$ 9,031.43
Klett Storm Sewer	\$ 2,456.19
Broadmoor Storm Sewer	\$ 3,141.85
Crystal Drive Storm Sewer	\$ 2,418.57
Cochran & Cedar Inlets	\$ 12,394.90
Oak Park Place Inlets	\$ 5,705.10
Scrubgrass Road Stream Rehabilitation	\$ 162,065.21

Storm Sewer CCTV	\$ 2,464.02
<b>Sub-Total 2012 Storm Projects</b>	<b>\$ 395,165.52</b>
<b>2013 Storm Sewer Projects</b>	
<b>*Bid in 2013, construction in 2014</b>	
Jefferson Drive Storm Sewer - Emergency	\$ 33,217.83
Kurt Drive Storm Sewer	\$ 10,841.46
Elatan Drive Storm Sewer	\$ 20,976.33
Castle Shannon Storm Sewer	\$ 38,917.87
Morrison Inlet Installation	\$ 6,900.00
Ice Spots (Piper, Cochran, Park Entrance, Sandrae, Lindendale)	\$ 127,279.02
Academy Avenue Storm Sewer	\$ 87,359.59
Moreland Hillside Failure	\$ 9,435.76
Sleepy Hollow	\$ 179,714.41
Washington-Navahoe Storm Sewer	\$ 56,971.80
PA DOT Drainage Improvements	\$ 30,000.00
<b>Sub-Total 2013 Storm Projects</b>	<b>\$ 601,614.07</b>

<b>2014/2015 Storm Sewer Projects</b>	
<b>*Projects that were designed in 2015, constructed in 2016.</b>	
Scrubgrass Retaining Wall Rehabilitation	\$ 12,405.00
Mapleton Sanitary and Storm Improvements	\$ 536,120.00
Lindendale Drive Retaining Wall *	\$ 135,585.50
Longuevue/Woodhaven Storm Sewer (Designed but not built – unknown construction date)	
Storm Sewer CCTV	\$ 30,000.00
Arden Drive Storm Sewer Extension	\$ 34,000.00
Parkside Drive Inlet Replacement	\$ 12,560.00
Roycroft Swale Maintenance	\$ 1,350.00
Washington Road Icing Issue	\$ 10,120.00
Orchard Drive Pipe Burst	\$ 69,500.00
Beverly Road Storm Sewer	\$ 79,390.00
<b>Sub-Total 2014/2015 Storm Projects</b>	<b>\$ 921,030.50</b>

<b>2016 Storm Sewer Projects</b>	
Longuevue/Woodhaven Storm Sewer	\$ 758,787.31
Roycroft/Mt. Lebanon Boulevard Storm Sewer Installation	\$ 110,933.47
Orchard Drive Storm Sewer Re-route Project	\$ 161,778.00
Public Works Culvert Repair	\$ 59,617.65
Storm Sewer CCTV	\$ 15,694.43
<b>Sub-Total 2016 Storm Projects</b>	<b>\$ 1,106,810.86</b>

<b>2017 Storm Sewer Projects</b>	
Elm Spring/Scrubgrass Road Emergency Repair	\$ 26,988.80
Jefferson Drive Emergency Repair	\$ 5,386.39



Storm Sewer CCTV	\$ 7,325.70
<b>Sub-Total 2017 Storm Projects</b>	<b>\$ 39,700.89</b>
<b>2018 Storm Sewer Projects</b>	
Crystal/Milbeth Storm Sewer	\$ 98,951.00
DPW Yard Culvert Emergency Repairs	\$ 169,668.90
Elm Spring/Scrubgrass Culvert Repair	\$ 37,966.75
Craigview Drive Storm Sewer Extension	\$ 32,058.60
Vee Lynn Drive Storm Sewer Extension	\$ 15,994.55
Storm Sewer Point Repairs	\$ 41,248.46
Storm Sewer CCTV	\$ 26,807.78
<b>Sub-Total 2018 Storm Projects</b>	<b>\$ 422,696.04</b>

<b>2019 Storm Sewer Projects</b>	
Golf Course Swale	\$ 135,867.82
DPW Yard Culvert Emergency Repairs	\$ 197,223.35
Vallevista Avenue Storm Sewer Connection	\$ 19,196.65
Storm Sewer Point Repairs	\$ 20,179.40
Storm Sewer CCTV	\$ 20,254.31
<b>Sub-Total 2019 Storm Projects</b>	<b>\$ 392,721.53</b>

<b>2020 Storm Sewer Projects</b>	
<b>*Projects that were designed/bid in 2019 and constructed in 2020</b>	
Shady Drive East Storm Sewer Extension	\$ 12,713.80
Castle Shannon Blvd. Storm Sewer Extension	\$ 22,051.85
Elatan Drive Storm Sewer Extension	\$ 21,840.00
Moreland Drive Storm Sewer Repair *	\$ 278,224.00
Ella Chalmers Storm Sewer Extensions	\$ 125,000.00
Bird Park Stream Restoration	\$ 148,230.00
DPW Yard Culvert Repairs (Currently being bid)	\$ 350,000.00
Storm Sewer CCTV	\$ 15,589.20
<b>Sub-Total 2020 Storm Projects</b>	<b>\$ 973,648.85</b>

<b>2021 Storm Sewer Projects</b>	
<b>*Projects that were designed/bid in 2020 and constructed in 2021</b>	
Ella Chalmers Storm Sewer Extensions	\$ 118,415.71
Lakemont/Firwood Sewer Extension	\$ 302,448.60
Inglewood Drive/Timber Creek Condo Storm Repair	\$ 20,092.40
Sleepy Hollow Road Storm Repair	\$ 20,791.02
DPW Yard Culvert Repairs (Continued Work)	\$ 260,048.55
Storm Sewer CCTV	\$ 45,551.17
<b>Sub-Total 2021 Storm Projects</b>	<b>\$ 767,347.45</b>

<b>2022 Storm Sewer Projects</b>	
<b>*Projects that were designed/bid in 2022 and constructed in 2023</b>	
Thornwood Drive	\$ 127,314.25
MacArthur Drive Icing Incident	\$ 67,062.00
Ashland Ave Storm Sewer	\$ 82,380.00
Iroquois Park Stream Bank Restoration	\$ 18,710.00
DPW Yard Culvert Repairs (Continued Work)	\$ 32,000.00
Storm Sewer CCTV	\$ 30,404.66
257 Broadmoor Avenue Icing Incident	\$ 71,331.16
407 Greenhurst Drive Icing Incident	\$ 28,055.58
72 Mt. Lebanon Boulevard Icing Incident	\$ 4,121.10
Woodhaven Drive – Storm Sewer	\$ 93,380.58
Birch Avenue at Scott Road	\$ 34,445.20
<b>Sub-Total for Proposed 2022 Storm Projects</b>	<b>\$ 590,204.53</b>

<b>2023 Storm Sewer Projects</b>	
<b>*Projects are proposed/beginning construction in 2023</b>	
752 Pinetree Road Storm Outfall Repair	\$ 16,265.06
1308 Lakemont Drive	\$ 18,513.87
Cedar Boulevard Storm Sewer Inlets	\$ 10,074.08
116 and 160 Oak Park Place	\$ 18,834.38
Folkstone Drive Storm Sewer	\$ 99,540.00
Rockwood Avenue CMP Storm Sewer Excavation Repair	\$ 10,182.38
Lindendale Drive Slip Line	\$ 41,200.00
296 Magnolia Place Storm Sewer Installation	\$ 30,846.38
<b>Sub-Total for Proposed 2022 Storm Projects</b>	<b>\$ 245,456.15</b>

<b>Future/Short Term Storm Sewer Projects</b>	
<b>*Projects that will need to be addressed within the next 5 years</b>	
Iroquois Park Culvert Repair	\$ 480,000.00
Forest Glen/Woodhaven Drive Phase II	\$ 200,000.00
355 Orchard Drive Storm Sewer Realignment	\$ 560,000.00
Hoodridge Park Stream Bank Restoration (141 Marshall)	\$ 500,000.00
148 Hoodridge Park	\$ 12,500.00
Mill/Overlay Stormwater	\$ 30,000.00
CMP Replacement	\$ 300,000.00
Emergency Repairs	\$ 50,000.00
Storm Sewer CCTV	\$ 25,000.00
120 Iroquois Park Storm Sewer Outfall	\$ 60,000.00
McCully at Cochran Ice Spot	\$ 65,000.00
Ordale Boulevard Storm Sewer Installation	\$ 100,000.00
1285 Folkstone Drive Phase II	\$ 100,000.00
1308 Lakemont Drive	\$ 60,000.00
Roycroft Avenue Storm Sewer Re-Route	\$ 112,700.00
<b>Sub-Total for Proposed Short Term Capital Storm Projects</b>	<b>\$ 2,655,200.00</b>

## Exhibit B

A **PRP Project** is defined as a project that provides a reduction to the sediment and phosphorous loading of the watersheds that are identified as being siltation or nutrient impaired within the Municipality, as required by the MS4 Permit.

A **Priority IA Project** is defined as one where damage occurred to an occupied structure due to a backup in the sanitary sewer system.

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A **Priority II Project** is defined as one where damage occurred to a property but not to an occupied structure.

A **Priority III Project** is defined as one where damage did not occur to an occupied structure or property, however, upgrades to the stormwater system would improve its operation or decrease maintenance for Public Works.

Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
PRP / II	1180 Cedar Blvd Cedar Lake (UNT to Painters Run) Stream Bank Restoration	Yes	Existing streambank is eroded along UNT to Painters run and could potentially compromise the integrity of the existing sanitary sewer.	Restore the streambank with a log toe and branch layering to protect the streambank and existing properties	\$50,000.00
PRP / II	Terrace and Connor Road Hoodridge Park Stream Bank Restoration	Yes	Existing streambank is eroded along Painters run	Restore the streambank with a log toe and branch layering to protect the streambank and existing properties	\$500,000.00
PRP / II	Bird Park Stream Restoration	Yes	Erosion of stream banks and damage and loss of trees along the stream have become major problems over the years	Continue the installation of stream restoration techniques from the pedestrian bridge, where the previous project ended.	\$240,000.00
				<b>TOTAL PRP PROJECTS</b>	<b>\$790,000.00</b>

A **PRP Project** is defined as a project that provides a reduction to the sediment and phosphorous loading of the watersheds that are identified as being siltation or nutrient impaired within the Municipality, as required by the MS4 Permit.

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Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
IA	265 Atlanta Drive	No	Basement Flooding due to sanitary surcharge.	Potentially 16 homes anticipated to require backwater valves due to the elevation of the sanitary main vs. the basement elevations. Recommend a design for the re-route of the sanitary sewer in Atlanta to provide a permanent solution to the back-ups. A conceptual design for the re-route of the sanitary sewer has been prepared.	\$250,000.00
IA	269 Atlanta Drive	No	Basement Flooding due to sanitary surcharge.	Potentially 16 homes anticipated to require backwater valves due to the elevation of the sanitary main vs. the basement elevations. Recommend a design for the re-route of the sanitary sewer in Atlanta to provide a permanent solution to the back-ups. A conceptual design for the re-route of the sanitary sewer has been prepared.	Included in 265 Atlanta estimated cost
IA	271 Atlanta Drive	No	Basement Flooding due to sanitary surcharge.	Potentially 16 homes anticipated to require backwater valves due to the elevation of the sanitary main vs. the basement elevations. Recommend a design for the re-route of the sanitary sewer in Atlanta to provide a permanent solution to the back-ups. A conceptual design for the re-route of the sanitary sewer has been prepared.	Included in 265 Atlanta estimated cost
				<b>TOTAL PRIORITY IA PROJECTS</b>	<b>\$250,000.00</b>

A **PRP Project** is defined as a project that provides a reduction to the sediment and phosphorous loading of the watersheds that are identified as being siltation or nutrient impaired within the Municipality, as required by the MS4 Permit.

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Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
IB	453 Austin Avenue	Possibly	Basement flooded due to stormwater runoff from Parkview.	Study area and consider either the extension of the storm system on Parkview to house 448 or extension of the storm sewer system within Austin to the rear of the property to intercept runoff and direct water to inlet with swales.	\$120,000.00
IB	104 Blue Spruce Circle	No	Stormwater from Pinetree caused property damage. Resident sits on high side of roadway. Water may have jumped curb on Pinetree and flowed through yards to residence.	Extension of storm sewer system on Pinetree to intercept roadway water.	\$50,000.00
IB	784 Brafferton Drive	Yes	Property owner reported heavy run off from the properties behind him resulting in damage to a retaining wall beside his house and water in the basement and garage. The water came through the garage door which was closed. Neighbors to both sides of him also experienced heavy run off.	Drainage system would be required in rear yards to intercept water prior to impacting residence.	\$60,000.00
IB	163 Castle Shannon Boulevard		33-acre watershed converges on these residences and there is a lack of storm system to address runoff	Option 1 - Divert a portion of the watershed around homes. Option 2 - Consider purchase of homes	\$165,000.00
IB	167 Castle Shannon Boulevard		33-acre watershed converges on these residences and there is a lack of storm system to address runoff	Option 1 - Divert a portion of the watershed around homes. Option 2 - Consider purchase of homes	Included in 163 Castle Shannon Blvd estimated cost

IB	764 Colony Circle		Lack of storm sewers on Larchmont that overflows onto Colony Circle	Addition of inlets to Larchmont system	\$25,000.00
IB	1199 Driftwood Drive	Yes	Runoff from Arrowood Properties is being directed to this property and causing flooding and stormwater entering the house.	Extension of Driftwood storm system to rear yard to address this private runoff issue with installation of drains and swale.	\$40,000.00
IB	829 Foxland Drive	No	Stormwater from Parkview jumped curb and ran through yard and into home through window wells	Add additional storm facilities on Parkview.	\$40,000.00
<b>Priority</b>	<b>Address</b>	<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b>	<b>Estimated Cost</b>
IB	853 Foxland Drive	No	Stormwater from Corace jumped curb and ran through yard.	Add additional storm facilities on Corace.	\$80,000.00
IB	625 Kelso Road	Yes	Runoff from rear of properties on Moreland is converging on the rear of this property and causing flooding issues. The curb reveal of Moreland appears adequate.	Possible solution would be to install swale / drainage around the home out to the state system on Kelso to address this private runoff issue.	\$60,000.00
IB	431 Layton Avenue	Yes	Resident had flooding in basement. He did research and thinks the flooding was caused by yard of 1511 McFarland. He said the current of water was high and very strong.	Expansion of existing storm system in rear of properties behind Layton.	\$10,000.00
IB	86 Lebanon Hills Drive		Stormwater backs up in the intersection of Park Entrance and Lebanon Hills during heavy storm events and overtops the negative-sloped driveway. The existing storm sewer system is potentially over-taxed during large storm events, causing water to back-up in the intersection.	Short-term solution for the resident would be to install a waterproof garage door. Long-term solution would be to study the overall watershed to determine if the storm sewer can be re-routed to reduce the back-up in the intersection during large storm events.	\$150,000.00
IB	229 Magnolia Place	No	Stormwater runoff pooled in the intersection of Lebanon and Florida and was reported to overtop the curb and flow overland to this residence where it flooded the detached garage and came in through the laundry room wall.	Consider installation of vane grates on inlets at 220/221 Florida to improve collection of water. There are already 10 inlets +/- above this residence to collect stormwater.	\$500.00
IB	214 Martin Avenue	No	Street flooded and overtopped curbs causing basement flooded.	This project is in conjunction with the 209 Edward recommendations.	\$25,000.00
IB	1485 McFarland Road	No	Lack of capacity to collect stormwater and water overtopping the curbs and flooding residents	Add inlets to the existing storm system	\$25,000.00
IB	212 Mohawk Drive	No	Resident indicated 1' of water in the garage. Water entered driveway from the road and went down the negatively sloping driveway. The driveway drain could not handle all the water and some went in the fresh air vent which we believe led to some of the garage surcharge.	Backwater valve was installed at the property to prevent the sanitary backup. Additional drainage necessary in the neighborhood upstream of the property, in the intersection of Ordale and Mohawk, and along Washington Road – property is at the low point of the drainage area.	\$100,000.00

IB	237 Morrison Drive	No	Basement Flooding	Historical investigation of this property indicated outside water making its way into the lateral and backing up into the home. There is a plan for the installation of a storm sewer along Morrison for future connection of a private sump to the sewer at the time of reconstruction.	\$40,000.00
Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
IB	109 Morton Lane	TBD	Severe basement flooding from the adjacent stream. The basement had 4 feet of water. Indicated that his whole back yard was flooded, and the stream overflowed the bank.	Backwater valve was recently inspected, and the flapper was replaced. Mitigation efforts would require engineering study before recommendations made.	\$10,000.00
IB	100, 104, 108 Newburn Drive	No	Stormwater runoff overtops curbs and flows into the underground parking garage at this location.	Storm sewer improvements and possible curb improvements to capture additional water. Long term there is a project to remove the storm sewer from beneath structures in this area but not part of this budget number.	\$25,000.00
IB	445 Old Farm Road	Yes	Experienced yard flooding and flooding of his patio caused by heavy run off from the property above on Summit. Also experienced some water in the basement that entered through a window well in the back of the house.	Runoff originating from rear of homes on Summit. To mitigate runoff would require installation of storm system from Old Farm to rear of properties and the construction of a swale to direct water to the inlets to mitigate this private runoff issue.	\$50,000.00
IB	397 Parkside Avenue	No	Basement flooding from runoff from roadways above. The home sits in the path of the natural drainage course of the watershed. Four feet of water was in basement.	Continue with the installation of storm inlets upstream of the residence to get water into the system before it reaches the home. The 2018 reconstruction program included the installation of additional drainage along Richland Road.	\$150,000.00
IB	211 Parkway Drive	No	The property owner experiences surface water runoff issues because they are in a natural swale that channels between 211 and 215 Parkway. During this storm it appears that water jumped the curb at Jefferson and flowed to this location.	The house is in a localized drainage path with about a 10-acre watershed. Additional storm drainage on Jefferson should be considered to intercept the flow before it jumps the curb and makes its way to these homes.	\$60,000.00
IB	215 Parkway Drive	No	The property owner experiences surface water runoff issues because they are in a natural swale that channels between 211 and 215 Parkway. During this storm it appears that water jumped the curb at Jefferson and flowed to this location.	The house is in a localized drainage path with about a 10-acre watershed. Additional storm drainage on Jefferson should be considered to intercept the flow before it jumps the curb and makes its way to these homes.	Included in 211 Parkway Drive estimated cost
IB	Public Works Culvert	No	Repairs and maintenance necessary to the aging CMP culvert traversing the public works yard.	Structural repairs of culvert and invert lining for future repair	\$102,000.00

Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
IB	482 Sage Drive	Yes	Water runoff from the back of 499 Willow and the back of his property caused damage to his yard and retaining wall in the back of the house. Stormwater on Willow is piped down Rosbury Place and does not appear to be the issue. Resident also mentioned that the floor drain was backed up in the basement.	Home sits on the high side of the road and a sanitary back-up would be unusual from the main. Investigate the condition of the sanitary sewer main in front of the home to verify clear. Sanitary back-up likely the cause of a blockage in the lateral that was exacerbated by the additional water getting in the lateral. Correction of the stormwater runoff issue would require a lengthy extension of the municipal main from Salem to the property (>450') to address a private runoff issue.	\$150,000.00
IB	791 Scrubgrass Road	No	Stormwater runoff from the roadway of Old Hickory and the private properties above this residence converged and flooded the basement.	Additional drainage to be installed within the low point of Old Hickory and the possible direction of runoff from above around the residence within the existing easements.	\$25,000.00
IB	440 Serpentine Drive	Yes	Surface water runoff issue where water is getting into basement. Met with resident and it appears as though water from properties above is finding its way through the foundation and into the basement.	Extension of storm sewers up Serpentine and around the rear of the property to intercept the runoff from above to mitigate this private runoff issue.	\$35,000.00
IB	Serrano Avenue	No	Report indicated that water cannot get into inlets and garage floods with 1' of water.	Review the inlets and adjust as necessary	\$5,000.00
IB	571 Sunset Drive	Yes	Resident claims basement flooding from stormwater due to water from upstream properties.	Home sits about 500' below the highpoint in the neighborhood and there is a natural drainage path of water from the rear of the upstream properties toward this home. Correction of the stormwater runoff issue would require the extension of the municipal system from Sunset to the rear of the property to address this private runoff issue.	\$35,000.00
IB	1351 Sylvandell Drive	No	Experienced flooding in his garage due to run off from the athletic field at Hoover School. The resident indicated that the drain above his property was clogged during the rain event.	The MLSD maintenance office was contacted to correct the issue. MLSD indicated that they would have the maintenance crews address the inlet.	TBD



IB	469	Thornycroft Avenue	Yes	Stormwater runoff issue. Water was entering the basement around the walls and going down the floor drain. The garage had about 4" of water. They indicated that a large amount of water was observed coming from the house above on Broadmoor - this portion of Broadmoor is private. They had about 4" of water in their backyard and have installed HydroBlox to help with drainage. During this event, the roadway was flooded, but it did not appear that road water was flowing back toward the house. This has occurred 3 or 4 times this year. Resident observed what looked like water coming out of the garage drain.	This home has a backwater valve and sits about 3 feet higher in elevation than other houses on the street with backwater valves. The other houses have not indicated any sanitary sewer issues. That said, we believe that the water coming from the house above is getting into the sanitary lateral and the backwater valve is closed so the water is not able to get out of the system but rather backs up in the basement. In order to relieve this issue, we believe a storm sewer extension would need to be installed to the rear of the property to pick up the water coming from the residence above.	\$30,000.00
IB	68	Mt. Lebanon Boulevard	No	Existing storm sewer is in disrepair and needs to be replaced	Replacement of existing storm sewer via installation of new storm sewer. Investigations underway to confirm connectivity in order to prepare solutions	\$150,000
					<b>TOTAL PRIORITY IB PROJECTS</b>	<b>\$1,817,500.00</b>

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A **Priority II Project** is defined as one where damage occurred to a property but not to an occupied structure.

A **Priority III Project** is defined as one where damage did not occur to an occupied structure or property, however, upgrades to the stormwater system would improve its operation or decrease maintenance for Public Works.

Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
II	351 Atlanta Drive	No	Lack of storm sewers to handle water from Towercrest (private street) is causing runoff issues for the resident.	Extension of the storm sewer system along Atlanta from either the intersection with Cochran or from the intersection of Cedar/Hollycrest.	\$100,000.00
II	270 Baywood Avenue	No	Home is in the low point of the street and the existing storm sewers could not handle all the flow which caused the back-up of water in this low point and flooding of driveway. The stone from the driveway washed downstream into the neighbor's yard and caused flooding problems on Atlanta.	Investigate capacity of system and inlet additions / roadway revisions at this location.	\$35,000.00
II	398 Dewalt Drive	TBD	Yard flooding from runoff from Summit Drive and the Summit Pointe Development.	Inspections reviewing with developer	TBD
II	1195 Driftwood Drive	Yes	Runoff from Arrowood Properties is being directed to this property and causing flooding.	Extension of Driftwood storm system to rear yard to address this private runoff issue with installation of drains and swale.	Included in 1199 Driftwood estimated cost
II	209 Edward Avenue	No	Stormwater runoff from Martin Street through yards and across property.	Review of stormwater system on Martin and add additional inlets for collection and revise the grates of the existing inlets to vane type (if frame permits).	Included in 214 Martin Avenue estimated cost
II	1297 Firwood Drive	Yes	Stormwater runoff causing damage and soil erosion in the rear yard of the property	Install storm drains in the rear yard to capture and convey stormwater to the existing storm sewer.	Included in 1301 Firwood Drive estimated cost
II	1301 Firwood Drive	Yes	Stormwater runoff causing damage and soil erosion in the rear yard of the property	Install storm drains in the rear yard to capture and convey stormwater to the existing storm sewer.	\$15,000.00

Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
II	1305 Firwood Drive	Yes	Stormwater runoff causing damage and soil erosion in the rear yard of the property	Install storm drains in the rear yard to capture and convey stormwater to the existing storm sewer.	Included in 1301 Firwood Drive estimated cost
II	300 Hazel Drive	No	Water from the Poplar Alley is flowing through this property.	Extension of the storm sewer system from Hazel to intercept the flow.	\$35,000.00
II	120 Iroquois drive	No	Iroquois Park Culvert Repair - Repairs and maintenance necessary to the aging CMP culvert traversing underneath the existing cul-de-sac of Iroquois Drive.	Structural repairs of culvert and invert lining for future repair	\$480,000.00
II	201 Jefferson Drive	Yes	Water from Hazel is flooding the rear of this residence.	Extension of storm sewers from Jefferson to the rear of the property to intercept runoff.	\$50,000.00
II	425 Kurt Drive	Yes	Runoff from adjacent upstream properties is flowing across the rear of the properties down to this resident and flooding the yard.	A storm sewer system exists in the rear of the property that could be expanded upon to address this private runoff issue.	\$10,000.00
II	425 Layton Avenue	Yes	Runoff from residents along McFarland flowing down to this residence and flooding yard.	Expansion of existing storm system in rear of properties behind Layton.	\$35,000.00
II	940 Lovington Drive	Yes	Yard experienced flooding from runoff of neighbors.	Residence sits in an 11-acre watershed. There is an existing storm line running through the rear of this property that could be added onto to address this private runoff issue coming from Dormont. Inlets and diversion swale required.	\$10,000.00
II	897 MacArthur Drive	No	Experienced flooding of the yard from the property and street in back which is in Castle Shannon (Redwood Drive). Damage limited to yard debris and mulch, but she is concerned that the run off could eventually impact her home.	Best course of action is to work with Castle Shannon to improve the curb to the rear of the 2 existing storm inlets at the end of the street.	TBD
II	124 Mayfair Drive	No	Runoff from property owner above caused yard flooding. Resident concerned that the property owner above used plastic beneath landscaping stones. She thinks that this increased run off towards her property and is concerned that her home will suffer damage.	Inspections is reviewing this issue.	TBD

Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
II	908 McNeilly Road	No	He wanted to report that the stream along McNeilly Road started flowing onto the roadway a few years ago when the property owner at 919 McNeilly installed a section of CMP under the bridge leading to his property.	Explained to the resident that the road and related right-of-way is a county R.O.W. Also, there may be an issue with DEP if proper permits were not acquired to install the pipe. Referred to Allegheny County DPW.	TBD
II	915 McNeilly Road	No	Runoff from properties above floods the yard of this property.	Runoff from Summit Pointe development to be reviewed.	TBD
II	931 McNeilly Road	No	Damage to bridge accessing home during heavy rain event.	Talked with homeowner and informed her that it's not an area that is maintained by MTL and that there are no trees that are owned by MTL in the area that caused the damage.	TBD
II	442 Morrison Drive	No	Backyard was flooded twice this year due to what the resident believes is a clogged storm sewer.	Investigate the storm sewers in the area to see if they are flowing freely and act upon this information.	TBD
II	16A North Meadowcroft Avenue	Yes	Runoff from properties above causes excess surface runoff onto the property	Install storm drains in the rear yard to capture and convey stormwater to the existing storm sewer.	TBD
II	305 Rawley Drive	Yes	Stormwater runoff causing damage and soil erosion in the rear yard of the property	Install storm drains in the rear yard to capture and convey stormwater to the existing storm sewer.	Included in 1301 Firwood Drive estimated cost
II	139 Rock Haven Lane	No	Flooding from property to the rear. Suffered some flooding damage to an outside gazebo and patio area. Believes that the water is coming from the properties on Park Entrance and Main Entrance.	Consider upgrades to the storm facilities on Park Entrance and possible addition of additional facilities.	\$20,000.00
II	66 Rocklynn Place	Yes	Runoff from upstream properties of St. Clair Drive is collecting and flooding the yard of this residence. The roadway water of St. Clair Drive is directed back toward Washington Road and is not presenting the problem.	To provide relief for this issue would require the installation of a storm sewer system from Rocklynn Place to the rear of properties on St. Clair Drive to mitigate this private runoff issue.	\$60,000.00
II	825 Wainwright Drive	No	Resident reported that water from MacArthur jumped the curb and flowed to their backyard.	Installation of a storm sewer extension on MacArthur.	\$50,000.00
II	817 White Oak Circle		Water overtops curb on Ridgeview due to a lack of available inlets.	Inlet improvements on Ridgeview are being completed as part of the 2018 reconstruction program.	Already Awarded

II	1308 Lakemont Drive	Yes	Outfall carrying water from Folkstone has been buried at somepoint by improvements to residents property.	Install storm sewer to connect into existing storm structure to convey water.	\$60,000
II	148 Hoodridge Headwall Repair	No	Headway to storm sewer experiences blockages and requires frequent cleaning	Install Inlet structure at headwall to act as emergency spillway	\$12,500
<b>TOTAL PRIORITY II PROJECTS</b>					<b>\$972,500.00</b>

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A **Priority II Project** is defined as one where damage occurred to a property but not to an occupied structure.

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Priority	Address	Easement Required	Problem	Recommendation	Estimated Cost
III	217 Altoona Place	No	The hydraulic connectivity of the storm sewers in front of this home is causing the manhole lid to lift off during heavy rain events but is not causing any property damage, but rather is a safety concern.	Installation of a watertight frame & lid	\$1,500.00
III	401 Morrison Drive @ Neulon Avenue	No	Existing bituminous pavement in which there is a 30" Belgian Block strip between the curb and the 4' wide sidewalk. No signs of water on the date of the review, but water may be coming from the high side of 401 Morrison.	Remove and replace existing 4' sidewalk for the installation of an 8" under drain with 2B backfill and install a separate 8" solid storm sewer pipe to pick up roof drains and tie all sewers into the inlet which is 230' away. 6 roof drains exist that need to be connected.	\$40,000.00
III	186 Mt. Lebanon Boulevard (Private Portion)	Yes	Stormwater is running from concrete gutter in yard next to 186 Mt. Lebanon Boulevard and onto the bituminous pavement before discharging onto the public portion of Mt. Lebanon Boulevard.	Install approximately 70' of new storm sewer and an inlet	\$20,000.00
III	148 Marshall	No	Stormwater backed up at the headwall located in the rear of the property	Install a trash rack to prevent debris from clogging the headwall	TBD
III	94 Ordale Boulevard	No	Water flowing from properties in rear yard causing ponding in yard	Additional storm sewer installation necessary in the neighborhood in order to provide storm sewer infrastructure to tie into; potentially add as part of future road reconstruction program	Included in 212 Mohawk Drive estimated cost
III	194 Woodhaven Drive	No	Forest Glen Storm / Woodhaven Drive Phase II - Improving storm sewer conveyance capacity to this water shed and to provide	Installation of Storm Sewer System to collect roof drains and increase capture capacity of the system	\$200,000.00

			opportunity for roof leader collection into the system to reduce icing issues		
II/III	Various	Storm Sewer CMP Repairs	No	Miscellaneous Repairs associated with televising of storm sewer outfall pipes as directed by Public Works	Repair defects prior to flooding/sinkholes arise \$300,000.00
II/III	Various	Mill/Overlay Stormwater Work	TBD	Miscellaneous Repairs associated with incidental work required for the Road Mill/Overlay Program	Repair defects ahead of road program \$30,000.00
<b>Priority</b>	<b>Address</b>		<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b> <b>Estimated Cost</b>
III	1653 McFarland Road	Banksville Road : Storm and Sanitary Re-Route	Yes	Existing Storm and Sanitary Sewers are located under Plaza that contains The Artsmiths of Pittsburgh, The Fireplace & Patio Place, Among Others	The Storm Sewer and Sanitary Sewer must be re-routed to avoid future issues relative to maintenance and access due to the sewer lines being under existing structures \$2,500,000.00
II/III	Various	Emergency Repairs		Emergency projects identified by CCTV or flooding issues	Address Emergency repairs as they arise \$50,000.00
II/III	355	Orchard Drive	Yes	Re-Alignment of Storm Sewer to avoid future conflict with existing homes and site features	Re-Route the storm sewer to avoid the problem area \$560,000.00
III	1285	Folkstone Drive	No	Damage sustained to outfall pipe	Re-Route the storm sewer to avoid the problem area \$100,000.00
III	120	Iroquois Drive	Yes	Outfall at Iroquois Drive requires upsizing and corrections to damaged pipe	Upsize outfall and repair damaged pipe \$60,000.00
					<b>TOTAL PRIORITY III PROJECTS (NON-ICE)</b> <b>\$3,811,500.00</b>
<b>ICE SPOT PROJECTS</b>					
<b>Priority</b>	<b>Address</b>		<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b> <b>Estimated Cost</b>
III	290	**Arden Road	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs \$50,000
III	1171	**Arrowood Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs \$50,000
III	1213	Arrowood Drive	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b> <b>\$425,225</b>
III	269	**Atlanta Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs \$50,000

III	208	**Barth Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	261	**Baywood Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	211-229	**Birch Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	14	**Broadmoor Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
<b>Priority</b>	<b>Address</b>		<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b>	<b>Estimated Cost</b>
III	60	**Castle Shannon Boulevard	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	95	Castle Shannon Boulevard	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$10,537.50
III	370	Castle Shannon Boulevard	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$51,162.50
III	1020	Cedar Boulevard	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$37,750
III	411	**Clokey Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	258-283	**Colonial Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	844 & 819	**Country Club Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	3	**Earlswood Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000

III	457 **Edgehill Lane	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	836 **Elm Spring Road	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	16 **Forest Glen Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	1535 **Forestview Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	814 **Fruithurst Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
<b>Priority</b>	<b>Address</b>	<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b>	<b>Estimated Cost</b>
III	797 **Fruithurst Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	455 **Greenhurst Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	108 **Halsey Court	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	529 **Hillcrest Place	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	427 **Jayson Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	471 **Jayson Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	249 Jonquil Place	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b>	<b>\$258,925</b>



III	720 **Kewanna Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	1010 **Lakemont Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	1012 Larchdale Drive	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b>	<b>\$48,375</b>
III	118 **Lebanon Hills Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	202 **Lemoyne Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	801 **Linda	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
<b>Priority</b>	<b>Address</b>	<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b>	<b>Estimated Cost</b>
III	54 Mayfair Drive	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b>	<b>\$227,462.50</b>
III	114 **McCann Place	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	210 **McCully Street	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	514 **McCully Street	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	633 **McCully Street	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	1103 McCully Street at Cochran Road	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b>	<b>\$65,000</b>

III	363 **Midway Road	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	399 **Midway Road	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	420 **Morrison Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	172 **Mt Lebanon Boulevard	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b>	<b>\$0.00</b>
III	756 **North Meadowcroft Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	391 **Neulon Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	441 **Neulon Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
<b>Priority</b>	<b>Address</b>	<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b>	<b>Estimated Cost</b>
III	156-158 Oak Park Place	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b>	<b>\$53,375</b>
III	64 **Ordale boulevard	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	1014 **Osage Road	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	201 **Overlook Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	223 **Park Entrance Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000

III	269 **Park Entrance Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	281 **Parker Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	113 **Piper Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	305 **Questend Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	129 **Ridgeway	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	731 **Rockwood Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	639 **Royce Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	56 **Roycroft Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
<b>Priority</b>	<b>Address</b>	<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b>	<b>Estimated Cost</b>
III	943 **Ruth Street	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	460 **Sage Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	119 **Seminole Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	704 **Shady Drive East	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000

III	744 **Shady Drive East	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	245 **Sleepy Hollow Road	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	137 **Stilwell Court	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	20 Sunnyhill Drive	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b>	<b>\$125,600</b>
III	57 Sunnyhill Drive	TBD	<b>Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis</b>	<b>TBD upon further investigation, Cost is estimated based on average of other repairs</b>	<b>\$131,325</b>
III	100 **Sunridge Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	720 **Vallevista Avenue	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	258 **Hoodridge Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	196 **Valley Park Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
<b>Priority</b>	<b>Address</b>	<b>Easement Required</b>	<b>Problem</b>	<b>Recommendation</b>	<b>Estimated Cost</b>
III	915 **Valleyview Road	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	70 **Woodland Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
III	83 **Woodland Drive	TBD	Ice Spot. Icing requires monitoring and maintenance by Public Works on an ongoing basis	TBD upon further investigation, Cost is estimated based on average of other repairs	\$50,000
				<b>TOTAL PRIORITY III PROJECTS</b>	<b>\$8,496,237.50</b>

- \*\* Cost is average of 54 Mayfair, Oakpark Place, Broadmoor Dr., Birch Pl, Larchdale, Castle Shannon Blvd, Cedar Blvd projects
- **Bold Text Denotes Priority Ice Spot Repairs**

