



Real People. Real Solutions.

City of Norwood Young America

# 2<sup>ND</sup> Avenue Lift Station & Street Improvements Feasibility Report

**Submitted by:**  
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# Certification

## Feasibility Report

For

2<sup>ND</sup> Avenue Lift Station & Street Improvements

City of Norwood Young America  
OC1.122730

November 17, 2020

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By: 

By:

Joshua Eckstein, P.E.

License No. 48224

Date: 11/17/2020

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## **I. EXECUTIVE SUMMARY**

### **A. Background & Introduction**

The impetus for this report is a request by the City of Norwood Young America to evaluate the feasibility of improvements to the 2<sup>nd</sup> Avenue SE sanitary sewer lift station and adjacent street. The project area is shown on Figure 1 of Appendix A. The goal of these improvements is to reconstruct one of the city's major sanitary sewer facilities thereby preserving the investment that the City of Norwood Young America has made in its infrastructure with proper and timely repairs and replacements.

### **B. Proposed Improvements**

All improvements addressed within this report are feasible from a technical standpoint. This study addresses issues with aging, substandard, or non-existent infrastructure including street pavement, sanitary sewer, watermain, and storm sewer facilities. The improvements recommended in this report are necessary to provide safe and adequate infrastructure and represent cost effective solutions for doing so.

#### **1. Street Improvements**

The proposed 2<sup>nd</sup> Avenue improvements consist of full depth street reconstruction from the Morse Street / 7<sup>th</sup> Street / Faxon Road / Central Avenue (5-way) intersection to the northern Devonshire Drive intersection. In general, the proposed street will match the existing street profile and width. The proposed street section will meet the City standard truck route pavement section and will include curb and gutter matching the existing curb width, profile, and style. The proposed street dimensions are as follows:

- 2<sup>nd</sup> Avenue SE
  - Curb and Gutter on Both Sides
  - 37.0-Foot Street Width
    - 11.0-Foot Thru Lanes
    - 7.5-Foot Parking on Both Sides

#### **2. Storm Sewer Improvements**

Existing storm sewer infrastructure are proposed to be replaced with new materials including manholes catch basins and pipe. Storm sewer within the roadway will be replaced in its approximate current location. Drain tile and sump pump discharge connection points are also proposed to be included as part of the project improvements.

#### **3. Watermain Improvements**

Proposed watermain improvements include replacement of the existing watermain from the 5-way intersection to the north Devonshire Drive intersection. All hydrants, gate valves and service lines are also proposed to be replaced as part of the project.

#### **4. Sanitary Sewer Improvements**

Proposed sanitary sewer improvements include removal and replacement of the existing Lift Station, replacement of existing gravity sewer manholes, replacement of existing forcemain, and cured in place pipe lining of the gravity

sewer pipe.

### C. Estimated Costs

Cost estimates have been prepared for the City infrastructure needs identified within the 2<sup>nd</sup> Avenue project area. Detailed cost estimates are provided in Appendix B and summarized below:

#### **2<sup>nd</sup> Avenue Improvements:**

1) \$ 725,580	Street Reconstruction Cost
2) \$ 83,005	Storm Sewer Cost
3) \$ 822,714	Sanitary Sewer Cost
4) \$ <u>171,114</u>	Watermain Cost
<b>\$ 1,802,413</b>	<b>Total Estimated Project Cost</b>

## II. INTRODUCTION

The impetus for this report is a request by the City of Norwood Young America to evaluate the feasibility of improvements to specifically identified City infrastructure components within the 2<sup>nd</sup> Avenue Lift Station area. The goal of these improvements is to provide and maintain municipal utility service and preserve the investments that the City of Norwood Young America has made in its infrastructure with proper and timely repairs and replacements.

This report is based on record drawings, aerial photography, City utility maps, and City staff input. This report examines various potential infrastructure components within the 2<sup>nd</sup> Avenue Lift Station area from the 5-way intersection to the north leg of Devonshire Drive. More specifically, this report reviews considerations for:

- Bituminous Pavement Needs
- Transportation Needs
- Stormwater Conveyance System Needs
- Stormwater Quality Needs
- Wastewater System Facility Needs
- Water Supply System Needs
- Pedestrian Transportation Needs

### A. Background

This Feasibility Study has been completed to identify the municipal infrastructure improvements and appropriate roadway rehabilitations needed within the proposed project area to better define project costs and impacts. The project area was identified and chosen by City staff based on priorities identified within the City's Street & Utility Reconstruction Projects Scoping Study.

### B. Overall Feasibility and Cost Effectiveness

All improvements addressed within this report are feasible from a technical standpoint. This study addressed issues with failing or non-existent infrastructure. The improvements are necessary to provide safe and adequate infrastructure, and represent cost effective solutions for doing so.

### III. PROPOSED IMPROVEMENTS

#### A. Street Improvements

The existing 2<sup>nd</sup> Avenue SE typical section consists of approximately 37-foot wide bituminous street with concrete curb and gutter on each side. The existing concrete curb and gutter is a B618 style curb. The existing pavement has many transverse and longitudinal cracks along with raveling on the east side. Based on the existing pavement condition and the scope of the proposed utility work, the recommended repair measure is full depth reconstruction. The proposed improvement consists of full depth reconstruction of the street structural section from the 5-way intersection to the northern Devonshire Drive intersection. Adjacent driveway and sidewalks will also be reconstructed as necessary to match the reconstructed roadway. The proposed street section will be designed to accommodate truck traffic including 6.5-inches of bituminous pavement with 14-inches of aggregate base and geotextile fabric. Additional excavation may be necessary if poor subgrade soils are encountered. The proposed street will also include new B618 concrete curb and gutter. Based on the City's assessment policy only the City standard street section shall be assessed. Based on that policy, 2-inches of bituminous pavement, 5-inches of aggregate base and 3-feet of width will not be assessed to adjacent properties and will be included as a 100% City cost. Parking lane striping is proposed on each side of the street to delineate the parking lane from the thru lanes and act as a speed reduction measure by visually narrowing the functional roadway.

The proposed street dimensions are as follows:

- 2<sup>nd</sup> Avenue SE
  - B618 Concrete Curb & Gutter on both sides
  - 37.0-Foot Paved Street Width
    - 11.0-Foot Thru Lanes
    - 7.5-Foot Parking Lanes Both Sides

The total project cost for the proposed street reconstruction is estimated to be \$725,580. Itemized cost estimates are included in Appendix B.

#### B. Storm Sewer Improvements

Existing drainage patterns and discharge locations will be maintained by this project. Stormwater generally drains to the low point in the street profile near the existing sanitary lift station. The existing stormwater conveyance system generally consists of concrete manholes and pipe which is in poor condition due to age. All components, pipe and manholes, are proposed to be replaced in generally similar locations. Additional intakes will be evaluated and added if necessary. New castings and manhole chimneys will also be included as part of the project. Drain tile and sump pump discharge connection points will also be added adjacent to the curb and gutter where adjacent properties with potential sump pumps exist. This will give each property owner the opportunity to connect sump pump discharge lines to the storm sewer conveyance system underground in an effort to minimize consistently wet yards, street icing and ice damage to sump pump lines.

The total project cost for the 2<sup>nd</sup> Avenue stormwater system improvements is estimated to be \$83,005. Itemized cost estimates are included in Appendix B.

#### C. Sanitary Sewer Improvements

Existing gravity sanitary sewer mains run along the centerline of the street from the the 5-way intersection to the north Devonshire Drive intersection. This line is generally in fair condition

and is recommended to be lined with a cured in place pipe (CIPP). Sanitary sewer manholes are located throughout the project and are recommended to be replaced due to age and condition. These manholes are in fair condition with considerable groundwater infiltration. The Village of Young America Municipal Lift Station No 1 (Second Avenue Lift Station) is located on the east side of the street approximately mid-block between the Devonshire Drive loop. This station is approximately 48 years old and has reached the end of its useful life. This lift station serves a large area including all of old Young America north of 7<sup>th</sup> Street from Trunk Highway 5 to Tacoma Avenue. This sanitary sewer lift station is a significant component of the City's wastewater infrastructure and must be maintained to a high standard of care. The existing station is proposed to be abandoned and a new duplex submersible style station installed adjacent to the existing facility. A new control panel along with connection for remote monitoring and backup power is also planned as part of the station rehabilitation. Replacement of the existing backup generator is planned. It is unlikely that the existing generator will not be able to operate the new lift station pumps however, further evaluation during final design will be completed and the existing generator will be reused if possible. Temporary bypass pumping will be necessary during construction of the new station to maintain sanitary sewer service. A significant shutdown of the sewer system is not anticipated. The existing forcemain which conveys pumped sewage from the lift station to a gravity sewer manhole within the 5-way intersection is under sized and of similar age and condition and therefore is recommended to be replaced. New forcemain piping will be sized appropriately and shall be constructed of PVC material with isolation valves, check valves and pump-out locations for maintenance conforming to current City standards. An additional complicating factor for the lift station and adjacent utility construction is the presence of petroleum odor identified by one of the soil borings taken adjacent to the existing lift station site. Additional analysis is needed to define the limits of potentially contaminated soil and cost implications of removal. Costs for contaminated soil removal are not included in the current sanitary sewer system estimate.

The total project cost for sanitary sewer system improvements is estimated to be \$822,714. Itemized cost estimates are included in Appendix B.

#### D. Water System Improvements

Existing watermain consists of 6-inch cast iron pipe. The existing pipe is under sized based on today's standards and restricts fire flows to the area. The exact age of the pipe is unknown but is likely 50 plus years old. The existing main is constructed of cast iron which is brittle and easily broken when ground shifting occurs during winter and spring months. Given the proposed street will have a useful life of 50 plus years this segment of watermain, if left in place, would be a liability to the integrity of the system. All existing watermain is proposed to be replaced with an 8-inch diameter PVC pipe. New isolation valves and hydrants will also be included in the design to bring the system up to current City standards and provide adequate fire protection. In addition to the main, each individual property service lines are recommended to be replaced from the main to the existing curb stop.

The total project cost for the water system improvements is estimated to be \$171,114. Itemized cost estimates are included in Appendix B.

## IV. FINANCING & FUNDING

### A. Financing

Due to the estimated assessable percentage, the proposed method of financing for the 2<sup>nd</sup> Avenue Lift Station & Street Improvement project is through a combined bond approach. The combined bond approach will allow a portion of the non-assessable improvements to be financed under a Chapter 115 Sanitary Sewer Revenue Bond, or a Chapter 444 Water and

Stormwater Revenue Bond, or another applicable bond ensuring the City is able to meet all statutory requirements. The Chapter 429 Bond is the most common financing method for local street reconstruction projects that contain assessments. The Chapter 429 statutory requirement for minimum assessable percentage is 20%. The Financing & Funding table located at the end of this section shows that the estimated assessable percentage of the project with all components currently 11.3% for the front footage method and 10.9% for the unit method.

It is recommended that the City discuss financing options in more detail with their financial consultant. Combining the financing of this project with other possible planned improvements, such as the Oak Lane improvements project, should also be evaluated and discussed.

## B. Funding

This project is proposed to be funded with general City funds and special assessments imposed on benefiting properties. There are several funding sources proposed to be used to service the bond debt including the following:

- Property Tax Revenue
- Sewer Revenues
- Water Revenues
- Stormwater Revenues
- Special Assessments

### 2<sup>nd</sup> AVENUE LIFT STATION AND STREET IMPROVEMENTS

The total project costs for the proposed project are apportioned as follows:

		RECOMMENDED FUNDING SOURCE
Total Project Cost	\$1,802,413.59	
Standard Section Street Cost	\$483,273.03	
Extra Depth Street Cost	\$242,307.04	General Fund
Storm Sewer Improvements	\$83,005.24	Stormwater Fund
Sanitary Sewer Cost	\$822,714.46	Sewer Fund
Watermain Cost	\$171,113.82	
<hr/>		
<i>Street Costs (Front Foot Method)</i>		
Extra Depth Street (100% City)	\$242,307.04	
City Contribution (50%)	\$241,636.52	
Assessable Portion (50%)	\$241,636.52	
Assessment Basis Front Footage	1,791.31	
Cost Per Front Foot	\$134.89	
City Non-Assessable FF	520.91	
Total City Non-Assessable Cost	\$70,266.83	



Total Assessed Amount	\$171,369.69	
City Assessed Amount	\$8,093.62	
Non-City Assessed Amount	\$163,276.06	Special Assessments
Total City Cost	\$554,210.38	General Fund
<i>Street Costs (Unit Method)</i>		
Extra Depth Street (100% City)	\$242,307.04	
City Contribution (50%)	\$241,636.52	
Assessable Portion (50%)	\$241,636.52	
Assessment Basis Units	12.5	
Cost Per Unit	\$19,330.92	
City Non-Assessable Units	4.0	
City Non-Assessable Amount	\$77,323.68	
Total Assessed Amount	\$164,312.83	
City Assessed Amount	\$19,330.92	
Total Non-City Assessed Amount	\$144,981.91	Special Assessments
Total City Cost	\$561,267.24	General Fund
<i>Watermain Costs</i>		
City Contribution (50%)	\$85,556.91	
Assessable Portion (50%)	\$85,556.91	
Assessment Basis Units	13.0	
Cost Per Unit	\$6,581.30	
Total City Units (Non-Assessable)	8.0	
Total Assessed Amount	\$32,906.50	
City Assessable Units	1.0	
City Assessed Amount	\$6,581.30	
Total Non-City Assessed Amount	\$26,325.20	Special Assessments
Total City Cost	\$138,207.32	Water Fund

TOTALS				DEBT SERVICE / FUNDING SOURCE							TOT REVE
TOTAL PROJECT COST	TOTAL ASSESS. AMOUNT	TOTAL CITY COST	TOTAL ASSESS. %	TOTAL DEBT SERVICE	DEBT SVC ASSMT REVENUE	DEBT SVC WATER FUND	DEBT SVC SEWER FUND	DEBT SVC STM SEWER FUND	DEBT SVC GENERAL FUND	TOT REVE	
\$725,580	\$171,370	\$554,210	23.6%	\$58,603	\$13,841				\$44,762		
\$83,005	\$0	\$83,005	0.0%	\$6,704	\$0		\$66,448	\$6,704			
\$822,714	\$0	\$822,714	0.0%	\$66,448	\$0		\$66,448				
\$171,114	\$32,907	\$138,207	19.2%	\$13,820	\$2,658	\$11,163					
<b>\$1,802,414</b>	<b>\$204,276</b>	<b>\$1,598,137</b>	<b>11.3%</b>	<b>\$145,575</b>	<b>\$16,499</b>	<b>\$11,163</b>	<b>\$66,448</b>	<b>\$6,704</b>	<b>\$44,762</b>	<b>\$</b>	

in a 15-Year Bond At 2.5%. Actual Bond Term TBD by the City Council.  
 e Will Be Based On Interest Rate 1.0% Above Bonding Cost (=2.5% + 1.0% = 3.5%) at the Selected Bond Term.

TOTALS				DEBT SERVICE / FUNDING SOURCE							TOT REVE
TOTAL PROJECT COST	TOTAL ASSESS. AMOUNT	TOTAL CITY COST	TOTAL ASSESS. %	TOTAL DEBT SERVICE	DEBT SVC ASSMT REVENUE	DEBT SVC WATER FUND	DEBT SVC SEWER FUND	DEBT SVC STM SEWER FUND	DEBT SVC GENERAL FUND	TOT REVE	
\$725,580	\$164,313	\$561,267	22.6%	\$58,603	\$13,271				\$45,332		
\$83,005	\$0	\$83,005	0.0%	\$6,704			\$66,448	\$6,704			
\$822,714	\$0	\$822,714	0.0%	\$66,448			\$66,448				
\$171,114	\$32,907	\$138,207	19.2%	\$13,820	\$2,658	\$11,163					
<b>\$1,802,414</b>	<b>\$197,219</b>	<b>\$1,605,194</b>	<b>10.9%</b>	<b>\$145,575</b>	<b>\$15,929</b>	<b>\$11,163</b>	<b>\$66,448</b>	<b>\$6,704</b>	<b>\$45,332</b>	<b>\$</b>	

in a 15-Year Bond At 2.5%. Actual Bond Term TBD by the City Council.  
 e Will Be Based On Interest Rate 1.0% Above Bonding Cost (=2.5% + 1.0% = 3.5%) at the Selected Bond Term.

## V. ASSESSMENTS

The project is proposed to be assessed to the benefiting properties in accordance with the adopted City Assessment Policy and annexation agreement as follows:

Street Reconstruction:	50% Assessed on a Unit Basis
Storm Sewer Reconstruction:	100% City Cost
Watermain:	50% Assessed on a Unit Basis
Sanitary Sewer:	100% City Cost

Figure 2 of Appendix A indicates the proposed assessment area. The estimated assessments for each property are tabulated on the estimated assessment rolls located at the end of this section. A copy of the current City assessment policy is included in Appendix C of this report for reference.

The street reconstruction portion of the project is proposed to be assessed based on the front footage method. However, assessments were also calculated based on the Unit method for reference and consideration. Assessments based on the front footage method are calculated based on the length of each property that is directly adjacent to the improvements. Assessments based on the unit method are also included for consideration. Assessments based on the unit method are calculated based on each property that is located within the project limits is assessed one unit per property. City owned property has been assessed appropriately, for each method, to the City. Multiple fronted parcels or corner lots, not located on a County road, are given a 50% credit for each side of property.

The watermain construction portion of the project is proposed to be assessed based on the unit method. Due to the unique nature of this project area with a significant number of multi-fronted parcels, a unit has been assigned to the City for each Multi-fronted parcel that is not served from its 2<sup>nd</sup> Avenue side. The resultant is a reduced watermain assessment that is closer to past assessment amounts.

We recommend the City work with an independent firm to complete appraisals of select properties within the project area. The appraisals will be used to determine final assessment amounts levied. Final assessment amounts will not exceed the benefit to each property as determined by this evaluation.

	PROPERTY ADDRESS	P.I.D.	UNIT	CORNER LOT UNIT CREDIT - PRIMARY	CORNER LOT UNIT CREDIT - SECONDARY	STREET ASSESSMENT		WATERMAIN ASSESSMENT	
						ASSMT UNIT	STREET ASSMT	UNIT	WATERMAIN ASSMT
	510 CENTRAL AVE S	580113150	0.50		0.50	0.50	\$9,665.46		
	506 CENTRAL AVE S	580113050	0.50		0.50	0.50	\$9,665.46		
TZ	504 CENTRAL AVE S	580113100	0.50		0.50	0.50	\$9,665.46		
N TWIST	418 CENTRAL AVE S	580111900	0.50		0.50	0.50	\$9,665.46		
TINEN	417 2ND AVE SE	580111630	1.00			1.00	\$19,330.92	1	\$6,581.30
A CRUZ	413 2ND AVE SE	580111100	1.00			1.00	\$19,330.92	1	\$6,581.30
	614 2ND AVE SE	580110300	1.00			1.00	\$19,330.92	1	\$6,581.30
R	542 DEVONSHIRE DR	581500010	0.50		0.50	0.50	\$9,665.46		
DOW	529 DEVONSHIRE DR	581500140	0.50		0.50	0.50	\$9,665.46		
ADIEKE	119 MUIRFIELD CIR	581500240	0.50		0.50	0.50	\$9,665.46		
CA CITY	N/A	580110250	1.00			1.00	\$19,330.92	1	\$6,581.30
	117 MUIRFIELD CIR	581500250	0.50		0.50	0.50	\$9,665.46		
	418 2ND AVE SE	580110200	0.50	0.50		0.50	\$9,665.46	1	\$6,581.30
CA CITY			4.00			4.00	\$77,323.68	8	\$52,650.41
			12.50		4.00	12.50	\$241,636.52	13.0	\$32,906.50

Cost ( = 2.5% + 1.0% = 3.5%) and Term Equal to Bond Term ( = 15 Years).

	PROPERTY ADDRESS	P.I.D.	FRONT FOOTAGE	CORNER LOT CREDIT - PRIMARY	CORNER LOT CREDIT - SECONDARY	STREET ASSESSMENT		WATERMAIN ASSESSMENT	
						ASSMT FF	STREET ASSMT	UNIT	WATERMAIN ASSMT
	510 CENTRAL AVE S	580113150	140.00		140.00	140.000	\$18,885.12		
	506 CENTRAL AVE S	580113050	77.00		77.00	77.000	\$10,386.82		
Z	504 CENTRAL AVE S	580113100	25.00		25.00	25.000	\$3,372.34		
TWEST	418 CENTRAL AVE S	580111900	54.00		54.00	54.000	\$7,284.26		
INEN	417 2ND AVE SE	580111630	148.00			148.000	\$19,964.27	1	\$6,581.30
CRUZ	413 2ND AVE SE	580111100	160.00			160.000	\$21,583.00	1	\$6,581.30
	614 2ND AVE SE	580110300	299.00			299.000	\$40,333.23	1	\$6,581.30
	542 DEVONSHIRE DR	581500010	42.405		42.405	42.405	\$5,720.17		
DW	529 DEVONSHIRE DR	581500140	57.50		57.50	57.500	\$7,756.39		
JIEKE	119 MUIRFIELD CIR	581500240	49.225		49.225	49.225	\$6,640.14		
A CITY	N/A	580110250	60.00			60.000	\$8,093.62	1	\$6,581.30
	117 MUIRFIELD CIR	581500250	75.775		75.775	75.775	\$10,221.57		
	418 2ND AVE SE	580110200	82.50	82.50		82.500	\$11,128.73	1	\$6,581.30
A CITY			520.905			520.91	\$70,266.83	8	\$52,650.41
			1791.310		520.905	1,791.31	\$241,636.52	13.0	\$32,906.50

Assessment Basis Front Footage  
 Corner Lot Credit FF  
 City Assessable FF

Cost ( = 2.5% + 1.0% = 3.5%) and Term Equal to Bond Term ( = 15 Years).

## VI. PROJECT SCHEDULE / NEXT STEPS

The City should be aware of the following steps and requirements necessary to meet the requirements of MN Statute 429 that allows for a portion of the project costs to be assessed:

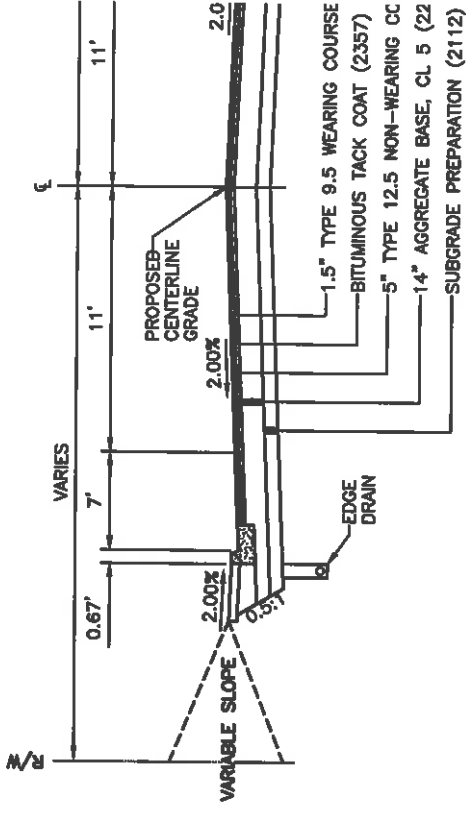
- City Council to approve the Feasibility Study and call for and conduct an Improvements Hearing.
- City Council to order the improvements (by 4/5ths vote) within 6 months of the Improvements Hearing.
- City Engineer to design, advertise and open bids. This step will take 4-6 months to complete.
- City Council to call for and conduct an assessment hearing.
- City Council to award the project. The construction contract must be signed within 12 months of ordering the improvements.
- Construction to occur (months of May to November only).

The following project schedule shows the necessary steps along with a tentative date to complete.

November 23, 2020	Present Study to the City Council
December 14, 2020	Conduct Public Hearing, Order Improvements
December – May 2021	Easement Negotiation
January - March 2021	Complete final design and plan reviews/approvals
March 2021	Advertise and bid project
April 2021	Award project, construction contracts
May - October 2021	Construct project
October 2021	Conduct Assessment Hearing
December 2021	Project closeout

## Appendix A: Figures

**TYPICAL SECTION**



**PROPOSED SANITARY SEWER MANHOLE REPLACEMENT**



**STUDY LOCATIONS**



**RY FORCEMAIN**



**RY SEWER LINING**



**RY SEWER**



**MAIN**



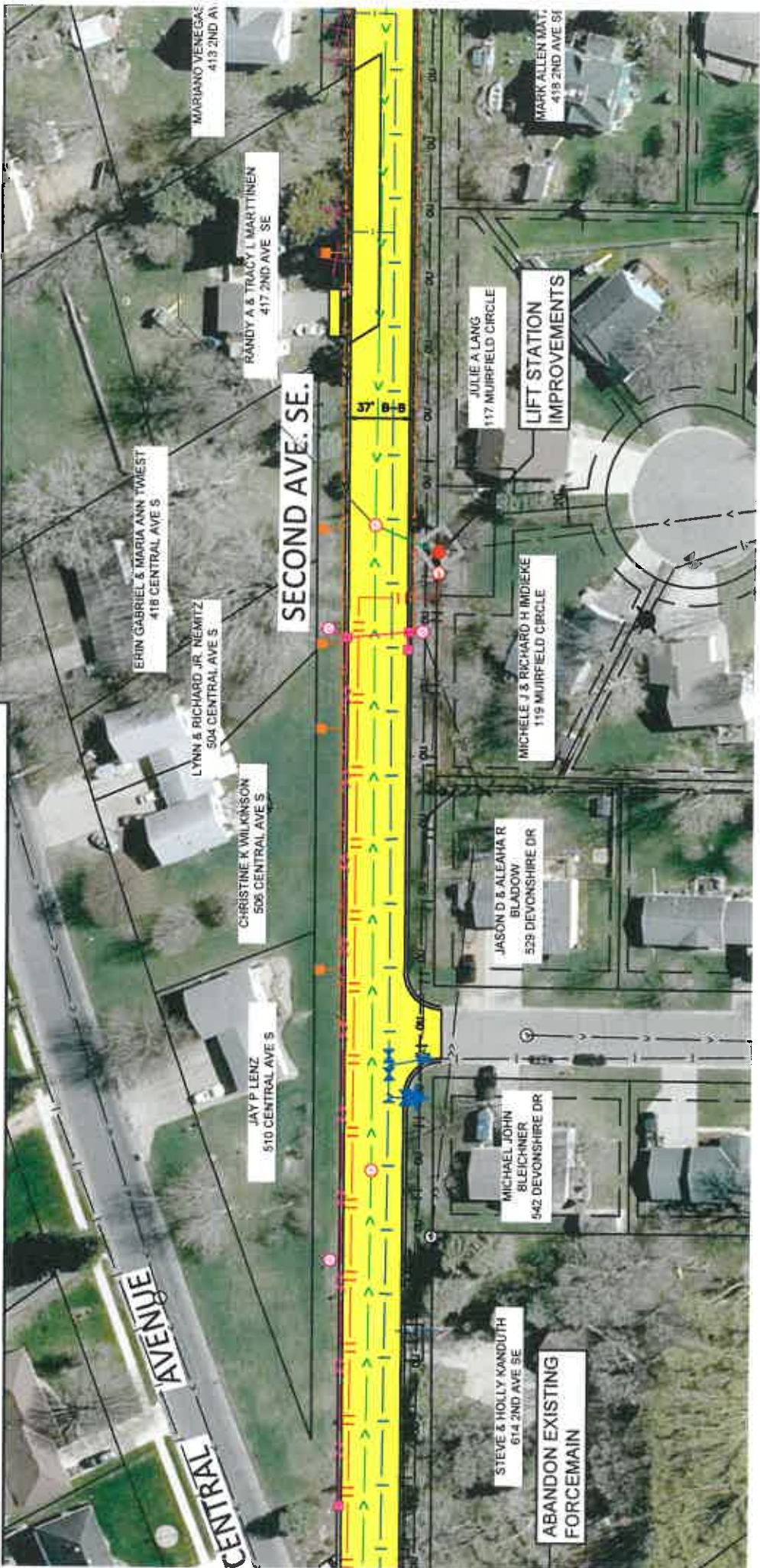
**SEWER**



**SEWER**



**MANHOLE**



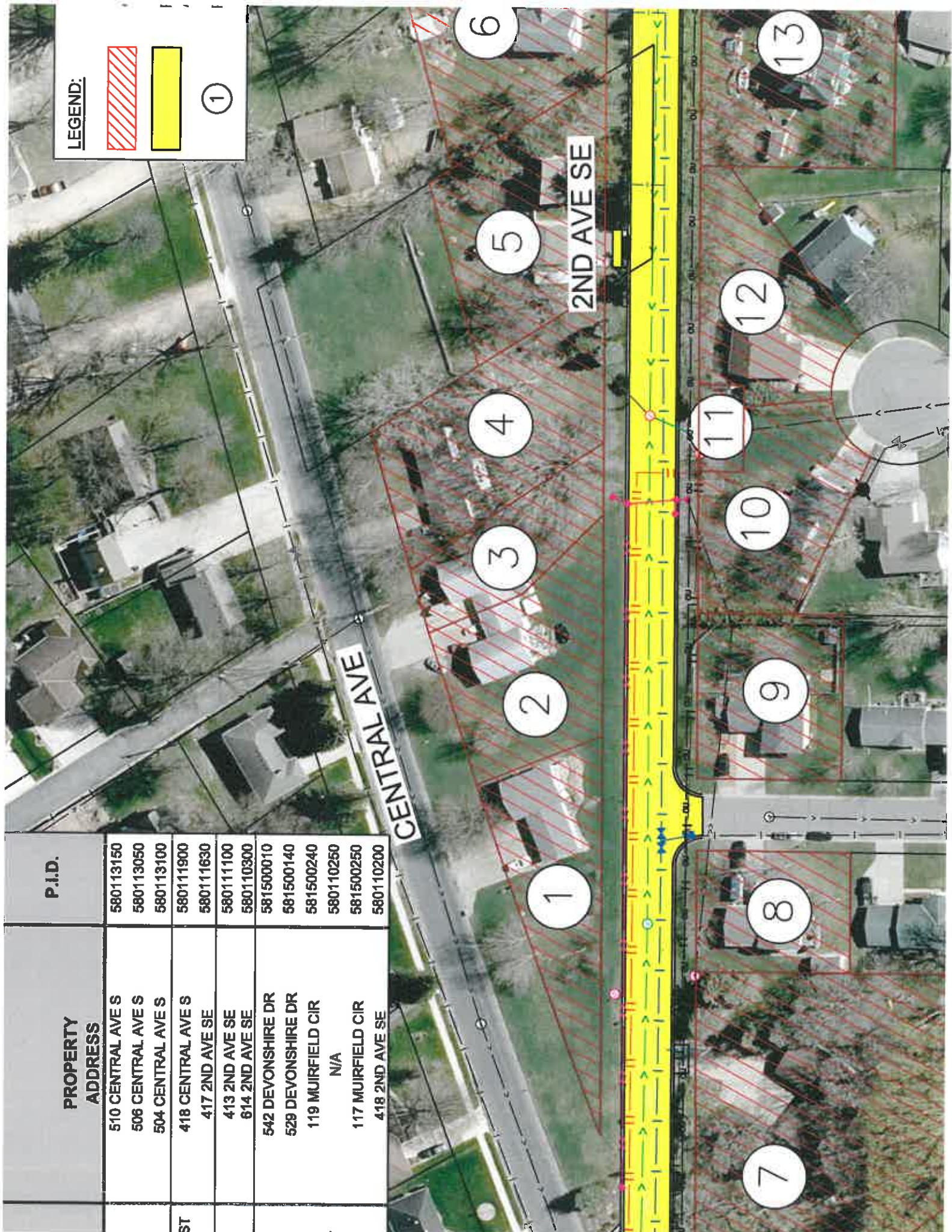


PROPERTY ADDRESS	P.I.D.
510 CENTRAL AVE S	580113150
506 CENTRAL AVE S	580113050
504 CENTRAL AVE S	580113100
418 CENTRAL AVE S	580111900
417 2ND AVE SE	580111630
413 2ND AVE SE	580111100
614 2ND AVE SE	580110300
542 DEVONSHIRE DR	581500010
529 DEVONSHIRE DR	581500140
119 MUIRFIELD CIR	581500240
N/A	580110250
117 MUIRFIELD CIR	581500250
418 2ND AVE SE	580110200

LEGEND:



①



# Appendix B: Itemized Cost Schedule

DESCRIPTION	UNIT	TOTAL QUANTITY	UNIT COST	TOTAL COST	STREET RECONSTRUCTION		STREET RECONSTRUCTION - NON ASSESSABLE		STORM SEWER	
					QUANTITY	AMOUNT	QUANTITY	AMOUNT		QUANTITY
	LUMP SUM	1.00	\$35,000.00	\$35,000.00	0.268	\$9,384.39	0.13	\$4,705.22	0.046	\$1,611.83
	LUMP SUM	1.00	\$5,000.00	\$5,000.00	0.268	\$1,340.63	0.13	\$672.17	0.046	\$230.26
	TREE	9.00	\$500.00	\$4,500.00	9.00	\$4,500.00				
	SQ.FT	36,106.00	\$1.25	\$45,132.50	36,106.00	\$45,132.50				
	SQ.FT	400.00	\$1.25	\$500.00	400.00	\$500.00				
	SQ.FT	800.00	\$1.25	\$1,000.00	800.00	\$1,000.00				
	EACH	3.00	\$40.00	\$120.00	3.00	\$120.00				
	LS	1.00	\$10,000.00	\$10,000.00						
	LIN FT	692.00	\$11.00	\$7,612.00						
	EACH	3.00	\$1,200.00	\$3,600.00						
	EACH	1.00	\$1,500.00	\$1,500.00						
	EACH	1.00	\$2,000.00	\$2,000.00						
	EACH	4.00	\$400.00	\$1,600.00	4.00	\$1,600.00				
	EACH	4.00	\$18.00	\$72.00	4.00	\$72.00				
	HOUR	15.00	\$450.00	\$6,750.00			15.00	\$6,750.00		
	CU YD	2,700.00	\$22.00	\$59,400.00	1,567.00	\$34,474.00	1133.00	\$24,926.00		
	CU YD	535.00	\$38.00	\$20,330.00	535.00	\$20,330.00				
	CU YD	882.00	\$30.00	\$26,460.00			882.00	\$26,460.00		
	TON	1,764.00	\$30.00	\$52,920.00			1764.00	\$52,920.00		
	SQ YD	4,742.00	\$1.50	\$7,113.00	4,179.00	\$6,268.50	563.00	\$844.50		
	SQ YD	4,742.00	\$3.00	\$14,226.00	4,179.00	\$12,537.00	563.00	\$1,689.00		
	TON	13.00	\$28.00	\$364.00	13.00	\$364.00				
	CU YD	1,936.00	\$32.00	\$61,952.00	1,097.00	\$35,104.00	839.00	\$26,848.00		
	TON	365.00	\$90.00	\$32,850.00	365.00	\$32,850.00				
	TON	1,215.00	\$80.00	\$97,200.00	730.00	\$58,400.00	485.00	\$38,800.00		
	LIN FT	2,075.00	\$17.00	\$35,275.00	2,075.00	\$35,275.00				
	LIN FT	1,201.00	\$6.00	\$7,206.00	1,201.00	\$7,206.00				
	EACH	7.00	\$250.00	\$1,750.00	7.00	\$1,750.00				
	EACH	2.00	\$1,000.00	\$2,000.00	2.00	\$2,000.00				
	LIN FT	550.00	\$68.00	\$37,400.00					550.00	\$37,400.00
	EACH	8.00	\$3,000.00	\$24,000.00					8.00	\$24,000.00
	LUMP SUM		\$15,000.00							
	EACH	4.00	\$1,800.00	\$7,200.00						
	EACH	2.00	\$7,000.00	\$14,000.00						
	EACH	2.00	\$2,150.00	\$4,300.00						
	EACH	6.00	\$2,500.00	\$15,000.00						
	EACH	4.00	\$375.00	\$1,500.00						
	LIN FT	130.00	\$45.00	\$5,850.00						
	EACH	4.00	\$450.00	\$1,800.00						
	LIN FT	40.00	\$70.00	\$2,800.00						
	LIN FT	1,180.00	\$50.00	\$59,000.00						
	LBS	875.00	\$15.00	\$13,125.00						
	EACH	4.00	\$2,000.00	\$8,000.00						
	EACH	4.00	\$9,000.00	\$36,000.00						
	LIN FT	1,110.00	\$30.00	\$33,300.00						
	LS	1.00	\$20.00	\$20.00						
	LS	1.00	\$80,000.00	\$80,000.00						

DESCRIPTION	UNIT	TOTAL QUANTITY	UNIT COST	TOTAL COST	STREET RECONSTRUCTION		STREET RECONSTRUCTION - NON ASSESSABLE		STORM SEWER
					QUANTITY	AMOUNT	QUANTITY	AMOUNT	
	LS	1.00	\$40,000.00	\$40,000.00					
	LS	1.00	\$10,000.00	\$10,000.00					
	EACH	4.00	\$425.00	\$1,700.00					
	LIN FT	692.00	\$70.00	\$48,440.00					
	EACH	2.00	\$600.00	\$1,200.00					
	EACH	4.00	\$550.00	\$2,200.00					
GG. BASE CL. 5)	SQ FT	400.00	\$4.50	\$1,800.00	400.00	\$1,800.00			
3. BASE CL 5)	SQ FT	800.00	\$8.00	\$6,400.00	800.00	\$6,400.00			
	EACH	2.00	\$1,000.00	\$2,000.00	2.00	\$2,000.00			
AND PANEL	EACH	4.00	\$225.00	\$900.00	4.00	\$900.00			
	LIN FT	2,000.00	\$2.25	\$4,500.00	2,000.00	\$4,500.00			
OOD FIBER	LIN FT	300.00	\$3.00	\$900.00	300.00	\$900.00			
	EACH	13.00	\$250.00	\$3,250.00	13.00	\$3,250.00			
	LUMP SUM	2.00	\$3,000.00	\$6,000.00	2.00	\$6,000.00			
	SQ YD	3,200.00	\$5.00	\$16,000.00	3,200.00	\$16,000.00			
MIX 25-151	SQ YD	150.00	\$20.00	\$3,000.00	150.00	\$3,000.00			
B & B	TREE	5.00	\$650.00	\$3,250.00	5.00	\$3,250.00			
	ALLOWANCE	1.00	\$5,000.00	\$5,000.00	1.00	\$5,000.00			
C FENCE REPAIR	ALLOWANCE	1.00	\$5,000.00	\$5,000.00	1.00	\$5,000.00			
				\$1,333,267.50		\$357,483.00		\$179,237.50	\$61,400.00
				1.00000000		0.268		0.134	0.046
				\$40,000.00		\$10,725.02		\$5,377.39	\$1,842.09
<b>NET COST:</b>				<b>\$1,373,267.50</b>		<b>\$368,208.02</b>		<b>\$184,614.89</b>	<b>\$63,242.09</b>
				\$68,663.38		\$18,410.40		\$9,230.74	\$3,162.10
				\$360,482.72		\$96,654.61		\$48,461.41	\$16,601.05
<b>F:</b>				<b>\$1,802,413.59</b>		<b>\$483,273.03</b>		<b>\$242,307.04</b>	<b>\$83,005.24</b>

## Appendix C: Assessment Policy

# Public Improvement Assessment Allocation Schedule

<u>Improvement</u>	<u>Type of Construction</u>	<u>Method</u>
<b>Curb &amp; Gutter</b>	New Development	100% of the cost assessed to abutting property owner on linear front footage or unit basis.
	Reconstruction (Complete)	50% of the cost assessed to abutting property owner on linear front footage. 50% of the cost to paid by City.
	Reconstruction (Spot Repair)	100% of cost to be included in overall cost of project prior to assessment apportionment in accordance with policy.
<b>Local Street</b>	New Development	100% of the cost assessed to abutting property owner on linear front footage OR per unit basis.
	Reconstruction	50% of the cost to be assessed to abutting property owner on linear front footage OR per unit basis. 50% of the cost to paid by City.
<b>Collector Street</b>	New Development	100% of the cost of the construction cost of a city standard local street assessed to abutting property owner based on linear front footage OR per unit basis. City pays additional cost of construction above city standard local street.
	Reconstruction	50% of the cost of the construction cost of a city standard local street assessed to abutting property owner based on linear front footage OR per unit basis. City pays 50% of the cost of the construction of a city standard local street and additional cost of construction above a city standard local street.
<b>Frontage Road</b>	New Development	100% of the cost assessed to benefited area owner on front footage OR per unit basis.
	Reconstruction	100% of the cost assessed to benefited area owner on front footage OR per unit basis.
<b>Intersection</b>	New Development	100% of the cost to be assessed. Shall be included as part of street project.

<u>Improvement</u>	<u>Type of Construction</u>	<u>Method</u>
	Reconstruction	100% of cost to be included in overall cost of project prior to assessment apportionment in accordance with policy.
<b>Multiple Fronted Parcels</b> - Corner Lot - Double Fronted Lot - Large Parcels - Etc.	Reconstruction	Front footage to be used in assessment methods described herein shall be calculated as follows: - 50% of the front footage on the “primary access” side of the parcel shall be assessed and 50% shall be credited. The credited front footage is rolled into the project and distributed to all property owners. - Plus 50% of the front footage on each of the remaining abutting sides of the parcel.
<b>Alley</b>	New Development	100% of the cost assessed to abutting property owner on linear front footage basis.
	Reconstruction	100% of the cost assessed to abutting property owner on linear front footage basis.
<b>Sanitary Sewer Trunk/Lateral</b>	New Development	100% of the cost assessed to benefited area on unit basis.
	Reconstruction	50% of the cost assessed to benefited area on unit basis. 50% of the cost to be paid by City.
<b>Sanitary Sewer Service</b>	New Development	100% of cost assessed to property owner.
	Reconstruction (Including main)	50% of the cost assessed to benefited area on a unit basis. 50% of the cost to be paid by the city.
	Reconstruction (Stand alone service replacement)	100% of cost assessed to property owner.
<b>Sanitary Sewer Oversizing</b>	New Development	100% paid by City. (Materials cost above 8-inch pipe plus 20% for handling and installation)
	Reconstruction	100% paid by City. (Materials cost above 8-inch pipe plus 20% for handling and installation)
<b>Lift Station</b>	New Development	100% of the cost assessed to benefited area on a per unit basis.
<b>Water Trunk/Lateral</b>	New Development	100% of the cost assessed to benefited area on unit basis.
	Reconstruction	50% of the cost assessed to benefited area on unit basis. 50% of cost to be paid by City.
<b>Water Service</b>	New Development	100% of cost assessed to property owner.

<b><u>Improvement</u></b>	<b><u>Type of Construction</u></b>	<b><u>Method</u></b>
	Reconstruction (Including main)	50% of the cost assessed to benefited area on a unit basis. 50% of the cost to be paid by the city
	Reconstruction (Stand alone service replacement)	100% of cost assessed to property owner.
<b>Water Oversizing</b>	New Development	100% paid by City. (Materials cost above 8-inch pipe plus 20% for handling and installation)
	Reconstruction	100% paid by City. (Materials cost above 8-inch pipe plus 20% for handling and installation)
<b>Storm Sewer Trunk/Lateral</b>	New Development	100% of the cost assessed to benefited area on unit basis.
	Reconstruction	100% of the cost to be paid by City.
<b>Storm Water Ponding</b>	New Development	100% assessed to development.
	Maintenance	100% of the cost to be paid by City.
<b>Street Lights</b>	New Development	100% of material and installation cost on a unit basis paid by developer.
	Reconstruction	100% of the cost to be paid by City.
	Maintenance	100% of maintenance cost to be paid by City.
<b>Street Signs</b>	New Development	100% of material and installation cost on a unit basis paid by developer.
	Reconstruction	100% of maintenance cost to be paid by City.
<b>Sidewalks</b>	New Development	100% of cost assessed on a unit basis to development.
	Reconstruction	100% of cost to be paid by City.
<b>Boulevard Trees</b>	New Development	100% of cost paid by the Developer.
	Maintenance	100% paid by City.