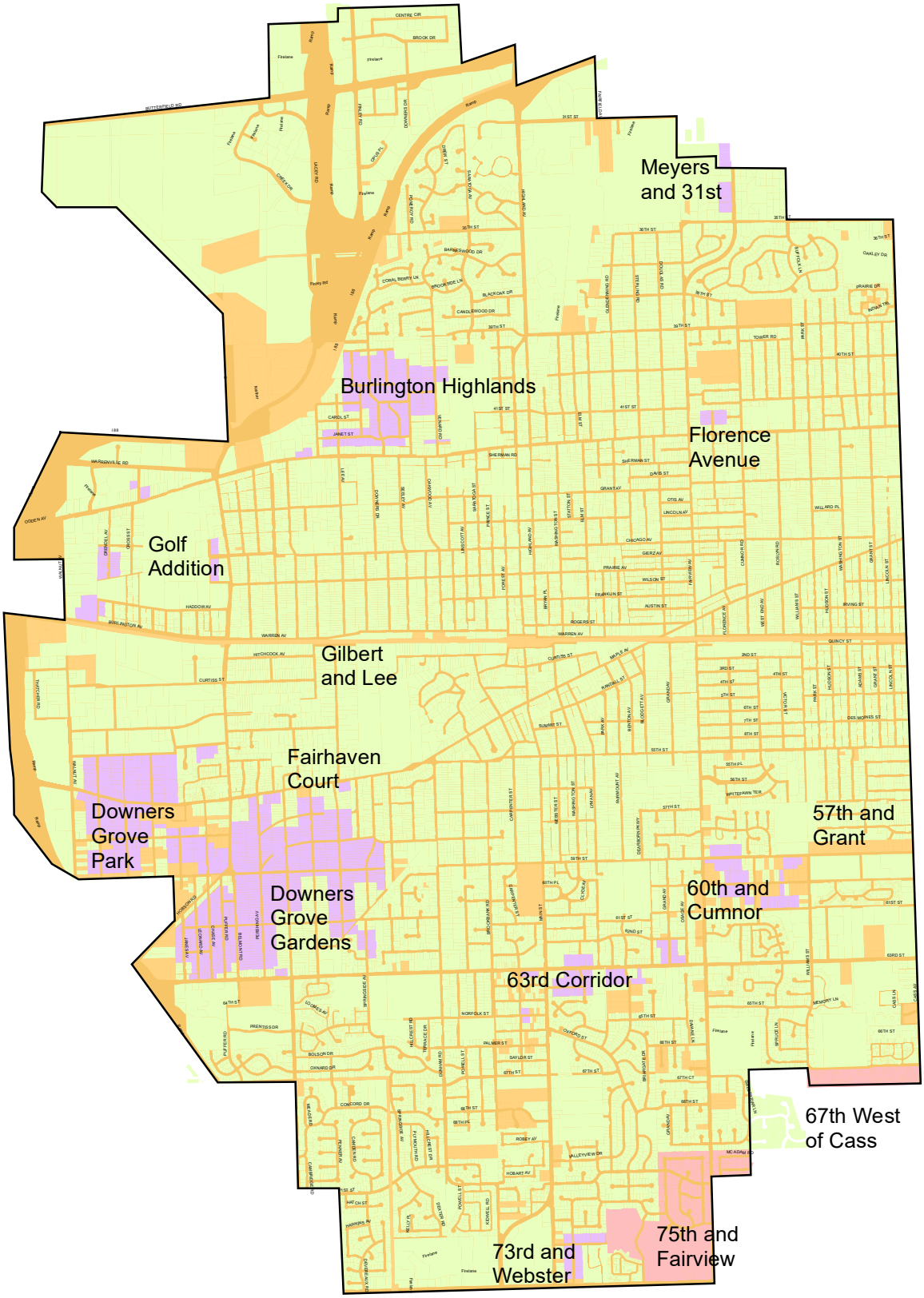
Downers Grove Sanitary District

Unsewered Area Plan

APRIL 2022



Downers Grove Sanitary District

Unsewered Area
Plan April 2022

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1. Introduction

The ultimate service area of the Downers Grove Sanitary District (District) is defined by the Facility Planning Area (FPA) boundary. The District is responsible for planning sewer service for all property within its FPA. Currently, a majority of the area within the FPA is annexed to the District and receives sewer service. There are a few areas in the FPA served by septic systems that are not annexed into the District, and are therefore considered "unsewered." This report is intended to identify plans for the installation of the sewer system improvements needed to serve unsewered areas within the FPA, and to identify the process for obtaining service in unsewered areas.

The Sanitary District Act of 1917 (ILCS 2405/7.6) allows for the orderly planning for and establishment of general and specific locations for all conduits, pipes and pumping stations. Under this statute, the District is not obligated to accept or maintain facilities not built in accordance with this plan. This report is intended to serve as the plan described in this statute.

The Federal Water Pollution Control Act Amendments, Public Law 92-500, include provisions for the establishment of state and areawide water quality planning programs to coordinate pollution control decisions and to implement feasible methods to achieve clean water over the long term. Section 208(a) (2) of the Clean Water Act directs that: "The Governor of each State ... shall identify each area within the State which, as a result of urban-industrial concentrations or other factors, has substantial water quality control problems..." This language led to the establishment of Facility Planning Areas (FPAs) as a key element of this Areawide Water Quality Management Plan. A Facility Planning Area (FPA) is defined as "a centralized sewer service area to be considered for possible wastewater treatment facilities within a 20-year planning period." FPAs provide individual jurisdictions with a means of planning and cooperation to provide service to residents.

The State of Illinois has identified the District as the responsible local wastewater treatment authority for the Facility Planning Area, shown on Exhibit 1.

As part of a major metropolitan area, the District FPA is completely surrounded by other designated Facility Planning Areas. There is little opportunity for the FPA boundaries to be changed. However, there are occasions when sewer users along the FPA boundary are more easily served by the designated wastewater authority of an adjacent FPA. In such cases, the two authorities can typically reach an agreement to provide service without altering the FPA boundaries, or can agree to FPA boundary changes.

There are sewer users within the District FPA that are served by neighboring designated FPA authorities. These sewer users are located in the 75th and Fairview area and the area along 67th west of Cass, shown on Exhibit 2, which are served by DuPage County Public Works (Marianbrook FPA).

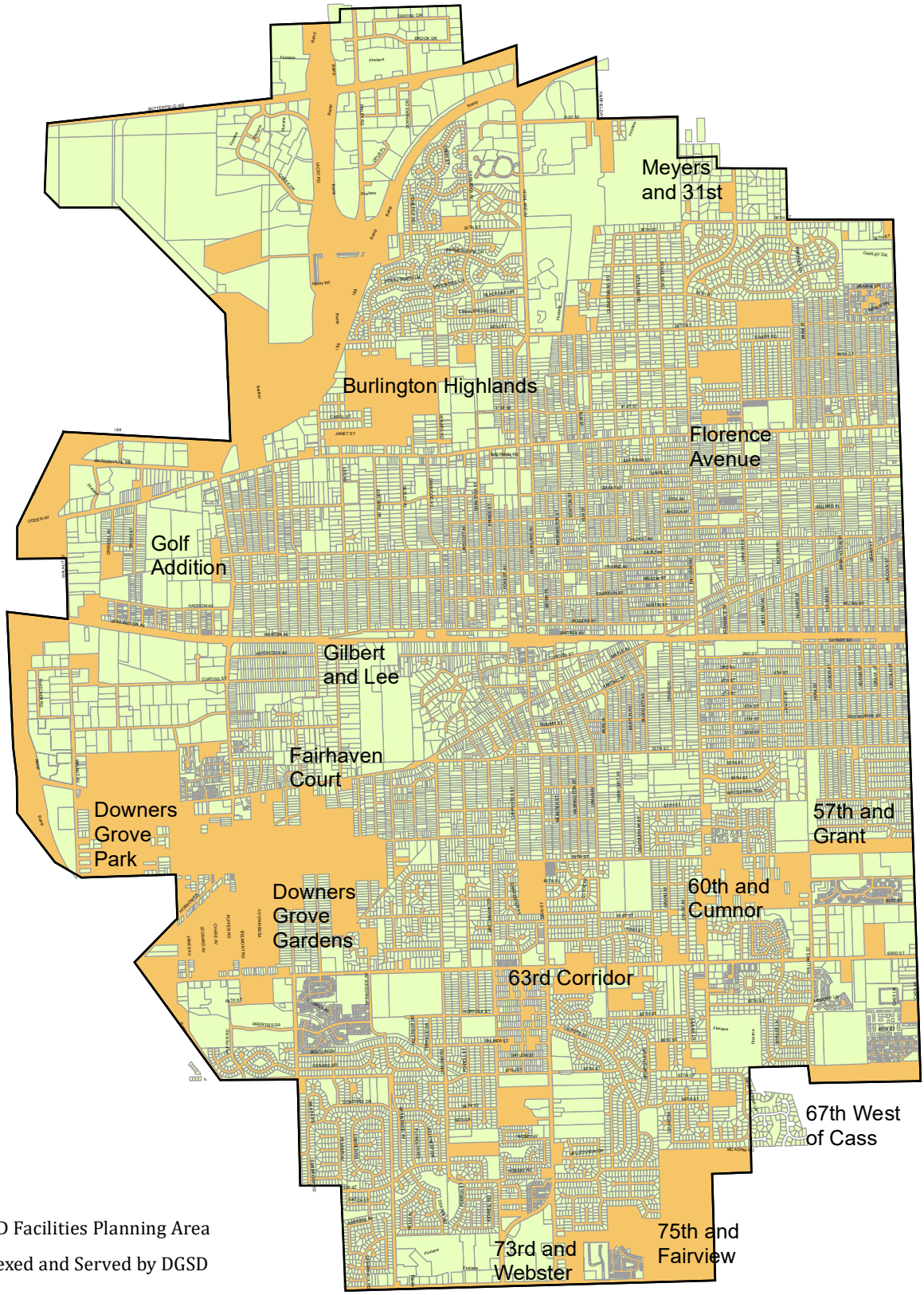
If FPA boundaries require adjustment for any reason, the State of Illinois has designated the Chicago Metropolitan Agency for Planning (CMAP) as the water-quality planning agency for the region. CMAP functions in an advisory role, reviewing applications and conducting administrative hearings, with the Illinois EPA retaining final approval over FPA boundary modifications.

Downers Grove Sanitary District

EXHIBIT 1

Unsewered Area Plan

APRIL 2022



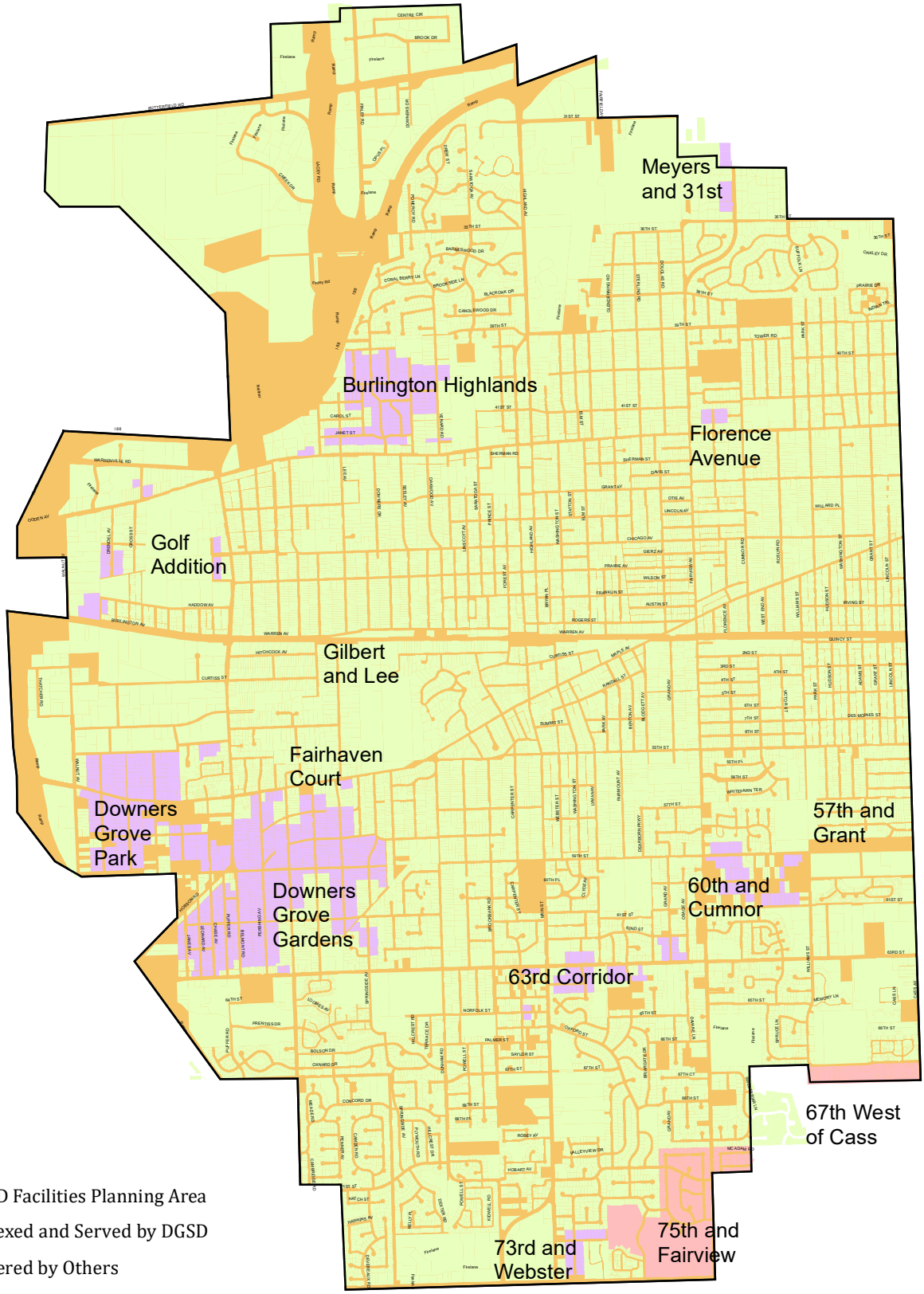
Facilities Planning Area Boundary Map
Based on Chicago Metropolitan Agency for Planning
FPA Boundary Map of December, 2005

Downers Grove Sanitary District

EXHIBIT 2

Unsewered Area Plan

APRIL 2022



Facilities Planning Area Boundary Map
Based on Chicago Metropolitan Agency for Planning
FPA Boundary Map of December, 2005

2. Existing Service Area

The existing service area of the District is smaller than the designated FPA. There are numerous properties within the FPA that do not receive sewer service, and are therefore not part of the existing service area.

The existing service area boundary is updated whenever a new property parcel is annexed into the District. Each annexation is filed with the County Clerk's office, at which time the service area boundary change becomes effective. Exhibit 1 shows the properties within the service area boundary, effective in the fourth quarter of 2005.

Property within the service area is subject to the property tax levy of the District. Property connected to the sewer also receives regular sewer use bills.

Property owners desiring sewer service are required to follow the rules defined by District ordinances and other applicable laws. Application for annexation is followed by construction of any necessary public sewer, and a building sewer connection to connect the improvements on the property to the public sewer. All construction is required to meet District standards, subject to review and inspection by District personnel.

In order to be annexed, a property owner must submit a completed Annexation Application Form. Under State law, property within the District service area must be contiguous.

Where property being annexed is not adjacent to an existing public sewer, a sewer extension must be constructed. Sewer extensions need to be constructed so that they are fully functional when newly built, and can accommodate anticipated future development of adjacent unsewered areas in the FPA.

Sewer extensions are required to meet District standards, subject to review and inspection by District personnel. Sewer extensions must be permitted for construction by the Illinois EPA.

In order to construct a sewer extension, an applicant must submit a completed Sanitary Sewer Service Request. The request must be approved by the Board of Local Improvements prior to proceeding to implementation.

The District will review engineering plans and specifications, prior to the permitting process by the Illinois EPA. Construction permit applications submitted to the Illinois EPA must be signed by the District as the authority receiving the wastewater. The District is thereby certifying that there is adequate downstream capacity to transport and treat all sanitary flows from the area being served by the sewer extension. The District will conduct inspections and require testing during and following construction in order to verify compliance with standards.

Fees are assessed for sewer permits, annexation applications, trunk sewer service charges, lateral sewer charges, recapture, plan reviews, construction inspection, and television inspection. These fees are updated periodically, and applied according to the requirements of District ordinances.

The District requires that sewer extensions be built according to this Unsewered Area Plan in order to allow for orderly and cost-effective construction, and so that capacity is available for anticipated future growth in remaining unsewered areas. This plan is updated from time to time, as projections for future development, zoning and growth may change over time.

3. Methods of Obtaining Service in Unsewered Areas

There are four available methods to finance the installation of sanitary sewers in an unsewered area - special assessment, construction by private party, cash plan, or special service area. Each method is discussed in detail below.

3.1 Special Assessment

The Statutes of the State of Illinois set forth a special assessment procedure whereby the District may construct sanitary sewers and assess the costs of the sewers against adjacent property to the extent the property is benefited. In order to utilize the special assessment procedure, the property to be benefited and assessed must be within District corporate limits. The procedure for annexing property to the District and the steps involved in a special assessment are discussed separately below.

3.1.1 Annexation

Property can be annexed into the District in one of two ways – by an election or by petition of a majority of land owners.

3.1.1.1 Upon the submittal to the District of a petition signed by ten percent or more of the legal voters residing within the area to be annexed, an election will be held at a regularly scheduled general election. The question to be submitted to the legal voters shall be whether the designated area should become a part of the District and assume a proportionate share of any bonded indebtedness of the district. If a majority of the votes cast at the election shall be in favor, the area shall be annexed.

3.1.1.2 Upon submittal of a petition to the District which has been signed by the owners of more than 50% of the land area of the designated area, the area shall be annexed. The District will provide the appropriate petition forms upon request. Annexation to the District does not involve annexation into a city or village.

3.1.2 Special Assessment Procedure

The District Board of Local Improvements originates the procedures for levying the special assessment, and property owners who wish a local improvement to be made on or adjacent to their property should petition this Board. For areas recently annexed by election or by majority petition, as discussed above, the Board of Local Improvements will generally initiate the special assessment procedure immediately following the annexation of the area to the District.

The following list is for general informational purposes only and merely highlights the various steps typically involved in a special assessment. This list should not be relied upon as conclusive since the steps actually followed in an individual special assessment will depend upon various circumstances, including the nature and extent of the improvement, as set forth in more detail in the state statutes and in the relevant case law.

3.1.2.1 Engineer's Report: At the request of the Board of Local Improvements, the plans for the local improvement project, including an estimate of costs thereof, are prepared by the engineer.

3.1.2.2 Estimate of Cost: This estimate lists the expenses involved in the local improvement and is signed by the President of the Board after determining that the estimate does not exceed the probable costs.

3.1.2.3 Originating Resolution: Board of Local Improvements outlines the improvement and orders a public hearing on the project.

3.1.2.4 Notice of Public Hearing: Persons who paid the last tax bill on the property to be assessed receive notice of the public hearing.

3.1.2.5 Public Hearing: A general description of the improvement is given to the public at the hearing and they are allowed to express their opinions and ask questions. The District attempts to provide a preliminary and unofficial spread of the assessment so that each property owner may then compute for himself an estimate of the amount to be levied against his property.

3.1.2.6 Second Resolution: Board of Local Improvements decides whether to continue, modify, or abandon the local improvement project.

3.1.2.7 Recommendation of Board of Local Improvements: If continued or modified, the improvement is recommended to the District Board of Trustees with a draft ordinance which shall be published at least 10 days prior to adoption.

3.1.2.8 Ordinance: The Board of Trustees decides whether to proceed with the special assessment by passing said ordinance.

3.1.2.9 Court Petition: District petitions the court for approval of the special assessment.

3.1.2.10 Appointment of Commissioners: President of Board of Local Improvements appoints commissioners to spread the assessment according to benefit, and to determine damages for any takings. This appointment is subject to approval by the court.

3.1.2.11 Assessment Roll: This roll, submitted by the Commissioners, lists the amounts proposed to be assessed against the individual parcels of property and just compensation for any takings (easements).

3.1.2.12 Summons: When takings are involved, a summons shall be issued and served upon all parties whose property is to be taken.

3.1.2.13 Notice of Court Hearing: Notice of a court hearing is published and mailed to the persons who paid the last tax bill on the property to be assessed.

3.1.2.14 Court Hearing: At a hearing before the court, any person owning or occupying property to be assessed or taken may file objections.

3.1.2.15 Order of Confirmation: After hearing any objections, the court rules on the assessment roll. Shortly thereafter, those property owners whose property is to be taken shall receive just compensation as determined by the Court.

3.1.2.16 Bills Issued: Property owners are sent bills based on the amount confirmed against their property in the earlier court hearing. The assessment will be billed in approximately equal installments over ten years. All installments will be due on January 2 of each year. A property owner who wishes to avoid being charged interest on his assessment can pay his entire assessment prior to the date when interest begins to accrue.

3.1.2.17 Invitation for Bids: Board of Local Improvements invites contractors to bid on the construction of the project.

3.1.2.18 Opening of Bids: The sealed bids of the contractors are opened publicly. Property owners have the right to do the work under certain conditions.

3.1.2.19 Award of Contract: The Board of Local Improvements accepts the lowest responsible bid or rejects all bids. If the bid to be approved is 10% more than the engineer's estimate, further legal proceedings must be undertaken and a supplemental assessment made. Following the award of a contract, construction begins.

3.2 Construction by Private Party

A private party may construct a sewer to be dedicated to the District as a public sewer. The private party is responsible for engineering, permitting, and construction of the improvement. The statute (ILCS 2405/7.7) allows for (but does not require) the recapture of costs from other properties benefited by the privately funded improvement.

If property owners along the sewer did not participate in the cost of the improvement, the District may provide a recapture agreement to assess such owners their prorated share of the costs of the sewer upon application to connect. The private party must submit paid copies of all costs of the project in a timely manner, and indicate which undisputed individuals are to receive the recapture payments.

Property owners desiring to connect to the newly constructed sewer must apply for a connection permit and must comply with all District requirements, including annexation to the District and payment of all District fees and charges.

3.3 Cash Plan

The residents of a given street may choose between two methods of constructing a sanitary sewer under a cash plan. Under the first method, the residents form a non-profit organization to administer the construction project, dealing directly with an engineer, a contractor, the District and a bank. Under the second method, the residents contract with the District to administer the project on their behalf. An outline of the steps to be taken under each method is presented below:

3.3.1 Cash Plan – Non-Profit Organization

3.3.1.1 The residents of a given street desiring to construct a sanitary sewer should first form a non-profit organization (for example – "Smith Avenue Improvement Association"). It is recommended that an attorney be consulted in order to properly establish the organization.

3.3.1.2 Officers should be selected, or a governing committee should be selected, to represent the property owners in future dealings with the District, contractors, engineers, etc.

3.3.1.3 After the organization has been formed and there is sufficient interest in the project, the officers should retain a registered engineer who is experienced in the design and construction of sanitary sewers.

3.3.1.4 The committee should authorize the engineer to prepare a preliminary estimate of cost of the proposed project. This preliminary estimate of cost can be prepared for a nominal fee. It would require the engineer to make a reconnaissance of the area, determine construction conditions in the area and generally look over the area to arrive at the preliminary estimate of cost. The committee should be prepared to supply the engineer with all available information, i.e. limits of the proposed improvement, number of homes, legal descriptions for area involved, etc.

3.3.1.5 Upon receipt of the cost estimate, the committee should then call a meeting of all property owners on the street. The estimated cost and other information can then be explained to the property owners.

3.3.1.6 If a sufficient number of property owners are in favor of proceeding with the project, the officers should then establish an escrow fund at one of the local banks.

3.3.1.7 Following the establishment of an escrow fund, the property owners should be instructed to deposit their pro-rated share of the project into the fund. Ultimately 100% participation will be required by the property owners. If 100% participation is not obtained, the cost of the non-participants will have to be borne by the remaining owners.

3.3.1.8 After approximately 50% of the total cost of the project has been deposited in the escrow account, the organization should then authorize the engineers to proceed with the preparation of final plans and specifications.

3.3.1.9 Four (4) copies of the completed plans and specifications must be submitted to the District for review and approval. Following District approval, two (2) sets of plans and specifications will be submitted by the District to the Illinois Environmental Protection Agency for review and issuance of the required permit. It is recommended that the plans not be released for bidding until District approval has been received. Construction of the sewer may not begin until the Illinois Environmental Protection Agency permit is received.

3.3.1.10 After approximately 80% of the necessary funds are deposited in the escrow account and the organization is assured that the remaining 20% will be deposited prior to the completion of the project, the engineers should then be authorized to solicit bids from contractors.

3.3.1.11 It is suggested that bids be opened at a joint meeting of the bidders, the engineer and organization officers. A contract is then awarded by the organization to the selected contractor.

3.3.1.12 The organization will be responsible, through the engineer, to monitor the sewer construction.

3.3.1.13 Payments to the contractor and the engineer shall be made from the escrow fund as authorized by the organization officers.

3.3.1.14 Following completion of the sewer, the District will prepare an agreement to be signed by the representatives of the organization. This agreement will assign the ownership of the sewer to the District and the District will agree to operate and maintain the sewer following acceptance.

3.3.1.15 If any of the property owners along the sewer did not participate in the cost of the improvement, the District will provide a recapture agreement to assess such owners their prorated share of the costs of the sewer upon application to connect. The organization officers must submit paid copies of all costs of the project and indicate which individuals are to receive recapture payments.

3.3.1.16 Property owners desiring to connect to the newly constructed sewer must apply for a connection permit and must comply with all District requirements, including annexation to the District and payment of all District fees and charges.

3.3.2 Contract with Sanitary District

Under the second cash plan method, the residents of the given street enter into an agreement with the District to construct the sewer. The District then administers the project and deals with the engineer and contractors. The following steps are required under this method:

3.3.2.1 The District provides an agreement for execution by each property owner who desires to participate in the sewer construction. This agreement will indicate the deposit required of each participating owner, authorize the District to prepare plans and specifications, advertise for bids, publicly open bids, award the contract to the lowest responsible bidder, proceed to construct the sewer, and establish a recapture fee to be assessed against any property along the route of the sewer which did not participate in the cost of the sewer.

3.3.2.2 Property owners desiring to connect to the newly constructed sewer must apply for a connection permit and must comply with all District requirements, including annexation to the District and payment of all District fees and charges.

3.4 Special Service Area

The Statutes of the State of Illinois set forth a special service area procedure whereby the District may construct sanitary sewers and assess the costs of the sewers against benefited property as a levy of an additional real estate or other tax for special services that are not available to other properties within the District. In order to utilize the special service area procedure, the property to be benefited and assessed must be within the corporate limits of the District. The procedure for annexing property to the District is discussed under Section 3.1.1.

The District has not utilized the special service area procedure to finance the installation of sanitary sewers and prefers the special assessment procedure as a more equitable method of financing such installations.

4. Unsewered Sub-Areas

The needs of different unsewered areas vary, depending on local conditions. The District has delineated a number of distinct sub-areas, and developed sewer plans according to the specific circumstances of each sub-area. Exhibit 2 shows these unsewered sub-areas. These sub-areas are listed as follows:

- 73rd and Webster
- Downers Grove Park
- Downers Grove Gardens
- Fairhaven Court
- Burlington Highlands
- Golf Addition
- Florence Avenue
- Meyers and 31st
- 57th and Grant *(Sanitary sewers are available as of March 2015.)*
- 60th and Cumnor
- 63rd Street Corridor
- Gilbert and Lee

Planning elements that have been considered in each sub-area include existing development and associated population density, zoning and associated density for undeveloped property, local topography, and existing nearby sewers. A planned sewer system layout is developed to provide sewer service for the entire sub-area. Sewer system layout includes routing and depth information, as needed to verify capacity and to estimate costs. Manhole spacing has been established assuming the entire sub-area were sewered as a single project. Actual manhole spacing can be adjusted to accommodate specific projects within any sub-area. With this flexibility in mind, construction of sewer extensions in the unsewered area is expected to be consistent with the planned sewer system lay-out.

For each planned sewer system addition, estimates of probable construction costs have been made. Estimates are based on unit quantities developed by the District. Unit prices are applied to these unit quantities. Estimates are updated periodically to reflect changes in unit pricing over time. Unit pricing is derived using recent unit prices from similar construction projects. The intent of the District is to update the unit price costs each calendar year using unit prices from recent projects and future industry projections. This report uses projected unit prices for the year 2022.

Every unsewered parcel has an associated sewer construction project that is necessary as the minimal project needed to obtain service. The project includes all downstream construction required to connect the parcel to the existing sewer according to this plan.

Specific sub-areas are identified and discussed here in detail. Preliminary plans were previously prepared for many unsewered areas. Historically, this was done on an as-needed basis as interest in obtaining sewer service is shown in individual unsewered areas. These preliminary plans were updated and included in this report, as well as new preliminary plans for sub-areas that were not investigated previously. Thus, this report contains a comprehensive summary of all the preliminary plans to provide sewer to all unsewered areas within the District FPA.

4.1 73rd and Webster

The unsewered area at 73rd Street and Webster Street includes 25 lots that are already developed as single family residential, 9 facing 73rd Street along the north side, and 16 facing Webster directly south of 73rd Street. A map of the area is included in Exhibit 4.1.

The area can be served from four existing locations: a new manhole on the existing sewer on 75th Street at Webster Street, an existing manhole on the west side of Main Street at 73rd Street, an existing manhole located on Webster Street just south of Old Orchard Avenue, and/or an existing sewer at Baybury Road and 73rd.

Another component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the 73rd and Webster sub-area.

Several options were considered when determining the cost-effective sewer layout to serve this area. Ground surface contours and major road crossings play a key role in development of the cost-effective sewer layout.

The low-cost layout generally follows the existing ground contours, while minimizing the number of road crossings. A deep cut is avoided in the hill along Webster by serving the homes along Webster with a southward-running sewer segment. The homes along 73rd are best served from the manhole to the north, to avoid a crossing at Main Street. The manhole at Baybury and 73rd is too shallow to serve the homes at the western edge of the service area.

A summary of the manhole and sewer layout are provided in Table 4.1-1.

Table 4.1-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,000,500 including contingency, engineering, easements, and legal/administrative costs. Some easement acquisition is required along 73rd street to avoid the nearby water main.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.1

73rd AND WEBSTER POSSIBLE SEWER ALIGNMENT

April 2022

LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWERS
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- 73RD AND WEBSTER

N

0 200 400

Feet

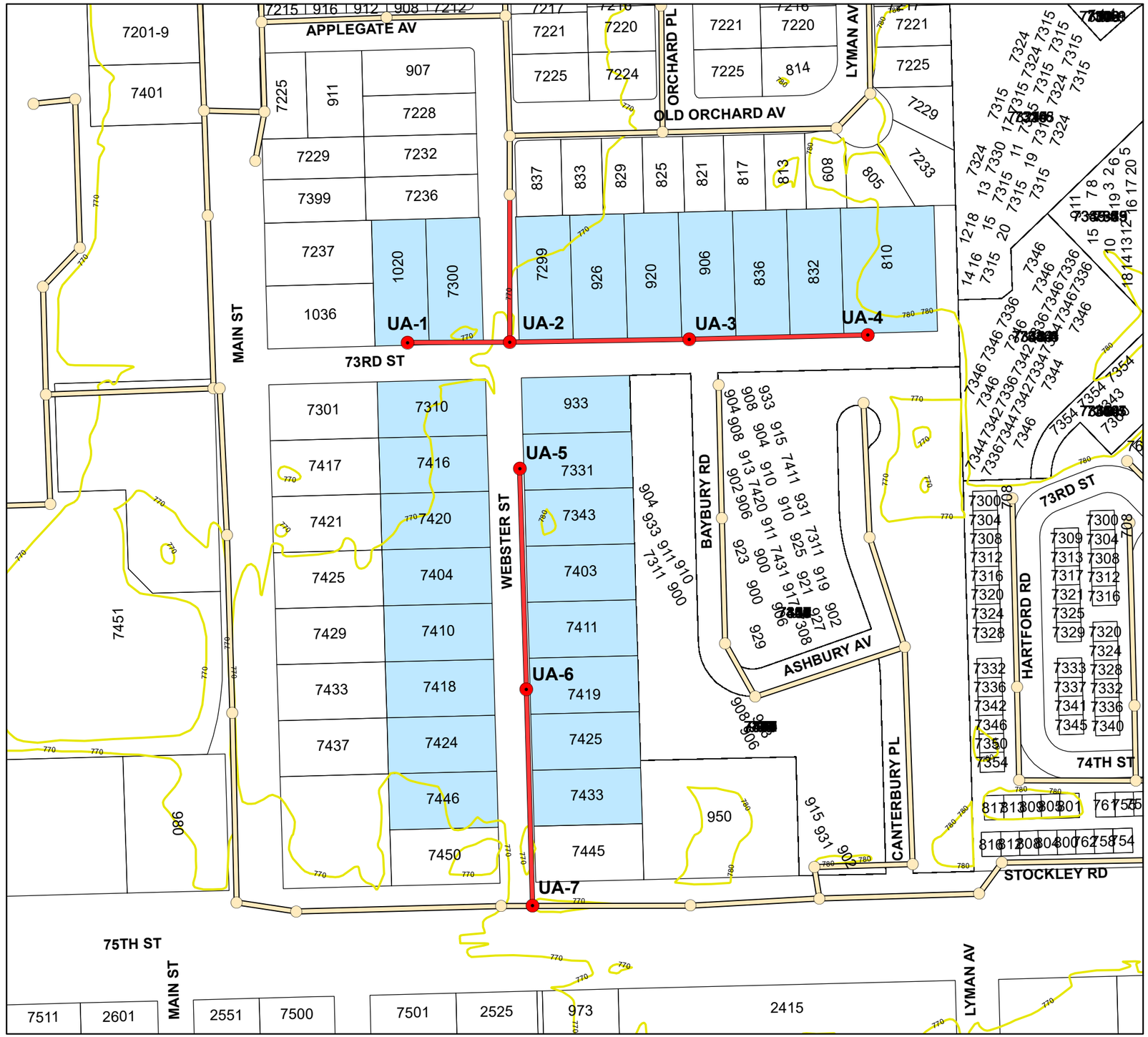


Table 4.1-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
73rd and Webster
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
73rd Street					
H-7-9-42 (existing)	765.3	755.09			10.2
			310	1.50%	
UA-2	771.8	759.74			12.1
			350	1.50%	
UA-3	775.5	764.99			10.5
			340	0.40%	
UA-4	777.5	766.35			11.2
			200	0.40%	
UA-1	768.5	760.54			8.0
Webster Street					
UA-7	770.7	760.77			9.9
			400	0.80%	
UA-6	774.3	763.97			10.3
			400	0.80%	
UA-5	776.0	767.17			8.8

Table 4.1-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
73rd and Webster
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	2,000	lin. ft.	$ 96.00	$ $192,000
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	7	each	$ 7,000.00	$ $49,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	1,097	lin. ft.	$ 124.00	$ $136,028
6	SEWER TELEVISING FOR FINAL INSPECTION					
			2,000	lin. ft.	$ 3.00	$ $6,000
7	SEWER TESTING FOR FINAL INSPECTION					
			2,000	lin. ft.	$ 3.00	$ $6,000
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		108	lin. ft.	$ 89.00	$ $9,612
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		2,160	sq.yd.	$ 15.00	$ $32,400
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		630	sq.yd.	$ 70.00	$ $44,100
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		58	sq.yd.	$ 53.00	$ $3,074
	Concrete		43	sq.yd.	$ 89.00	$ $3,827
12	REMOVE AND REPLACE SIDEWALK					
	5-foot PCC		50	sq.ft.	$ 14.00	$ $700
13	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $730
14	EROSION CONTROL				Lump Sum	$ $1,095

Table 4.1-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
73rd and Webster
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
15	TRAFFIC CONTROL			Lump Sum	$ $3,650
	SUBTOTAL				$ $500,466
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near Side	396	lin. ft.	$ 55.00	$ $21,780
	Far Side	1,233	lin. ft.	$ 55.00	$ $67,815
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	16	each	$ 608.00	$ $9,728
	Far Side	9	each	$ 749.00	$ $6,741
3	BUILDING SERVICE PLUGS:	25	each	$ 228.00	$ $5,700
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	260	sq.yd.	$ 12.00	$ $3,120
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	172	sq.yd.	$ 69.00	$ $11,868
6	TRENCH BACKFILL				
	0-8 feet deep	295	lin. ft.	$ 68.00	$ $20,060
	SUBTOTAL				$ $146,812
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $647,300
	Contingencies		(20%)		$129,500
	Engineering		(20%)		$129,500
	Legal / Admin		(6%)		$54,400
	Easement Acquisition				$39,800
	TOTAL OPINION OF PROBABLE COST				**$ $1,000,500**
				Cost per lot	$40,020

4.2 Downers Grove Park

Downers Grove Park is a large sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.2, the approximate limits of this sub-area are Elmore Avenue and Inverness Avenue to the north, Walnut Avenue to the west, 59th Street to the south, and Belmont Road to the east. The proposed service area includes approximately 196 lots that are mostly developed as single-family residences with septic systems. This evaluation establishes the cost-effective sanitary sewer plan for serving the unsewered properties within the Downers Grove Park sub-area.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The Downers Grove Park sub-area has one major drainage divide running from west to east, just south of Maple Avenue. Serving these properties by following the ground contours will avoid deep cuts through the higher elevations along the drainage divide. Properties north of this divide will generally be served by the existing manhole at Walnut Avenue and Elmore Avenue, the manhole at the intersection of Janes Avenue and Inverness Avenue, the manhole on Inverness west of Belmont, and the manhole on Elinor Avenue just south of Maple Avenue that was recently constructed as part of the Villas of Maple Woods development. Properties south of the drainage divide can be served by the existing sewers on Walnut Avenue, 59th Street and Hobson Road. The Walnut Avenue sewer has been extended east to Katrine Avenue to provide a manhole to connect to at Katrine and College Road. The 59th Street sewer contains manholes at each cross street to provide connection points for lots along Katrine Avenue, Lomond Avenue, Elinor Avenue and Janes Avenue. The final connection points south of the drainage divide are manholes on Hobson Road at Chase Road and Puffer Road.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The only major road crossing that would significantly increase construction cost in this sub-area is Maple Avenue. Thus, alternatives were considered to minimize crossing Maple Avenue with both the mainline sewer and building services.

The sewer layout also considered the several wetlands that are located within the sub-area at the following locations: Elinor and Inverness, Katrine and 59th, and Lomond and 59th. Avoiding these wetlands will minimize the time and expense involved in the permitting process for construction in wetlands as well as reduce the costs associated with restoring these areas.

The Village of Downers Grove owns and operates water mains on a majority of the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Downers Grove Park sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points. The following are the proposed sub-basins:

Sub-basin	No. of Services	Layout	Cost Estimate
Katrine-Maple (North)	25	Table 4.2-1	Table 4.2-2
Inverness-Lomond-Elinor-Maple (North)	72	Table 4.2-3	Table 4.2-4
Inverness-Belmont (North)	6	Table 4.2-5	Table 4.2-6
Katrine-College (South)	27	Table 4.2-7	Table 4.2-8
Lomond-College (South)	29	Table 4.2-9	Table 4.2-10
Elinor-College (South)	9	Table 4.2-11	Table 4.2-12
Janes-College (South)	13	Table 4.2-13	Table 4.2-14
Chase-Hobson-Belmont (South)	15	Table 4.2-15	Table 4.2-16

Table 4.2-17 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.2.

The Katrine-Maple (North) sub-basin sewer plan follows the existing topography which falls from Maple Avenue north to the dead end of Katrine Avenue and west to Walnut Avenue. Our analysis determined that parallel sewers on the north and south sides of Maple Avenue will be less expensive than bringing numerous services across the street. A sewer will serve the homes on the north side of Maple Avenue and will be included in the Katrine-Maple (North) sub-basin. The sewer on the south side of Maple will run east to the adjacent Inverness-Lomond-Elinor-Maple (North) sub-basin at Lomond, which is less expensive than another crossing of Maple Avenue. Table 4.2-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.2-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $946,200, including contingency, engineering, easements, and legal/administrative costs.

The Inverness-Lomond-Elinor-Maple (North) sub-basin sewer plan also follows existing topography from the intersection of Lomond Avenue and Maple Avenue northeast to an existing manhole at Janes Avenue and Inverness Avenue. This sub-basin will include all unsewered properties fronting the south side of Maple Avenue. Two road crossings of Maple are identified to provide flexibility, but only one crossing at Elinor could be utilized if construction phasing allows. The opinion of project cost is $3,011,800, including contingency, engineering, easements, and legal/administrative costs.

The Inverness-Belmont (North) sub-basin is best served by extending a sewer east from the existing manhole near the intersection of Inverness and Ashbrook. The existing ground slope, which rises from west to east, accommodates the plan for serving this sub-basin. The opinion of project cost is $197,400, including contingency, engineering, and legal/administrative costs.

The Katrine-College (South) sub-basin sewer plan will follow the drainage divide south to 59th Street. The lots south of College Road will be served by the existing manhole at the southern terminus of Katrine, while lots north of College will be served by the existing sewer at the intersection of Katrine and College. This sewer is not the recommended alternative to serve the

south frontage properties along Maple Avenue because of the costly deep cuts needed through the hill south of Maple. The opinion of project cost is $655,200, including contingency, engineering, and legal/administrative costs.

The Lomond-College (South) sub-basin sewer plan will follow the drainage divide south to 59th Street. The sub-basin will be served by a sewer that will extend north from the existing manhole near the creek near the southern terminus of Lomond Avenue at 59th Street. This alignment is the most cost effective alternative to serve the area due to the shortest total sewer length and minimizing of utility conflicts. However, the cost per lot is still comparatively larger than for other sub-basins because portions of the sewer will be located in the pavement to avoid the existing water main. The opinion of project cost is $985,200, including contingency, engineering, and legal/administrative costs.

The Elinor-College (South) sub-basin will be served just as Katrine and Lomond. The ground slope promotes a sewer draining south that will connect to the existing system just north of 59th Street. The northerly limit of the sewer is the southern limit of the Villas of Maple Woods Subdivision. The sewer installed as part of that subdivision will serve several properties north of this sub-basin along Elinor. The opinion of project cost is $417,100, including contingency, engineering, and legal/administrative costs.

The Janes-College (South) sub-basin will also flow south to 59th Street. Design drawings for the sewers from 59th Street to College and east on College have been reviewed as part of the proposed Robert's and Lisa Marie subdivisions. The design drawings for these subdivisions are consistent with this preliminary sewer plan. This sewer plan is the least costly because it will not contain any deep sections due to the consistent southerly ground slope. The opinion of project cost is $444,700, including contingency, engineering, and legal/administrative costs.

The Chase-Hobson-Belmont (South) sub-basin is also best served by sanitary sewers draining to the south to match the topography. A sewer should be constructed north along Chase Road from the existing manhole approximately 200 feet north of Hobson. Belmont Road will be served by a sewer that extends north from Hobson and Puffer. A major factor in the higher cost per lot of this sub-basin was the trench backfill and pavement restoration needed along Belmont Road. The opinion of project cost is $713,800, including contingency, engineering, and legal/ administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.2

DOWNERS GROVE PARK POSSIBLE SEWER ALIGNMENT

April 2022

LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWERS
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- KATRINE-MAPLE (NORTH):TABLES 4.2-1, 4.2-2
- INVERNESS-LOMOND-ELINOR-MAPLE (NORTH):TABLES 4.2-3, 4.2-4
- INVERNESS-BELMONT (NORTH):TABLES 4.2-5, 4.2-6
- KATRINE-COLLEGE (SOUTH):TABLES 4.2-7, 4.2-8
- LOMOND-COLLEGE (SOUTH):TABLES 4.2-9, 4.2-10
- ELINOR-COLLEGE (SOUTH):TABLES 4.2-11, 4.2-12
- JANES-COLLEGE (SOUTH):TABLES 4.2-13, 4.2-14
- CHASE-HOBSON-BELMONT (SOUTH):TABLES 4.2-15, 4.2-16

N

0 400 800

Feet

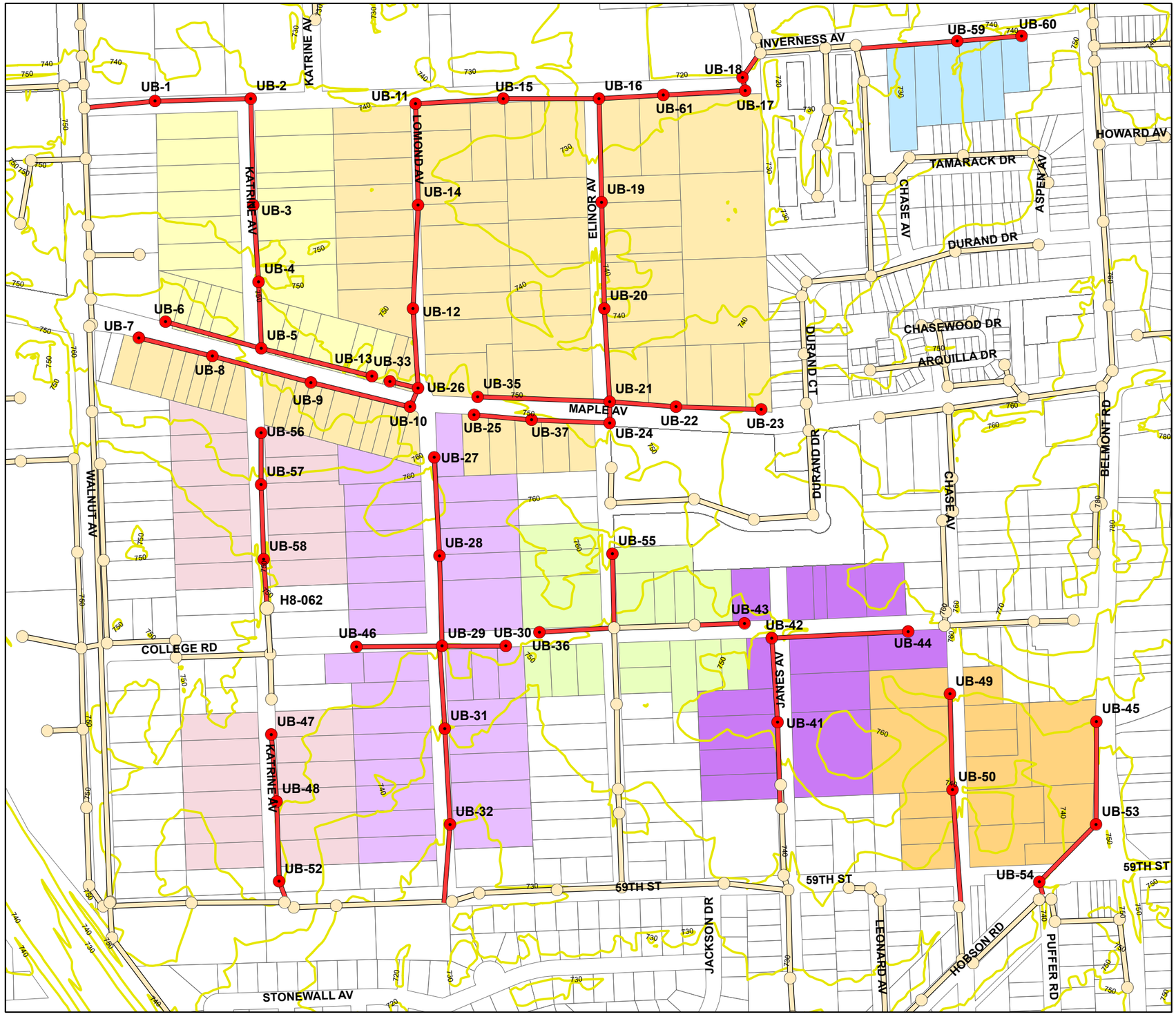


Table 4.2-1

Downers Grove Sanitary District

Possible Special Assessment for Sanitary Sewers

Katrine-Maple (North)

Preliminary Design

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Katrine Avenue					
3-A-23 (existing)	748.1	732.36			15.7
			255	1.00%	
UB-1	741.0	734.91			6.1
			346	0.40%	
UB-2	742.0	736.29			5.7
			400	0.40%	
UB-3	746.3	737.89			8.4
			300	0.40%	
UB-4	749.5	739.09			10.4
			275	0.40%	
UB-5	757.3	740.19			17.1
Maple Avenue					
			420	0.40%	
UB-13	749.0	741.87			7.1
			380	2.00%	
UB-6	756.0	747.79			8.2

Table 4.2-2

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Katrine-Maple (North)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	270	lin. ft.	$ 82.00	$ 22,140
		8-12 feet deep	996	lin. ft.	$ 96.00	$ 95,616
		12-16 feet deep	705	lin. ft.	$ 116.00	$ 81,780
		16-20 feet deep	150	lin. ft.	$ 139.00	$ 20,850
2	SANITARY SEWER (DIRECTIONAL DRILLED)					
	8-inch		255	lin. ft.	$ 302.00	$ 77,010
3	SANITARY MANHOLES					
	48-inch	0-8 feet deep	3	each	$ 5,300.00	$ 15,900
		8-12 feet deep	3	each	$ 7,000.00	$ 21,000
		16-20 feet deep	1	each	$ 11,300.00	$ 11,300
4	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
5	TRENCH BACKFILL					
	8-inch	0-8 feet deep	35	lin. ft.	$ 102.00	$ 3,570
		8-12 feet deep	95	lin. ft.	$ 124.00	$ 11,780
		12-16 feet deep	70	lin. ft.	$ 150.00	$ 10,500
		16-20 feet deep	25	lin. ft.	$ 198.00	$ 4,950
6	TREE TUNNELING		250	lin. ft.	$ 211.00	$ 52,750
7	SEWER TELEVISING FOR FINAL INSPECTION					
			2,376	lin. ft.	$ 3.00	$ 7,128
8	SEWER TESTING FOR FINAL INSPECTION					
			2,376	lin. ft.	$ 3.00	$ 7,128
9	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		85	lin. ft.	$ 89.00	$ 7,565
10	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and Seed		708	sq.yd.	$ 15.00	$ 10,620
	Topsoil and Sod		2,880	sq.yd.	$ 15.00	$ 43,200
11	RESTORATION OF STREETS					
	Bituminous		33	sq.yd.	$ 70.00	$ 2,310

Table 4.2-2

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Katrine-Maple (North)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	REMOVE AND REPLACE DRIVEWAYS				
	Bituminous	120	sq.yd.	$ 53.00	$ 6,360
	PCC Driveway	45	sq.yd.	$ 89.00	$ 4,005
	Gravel Driveway	50	sq.yd.	$ 22.00	$ 1,100
13	TREE REMOVAL & TRIMMING			Lump Sum	$ 2,920
14	TRAFFIC CONTROL			Lump Sum	$ 10,950
	SUBTOTAL				$ 539,232
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	210	lin. ft.	$ 55.00	$ 11,550
	Far side	400	lin. ft.	$ 55.00	$ 22,000
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	17	each	$ 608.00	$ 10,336
	Far side	8	each	$ 749.00	$ 5,992
3	BUILDING SERVICE PLUG	25	each	$ 228.00	$ 5,700
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Sod	340	sq.yd.	$ 15.00	$ 5,100
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	60	sq.yd.	$ 69.00	$ 4,140
6	TRENCH BACKFILL				
	0-8 feet deep	152	lin. ft.	$ 68.00	$ 10,336
	SUBTOTAL				$ 75,154
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 614,400
	Contingencies (20%)				122,900
	Engineering (20%)				122,900
	Legal / Admin (6%)				51,600
	Easement Acquisition				34,400
	TOTAL OPINION OF PROBABLE COST				**$ 946,200**
				Cost per lot	37,850

Table 4.2-3

Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Inverness-Lomond-Elinor-Maple (North)
Preliminary Design

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Inverness Avenue (Janes to Lomond)					
2-A-71A (existing)	717.7	704.82			12.9
			42	1.20%	
UB-18	717.5	705.32			12.2
			125	3.00%	
UB-17	726.0	709.07			16.9
			340	1.20%	
UB-61	723.8	713.15			10.6
			284	1.20%	
UB-16	725.5	716.56			8.9
			400	3.00%	
UB-15	742.5	728.56			13.9
			320	0.80%	
UB-11	742.3	731.12			11.1
Lomond Avenue (Inverness to Maple)					
			390	0.40%	
UB-14	741.3	732.68			8.6
			400	0.80%	
UB-12	747.3	735.88			11.4
			333	0.80%	
UB-26	750.3	738.55			11.7
Maple Avenue (west of Lomond)					
			135	0.40%	
UB-33	748.0	739.09			8.9
			80	0.80%	
UB-10	754.0	739.19			14.8
			400	0.80%	
UB-9	754.0	742.39			11.6
			400	1.00%	
UB-8	762.0	746.39			15.6
			250	1.00%	
UB-7	763.0	748.89			14.1

Table 4.2-3

Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Inverness-Lomond-Elinor-Maple (North)
Preliminary Design

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Elinor Avenue (Inverness to Maple)					
			400	2.00%	
UB-19	735.5	724.56			10.9
			400	1.50%	
UB-20	738.8	730.56			8.2
			375	1.50%	
UB-21	747.0	736.19			10.8
Maple Avenue (east and west of Elinor)					
			350	0.80%	
UB-22	747.0	738.99			8.0
			250	0.80%	
UB-23	750.0	740.99			9.0
			450	0.80%	
UB-35	750.5	739.79			10.7
			80	1.00%	
UB-24	748.0	736.99			11.0
			300	1.00%	
UB-37	750.0	739.99			10.0
			300	1.00%	
UB-25	752.0	742.99			9.0

Table 4.2-4

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Inverness-Lomond-Elinor-Maple (North)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	5,193	lin. ft.	$ 96.00	$ $498,528
		12-16 feet deep	920	lin. ft.	$ 116.00	$ $106,720
		16-20 feet deep	691	lin. ft.	$ 139.00	$ $96,049
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	19	each	$ 7,000.00	$ $133,000
		12-16 feet deep	3	each	$ 8,500.00	$ $25,500
		16-20 feet deep	1	each	$ 11,300.00	$ $11,300
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	3,050	lin. ft.	$ 124.00	$ $378,200
		12-16 feet deep	502	lin. ft.	$ 150.00	$ $75,300
		16-20 feet deep	184	lin. ft.	$ 198.00	$ $36,432
5	TREE TUNNELING		350	lin. ft.	$ 211.00	$ $73,850
6	SEWER TELEVISING FOR FINAL INSPECTION					
			6,804	lin. ft.	$ 3.00	$ $20,412
7	SEWER TESTING FOR FINAL INSPECTION					
			6,804	lin. ft.	$ 3.00	$ $20,412
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		515	lin. ft.	$ 89.00	$ $45,835
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and seed		308	sq.yd.	$ 15.00	$ $4,620
	Sod		3,378	sq.yd.	$ 15.00	$ $50,670
10	RESTORATION OF STREETS					
	Bituminous		2,000	sq.yd.	$ 70.00	$ $140,000
	PCC Curb & Gutter		60	lin. ft.	$ 45.00	$ $2,700
	PCC Sidewalk		650	sq. ft.	$ 14.00	$ $9,100

Table 4.2-4

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Inverness-Lomond-Elinor-Maple (North)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
11	REMOVE AND REPLACE DRIVEWAYS				
	Bituminous	290	sq.yd.	$ 53.00	$ $15,370
	PCC Driveway	75	sq.yd.	$ 89.00	$ $6,675
	Gravel Driveway	25	sq.yd.	$ 22.00	$ $550
12	TREE REMOVAL & TRIMMING			Lump Sum	$ $5,110
13	TRAFFIC CONTROL			Lump Sum	$ $21,900
	SUBTOTAL				$ $1,785,033
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	763	lin. ft.	$ 55.00	$ $41,965
	Far side	400	lin. ft.	$ 55.00	$ $22,000
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	59	each	$ 608.00	$ $35,872
	Far side	13	each	$ 749.00	$ $9,737
3	BUILDING SERVICE PLUG	72	each	$ 228.00	$ $16,416
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Sod	1,004	sq.yd.	$ 15.00	$ $15,060
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	149	sq.yd.	$ 69.00	$ $10,281
6	TRENCH BACKFILL				
	0-8 feet deep	260	lin. ft.	$ 68.00	$ $17,680
	SUBTOTAL				$ $169,011
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $1,954,000
	Contingencies (20%)				$390,800
	Engineering (20%)				$390,800
	Legal / Admin (6%)				$164,100
	Easement Acquisition				$112,100
	TOTAL OPINION OF PROBABLE COST				**$ $3,011,800**
				Cost per lot	$41,830

Table 4.2-5

Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Inverness-Belmont (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Inverness Avenue					
2-A-71F existing	725.4	715.59			9.8
			400	2.20%	
UB-59	734.0	724.39			9.6
			250	2.20%	
UB-60	738.0	729.89			8.1

Table 4.2-6

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Inverness-Belmont (North)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	200	lin. ft.	$ 82.00	$ $16,400
		8-12 feet deep	450	lin. ft.	$ 96.00	$ $43,200
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ $5,300
		8-12 feet deep	1	each	$ 7,000.00	$ $7,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	48	lin. ft.	$ 102.00	$ $4,896
		8-12 feet deep	96	lin. ft.	$ 124.00	$ $11,904
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ $0
6	SEWER TELEVISING FOR FINAL INSPECTION		650	lin. ft.	$ 3.00	$ $1,950
7	SEWER TESTING FOR FINAL INSPECTION		650	lin. ft.	$ 3.00	$ $1,950
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		40	lin. ft.	$ 89.00	$ $3,560
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and seed		900	sq.yd.	$ 15.00	$ $13,500
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ $0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		68	sq.yd.	$ 53.00	$ $3,604
	Concrete		12	sq.yd.	$ 89.00	$ $1,068
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $0

Table 4.2-6
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Inverness-Belmont (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ $1,095
14	TRAFFIC CONTROL			Lump Sum	$ $1,095
	SUBTOTAL				$ $123,322
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	72	lin. ft.	$ 55.00	$ $3,960
	Far side	0	lin. ft.	$ 55.00	$ $0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	6	each	$ 608.00	$ $3,648
	Far side	0	each	$ 749.00	$ $0
3	BUILDING SERVICE PLUG	6	each	$ 228.00	$ $1,368
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and seed	50	sq.yd.	$ 15.00	$ $750
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ $0
6	TRENCH BACKFILL				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ $0
	SUBTOTAL				$ $9,726
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $133,000
	Contingencies	(20%)			$26,600
	Engineering	(20%)			$26,600
	Legal / Admin	(6%)			$11,200
	TOTAL OPINION OF PROBABLE COST				**$ $197,400**
				Cost per lot	$32,900

Table 4.2-7
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Katrine-College (South)
Preliminary Design

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Katrine Avenue (south of College)					
H-8-22 (ex.)	745.0	725.86			
			39	5.00%	
UB-52	751.0	735.81			15.2
			300	1.00%	
UB-48	754.0	738.81			15.2
			350	0.40%	
UB-47	752.0	740.21			11.8
Katrine Avenue (north of College)					
H8-062 (ex.)	750.0	741.40			
			180	1.00%	
UB-58	751.0	743.20			7.8
			300	2.00%	
UB-57	760.0	749.20			10.8
			200	2.00%	
UB-56	764.0	753.20			10.8

Table 4.2-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Katrine-College (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	580	lin. ft.	$ 82.00	$ $47,560
		8-12 feet deep	499	lin. ft.	$ 96.00	$ $47,904
		12-16 feet deep	290	lin. ft.	$ 116.00	$ $33,640
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	2	each	$ 5,300.00	$ $10,600
		8-12 feet deep	2	each	$ 7,000.00	$ $14,000
		12-16 feet deep	2	each	$ 8,500.00	$ $17,000
3	DROP CONNECTION					
	8-inch		8	lin. ft.	$ 364.00	$ $2,912
4	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
5	TRENCH BACKFILL					
	8-inch	0-8 feet deep	156	lin. ft.	$ 102.00	$ $15,912
		8-12 feet deep	65	lin. ft.	$ 124.00	$ $8,060
		12-16 feet deep	104	lin. ft.	$ 150.00	$ $15,600
6	TREE TUNNELING		80	lin. ft.	$ 211.00	$ $16,880
7	SEWER TELEVISING FOR FINAL INSPECTION					
			1,369	lin. ft.	$ 3.00	$ $4,107
8	SEWER TESTING FOR FINAL INSPECTION					
			1,369	lin. ft.	$ 3.00	$ $4,107
9	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		220	lin. ft.	$ 89.00	$ $19,580
10	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		2,130	sq.yd.	$ 15.00	$ $31,950
11	RESTORATION OF STREETS:					
	Bit. Concrete Street		12	sq.yd.	$ 70.00	$ $840
12	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		150	sq.yd.	$ 53.00	$ $7,950
	Concrete		25	sq.yd.	$ 89.00	$ $2,225

Table 4.2-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Katrine-College (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	TREE REMOVAL AND TRIMMING:			Lump Sum	$ $9,490
14	EROSION CONTROL			Lump Sum	$ $1,095
15	TRAFFIC CONTROL			Lump Sum	$ $3,650
	SUBTOTAL				$ $321,862
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	205	lin. ft.	$ 55.00	$ $11,275
	Far side	715	lin. ft.	$ 55.00	$ $39,325
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	13	each	$ 608.00	$ $7,904
	Far side	14	each	$ 749.00	$ $10,486
3	BUILDING SERVICE PLUG	27	each	$ 228.00	$ $6,156
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and seed	685	sq.yd.	$ 15.00	$ $10,275
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	195	sq.yd.	$ 69.00	$ $13,455
6	TRENCH BACKFILL				
	0-8 feet deep	305	lin. ft.	$ 68.00	$ $20,740
	SUBTOTAL				$ $119,616
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $441,500
	Contingencies	(20%)			$88,300
	Engineering	(20%)			$88,300
	Legal / Admin	(6%)			$37,100
	TOTAL OPINION OF PROBABLE COST				**$ $655,200**
				Cost per lot	$24,270

Table 4.2-9

Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Lomond-College (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Lomond Avenue					
H-8-19 existing	725.0	720.00			5.0
			305	1.30%	
UB-32	732.0	723.97			8.0
			300	2.20%	
UB-31	738.0	730.57			7.4
			400	3.40%	
UB-29	752.0	744.17			7.8
			370	1.10%	
UB-28	756.0	748.24			7.8
			375	0.50%	
UB-27	758.0	750.11			7.9
College Road					
			245	0.50%	
UB-30	753.0	745.39			7.6
			300	1.00%	
UB-46	755.0	747.17			7.8

Table 4.2-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Lomond-College (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)				
	8-inch 0-8 feet deep	2,295	lin. ft.	$ 82.00	$ 188,190
2	SANITARY MANHOLES				
	48-inch 0-8 feet deep	7	each	$ 5,300.00	$ 37,100
3	CONNECTION TO EXISTING MANHOLE				
	8-inch	1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL				
	8-inch 0-8 feet deep	1,599	lin. ft.	$ 102.00	$ 163,098
5	TREE TUNNELLING	40	lin. ft.	$ 211.00	$ 8,440
6	WATER MAIN RELOCATION:	1	each	$ 7,800.00	$ 7,800
7	SEWER TELEVISING FOR FINAL INSPECTION	2,295	lin. ft.	$ 3.00	$ 6,885
8	SEWER TESTING FOR FINAL INSPECTION	2,295	lin. ft.	$ 3.00	$ 6,885
9	CULVERT REMOVAL AND REPLACEMENT:				
	12-inch	76	lin. ft.	$ 89.00	$ 6,764
10	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	1,548	sq.yd.	$ 15.00	$ 23,220
11	RESTORATION OF STREETS:				
	Bituminous Concrete Street	1,069	sq.yd.	$ 70.00	$ 74,830
12	REMOVE AND REPLACE DRIVEWAYS:				
	Bituminous Driveway	39	sq.yd.	$ 53.00	$ 2,067
	PCC Driveway	10	sq.yd.	$ 89.00	$ 890
13	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 2,920
14	EROSION CONTROL:			Lump Sum	$ 1,095

Table 4.2-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Lomond-College (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
15	TRAFFIC CONTROL:			Lump Sum	$ 7,300
	SUBTOTAL				$ 544,284
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	360	lin. ft.	$ 55.00	$ 19,800
	Far side	630	lin. ft.	$ 55.00	$ 34,650
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	14	each	$ 608.00	$ 8,512
	Far side	15	each	$ 749.00	$ 11,235
3	BUILDING SERVICE PLUG	29	each	$ 228.00	$ 6,612
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	783	sq.yd.	$ 15.00	$ 11,745
5	RESTORATION OF STREETS:				
	Bituminous Concrete Street	140	sq.yd.	$ 69.00	$ 9,660
6	TRENCH BACKFILL				
	0-8 feet deep	255	lin. ft.	$ 68.00	$ 17,340
	SUBTOTAL				$ 119,554
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 663,800
			Contingencies	(20%)	132,800
			Engineering	(20%)	132,800
			Legal / Admin	(6%)	55,800
	TOTAL OPINION OF PROBABLE COST				**$ 985,200**
				Cost per lot	33,970

Table 4.2-11

Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Elinor-College (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Elinor Avenue					
H-8-54 (existing)	747.9	737.90			10.0
			395	3.00%	
UB-55	760.0	749.75			10.3
College Road					
H-8-55 (existing)	745.4	738.99			
			225	0.80%	
UB-43	748.5	740.79			7.7
			420	0.40%	
UB-36	749.5	739.58			9.9

Table 4.2-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Elinor-College (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)				
	8-inch 8-12 feet deep	1,040	lin. ft.	$ 96.00	$ 99,840
2	SANITARY MANHOLES				
	48-inch 8-12 feet deep	3	each	$ 7,000.00	$ 21,000
3	CONNECTION TO EXISTING MANHOLE				
	8-inch	3	each	$ 6,800.00	$ 20,400
4	TRENCH BACKFILL				
	8-inch 8-12 feet deep	140	lin. ft.	$ 124.00	$ 17,360
5	TREE TUNNELING	150	lin. ft.	$ 211.00	$ 31,650
6	SEWER TELEVISING FOR FINAL INSPECTION	1,040	lin. ft.	$ 3.00	$ 3,120
7	SEWER TESTING FOR FINAL INSPECTION	1,040	lin. ft.	$ 3.00	$ 3,120
8	CULVERT REMOVAL AND REPLACEMENT				
	12-inch	40	lin. ft.	$ 89.00	$ 3,560
	24-inch	20	lin. ft.	$ 183.00	$ 3,660
9	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	1,596	sq.yd.	$ 15.00	$ 23,933
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	71	sq.yd.	$ 70.00	$ 4,978
11	REMOVE AND REPLACE DRIVEWAYS				
	Bituminous	33	sq.yd.	$ 53.00	$ 1,767
	Concrete	33	sq.yd.	$ 89.00	$ 2,967
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 2,500
13	EROSION CONTROL			Lump Sum	$ 750
14	TRAFFIC CONTROL			Lump Sum	$ 2,000
	SUBTOTAL				$ 242,604

Table 4.2-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Elinor-College (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	75	lin. ft.	$ 55.00	$ 4,125
	Far side	150	lin. ft.	$ 55.00	$ 8,250
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	5	each	$ 608.00	$ 3,040
	Far side	4	each	$ 749.00	$ 2,996
3	BUILDING SERVICE PLUG	9	each	$ 228.00	$ 2,052
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and seed	325	sq.yd.	$ 15.00	$ 4,875
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	64	sq.yd.	$ 69.00	$ 4,416
6	TRENCH BACKFILL				
	8-12 feet deep	96	lin. ft.	$ 91.00	$ 8,736
	SUBTOTAL				$ 38,490
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 281,100
	Contingencies	(20%)			56,200
	Engineering	(20%)			56,200
	Legal / Admin	(6%)			23,600
	TOTAL OPINION OF PROBABLE COST				**$ 417,100**
				Cost per lot	46,340

Table 4.2-13

Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Janes-College (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Janes Avenue					
H-8-56 existing	747.0	735.35			
			230	1.50%	
UB-41	751.0	738.80			12.2
			300	1.25%	
UB-42	750.0	742.55			7.4
College Road					
			440	1.25%	
UB-44	756.0	748.05			7.9

Table 4.2-14

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Janes-College (South)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	300	lin. ft.	$ 82.00	$ 24,600
		8-12 feet deep	670	lin. ft.	$ 96.00	$ 64,320
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	2	each	$ 7,000.00	$ 14,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	54	lin. ft.	$ 102.00	$ 5,508
		8-12 feet deep	260	lin. ft.	$ 124.00	$ 32,240
5	TREE TUNNELING		110	lin. ft.	$ 211.00	$ 23,210
6	SEWER TELEVISING FOR FINAL INSPECTION		970	lin. ft.	$ 3.00	$ 2,910
7	SEWER TESTING FOR FINAL INSPECTION		970	lin. ft.	$ 3.00	$ 2,910
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		150	lin. ft.	$ 89.00	$ 13,350
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		1,200	sq.yd.	$ 15.00	$ 18,000
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		65	sq.yd.	$ 70.00	$ 4,550
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		140	sq.yd.	$ 53.00	$ 7,420
	Concrete		24	sq.yd.	$ 89.00	$ 2,136
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 9,490
13	EROSION CONTROL				Lump Sum	$ 1,095

Table 4.2-14
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Janes-College (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	TRAFFIC CONTROL			Lump Sum	$ 3,650
	SUBTOTAL				$ 241,489
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	105	lin. ft.	$ 55.00	$ 5,775
	Far side	312	lin. ft.	$ 55.00	$ 17,160
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	6	each	$ 608.00	$ 3,648
	Far side	7	each	$ 749.00	$ 5,243
3	BUILDING SERVICE PLUG	13	each	$ 228.00	$ 2,964
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and seed	370	sq.yd.	$ 15.00	$ 5,550
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	102	sq.yd.	$ 69.00	$ 7,038
6	TRENCH BACKFILL:				
	0-8 feet deep	160	lin. ft.	$ 68.00	$ 10,880
	SUBTOTAL				$ 58,258
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 299,700
	Contingencies		(20%)		59,900
	Engineering		(20%)		59,900
	Legal / Admin		(6%)		25,200
	TOTAL OPINION OF PROBABLE COST				**$ 444,700**
				Cost per lot	34,210

Table 4.2-15

Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Chase-Hobson-Belmont (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Chase Avenue					
H-8-42 existing	734.6	726.10			
			420	1.25%	
UB-50	740.0	731.35			8.6
			400	2.00%	
UB-49	752.0	739.35			12.7
Hobson Road					
H-8-44 existing	738.5	729.57			
			80	0.60%	
UB-54	738.0	730.05			7.9
			350	1.25%	
UB-53	747.0	734.43			12.6
Belmont Road					
			400	1.25%	
UB-45	752.0	739.43			12.6

Table 4.2-16
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Chase-Hobson-Belmont (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	450	lin. ft.	$ 82.00	$ 36,900
		8-12 feet deep	1,200	lin. ft.	$ 96.00	$ 115,200
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	4	each	$ 7,000.00	$ 28,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	450	lin. ft.	$ 102.00	$ 45,900
		8-12 feet deep	602	lin. ft.	$ 124.00	$ 74,648
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ 0
6	SEWER TELEVISING FOR FINAL INSPECTION		1,650	lin. ft.	$ 3.00	$ 4,950
7	SEWER TESTING FOR FINAL INSPECTION		1,650	lin. ft.	$ 3.00	$ 4,950
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		60	lin. ft.	$ 89.00	$ 5,340
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and seed		780	sq.yd.	$ 15.00	$ 11,700
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		711	sq.yd.	$ 70.00	$ 49,770
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		50	sq.yd.	$ 53.00	$ 2,650
	Concrete		0	sq.yd.	$ 89.00	$ 0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 730
13	EROSION CONTROL				Lump Sum	$ 1,095

Table 4.2-16
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Chase-Hobson-Belmont (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	TRAFFIC CONTROL			Lump Sum	$ 21,900
	SUBTOTAL				$ 415,833
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	198	lin. ft.	$ 55.00	$ 10,890
	Far side	312	lin. ft.	$ 55.00	$ 17,160
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	9	each	$ 608.00	$ 5,472
	Far side	6	each	$ 749.00	$ 4,494
3	BUILDING SERVICE PLUG	15	each	$ 228.00	$ 3,420
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and seed	122	sq.yd.	$ 15.00	$ 1,830
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	140	sq.yd.	$ 69.00	$ 9,660
6	TRENCH BACKFILL				
	0-8 feet deep	180	lin. ft.	$ 68.00	$ 12,240
	SUBTOTAL				$ 65,166
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 481,000
	Contingencies	(20%)			96,200
	Engineering	(20%)			96,200
	Legal / Admin	(6%)			40,400
	TOTAL OPINION OF PROBABLE COST				**$ 713,800**
				Cost per lot	47,590

Table 4.2-17

Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Downers Grove Park Sub-Area
Cost Summary

April 2022

Sub-Basin:	Near Services	Far Services	Cost	Cost per lot
Katrine-Maple (North)	17	8	$ 946,200	$ 37,850
Inverness-Lomond-Elinor-Maple (North)	59	13	$ 3,011,800	$ 41,830
Inverness-Belmont (North)	6	0	$ 197,400	$ 32,900
Katrine-College (South)	13	14	$ 655,200	$ 24,270
Lomond-College (South)	14	15	$ 985,200	$ 33,970
Elinor-College (South)	5	4	$ 417,100	$ 46,340
Janes-College (South)	6	7	$ 444,700	$ 34,210
Chase-Hobson-Belmont (South)	9	6	$ 713,800	$ 47,590
TOTALS	129	67	$ 7,371,400	$ 37,610
		196		

4.3 Downers Grove Gardens

Downers Grove Gardens is a large sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.3, the approximate limits of this sub-area are Maple Avenue to the north, Janes Avenue and Belmont Road to the west, 63rd Street to the south, and Downers Drive to the east. The proposed service area includes approximately 673 lots that are mostly developed as single-family residences with septic systems. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving properties within Downers Grove Gardens.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The Downers Grove Gardens sub-area has two major drainage divides running from west to east: 61st Street from Janes east to Belmont and just south of 59th Street from Belmont east to Downers Drive. Serving these properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divide. The study area can be divided into four smaller service areas. Properties north of 61st Street and west of Belmont Road will be served by the existing sanitary sewer on Hobson Road (at Janes, Leonard, Chase and Puffer). Properties south of 61st Street and west of Belmont Road will be served by existing sewers on 63rd Street (at Janes, Puffer, and Belmont). Residences north of 59th Street and east of Belmont Road will be served by the existing sewer on Maple Avenue (between Woodward and Sherman). Residences south of 59th Street and east of Belmont Road will be served by existing sewers on Boundary Road (at Lee and Downers) and 63rd Street (at Belmont, Pershing, Stonewall, and Springside)

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The major road crossings that would significantly increase construction cost in this sub-area are Belmont Road and Maple Avenue. Thus, alternatives were considered to minimize crossing of these routes with both the mainline sewer and building services.

The sewer layout also considered the several wetlands that are located within the sub-area at the following locations: Woodward and Blanchard (vacated right-of-way), and Sherman and Jefferson (vacated right-of-way). Avoiding these wetlands will minimize the time and expense involved in the permitting process for construction in wetlands as well as reduce the costs associated with restoring these areas.

The Village of Downers Grove owns and operates water mains on the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Downers Grove Gardens sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

The following are the proposed sub-basins:

Sub-basin	No. of Services	Layout	Cost Estimate
Janes-Leonard-Chase-Puffer (North)	68	Table 4.3-1	Table 4.3-2
Janes-Leonard-Chase-Puffer (South)	129	Table 4.3-3	Table 4.3-4
Belmont Road (Southwest)	25	Table 4.3-5	Table 4.3-6
Belmont Road (East)	52	Table 4.3-7	Table 4.3-8
Pershing Avenue (South)	64	Table 4.3-9	Table 4.3-10
Woodward and 63rd Street	17	Table 4.3-11	Table 4.3-12
Lee and Boundary (South)	39	Table 4.3-13	Table 4.3-14
Springside Avenue (South)	14	Table 4.3-15	Table 4.3-16
Springside-Jefferson-Downers (North)	52	Table 4.3-17	Table 4.3-18
Pershing-Woodward-Maple (North)	104	Table 4.3-19	Table 4.3-20
Sherman Avenue (North)	54	Table 4.3-21	Table 4.3-22
Lee Avenue (North)	54	Table 4.3-23	Table 4.3-24

Table 4.3-25 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.3.

The Janes-Leonard-Chase-Puffer (North) sub-basin sewer plan follows the east-west drainage divide near 61st Street from Janes Avenue to Belmont Road. Serving these properties north to the existing sewer along Hobson is the most cost effective because it prevents a deep cut through the ridge line at 61st. The sewer alignment on each street should be on the east side of the rightof-way because of the existing water main is on the west side of the right-of-way. In October 2019, Baxter & Woodman performed a special assessment evaluation on the area south of Hobson Road, along Puffer Street. The special assessment included a cost estimate and evaluation for a 900-foot sewer extension from existing manhole H8-046 to proposed manhole UC-7. The cost per lot in the Special Assessment was nearly double the cost per lot in this plan. This cost difference is due to the study area on Puffer Street containing a relatively low number of lots and larger-sized lots which results in a higher cost per unsewered lot based on the length of sewer required to be installed. For comparison, the other sub-basin streets west of this study area have a higher density of lots and a resulting lower cost per unsewered lot. The property owners were polled in early 2020, and the majority were not in favor of moving forward with the special assessment. Therefore, it was not constructed. Table 4.3-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,421,100, including contingency, engineering, and legal/administrative costs.

The Janes-Leonard-Chase-Puffer (South) sub-basin sewer plan also follows the east-west drainage divide near 61st Street from Janes Avenue to Belmont Road. This sub-basin will also include all unsewered properties fronting 63rd Street west of Belmont. The properties on Janes, Leonard, and Chase should connect to the west at the existing manhole on 63rd Street at Janes, since the existing manhole east of Chase is too shallow. The properties on Puffer should connect to the existing manhole at Puffer and 63rd Street. Similar to the sub-basin to the north, sewer alignment on each street should be on the east side of the right-of-way because of the existing water mains on the west side of the right-of-way. Table 4.3-3 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-4 includes a breakdown of the unit quantities and

unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $2,677,200, including contingency, engineering, and legal/administrative costs.

The Belmont Road (Southwest) sub-basin sewer plan includes the unsewered properties on the west side of Belmont and south of Hobson Road. These properties will connect to the existing sewer on the west side of Belmont, north of 63rd Street. The sewer alignment will require an easement adjacent to the west right-of-way line of Belmont, similar to the existing sewer to the south. Installing a parallel sewer on the both sides of Belmont was determined to be more costeffective than installing services across Belmont. Table 4.3-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $680,300, including contingency, engineering, easements, and legal/administrative costs.

The Belmont Road (East) sub-basin sewer plan follows the existing topography, which consists of a low area between the ridge lines along 61st Street west of Belmont and along 59th Street east of Belmont. The ground elevation along Belmont decreases from a high point near College Road south to the connection point at an existing sewer manhole at the northeast corner of Belmont and 63rd Street. This sub-basin will include all unsewered properties on the east side of Belmont, as well as several properties on 59th Street, east of Belmont. Similar to the west side of Belmont Road, the sewer alignment will require an easement adjacent to the east right-of-way line and the parallel sewer was determined to be more cost-effective than installing services across Belmont. Table 4.3-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,335,400, including contingency, engineering, easements, and legal/administrative costs.

The Pershing Avenue (South) sub-basin sewer plan follows the drainage divide just south of 59th Street. This sub-basin will include unsewered properties along Pershing Avenue. Connecting to the manhole at 63rd Street and Pershing Avenue is the most cost effective because it prevents a deep cut through the ridge line. The sewer alignment on Pershing should be on the east side of the right-of-way because of the existing water main is on the west side of the right-of-way. Table 4.3-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,293,100, including contingency, engineering, and legal/administrative costs.

The Woodward and 63rd Street sub-basin sewer plan also follows the existing drainage divide just south of 59th Street. This sub-basin includes unsewered properties along Woodward as well as properties on the north side of 63rd Street between Woodward Avenue and Pershing Road. For the properties along Woodward, connecting to the existing manhole at 6000 Woodward Avenue is the most feasible alternative. For the properties on the north side of 63rd Street, connecting to the existing manhole at Woodward and 63rd Street is the most feasible alternative because the manhole to the west of Woodward on 63rd is too shallow. Table 4.3-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of

project cost is $285,300, including contingency, engineering, easements and legal/administrative costs.

The Lee and Boundary (South) sub-basin sewer plan also follows the existing drainage divide south of 59th Street. Connecting to the existing manhole at Boundary Road eliminates a deep cut through the ridge line south of 59th and provides adequate depth with the shortest length of pipe. The sewer should be placed in the east right-of-way on Lee and in the southeast right-of-way on Boundary to avoid existing utilities. Table 4.3-13 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-14 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $811,100, including contingency, engineering, and legal/administrative costs.

The Springside Avenue (South) sub-basin sewer plan is to follow the existing topography and connect to the existing manhole to the south at 63rd Street. The only other potential connection point would be the existing manhole to the north, but it is too shallow to be a feasible alternative. Table 4.3-15 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-16 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $342,000, including contingency, engineering, and legal/administrative costs.

The Springside-Jefferson-Downers (North) sub-basin sewer plan follows the existing topography which consists of a high point to the west along 59th Street and a low lying area near Springside and Jefferson. There are several potential connection points, but the existing manhole at Boundary and Downers Drive is the only feasible alternative to serve Downers, Jefferson, and Springside north of 59th because the two existing manholes on Springside, north of Jefferson and south of 59th, are too shallow. The lots on Springside south of 59th Street are best served by the existing manhole 320 feet south of 59th Street. The cost per lot for this sub-basin is the most expensive in the Downers Grove Gardens sub-area because of the amount of granular backfill and pavement restoration that is required to avoid utilities. Table 4.3-17 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-18 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,602,200, including contingency, engineering, and legal/ administrative costs.

The Pershing-Woodward-Maple Avenue (North) sub-basin sewer plan follows the existing topography which falls from the high point just south of 59th and east of Woodward to the lowest elevation, along Woodward north of Blanchard. This is the recommended alternative because it has the shortest sewer length while preventing deep cuts through the ridge line and provides adequate cover at the low elevation. This sub-basin includes all unsewered properties fronting Maple on the south side of the road. The recommended alternative to install one main sewer across Maple Avenue is more cost-effective than installing multiple services across Maple to the existing sewer on the north side. The sewer alignment along Maple will require easements adjacent to the right-of-way line. The connection point for sewer along the south side of Maple is the existing manhole at the intersection of Maple Avenue and Woodward Avenue. Sewer has been extended west to this manhole and south along Woodward Avenue to the manhole south of the intersection of Woodward Avenue and Blanchard Street right-of-way. The connection point for sewer along the north side of Maple is the existing manhole at 5516 Maple Avenue. Table 4.3-19 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-20 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable

cost. The total opinion of project cost is $3,075,900, including contingency, engineering, and easements, legal/administrative costs.

The Sherman Avenue (North) sub-basin sewer plan follows the drainage divide just south of 59th Street. This sub-basin will include unsewered properties along Sherman Avenue. Connecting to the existing manhole just south of Maple is the recommended alternative because it has the shortest sewer length while preventing deep cuts through the ridge line and provides adequate cover at the low elevation at Jefferson. The sewer alignment on Sherman should be on the east side of the right-of-way because of the existing water main is on the west side of the right-ofway. In 2017, 188 feet of sanitary sewer was installed including the 5602 Sherman Ave. service connection for a construction cost of $22,070. Table 4.3-21 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-22 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,368,900, including contingency, engineering, and legal/administrative costs.

The Lee Avenue (North) sub-basin sewer plan follows the topography which falls to the north from the drainage divide just south of 59th Street. Serving the properties along the south side of Maple with a parallel sewer and connecting to the existing manhole at Lee and Maple requires an easement on the south side of Maple but is more cost-effective than jacking sewer services under Maple. The sewer on Lee Avenue should be placed in the west parkway, near the edge of pavement, to avoid the Village water main near the west right-of-way line and the DuPage Water Commission main in the east parkway. The cost per lot for this sub-basin is the fourth most expensive in the Downers Grove Gardens sub-area because of the granular backfill and pavement restoration that is required along the north end of Lee. Table 4.3-23 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.3-24 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,590,500, including contingency, engineering, easements, and legal/administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.3

DOWNERS GROVE GARDENS POSSIBLE SEWER ALIGNMENT

MARCH 2018

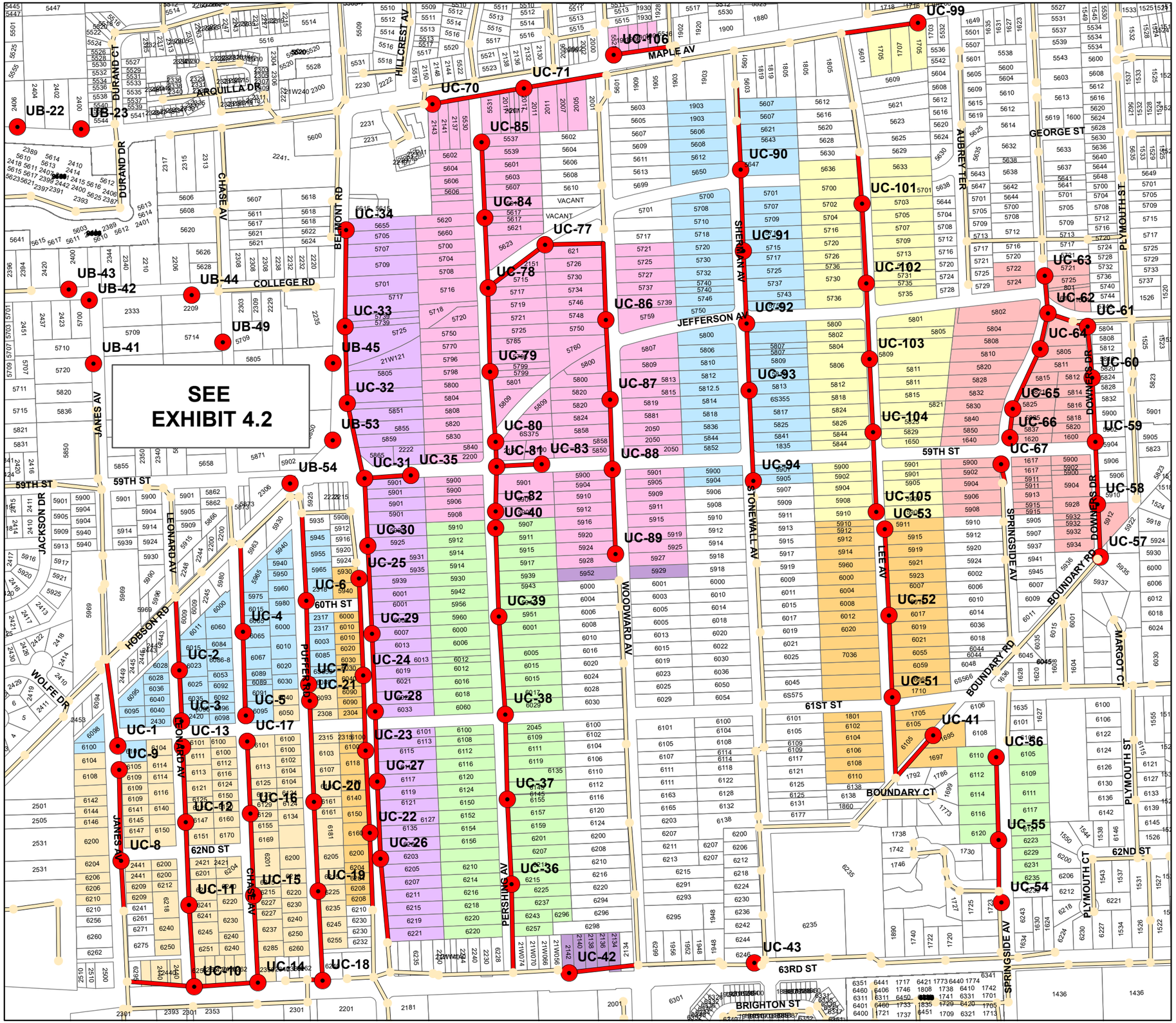
LEGEND

- PROPOSED SEWERS
- PARCEL BOUNDARIES
- JANES-LEONARD-CHASE-PUFFER (NORTH);TABLES 4.3-1, 4.3-2
- JANES-LEONARD-CHASE-PUFFER (SOUTH);TABLES 4.3-3, 4.3-4
- BELMONT ROAD (SOUTHWEST);TABLES 4.3-5, 4.3-6
- BELMONT ROAD (EAST);TABLES 4.3-7, 4.3-8
- PERSHING AVENUE (SOUTH);TABLES 4.3-9, 4.3-10
- WOODWARD AND 63RD STREET;TABLES 4.3-11, 4.3-12
- LEE AND BOUNDARY (SOUTH);TABLES 4.3-13, 4.3-14
- SPRINGSIDE AVENUE (SOUTH);TABLES 4.3-15, 4.3-16
- SPRINGSIDE-JEFFERSON-DOWNERS (NORTH);TABLES 4.3-17, 4.3-18
- PERSHING-WOODWARD-MAPLE (NORTH);TABLES 4.3-19, 4.3-20
- SHERMAN AVENUE (NORTH);TABLES 4.3-21, 4.3-22
- LEE AVENUE (NORTH);TABLES 4.3-23, 4.3-24

N

0 500 1,000

Feet



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abielawa - 4/11/2022

Table 4.3-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Janes-Leonard-Chase-Puffer (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Janes Avenue					
H-8-10-1 existing	731.4	715.01			
			420	1.20%	
UC-1	736.0	725.05			11.0
Leonard Avenue					
H-8-33 existing	731.7	719.00			
			400	2.20%	
UC-2	736.0	727.80			8.2
			220	2.60%	
UC-3	742.0	733.52			8.5
Chase Avenue					
H-8-43 existing	733.5	726.62			
			410	3.00%	
UC-4	755.0	738.92			16.1
			410	1.00%	
UC-5	754.0	743.02			11.0
Puffer Road					
H-8-46 existing	741.3	731.65			
			450	0.40%	
UC-6	741.5	733.45			8.1
			400	2.00%	
UC-7	752.0	741.45			10.6

Table 4.3-2

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Janes-Leonard-Chase-Puffer (North)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	500	lin. ft.	$ 82.00	$ $41,000
		8-12 feet deep	2,210	lin. ft.	$ 96.00	$ $212,160
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	2	each	$ 5,300.00	$ $10,600
		8-12 feet deep	5	each	$ 7,000.00	$ $35,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		4	each	$ 6,800.00	$ $27,200
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	100	lin. ft.	$ 102.00	$ $10,200
		8-12 feet deep	822	lin. ft.	$ 124.00	$ $101,928
5	TREE TUNNELING		80	lin. ft.	$ 211.00	$ $16,880
6	SEWER TELEVISING FOR FINAL INSPECTION					
			2,710	lin. ft.	$ 3.00	$ $8,130
7	SEWER TESTING FOR FINAL INSPECTION					
			2,710	lin. ft.	$ 3.00	$ $8,130
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		357	lin. ft.	$ 89.00	$ $31,773
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		5,142	sq.yd.	$ 15.00	$ $77,130
10	RESTORATION OF STREETS					
	Bit. Concrete Street		160	sq.yd.	$ 70.00	$ $11,200
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		491	sq.yd.	$ 53.00	$ $26,023
	Concrete		67	sq.yd.	$ 89.00	$ $5,963
12	TREE REMOVAL AND TRIMMING				Lump Sum	$ $365

Table 4.3-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Janes-Leonard-Chase-Puffer (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ $1,460
14	TRAFFIC CONTROL			Lump Sum	$ $8,760
					$ $633,902
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	740	lin. ft.	$ 55.00	$ $40,700
	Far side	1,860	lin. ft.	$ 55.00	$ $102,300
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	37	each	$ 608.00	$ $22,496
	Far side	31	each	$ 749.00	$ $23,219
3	BUILDING SERVICE PLUGS:	68	each	$ 228.00	$ $15,504
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	2,700	sq.yd.	$ 15.00	$ $40,500
5	RESTORATION OF STREETS				
	Bit. Concrete Street	413	sq.yd.	$ 69.00	$ $28,497
6	TRENCH BACKFILL				
	0-8 feet deep	744	lin. ft.	$ 68.00	$ $50,592
	SUBTOTAL				$ $323,808
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $957,700
	Contingencies (20%)				$191,500
	Engineering (20%)				$191,500
	Legal / Admin (6%)				$80,400
	TOTAL OPINION OF PROBABLE COST				**$ $1,421,100**
				Cost per lot	$20,900

Table 4.3-3
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Janes-Leonard-Chase-Puffer (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Janes Avenue					
Existing	720.0	708.00			
			300	1.20%	
UC-8	730.0	716.60			13.4
			400	1.20%	
UC-9	738.0	726.40			11.6
63rd Street					
Existing	713.6	702.70			
			350	0.40%	
UC-10	719.0	709.10			9.9
			340	0.40%	
UC-14	724.5	715.46			9.0
Leonard Avenue					
			400	3.00%	
UC-11	730.0	721.10			8.9
			400	2.00%	
UC-12	740.0	729.10			10.9
			400	2.00%	
UC-13	746.0	737.10			8.9
Chase Avenue					
			450	0.80%	
UC-15	730.0	719.06			10.9
			450	1.50%	
UC-16	734.0	725.81			8.2
			450	3.00%	
UC-17	750.0	739.31			10.7
Puffer Road					
H-1-98 (existing)	730.0	719.79			
			60	2.50%	
UC-18	730.0	721.29			8.7
			450	0.60%	
UC-19	732.0	723.99			8.0
			450	0.80%	
UC-20	736.0	727.59			8.4
			450	2.50%	
UC-21	750.0	738.84			11.2

Table 4.3-4

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Janes-Leonard-Chase-Puffer (South)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	900	lin. ft.	$ 82.00	$ $73,800
		8-12 feet deep	4,450	lin. ft.	$ 96.00	$ $427,200
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	2	each	$ 5,300.00	$ $10,600
		8-12 feet deep	12	each	$ 7,000.00	$ $84,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		3	each	$ 6,800.00	$ $20,400
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	50	lin. ft.	$ 102.00	$ $5,100
		8-12 feet deep	1,353	lin. ft.	$ 124.00	$ $167,772
5	TREE TUNNELING		240	lin. ft.	$ 211.00	$ $50,640
6	SEWER TELEVISING FOR FINAL INSPECTION		5,350	lin. ft.	$ 3.00	$ $16,050
7	SEWER TESTING FOR FINAL INSPECTION		5,350	lin. ft.	$ 3.00	$ $16,050
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		856	lin. ft.	$ 89.00	$ $76,184
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		9,789	sq.yd.	$ 15.00	$ $146,835
10	RESTORATION OF STREETS					
	Bit. Concrete Street		292	sq.yd.	$ 70.00	$ $20,440
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		1,012	sq.yd.	$ 53.00	$ $53,636
	Concrete		77	sq.yd.	$ 89.00	$ $6,853
12	TREE REMOVAL AND TRIMMING				Lump Sum	$ $1,241
13	EROSION CONTROL				Lump Sum	$ $1,825

Table 4.3-4
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Janes-Leonard-Chase-Puffer (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	TRAFFIC CONTROL			Lump Sum	$ $10,950
	SUBTOTAL				$ $1,189,576
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	1,440	lin. ft.	$ 55.00	$ $79,200
	Far side	3,420	lin. ft.	$ 55.00	$ $188,100
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	72	each	$ 608.00	$ $43,776
	Far side	57	each	$ 749.00	$ $42,693
3	BUILDING SERVICE PLUG	129	each	$ 228.00	$ $29,412
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	3,575	sq.yd.	$ 15.00	$ $53,625
5	RESTORATION OF STREETS				
	Bit. Concrete Street	1,115	sq.yd.	$ 69.00	$ $76,935
6	TRENCH BACKFILL				
	0-8 feet deep	1,482	lin. ft.	$ 68.00	$ $100,776
	SUBTOTAL				$ $614,517
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $1,804,100
	Contingencies (20%)				$360,800
	Engineering (20%)				$360,800
	Legal / Admin (6%)				$151,500
	TOTAL OPINION OF PROBABLE COST				**$ $2,677,200**
	Cost per lot				$20,750

Table 4.3-5
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Belmont-Southwest
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Belmont Road					
H-1-94 (existing)	738.8	728.38			
			400	1.00%	
UC-22	742.0	732.38			9.6
			400	0.90%	
UC-23	744.0	735.98			8.0
			450	0.90%	
UC-24	750.0	740.03			10.0
			470	0.40%	
UC-25	750.0	741.91			8.1

Table 4.3-6
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Belmont-Southwest
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	500	lin. ft.	$ 82.00	$ $41,000
		8-12 feet deep	1,220	lin. ft.	$ 96.00	$ $117,120
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	2	each	$ 5,300.00	$ $10,600
		8-12 feet deep	2	each	$ 7,000.00	$ $14,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	264	lin. ft.	$ 102.00	$ $26,928
		8-12 feet deep	315	lin. ft.	$ 124.00	$ $39,060
5	TREE TUNNELING		120	lin. ft.	$ 211.00	$ $25,320
6	SEWER TELEVISING FOR FINAL INSPECTION					
			1,720	lin. ft.	$ 3.00	$ $5,160
7	SEWER TESTING FOR FINAL INSPECTION					
			1,720	lin. ft.	$ 3.00	$ $5,160
8	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		3,547	sq.yd.	$ 15.00	$ $53,205
9	RESTORATION OF STREETS					
	Bit. Concrete Street		64	sq.yd.	$ 70.00	$ $4,480
10	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		269	sq.yd.	$ 53.00	$ $14,257
	Concrete		60	sq.yd.	$ 89.00	$ $5,340
12	TREE REMOVAL AND TRIMMING				Lump Sum	$ $1,460
13	EROSION CONTROL				Lump Sum	$ $730

Table 4.3-6
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Belmont-Southwest
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	TRAFFIC CONTROL			Lump Sum	$ $9,490
	SUBTOTAL				$ $380,110
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	250	lin. ft.	$ 55.00	$ $13,750
	Far side	0	lin. ft.	$ 55.00	$ $0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	25	each	$ 608.00	$ $15,200
	Far side	0	each	$ 749.00	$ $0
3	BUILDING SERVICE PLUG				
	Near side	25	each	$ 228.00	$ $5,700
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	0	sq.yd.	$ 15.00	$ $0
5	RESTORATION OF STREETS				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ $0
6	TRENCH BACKFILL				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ $0
	SUBTOTAL				$ $34,650
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $414,800
	Contingencies (20%)				$83,000
	Engineering (20%)				$83,000
	Legal / Admin (6%)				$34,800
	Easement Acquisition				$64,700
	TOTAL OPINION OF PROBABLE COST				**$ $680,300**
	Cost per lot				$27,210

Table 4.3-7
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Belmont Road (East)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Belmont Road					
H-1-97 (existing)	739.5	724.62			
			400	2.00%	
UC-26	742.0	732.62			9.4
			400	0.40%	
UC-27	746.0	734.22			11.8
			400	0.40%	
UC-28	748.0	735.82			12.2
			400	0.40%	
UC-29	748.0	737.42			10.6
			400	0.40%	
UC-30	748.0	739.02			9.0
			400	0.40%	
UC-31	750.0	740.62			9.4
			400	0.40%	
UC-32	750.0	742.22			7.8
			400	2.50%	
UC-33	762.0	752.22			9.8
			400	4.00%	
UC-34	780.0	768.22			11.8
59th Street					
			200	0.80%	
UC-35	750.0	742.22			7.8

Table 4.3-8

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Belmont Road (East)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	1,000	lin. ft.	$ 82.00	$ $82,000
		8-12 feet deep	2,800	lin. ft.	$ 96.00	$ $268,800
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	2	each	$ 5,300.00	$ $10,600
		8-12 feet deep	8	each	$ 7,000.00	$ $56,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	313	lin. ft.	$ 102.00	$ $31,926
		8-12 feet deep	659	lin. ft.	$ 124.00	$ $81,716
5	TREE TUNNELING		280	lin. ft.	$ 211.00	$ $59,080
6	SEWER TELEVISING FOR FINAL INSPECTION					
			3,800	lin. ft.	$ 3.00	$ $11,400
7	SEWER TESTING FOR FINAL INSPECTION					
			3,800	lin. ft.	$ 3.00	$ $11,400
8	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		2,031	sq.yd.	$ 15.00	$ $30,465
9	RESTORATION OF STREETS					
	Bit. Concrete Street		69	sq.yd.	$ 70.00	$ $4,830
10	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		443	sq.yd.	$ 53.00	$ $23,479
	Concrete		130	sq.yd.	$ 89.00	$ $11,570
11	TREE REMOVAL AND TRIMMING				Lump Sum	$ $14,600
12	EROSION CONTROL				Lump Sum	$ $730

Table 4.3-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Belmont Road (East)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	TRAFFIC CONTROL			Lump Sum	$ $21,900
	SUBTOTAL				$ $727,296
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	520	lin. ft.	$ 55.00	$ $28,600
	Far side	0	lin. ft.	$ 55.00	$ $0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	52	each	$ 608.00	$ $31,616
	Far side	0	each	$ 749.00	$ $0
3	BUILDING SERVICE PLUG				
	Near side	52	each	$ 228.00	$ $11,856
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	0	sq.yd.	$ 15.00	$ $0
5	RESTORATION OF STREETS				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ $0
6	TRENCH BACKFILL				
	8-12 feet deep	0	lin. ft.	$ 91.00	$ $0
	SUBTOTAL				$ $72,072
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $799,400
	Contingencies (20%)				$159,900
	Engineering (20%)				$159,900
	Legal / Admin (6%)				$67,200
	Easement Acquisition				$149,000
	TOTAL OPINION OF PROBABLE COST				**$ $1,335,400**
				Cost per lot	$25,680

Table 4.3-9
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Pershing Avenue (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Pershing Avenue					
Existing	744.8	733.40			
			450	1.00%	
UC-36	750.0	737.90			12.1
			450	0.50%	
UC-37	750.0	740.15			9.9
			450	0.50%	
UC-38	754.0	742.40			11.6
			450	0.40%	
UC-39	752.0	744.20			7.8
			450	0.80%	
UC-40	762.0	747.80			14.2

Table 4.3-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Pershing Avenue (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	400	lin. ft.	$ 82.00	$ $32,800
		8-12 feet deep	1,850	lin. ft.	$ 96.00	$ $177,600
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ $5,300
		8-12 feet deep	4	each	$ 7,000.00	$ $28,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	130	lin. ft.	$ 102.00	$ $13,260
		8-12 feet deep	1,201	lin. ft.	$ 124.00	$ $148,924
5	TREE TUNNELING		70	lin. ft.	$ 211.00	$ $14,770
6	SEWER TELEVISING FOR FINAL INSPECTION					
			2,250	lin. ft.	$ 3.00	$ $6,750
7	SEWER TESTING FOR FINAL INSPECTION					
			2,250	lin. ft.	$ 3.00	$ $6,750
8	CULVERT REMOVAL AND REPLACEMENT					
	15-inch		255	lin. ft.	$ 113.00	$ $28,815
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		2,616	sq.yd.	$ 15.00	$ $39,240
10	RESTORATION OF STREETS					
	Bit. Concrete Street		756	sq.yd.	$ 70.00	$ $52,920
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		263	sq.yd.	$ 53.00	$ $13,939
	Concrete		80	sq.yd.	$ 89.00	$ $7,120
12	REMOVE AND REPLACE SIDEWALK					
	4' Concrete		50	sq.ft.	$ 14.00	$ $700

Table 4.3-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Pershing Avenue (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	TREE REMOVAL AND TRIMMING			Lump Sum	$ $3,650
14	EROSION CONTROL			Lump Sum	$ $730
15	TRAFFIC CONTROL			Lump Sum	$ $4,380
	SUBTOTAL				$ $592,448
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	768	lin. ft.	$ 55.00	$ $42,240
	Far side	1,344	lin. ft.	$ 55.00	$ $73,920
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	32	each	$ 608.00	$ $19,456
	Far side	32	each	$ 749.00	$ $23,968
3	BUILDING SERVICE PLUG	64	each	$ 228.00	$ $14,592
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	1,387	sq.yd.	$ 15.00	$ $20,805
5	RESTORATION OF STREETS				
	Bit. Concrete Street	427	sq.yd.	$ 69.00	$ $29,463
6	TRENCH BACKFILL				
	0-8 feet deep	800	lin. ft.	$ 68.00	$ $54,400
	SUBTOTAL				$ $278,844
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $871,300
	Contingencies	(20%)			$174,300
	Engineering	(20%)			$174,300
	Legal / Admin	(6%)			$73,200
	TOTAL OPINION OF PROBABLE COST				**$ $1,293,100**
				Cost per lot	$20,200

Table 4.3-11
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Woodward and 63rd Street
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
63rd Street					
H-2-160 (existing)	736.0	730.63	320	1.20%	5.4
UC-42	744.0	734.47			9.5

Table 4.3-12

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Woodward and 63rd Street

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	300	lin. ft.	$ 96.00	$ $28,800
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ $5,300
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	215	lin. ft.	$ 102.00	$ $21,930
		8-12 feet deep	85	lin. ft.	$ 124.00	$ $10,540
5	TREE TUNNELING		40	lin. ft.	$ 211.00	$ $8,440
6	SEWER TELEVISING FOR FINAL INSPECTION					
			300	lin. ft.	$ 3.00	$ $900
7	SEWER TESTING FOR FINAL INSPECTION					
			300	lin. ft.	$ 3.00	$ $900
8	CULVERT REMOVAL AND REPLACEMENT					
	15-inch		80	lin. ft.	$ 113.00	$ $9,040
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		725	sq.yd.	$ 15.00	$ $10,875
10	RESTORATION OF STREETS					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ $0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		171	sq.yd.	$ 53.00	$ $9,045
	Concrete		10	sq.yd.	$ 89.00	$ $890
12	REMOVE AND REPLACE SIDEWALK					
	4' Concrete		0	sq.ft.	$ 14.00	$ $0

Table 4.3-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Woodward and 63rd Street
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	TREE REMOVAL AND TRIMMING			Lump Sum	$ $2,920
14	EROSION CONTROL			Lump Sum	$ $730
15	TRAFFIC CONTROL			Lump Sum	$ $9,490
	SUBTOTAL				$ $126,600
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	103	lin. ft.	$ 55.00	$ $5,665
	Far side	189	lin. ft.	$ 55.00	$ $10,395
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	10	each	$ 608.00	$ $6,080
	Far side	7	each	$ 749.00	$ $5,243
3	BUILDING SERVICE PLUG	17	each	$ 228.00	$ $3,876
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	217	sq.yd.	$ 15.00	$ $3,250
5	RESTORATION OF STREETS				
	Bit. Concrete Street	103	sq.yd.	$ 69.00	$ $7,084
6	TRENCH BACKFILL				
	0-8 feet deep	175	lin. ft.	$ 68.00	$ $11,900
	SUBTOTAL				$ $53,493
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $180,100
	Contingencies (20%)				$36,000
	Engineering (20%)				$36,000
	Legal / Admin (6%)				$15,100
	Easement Acquisition				$18,100
	TOTAL OPINION OF PROBABLE COST				**$ $285,300**
				Cost per lot	$16,780

Table 4.3-13
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Lee and Boundry (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Lee Avenue					
H-2-151 (existing)	750.0	735.65			14.4
			400	1.60%	
UC-51	750.0	742.05			8.0
			400	1.50%	
UC-52	760.0	748.05			12.0
			400	3.50%	
UC-53	770.0	762.05			8.0
Boundary Road					
			430	1.50%	
UC-41	753.0	742.10			10.9

Table 4.3-14

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Lee and Boundary (South)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	509	lin. ft.	$ 82.00	$ $41,738
		8-12 feet deep	754	lin. ft.	$ 96.00	$ $72,384
		12-16 feet deep	367	lin. ft.	$ 116.00	$ $42,572
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	2	each	$ 5,300.00	$ $10,600
		8-12 feet deep	2	each	$ 7,000.00	$ $14,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		2	each	$ 6,800.00	$ $13,600
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	130	lin. ft.	$ 102.00	$ $13,260
		8-12 feet deep	225	lin. ft.	$ 124.00	$ $27,900
		12-16 feet deep	42	lin. ft.	$ 150.00	$ $6,300
5	TREE TUNNELING		79	lin. ft.	$ 211.00	$ $16,669
6	SEWER TELEVISING FOR FINAL INSPECTION					
			1,630	lin. ft.	$ 3.00	$ $4,890
7	SEWER TESTING FOR FINAL INSPECTION					
			1,630	lin. ft.	$ 3.00	$ $4,890
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		200	lin. ft.	$ 89.00	$ $17,800
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		2,901	sq.yd.	$ 15.00	$ $43,515
10	RESTORATION OF STREETS					
	Bit. Concrete Street		93	sq.yd.	$ 70.00	$ $6,510
	PCC Curb & Gutter		20	lin. ft.	$ 45.00	$ $900
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		158	sq.yd.	$ 53.00	$ $8,374
	PCC Driveway		83	sq.yd.	$ 89.00	$ $7,387
	Aggregate Driveway		61	sq.yd.	$ 22.00	$ $1,342
12	TREE REMOVAL AND TRIMMING				Lump Sum	$ $1,825

Table 4.3-14
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Lee and Boundary (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ $730
14	TRAFFIC CONTROL			Lump Sum	$ $8,030
	SUBTOTAL				$ $365,216
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	200	lin. ft.	$ 55.00	$ $11,000
	Far side	1,064	lin. ft.	$ 55.00	$ $58,520
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	20	each	$ 608.00	$ $12,160
	Far side	19	each	$ 749.00	$ $14,231
3	BUILDING SERVICE PLUG	39	each	$ 228.00	$ $8,892
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	1,017	sq.yd.	$ 15.00	$ $15,255
5	RESTORATION OF STREETS				
	Bit. Concrete Street	377	sq.yd.	$ 69.00	$ $26,013
6	TRENCH BACKFILL				
	0-8 feet deep	519	lin. ft.	$ 68.00	$ $35,292
	SUBTOTAL				$ $181,363
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $546,600
	Contingencies	(20%)			$109,300
	Engineering	(20%)			$109,300
	Legal / Admin	(6%)			$45,900
	TOTAL OPINION OF PROBABLE COST				**$ $811,100**
				Cost per lot	$20,800

Table 4.3-15
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Springside (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Springside Avenue					
H-2-166 (existing)	740.0	726.63			13.4
			250	0.80%	
UC-55	742.0	728.63			13.4
			400	1.80%	
UC-56	749.0	735.83			13.2

Table 4.3-16
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Springside (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	650	lin. ft.	$ 82.00	$ $53,300
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	2	each	$ 5,300.00	$ $10,600
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
		0-8 feet deep	206	lin. ft.	$ 102.00	$ $21,012
5	TREE TUNNELING		60	lin. ft.	$ 211.00	$ $12,660
6	SEWER TELEVISING FOR FINAL INSPECTION					
			650	lin. ft.	$ 3.00	$ $1,950
7	SEWER TESTING FOR FINAL INSPECTION					
			650	lin. ft.	$ 3.00	$ $1,950
8	CULVERT REMOVAL AND REPLACEMENT					
	15-inch		150	lin. ft.	$ 113.00	$ $16,950
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		1,098	sq.yd.	$ 15.00	$ $16,470
10	RESTORATION OF STREETS					
	Bit. Concrete Street		35	sq.yd.	$ 70.00	$ $2,450
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		110	sq.yd.	$ 53.00	$ $5,830
12	TREE REMOVAL AND TRIMMING				Lump Sum	$ $2,190
13	EROSION CONTROL				Lump Sum	$ $730

Table 4.3-16
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Springside (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	TRAFFIC CONTROL			Lump Sum	$ $3,650
	SUBTOTAL				$ $156,542
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	80	lin. ft.	$ 55.00	$ $4,400
	Far side	450	lin. ft.	$ 55.00	$ $24,750
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	5	each	$ 608.00	$ $3,040
	Far side	9	each	$ 749.00	$ $6,741
3	BUILDING SERVICE PLUG	14	each	$ 228.00	$ $3,192
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	400	sq.yd.	$ 15.00	$ $6,000
5	RESTORATION OF STREETS				
	Bit. Concrete Street	160	sq.yd.	$ 69.00	$ $11,040
6	TRENCH BACKFILL				
	0-8 feet deep	216	lin. ft.	$ 68.00	$ $14,688
	SUBTOTAL				$ $73,851
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $230,400
	Contingencies	(20%)			$46,100
	Engineering	(20%)			$46,100
	Legal / Admin	(6%)			$19,400
	TOTAL OPINION OF PROBABLE COST				**$ $342,000**
				Cost per lot	$24,430

Table 4.3-17
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Springside-Jefferson-Downers (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Downers Drive					
H-3-2-14 (existing)	755.0	736.20			18.8
			38	0.40%	
UC-57	754.0	736.35			17.6
			250	0.40%	
UC-58	756.0	737.35			18.6
			253	0.40%	
UC-59	754.0	738.36			15.6
			341	0.40%	
UC-60	757.5	739.73			17.8
			340	0.40%	
UC-61	753.0	741.09			11.9
Jefferson Drive					
			250	0.40%	
UC-62	750.0	742.09			7.9
Springside Avenue					
			220	0.40%	
UC-63	750.0	742.97			7.0
			198	0.40%	
UC-64	750.0	742.88			7.1
			384	2.00%	
UC-65	763.0	750.56			12.4
			140	1.00%	
UC-66	764.0	751.96			12.0
H-3-110 (existing)	755.3	745.25			10.0
			320	3.00%	
UC-67	764.0	754.85			9.1

Table 4.3-18
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Springside-Jefferson-Downers (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	418	lin. ft.	$ 82.00	$ $34,276
		8-12 feet deep	1,114	lin. ft.	$ 96.00	$ $106,944
		12-16 feet deep	588	lin. ft.	$ 116.00	$ $68,208
		16-20 feet deep	614	lin. ft.	$ 139.00	$ $85,346
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	3	each	$ 5,300.00	$ $15,900
		8-12 feet deep	4	each	$ 7,000.00	$ $28,000
		12-16 feet deep	1	each	$ 8,500.00	$ $8,500
		16-20 feet deep	3	each	$ 11,300.00	$ $33,900
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		2	each	$ 6,800.00	$ $13,600
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	370	lin. ft.	$ 102.00	$ $37,740
		8-12 feet deep	680	lin. ft.	$ 124.00	$ $84,320
		12-16 feet deep	481	lin. ft.	$ 150.00	$ $72,150
		16-20 feet deep	608	lin. ft.	$ 198.00	$ $120,384
5	TREE TUNNELING		60	lin. ft.	$ 211.00	$ $12,660
6	SEWER TELEVISING FOR FINAL INSPECTION					
			2,734	lin. ft.	$ 3.00	$ $8,202
7	SEWER TESTING FOR FINAL INSPECTION					
			2,734	lin. ft.	$ 3.00	$ $8,202
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		160	lin. ft.	$ 89.00	$ $14,240
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		3,850	sq.yd.	$ 15.00	$ $57,750
10	RESTORATION OF STREETS					
	Bit. Concrete Street		625	sq.yd.	$ 70.00	$ $43,750
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		255	sq.yd.	$ 53.00	$ $13,515
	Concrete		72	sq.yd.	$ 89.00	$ $6,408
	Aggregate		162	sq.yd.	$ 22.00	$ $3,564

Table 4.3-18
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Springside-Jefferson-Downers (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	TREE REMOVAL AND TRIMMING			Lump Sum	$ $3,285
13	EROSION CONTROL			Lump Sum	$ $1,095
14	TRAFFIC CONTROL:			Lump Sum	$ $7,300
	SUBTOTAL				$ $881,939
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	495	lin. ft.	$ 55.00	$ $27,225
	Far side	912	lin. ft.	$ 55.00	$ $50,160
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	33	each	$ 608.00	$ $20,064
	Far side	19	each	$ 749.00	$ $14,231
3	BUILDING SERVICE PLUG	52	each	$ 228.00	$ $11,856
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	842	sq.yd.	$ 15.00	$ $12,630
5	RESTORATION OF STREETS				
	Bit. Concrete Street	388	sq.yd.	$ 69.00	$ $26,772
6	TRENCH BACKFILL				
	0-8 feet deep	494	lin. ft.	$ 68.00	$ $33,592
7	REMOVE AND REPLACE DRIVEWAYS				
	Bituminous	24	sq.yd.	$ 52.00	$ $1,248
	SUBTOTAL				$ $197,778
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $1,079,700
	Contingencies	(20%)			$215,900
	Engineering	(20%)			$215,900
	Legal / Admin	(6%)			$90,700
	TOTAL OPINION OF PROBABLE COST				**$ $1,602,200**
	Cost per lot				$30,810

Table 4.3-19
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Pershing-Woodward-Maple (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Maple Avenue					
2-C-131 (existing)	730.2	711.80			18.4
			300	2.00%	
UC-106	740.0	729.80			10.2
2-C-151 (existing)	741.6	723.72			17.9
			450	3.50%	
UC-71	752.0	739.47			12.5
			450	2.00%	
UC-70	760.0	748.47			11.5
Woodward Avenue					
2-C-155 (existing)	735.7	727.36			8.3
			400	1.00%	
UC-86	746.0	731.36			14.6
			400	2.00%	
UC-87	750.0	739.36			10.6
			400	5.00%	
UC-88	760.0	751.36			8.6
			400	5.00%	
UC-89	778.0	761.36			16.6
Blanchard Street					
			325	1.10%	
UC-77	739.0	730.94			8.1
			390	1.20%	
UC-78	756.0	735.62			20.4
Pershing Avenue					
			400	0.40%	
UC-79	750.0	737.22			12.8
			400	0.40%	
UC-80	747.5	738.82			8.7
			160	0.40%	
UC-81	752.0	739.46			12.5
			225	5.00%	
UC-82	764.0	750.07			13.9
			350	0.80%	
UC-84	752.0	738.42			13.6
			400	0.80%	
UC-85	750.0	741.62			8.4
59th Street					
			400	0.40%	
UC-83	748.5	741.06			7.4

Table 4.3-20
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Pershing-Woodward-Maple (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	1,130	lin. ft.	$ 82.00	$ $92,660
		8-12 feet deep	3,300	lin. ft.	$ 96.00	$ $316,800
		12-16 feet deep	960	lin. ft.	$ 116.00	$ $111,360
		16-20 feet deep	460	lin. ft.	$ 139.00	$ $63,940
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	4	each	$ 5,300.00	$ $21,200
		8-12 feet deep	8	each	$ 7,000.00	$ $56,000
		12-16 feet deep	3	each	$ 8,500.00	$ $25,500
		16-20 feet deep	1	each	$ 11,300.00	$ $11,300
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		3	each	$ 6,800.00	$ $20,400
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	1,203	lin. ft.	$ 102.00	$ $122,706
		8-12 feet deep	1,391	lin. ft.	$ 124.00	$ $172,484
		12-16 feet deep	676	lin. ft.	$ 150.00	$ $101,400
		16-20 feet deep	347	lin. ft.	$ 198.00	$ $68,706
5	TREE TUNNELING		440	lin. ft.	$ 211.00	$ $92,840
6	SEWER TELEVISING FOR FINAL INSPECTION		5,850	lin. ft.	$ 3.00	$ $17,550
7	SEWER TESTING FOR FINAL INSPECTION		5,850	lin. ft.	$ 3.00	$ $17,550
8	CULVERT REMOVAL AND REPLACEMENT					
	15-inch		10	lin. ft.	$ 113.00	$ $1,130
	12-inch		185	lin. ft.	$ 89.00	$ $16,465
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		6,027	sq.yd.	$ 15.00	$ $90,405
10	RESTORATION OF STREETS					
	Bit. Concrete Street		2,018	sq.yd.	$ 70.00	$ $141,260
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		695	sq.yd.	$ 53.00	$ $36,835
	PCC		55	sq.yd.	$ 89.00	$ $4,895

Table 4.3-20
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Pershing-Woodward-Maple (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	TREE REMOVAL AND TRIMMING			Lump Sum	$ $1,460
13	EROSION CONTROL				
	Silt Fence			Lump Sum	$ $7,297
14	TRAFFIC CONTROL:			Lump Sum	$ $13,140
	SUBTOTAL				$ $1,625,283
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	842	lin. ft.	$ 55.00	$ $46,310
	Far side	2,286	lin. ft.	$ 55.00	$ $125,730
	Riser Pipes	74	vert. ft.	$ 52.00	$ $3,848
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	58	each	$ 608.00	$ $35,264
	Far side	46	each	$ 749.00	$ $34,454
3	BUILDING SERVICE PLUG	104	each	$ 228.00	$ $23,712
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	2,417	sq.yd.	$ 15.00	$ $36,255
5	RESTORATION OF STREETS				
	Bit. Concrete Street	562	sq.yd.	$ 69.00	$ $38,778
6	TRENCH BACKFILL				
	0-8 feet deep	1,090	lin. ft.	$ 68.00	$ $74,120
	SUBTOTAL				$ $418,471
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $2,043,800
	Contingencies			(20%)	$408,800
	Engineering			(20%)	$408,800
	Legal / Admin			(6%)	$171,700
	Easement Acquisition				$42,800
	TOTAL OPINION OF PROBABLE COST				**$ $3,075,900**
				Cost per lot	$29,580

Table 4.3-21
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Sherman Avenue (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Sherman Avenue					
2-C-142 (existing)	734.5	726.04			8.5
			212	2.00%	
UC-90	752.0	730.28			21.7
			400	0.40%	
UC-91	746.0	731.88			14.1
			400	0.40%	
UC-92	742.0	733.48			8.5
			400	3.00%	
UC-93	760.0	745.48			14.5
			400	3.00%	
UC-94	767.0	757.48			9.5

Table 4.3-22
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Sherman Avenue (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	870	lin. ft.	$ 96.00	$ $83,520
		12-16 feet deep	570	lin. ft.	$ 116.00	$ $66,120
		16-20 feet deep	385	lin. ft.	$ 139.00	$ $53,515
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	2	each	$ 7,000.00	$ $14,000
		12-16 feet deep	2	each	$ 8,500.00	$ $17,000
		16-20 feet deep	1	each	$ 11,300.00	$ $11,300
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	870	lin. ft.	$ 124.00	$ $107,880
		12-16 feet deep	570	lin. ft.	$ 150.00	$ $85,500
		16-20 feet deep	385	lin. ft.	$ 198.00	$ $76,230
5	TREE TUNNELING		120	lin. ft.	$ 211.00	$ $25,320
6	SEWER TELEVISING FOR FINAL INSPECTION					
			1,825	lin. ft.	$ 3.00	$ $5,475
7	SEWER TESTING FOR FINAL INSPECTION					
			1,825	lin. ft.	$ 3.00	$ $5,475
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		360	lin. ft.	$ 89.00	$ $32,040
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		2,847	sq.yd.	$ 15.00	$ $42,705
10	RESTORATION OF STREETS					
	Bit. Concrete Street		89	sq.yd.	$ 70.00	$ $6,230
11	STORM SEWER REMOVAL AND REPLACEMENT					
	18" RCP		20	lin. ft.	$ 113.00	$ $2,260
12	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		428	sq.yd.	$ 53.00	$ $22,684
	Concrete		43	sq.yd.	$ 89.00	$ $3,827

Table 4.3-22
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Sherman Avenue (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	TREE REMOVAL AND TRIMMING			Lump Sum	$ $1,825
14	EROSION CONTROL			Lump Sum	$ $730
15	TRAFFIC CONTROL			Lump Sum	$ $7,300
	SUBTOTAL				$ $677,736
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	405	lin. ft.	$ 55.00	$ $22,275
	Far side	1,377	lin. ft.	$ 55.00	$ $75,735
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	27	each	$ 608.00	$ $16,416
	Far side	27	each	$ 749.00	$ $20,223
3	BUILDING SERVICE PLUG	54	each	$ 228.00	$ $12,312
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	1,260	sq.yd.	$ 15.00	$ $18,900
5	RESTORATION OF STREETS				
	Bit. Concrete Street	504	sq.yd.	$ 69.00	$ $34,776
6	TRENCH BACKFILL				
	0-8 feet deep	648	lin. ft.	$ 68.00	$ $44,064
	SUBTOTAL				$ $244,701
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $922,400
	Contingencies (20%)				$184,500
	Engineering (20%)				$184,500
	Legal / Admin (6%)				$77,500
	TOTAL OPINION OF PROBABLE COST				**$ $1,368,900**
	Cost per lot				$25,350

Table 4.3-23
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Lee Avenue (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Maple Avenue					
2-C-147 (existing)	750.8	737.48			13.3
			380	3.00%	
UC-99	760.0	748.88			11.1
Lee Avenue					
2-C-149 (existing)	759.1	745.52			13.6
			260	0.40%	
UC-101	762.0	746.56			15.4
			400	0.40%	
UC-102	756.0	748.16			7.8
			400	0.80%	
UC-103	760.0	751.36			8.6
			400	1.80%	
UC-104	767.0	758.56			8.4
			400	1.80%	
UC-105	774.0	765.76			8.2

Table 4.3-24
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Lee Cost Estimate
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	200	lin. ft.	$ 82.00	$ $16,400
		8-12 feet deep	1,250	lin. ft.	$ 96.00	$ $120,000
		12-16 feet deep	140	lin. ft.	$ 116.00	$ $16,240
		16-20 feet deep	260	lin. ft.	$ 139.00	$ $36,140
2	DIRECTIONAL DRILLING					
	8-inch		400	lin. ft.	$ 302.00	$ $120,800
3	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ $5,300
		8-12 feet deep	2	each	$ 7,000.00	$ $14,000
		12-16 feet deep	2	each	$ 8,500.00	$ $17,000
		16-20 feet deep	1	each	$ 11,300.00	$ $11,300
4	CONNECTION TO EXISTING MANHOLE					
	8-inch		2	each	$ 6,800.00	$ $13,600
5	TRENCH BACKFILL					
	8-inch	0-8 feet deep	200	lin. ft.	$ 102.00	$ $20,400
		8-12 feet deep	1,250	lin. ft.	$ 124.00	$ $155,000
		12-16 feet deep	140	lin. ft.	$ 150.00	$ $21,000
		16-20 feet deep	260	lin. ft.	$ 198.00	$ $51,480
6	TREE TUNNELING		0	lin. ft.	$ 211.00	$ $0
7	SEWER TELEVISING FOR FINAL INSPECTION					
			2,250	lin. ft.	$ 3.00	$ $6,750
8	SEWER TESTING FOR FINAL INSPECTION					
			2,250	lin. ft.	$ 3.00	$ $6,750
9	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		55	lin. ft.	$ 89.00	$ $4,895
10	STORM SEWER REMOVAL AND REPLACEMENT					
	18" RCP		20	lin. ft.	$ 113.00	$ $2,260
11	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		457	sq.yd.	$ 15.00	$ $6,855
12	RESTORATION OF STREETS					
	Bit. Concrete Street		1,678	sq.yd.	$ 70.00	$ $117,460

Table 4.3-24
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Lee Cost Estimate
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	REMOVE AND REPLACE DRIVEWAYS				
	Bituminous	711	sq.yd.	$ 53.00	$ $37,683
	Concrete	178	sq.yd.	$ 89.00	$ $15,842
14	TREE REMOVAL AND TRIMMING:			Lump Sum	$ $730
15	EROSION CONTROL			Lump Sum	$ $730
16	TRAFFIC CONTROL			Lump Sum	$ $10,950
	SUBTOTAL				$ $829,565
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	522	lin. ft.	$ 55.00	$ $28,710
	Far side	1,200	lin. ft.	$ 55.00	$ $66,000
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	29	each	$ 608.00	$ $17,632
	Far side	25	each	$ 749.00	$ $18,725
3	BUILDING SERVICE PLUG	54	each	$ 228.00	$ $12,312
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	1,156	sq.yd.	$ 15.00	$ $17,340
5	RESTORATION OF STREETS				
	Bit. Concrete Street	422	sq.yd.	$ 69.00	$ $29,118
6	TRENCH BACKFILL				
	0-8 feet deep	625	lin. ft.	$ 68.00	$ $42,500
	SUBTOTAL				$ $232,337
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $1,061,900
	Contingencies (20%)				$212,400
	Engineering (20%)				$212,400
	Legal / Admin (6%)				$89,200
	Easement Acquisition				$14,600
	TOTAL OPINION OF PROBABLE COST				**$ $1,590,500**
				Cost per lot	$29,450

Table 4.3-25

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Downers Grove Gardens Sub-Area

Cost Summary

Sub-Basin:	Near Services	Far Services	Cost	Cost per lot
Janes-Leonard-Chase-Puffer (North)	37	31	$ 1,421,100	$ 20,900
Janes-Leonard-Chase-Puffer (South)	72	57	$ 2,677,200	$ 20,750
Belmont-Southwest	25	0	$ 680,300	$ 27,210
Belmont Road (East)	52	0	$ 1,335,400	$ 25,680
Pershing Avenue (South)	32	32	$ 1,293,100	$ 20,200
Woodward and 63rd Street	10	7	$ 285,300	$ 16,780
Lee and Boundary (South)	20	19	$ 811,100	$ 20,800
Springside (South)	5	9	$ 342,000	$ 24,430
Springside-Jefferson-Downers (North)	33	19	$ 1,602,200	$ 30,810
Pershing-Woodward-Maple (North)	58	46	$ 3,075,900	$ 29,580
Sherman Avenue (North)	27	27	$ 1,368,900	$ 25,350
Lee Avenue (North)	29	25	$ 1,590,500	$ 29,450
TOTALS	400	272	$ 16,483,000	$ 24,530
		672		

4.4 Fairhaven Court

Fairhaven Court is a small service area adjacent to the Downers Grove Gardens sub-area. Exhibit 4.4 shows the approximate limits of this service area which is located north of Maple Avenue. The proposed service area currently includes 10 lots that are developed as single-family residences with septic systems. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving properties along Fairhaven Court.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, tree protection, water main and existing utility location. In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Maple Avenue. Thus, alternatives were considered to minimize crossing of this roadway.

The Village of Downers Grove owns and operates a water main on Fairhaven Court. Water main locations were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Fairhaven Court sub-area.

A map of the proposed sewer plan is included in Exhibit 4.4.

The topography along Fairhaven Court is relatively flat, and thus, the direction of flow will be dictated by the available sewer depth and the most cost effective route. We identified two existing manholes that would provide adequate cover and would be feasible alternatives for connection points: the manhole located east of the dead end of Fairhaven Court and the manhole along Maple Avenue at Stonewall Avenue. We recommend the first alternative, connecting east of the dead end at Fairhaven Court to reduce the additional cost and pipe footage required to install a sewer in the Maple Avenue right-of-way.

The sewer should be placed in an easement on east side of Fairhaven Court. Previous studies have planned for the sewer to be installed east of the edge of pavement. Our field investigation determined that there is a significant amount of new landscaping, brickwork, lighting, and concrete driveways located in the proposed sewer path. Thus, we recommend that the sewer be installed in the east half of the pavement, opposite of the existing water main which is located west of the pavement centerline. Table 4.4-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.4-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $420,100 including contingency, engineering, and legal/administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.4

FAIRHAVEN COURT
POSSIBLE SEWER ALIGNMENT

April 2022

LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWERS
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- FAIRHAVEN COURT

N

0 100 200
Feet

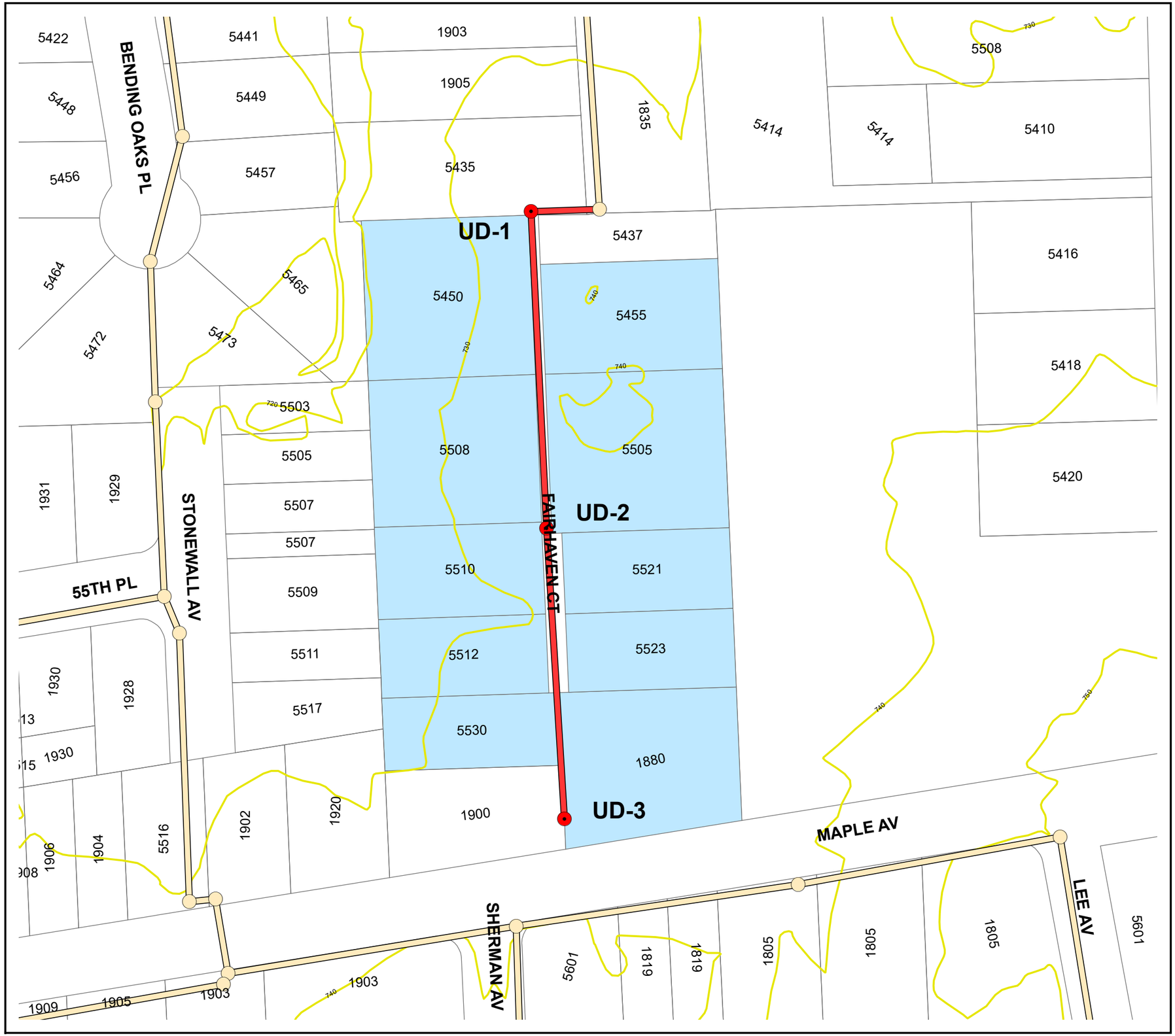

Table 4.4-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Fairhaven Court
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Fairhaven Court					
2-C-133 (existing)	736.0	723.00			13.0
			60	0.40%	
UD-1	734.0	723.24			10.8
			320	0.50%	
UD-2	734.0	724.84			9.2
			290	0.50%	
UD-3	735.0	726.29			8.7

Table 4.4-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Fairhaven Court
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	670	lin. ft.	$ 96.00	$ $64,320
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	3	each	$ 7,000.00	$ $21,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	630	lin. ft.	$ 124.00	$ $78,120
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ $0
6	SEWER TELEVISING FOR FINAL INSPECTION					
			670	lin. ft.	$ 3.00	$ $2,010
7	SEWER TESTING FOR FINAL INSPECTION					
			670	lin. ft.	$ 3.00	$ $2,010
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ $0
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		111	sq.yd.	$ 15.00	$ $1,665
10	RESTORATION OF STREETS					
	Bit. Concrete Street		560	sq.yd.	$ 70.00	$ $39,200
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		0	sq.yd.	$ 53.00	$ $0
12	TREE REMOVAL AND TRIMMING				Lump Sum	$ $365
13	EROSION CONTROL				Lump Sum	$ $365

Table 4.4-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Fairhaven Court
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	TRAFFIC CONTROL			Lump Sum	$ $7,300
	SUBTOTAL				$ $223,155
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	100	lin. ft.	$ 55.00	$ $5,500
	Far side	125	lin. ft.	$ 55.00	$ $6,875
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	5	each	$ 608.00	$ $3,040
	Far side	5	each	$ 749.00	$ $3,745
3	BUILDING SERVICE PLUG	10	each	$ 228.00	$ $2,280
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	139	sq.yd.	$ 15.00	$ $2,085
5	RESTORATION OF STREETS				
	Bit. Concrete Street	33	sq.yd.	$ 69.00	$ $2,277
6	TRENCH BACKFILL				
	0-8 feet deep	70	lin. ft.	$ 68.00	$ $4,760
	SUBTOTAL				$ $30,562
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $253,700
	Contingencies (20%)				$50,700
	Engineering (20%)				$50,700
	Legal / Admin (6%)				$21,300
	Easement Acquisition				$43,700
	TOTAL OPINION OF PROBABLE COST				**$ $420,100**
	Cost per lot				$42,010

4.5 Burlington Highlands

Burlington Highlands is a large sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.5, the approximate limits of this sub-area are Herbert Street to the north, Lacey Road to the west, Grant Street to the south, and Venard Road to the east. The proposed service area includes approximately 187 lots that are mostly developed as single-family residences with septic systems with some potential commercial lots on Ogden Avenue. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving properties within Burlington Highlands.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The Burlington Highlands sub-area has three major drainage divides. Serving the subject properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divide. The study area can be divided into four smaller service areas. Properties to the southwest will be served by the existing sanitary sewer south of I-88 (at Lacey and Virginia). Central properties will be served by existing sewers southeast of I-88 (near Morton and Herbert). Residences on Venard Road, north of Drove Avenue will be served by the existing sewer stub 500 feet south of Parrish Court. Residences on Venard Road, just north of Ogden Avenue will be served by the existing sewer south of the park.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Ogden Avenue. Thus, alternatives were considered to minimize crossing of this route with both the mainline sewer and building services.

The sewer layout also considered the several wetlands that are located within the sub-area at the following locations: between Morton and Downers (proposed side yard easement), and various small wetlands located in the vacant development south of Ogden Avenue. Avoiding these wetlands will minimize the time and expense involved in the permitting process for construction in wetlands, as well as reduce the costs associated with restoring these areas.

The Village of Downers Grove and the DuPage Water Commission own and operate water mains on the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Burlington Highlands sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

The following are the proposed sub-basins:

Sub-basin	No. of Services	Layout	Cost Estimate
Morton and Downers	39	Table 4.5-1	Table 4.5-2
40th and Seeley (North)	21	Table 4.5-3	Table 4.5-4
40th and Northcott	14	Table 4.5-5	Table 4.5-6
Virginia-Seeley-Janet-Downers	43	Table 4.5-7	Table 4.5-8
Belle Aire and Venard	21	Table 4.5-9	Table 4.5-10
Venard Road (North)	10	Table 4.5-11	Table 4.5-12
Venard Road (South)	*(completed)*	*Table 4.5-13*	*Table 4.5-14*
Virginia Avenue (West)	6	Table 4.5-15	Table 4.5-16
Lacey-Carol-Northcott	1	Table 4.5-17	Table 4.5-18
Lacey and Janet	14	Table 4.5-19	Table 4.5-20
Ogden-Lacey-Grant-Lee (South)	18	Table 4.5-21	Table 4.5-22

Table 4.5-23 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.5.

The Morton and Downers sub-basin sewer plan follows the existing topography which falls from the intersection of Downers and Janet northwest to the creek crossing near Morton and I-88. In general, the sewer alignment on each street should be on the east side of the right-of-way because of the existing water main on the west side of the right-of-way. The existing sewer stub located at Herbert and Downers is too shallow to serve the subject area. The only feasible connection point is the trunk sewer located southeast of I-88. The sewer on Downers should extend west to Morton in a side yard easement along the creek north of 40th Street. This sub-basin is the second most costly per lot in Burlington Highlands due to the sewer easements that are required. Table 4.5-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,506,700, including contingency, engineering, easements, and legal/administrative costs.

The 40th and Seeley (North) sub-basin sewer plan also follows the existing topography which falls from Herbert and Seeley south to 40th Street and west to Downers. The sewer alignment on each street should be on the east side of the right-of-way on Seeley and the north side of 40th because of the existing water mains on the opposite sides of the right-of-way. Table 4.5-3 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-4 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $658,900, including contingency, engineering, and legal/administrative costs.

The 40th and Northcott sub-basin sewer plan includes the unsewered properties northeast of the ridge that runs from Virginia east of Lee to Janet west of Northcott. The sewer will flow north on Northcott to 40th and east along 40th to Downers Drive. Table 4.5-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $461,400, including contingency, engineering, and legal/ administrative costs.

The Virginia-Seeley-Janet (South) sub-basin sewer plan follows the existing topography around the highpoint on Downers Dive by flowing east on Janet to Seeley, north to Virginia, and back west to Downers Drive. The proposed sewer must circle Downers Drive because the existing topography at Downers Drive and Janet Street would require a deep cut. Similar to other sub-basins, the sewer should be placed in the parkway opposite of the existing water main. A number of properties between Seeley and Belle Aire could be served by the existing sewer on Belle Aire, but it would require individual grinder pumps and force mains. In the past, the District has not allowed such connections. The proposed sewer on Seeley provides a much better way to serve these parcels by gravity. Table 4.5-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,245,900, including contingency, engineering, and legal/administrative costs.

The Belle Aire and Venard sub-basin sewer plan follows the same topography as the Morton and Downers sanitary sewer. All the properties on Belle Aire will flow towards Virginia Street while the sewer on Venard will flow to a low spot near the south end of the park. Similar to the Morton sewer, side yard easements should be obtained to connect Venard to Belle Aire. The required landscaping restoration and easements will be expensive, but the properties on Venard cannot be served by the existing sewer south of 4146 Venard Road or by a sewer on Drove Avenue. This sub-basin is the most costly per lot in Burlington Highlands due to the sewer easements and landscaping. Table 4.5-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $1,006,200, including contingency, engineering, easements, and legal/administrative costs.

The Venard Road (North) sub-basin sewer plan follows the existing District flow basin as the sewer should flow north on Venard to existing manhole V1-172 in front of 4003 Venard Road. This sewer will serve all remaining unsewered parcels north of Drove Avenue. The sewer should be placed in the east parkway between the edge-of-pavement and sidewalk. Table 4.5-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $404,400, including contingency, engineering, and legal/administrative costs.

Sanitary sewers are available to all parcels in The Venard Road (South) sub-basin as of March 2018. In 2017, approximately 88 feet of 8-inch sanitary sewer was installed with two service connections for a construction cost of $9,916 to complete the sub-basin. In 2012, approximately 92 feet of 8-inch sanitary sewer and 2 services were constructed for a total price of $20,000.

The Virginia Avenue (West) sub-basin sewer plan will follow the existing ridge on Virginia west to the existing manhole at 1653 Virginia Avenue. The sewer should be placed in the south right-of-way to avoid the existing water mains. Table 4.5-15 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-16 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $163,800, including contingency, engineering, and legal/administrative costs.

The Lacey-Carol-Northcott sub-basin sewer plan is for the address of 4219 Northcott Avenue. The best alternative is to follow the existing ground slope and connect to the manhole at 4211 Northcott Avenue. From there, the sewer will flow west on Carol Street and north on Lacey

Road. Since there is only one unsewered parcel in this basin, the project cost is high. Table 4.5-17 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-18 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $73,700, including contingency, engineering, and legal/administrative costs.

The Lacey and Janet sub-basin sewer plan will follow a similar drainage pattern as the sub-basin to the north. The sewer will flow west on Janet, connect to the existing manhole near 1747 Janet Street, and flow north on Lacey Road. The south right-of-way on Janet is the preferred alignment for the proposed sewer. Table 4.5-19 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-20 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $333,100, including contingency, engineering, and legal/administrative costs.

The Ogden-Lacey-Grant-Lee (South) sub-basin sewer plan follows the existing creek from south of Grant Street to Lacey north of Ogden. There are several potential connection points, but the existing sewer at Lacey is the only feasible alternative to serve the sub-basin because the existing manholes on Grant, Ogden, Stonewall, and Lee are too shallow. The sewers within the undeveloped property south of Ogden should be placed in utility easements. The construction cost for this sub-basin is expensive because of two reasons: the numerous easements required, and the required wetland permitting and restoration. In 2016, construction on the Packey-Webb facility was completed, eliminating a number of unsewered parcels in the sub-basin. In February 2020, Baxter & Woodman performed a special assessment evaluation on the entire Ogden-Lacey-Grant-Lee (South) sub-basin, with the exception of three parcels on the north side of Ogden Avenue. The cost per lot in the special assessment was nearly $14,000 more than the cost per lot in this plan. This cost difference is due to the entire Ogden/Lacey/Grant/Lee (South) sub-basin needing to be built-out to service the special assessment study area. The cost per lot for the special assessment area did not include three unsewered lots along the north side of Ogden Avenue which have relatively easy and short lengths of sewer installation. Including these three easy-to-connect lots in the UAP causes the overall cost per lot to be lower than the special assessment. This assessment did not move forward any further due to insufficient interest from the property owners. Table 4.5-21 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.5-22 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $2,693,600, including contingency, engineering, easements, and legal/administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.5

BURLINGTON HIGHLANDS POSSIBLE SEWER ALIGNMENT

April 2022

LEGEND

- PROPOSED MANHOLES
- EXISTING MANHOLES
- PROPOSED SEWERS
- EXISTING SEWERS
- PARCEL BOUNDARIES
- MORTON AND DOWNERS;TABLES 4.5-1, 4.5-2
- 40TH AND SEELEY (NORTH);TABLES 4.5-3, 4.5-4
- 40TH AND NORTHCOTT;TABLES 4.5-5, 4.5-6
- VIRGINIA-SEELEY-JANET-DOWNERS;TABLES 4.5-7, 4.5-8
- BELLE AIRE AND VENARD;TABLES 4.5-9, 4.5-10
- VENARD ROAD (NORTH);TABLES 4.5-11, 4.5-12
- VENARD ROAD (SOUTH);TABLES 4.5-13, 4.5-14
- VIRGINIA AVENUE (WEST);TABLES 4.5-15, 4.5-16
- LACEY-CAROL-NORTHCOTT;TABLES 4.5-17, 4.5-18
- LACEY AND JANET;TABLES 4.5-19, 4.5-20
- OGDEN-LACEY-GRANT-LEE (SOUTH);TABLES 4.5-21, 4.5-22

N

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Feet

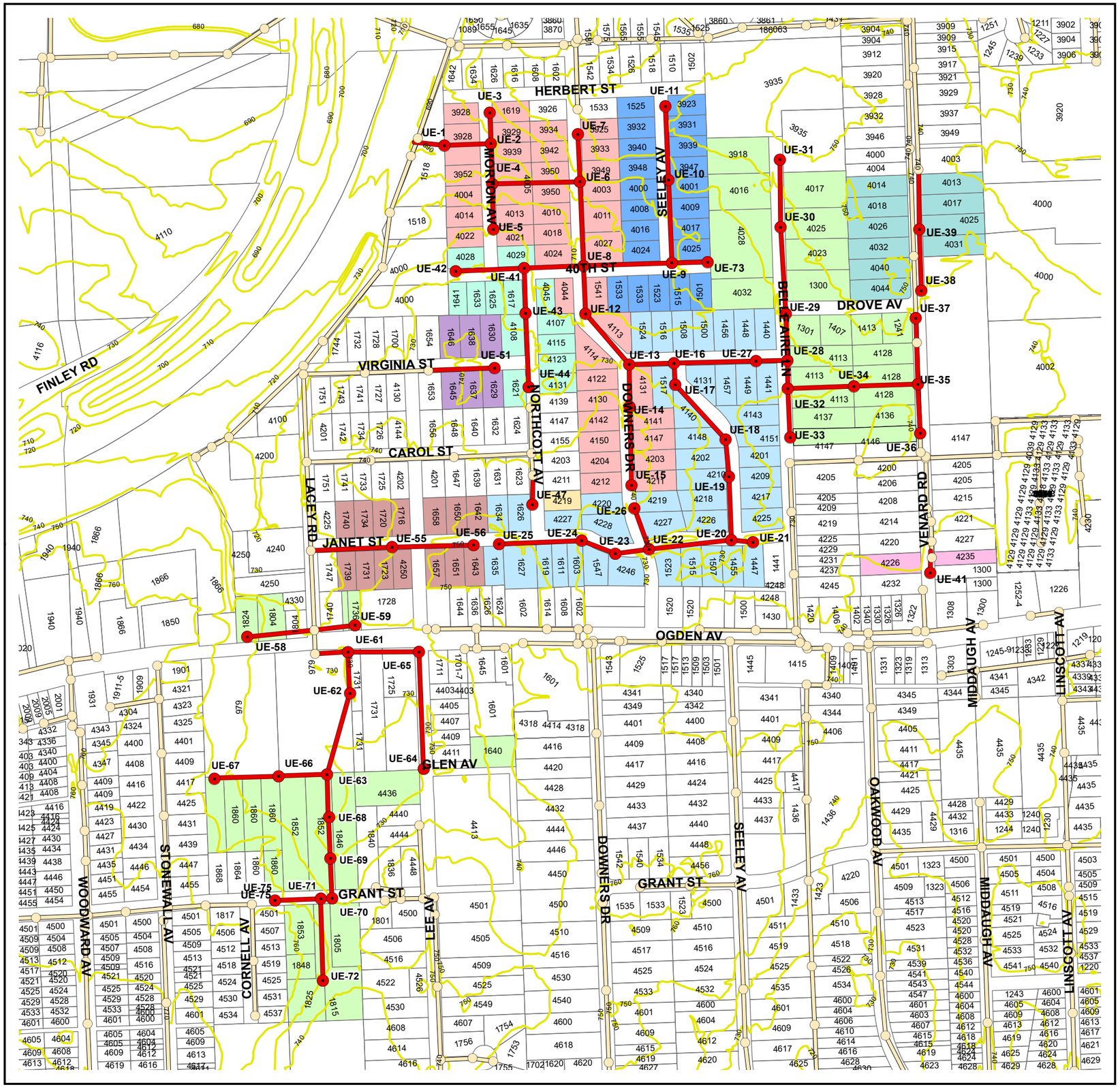


Table 4.5-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Morton and Downers
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Morton Avenue					
N-2-001 existing	690.2	685.00			5.2
			100	1.00%	
UE-1	694.5	686.00			8.5
			225	1.00%	
UE-2	698.5	688.25			10.3
			150	3.00%	
UE-3	705.5	694.95			10.6
			220	1.00%	
UE-4	703.3	690.45			12.8
			220	5.00%	
UE-5	720.0	707.45			12.6
Downers Drive					
			400	2.00%	
UE-6	716.0	698.45			17.6
			250	5.00%	
UE-7	724.0	710.95			13.1
			400	1.50%	
UE-8	713.5	704.45			9.0
			250	2.00%	
UE-12	719.5	709.45			10.1
			320	1.50%	
UE-13	729.0	714.25			14.8
			180	3.00%	
UE-14	738.0	719.65			18.4
			400	2.50%	
UE-15	741.0	729.65			11.4

Table 4.5-2
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Morton and Downers
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	100	lin. ft.	$ 82.00	$ $8,200
		8-12 feet deep	1,295	lin. ft.	$ 96.00	$ $124,320
		12-16 feet deep	1,485	lin. ft.	$ 116.00	$ $172,260
		16-20 feet deep	235	lin. ft.	$ 139.00	$ $32,665
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ $0
		8-12 feet deep	6	each	$ 7,000.00	$ $42,000
		12-16 feet deep	4	each	$ 8,500.00	$ $34,000
		16-20 feet deep	2	each	$ 11,300.00	$ $22,600
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	0	lin. ft.	$ 102.00	$ $0
		8-12 feet deep	165	lin. ft.	$ 124.00	$ $20,460
		12-16 feet deep	520	lin. ft.	$ 150.00	$ $78,000
		16-20 feet deep	60	lin. ft.	$ 198.00	$ $11,880
5	TREE TUNNELING		110	lin. ft.	$ 211.00	$ $23,210
6	AUGER UNDER EXISTING BOX CULVERT		20	lin. ft.	$ 524.00	$ $10,480
7	SEWER TELEVISING FOR FINAL INSPECTION		3,115	lin. ft.	$ 3.00	$ $9,345
8	SEWER TESTING FOR FINAL INSPECTION		3,115	lin. ft.	$ 3.00	$ $9,345
9	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		160	lin. ft.	$ 89.00	$ $14,240
10	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		5,000	sq.yd.	$ 15.00	$ $75,000
11	RESTORATION OF STREETS					
	Bit. Concrete Street		85	sq.yd.	$ 70.00	$ $5,950
	PCC Sidewalk		2,500	sq. ft	$ 14.00	$ $35,000
12	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		230	sq.yd.	$ 53.00	$ $12,190
	Concrete		120	sq.yd.	$ 89.00	$ $10,680

Table 4.5-2
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Morton and Downers
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	TREE REMOVAL AND TRIMMING:			Lump Sum	$ $21,900
14	EROSION CONTROL:			Lump Sum	$ $14,600
15	TRAFFIC CONTROL:			Lump Sum	$ $14,600
	SUBTOTAL				$ $809,725
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	320	lin. ft.	$ 55.00	$ $17,600
	Far side	950	lin. ft.	$ 55.00	$ $52,250
	Riser Pipes	75	vert. ft.	$ 52.00	$ $3,900
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	20	each	$ 608.00	$ $12,160
	Far side	19	each	$ 749.00	$ $14,231
3	BUILDING SERVICE PLUG:	39	each	$ 228.00	$ $8,892
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	490	sq.yd.	$ 15.00	$ $7,350
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	340	sq.yd.	$ 69.00	$ $23,460
6	TRENCH BACKFILL				
	8-12 feet deep	600	lin. ft.	$ 91.00	$ $54,600
	SUBTOTAL				$ $194,443
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $1,004,200
	Contingencies		(20%)		$200,800
	Engineering		(20%)		$200,800
	Legal / Admin		(6%)		$84,300
	Easement Acquisition				$16,600
	TOTAL OPINION OF PROBABLE COST				**$ $1,506,700**
				Cost per lot	$38,630

Table 4.5-3
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
40th and Seely (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
40th Place					
UE-8	713.5	704.45			9.0
			425	0.70%	
UE-9	719.0	707.43			11.6
			160	3.00%	
UE-73	722.0	712.23			9.8
Seely Avenue					
			400	2.00%	
UE-10	725.0	715.43			9.6
			335	3.00%	
UE-11	736.0	725.48			10.5

Table 4.5-4
Downers Grove Sanitary District April 2022
Proposed Special Assessment
40th and Seely (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
	MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	80	lin. ft.	$ 82.00	$ $6,560
		8-12 feet deep	1,240	lin. ft.	$ 96.00	$ $119,040
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ $0
		8-12 feet deep	4	each	$ 7,000.00	$ $28,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	50	lin. ft.	$ 102.00	$ $5,100
		8-12 feet deep	402	lin. ft.	$ 124.00	$ $49,848
5	TREE TUNNELING		80	lin. ft.	$ 211.00	$ $16,880
6	SEWER TELEVISING FOR FINAL INSPECTION		1,320	lin. ft.	$ 3.00	$ $3,960
7	SEWER TESTING FOR FINAL INSPECTION		1,320	lin. ft.	$ 3.00	$ $3,960
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		188	lin. ft.	$ 89.00	$ $16,732
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		1,895	sq.yd.	$ 15.00	$ $28,425
10	RESTORATION OF STREETS					
	Bit. Concrete Street		20	sq.yd.	$ 70.00	$ $1,400
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		126	sq.yd.	$ 53.00	$ $6,678
	Concrete		0	sq.yd.	$ 89.00	$ $0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $730

Table 4.5-4

Downers Grove Sanitary District April 2022
Proposed Special Assessment
40th and Seely (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL:			Lump Sum	$ $730
14	TRAFFIC CONTROL:			Lump Sum	$ $7,300
	SUBTOTAL				$ $302,143
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	378	lin. ft.	$ 55.00	$ $20,790
	Far side	1,008	lin. ft.	$ 55.00	$ $55,440
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	9	each	$ 608.00	$ $5,472
	Far side	12	each	$ 749.00	$ $8,988
3	BUILDING SERVICE PLUG:	21	each	$ 228.00	$ $4,788
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	500	sq.yd.	$ 15.00	$ $7,500
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	168	sq.yd.	$ 69.00	$ $11,592
6	TRENCH BACKFILL				
	8-12 feet deep	300	lin. ft.	$ 91.00	$ $27,300
	SUBTOTAL				$ $141,870
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $444,000
	Contingencies		(20%)		$88,800
	Engineering		(20%)		$88,800
	Legal / Admin		(6%)		$37,300
	TOTAL OPINION OF PROBABLE COST				**$ $658,900**
				Cost per lot	$31,380

Table 4.5-5
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
40th and Northcott
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
40th Place					
UE-8	713.5	704.45			9.0
			280	2.00%	
UE-41	721.0	710.05			10.9
			300	2.00%	
UE-42	729.0	716.05			12.9
Northcott Avenue					
			250	1.00%	
UE-43	725.0	712.55			12.4
			350	2.00%	
UE-44	731.0	719.55			11.4

Table 4.5-6
Downers Grove Sanitary District April 2022
Proposed Special Assessment
40th and Northcott
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
	MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	15	lin. ft.	$ 82.00	$ $1,230
		8-12 feet deep	1,025	lin. ft.	$ 96.00	$ $98,400
		12-16 feet deep	140	lin. ft.	$ 116.00	$ $16,240
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ $0
		8-12 feet deep	4	each	$ 7,000.00	$ $28,000
		12-16 feet deep	0	each	$ 8,500.00	$ $0
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	0	lin. ft.	$ 102.00	$ $0
		8-12 feet deep	239	lin. ft.	$ 124.00	$ $29,636
		12-16 feet deep	15	lin. ft.	$ 150.00	$ $2,250
5	TREE TUNNELING		50	lin. ft.	$ 211.00	$ $10,550
6	SEWER TELEVISING FOR FINAL INSPECTION		1,180	lin. ft.	$ 3.00	$ $3,540
7	SEWER TESTING FOR FINAL INSPECTION		1,180	lin. ft.	$ 3.00	$ $3,540
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		30	lin. ft.	$ 89.00	$ $2,670
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		1,692	sq.yd.	$ 15.00	$ $25,380
10	RESTORATION OF STREETS					
	Bit. Concrete Street		39	sq.yd.	$ 70.00	$ $2,730
	PCC Sidewalk		0	sq. ft.	$ 14.00	$ $0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		29	sq.yd.	$ 53.00	$ $1,537
	Concrete		0	sq.yd.	$ 89.00	$ $0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $730

Table 4.5-6
Downers Grove Sanitary District April 2022
Proposed Special Assessment
40th and Northcott
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL:			Lump Sum	$ $730
14	TRAFFIC CONTROL:			Lump Sum	$ $6,570
	SUBTOTAL				$ $240,533
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	75	lin. ft.	$ 55.00	$ $4,125
	Far side	459	lin. ft.	$ 55.00	$ $25,245
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	5	each	$ 608.00	$ $3,040
	Far side	9	each	$ 749.00	$ $6,741
3	BUILDING SERVICE PLUG:	14	each	$ 228.00	$ $3,192
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	281	sq.yd.	$ 15.00	$ $4,215
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	132	sq.yd.	$ 69.00	$ $9,108
6	TRENCH BACKFILL				
	0-8 feet deep	216	lin. ft.	$ 68.00	$ $14,688
	SUBTOTAL				$ $70,354
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $310,900
		Contingencies	(20%)		$62,200
		Engineering	(20%)		$62,200
		Legal / Admin	(6%)		$26,100
	TOTAL OPINION OF PROBABLE COST				**$ $461,400**
				Cost per lot	$32,960

Table 4.5-7
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Virginia-Seeley-Janet-Downers
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Virginia Street					
UE-13	729.0	714.25			14.8
			200	0.40%	
UE-16	726.0	715.05			11.0
			400	0.40%	
UE-27	725.5	716.65			8.9
			165	0.40%	
UE-28	728.0	717.31			10.7
Seeley Avenue					
			110	0.40%	
UE-17	726.0	715.49			10.5
			335	0.40%	
UE-18	728.0	716.83			11.2
			190	0.40%	
UE-19	727.0	717.59			9.4
			320	0.40%	
UE-20	728.0	718.87			9.1
Janet Street					
			100	1.00%	
UE-21	730.0	719.87			10.1
			400	0.40%	
UE-22	730.0	720.47			9.5
			160	1.00%	
UE-23	736.0	722.07			13.9
			150	3.00%	
UE-24	740.0	726.57			13.4
			400	3.00%	
UE-25	752.0	738.57			13.4
Downers Drive					
			250	1.00%	
UE-26	736.0	722.97			13.0

Table 4.5-8
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Virginia-Seeley-Janet-Downers
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
	MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	720	lin. ft.	$ 82.00	$ $59,040
		8-12 feet deep	2,460	lin. ft.	$ 96.00	$ $236,160
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	4	each	$ 5,300.00	$ $21,200
		8-12 feet deep	9	each	$ 7,000.00	$ $63,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	86	lin. ft.	$ 102.00	$ $8,772
		8-12 feet deep	796	lin. ft.	$ 124.00	$ $98,704
5	TREE TUNNELING		90	lin. ft.	$ 211.00	$ $18,990
6	SEWER TELEVISING FOR FINAL INSPECTION		3,180	lin. ft.	$ 3.00	$ $9,540
7	SEWER TESTING FOR FINAL INSPECTION		3,180	lin. ft.	$ 3.00	$ $9,540
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		205	lin. ft.	$ 89.00	$ $18,245
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		4,312	sq.yd.	$ 15.00	$ $64,680
10	RESTORATION OF STREETS					
	Bit. Concrete Street		109	sq.yd.	$ 70.00	$ $7,630
	PCC Sidewalk		50	sq. ft.	$ 14.00	$ $700
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		268	sq.yd.	$ 53.00	$ $14,204
	Concrete		0	sq.yd.	$ 89.00	$ $0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $1,460

Table 4.5-8
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Virginia-Seeley-Janet-Downers
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL:			Lump Sum	$ $1,460
14	TRAFFIC CONTROL:			Lump Sum	$ $14,600
	SUBTOTAL				$ $654,725
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	375	lin. ft.	$ 55.00	$ $20,625
	Far side	918	lin. ft.	$ 55.00	$ $50,490
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	25	each	$ 608.00	$ $15,200
	Far side	18	each	$ 749.00	$ $13,482
3	BUILDING SERVICE PLUG:	43	each	$ 228.00	$ $9,804
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	878	sq.yd.	$ 15.00	$ $13,170
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	252	sq.yd.	$ 69.00	$ $17,388
6	TRENCH BACKFILL				
	8-12 feet deep	486	lin. ft.	$ 91.00	$ $44,226
7	REMOVE AND REPLACE DRIVEWAYS				
	Bituminous	10	sq. yd.	$ 52.00	$ $520
	SUBTOTAL				$ $184,905
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $839,600
			Contingencies	(20%)	$167,900
			Engineering	(20%)	$167,900
			Legal / Admin	(6%)	$70,500
	TOTAL OPINION OF PROBABLE COST				**$ $1,245,900**
				Cost per lot	$28,970

Table 4.5-9
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Belle Aire and Venard
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Belle Aire Lane					
UE-28	728.0	717.31			10.7
			235	0.80%	
UE-29	732.0	719.19			12.8
			400	1.00%	
UE-30	736.0	723.19			12.8
			360	2.00%	
UE-31	744.0	730.39			13.6
			130	0.40%	
UE-32	728.0	717.83			10.2
			280	2.00%	
UE-33	736.0	723.43			12.6
Backyard Easement					
			330	0.40%	
UE-34	730.0	719.15			10.9
			320	0.80%	
UE-35	735.0	721.71			13.3
Venard Road					
			270	2.00%	
UE-36	738.0	727.11			10.9
			300	2.00%	
UE-37	738.0	727.71			10.3

Table 4.5-10
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Belle Aire and Venard
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
	MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	150	lin. ft.	$ 82.00	$ $12,300
		8-12 feet deep	2,475	lin. ft.	$ 96.00	$ $237,600
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ $0
		8-12 feet deep	9	each	$ 7,000.00	$ $63,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	0	lin. ft.	$ 102.00	$ $0
		8-12 feet deep	758	lin. ft.	$ 124.00	$ $93,992
5	TREE TUNNELING		90	lin. ft.	$ 211.00	$ $18,990
6	SEWER TELEVISING FOR FINAL INSPECTION		2,625	lin. ft.	$ 3.00	$ $7,875
7	SEWER TESTING FOR FINAL INSPECTION		2,625	lin. ft.	$ 3.00	$ $7,875
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		20	lin. ft.	$ 89.00	$ $1,780
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		3,536	sq.yd.	$ 15.00	$ $53,040
10	RESTORATION OF STREETS					
	Bit. Concrete Street		530	sq.yd.	$ 70.00	$ $37,100
	PCC Sidewalk		50	sq. ft.	$ 14.00	$ $700
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		167	sq.yd.	$ 53.00	$ $8,851
	Concrete		15	sq.yd.	$ 89.00	$ $1,335
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $18,250
13	EROSION CONTROL:				Lump Sum	$ $10,950

Table 4.5-10
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Belle Aire and Venard
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	TRAFFIC CONTROL:			Lump Sum	$ $10,950
	SUBTOTAL				$ $591,388
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	225	lin. ft.	$ 55.00	$ $12,375
	Far side	306	lin. ft.	$ 55.00	$ $16,830
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	15	each	$ 608.00	$ $9,120
	Far side	6	each	$ 749.00	$ $4,494
3	BUILDING SERVICE PLUG:	21	each	$ 228.00	$ $4,788
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	367	sq.yd.	$ 15.00	$ $5,505
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	84	sq.yd.	$ 69.00	$ $5,796
6	TRENCH BACKFILL				
	0-8 feet deep	162	lin. ft.	$ 68.00	$ $11,016
	SUBTOTAL				$ $69,924
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $661,300
	Contingencies		(20%)		$132,300
	Engineering		(20%)		$132,300
	Legal / Admin		(6%)		$55,600
	Easement Acquisition				$24,700
	TOTAL OPINION OF PROBABLE COST				**$ $1,006,200**
				Cost per lot	$47,910

Table 4.5-11

Possible Special Assessment for Sanitary Sewers
Burlington Highlands
Venard Road (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Venard Road					
V1-172 (existing)	742.0	734.24			7.8
			300	0.40%	
UE-39	746.0	735.44			10.6
			300	0.40%	
UE-38	746.0	736.64			9.4

Table 4.5-12

Downers Grove Sanitary District April 2022
Proposed Special Assessment
Venard Road (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
	MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	150	lin. ft.	$ 82.00	$ $12,300
		8-12 feet deep	450	lin. ft.	$ 96.00	$ $43,200
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ $0
		8-12 feet deep	2	each	$ 7,000.00	$ $14,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	150	lin. ft.	$ 102.00	$ $15,300
		8-12 feet deep	450	lin. ft.	$ 124.00	$ $55,800
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ $0
6	SEWER TELEVISING FOR FINAL INSPECTION		600	lin. ft.	$ 3.00	$ $1,800
7	SEWER TESTING FOR FINAL INSPECTION		600	lin. ft.	$ 3.00	$ $1,800
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		40	lin. ft.	$ 89.00	$ $3,560
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		1,333	sq.yd.	$ 15.00	$ $19,995
10	RESTORATION OF STREETS					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ $0
	PCC Sidewalk		2,000	sq. ft.	$ 14.00	$ $28,000
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		142	sq.yd.	$ 53.00	$ $7,526
	Concrete		27	sq.yd.	$ 89.00	$ $2,403
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $365
13	EROSION CONTROL:				Lump Sum	$ $365

Table 4.5-12
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Venard Road (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	TRAFFIC CONTROL:			Lump Sum	$ $9,490
	SUBTOTAL				$ $222,704
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	60	lin. ft.	$ 55.00	$ $3,300
	Far side	306	lin. ft.	$ 55.00	$ $16,830
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	4	each	$ 608.00	$ $2,432
	Far side	6	each	$ 749.00	$ $4,494
3	BUILDING SERVICE PLUG:	10	each	$ 228.00	$ $2,280
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	244	sq.yd.	$ 15.00	$ $3,660
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	84	sq.yd.	$ 69.00	$ $5,796
6	TRENCH BACKFILL				
	0-8 feet deep	162	lin. ft.	$ 68.00	$ $11,016
	SUBTOTAL				$ $49,808
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $272,500
	Contingencies		(20%)		$54,500
	Engineering		(20%)		$54,500
	Legal / Admin		(6%)		$22,900
	TOTAL OPINION OF PROBABLE COST				**$ $404,400**
				Cost per lot	$40,440

Table 4.5-13
Possible Special Assessment for Sanitary Sewers
Burlington Highlands
Venard Road (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth

(Sanitary sewers are available as of March 2018.)

Table 4.5-14
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Venard Road (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity	Unit Price	Amount

(Sanitary sewers are available as of March 2018.)

Table 4.5-14
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Venard Road (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity	Unit Price	Amount

(Sanitary sewers are available as of March 2018.)

Table 4.5-15
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Virginia Avenue (West)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Virginia Street					
SA-N-1-138	732.4	720.69	330	2.50%	11.7
UE-51	738.0	728.94			9.1

Table 4.5-16
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Virginia Avenue (West)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
	MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	80	lin. ft.	$ 96.00	$ $7,680
		12-16 feet deep	250	lin. ft.	$ 116.00	$ $29,000
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	1	each	$ 7,000.00	$ $7,000
		12-16 feet deep	0	each	$ 8,500.00	$ $0
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	20	lin. ft.	$ 124.00	$ $2,480
		12-16 feet deep	40	lin. ft.	$ 150.00	$ $6,000
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ $0
6	SEWER TELEVISING FOR FINAL INSPECTION		330	lin. ft.	$ 3.00	$ $990
7	SEWER TESTING FOR FINAL INSPECTION		330	lin. ft.	$ 3.00	$ $990
8	CULVERT/STORM REMOVAL AND REPLACEMENT					
	12-inch		60	lin. ft.	$ 89.00	$ $5,340
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		890	sq.yd.	$ 15.00	$ $13,350
10	RESTORATION OF STREETS					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ $0
	PCC Sidewalk		0	sq. ft.	$ 14.00	$ $0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		28	sq.yd.	$ 53.00	$ $1,508
	Aggregate		14	sq.yd.	$ 22.00	$ $313
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $365
13	EROSION CONTROL:				Lump Sum	$ $365

Table 4.5-16
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Virginia Avenue (West)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price		Amount
14	TRAFFIC CONTROL:			Lump Sum	$	$1,460
	SUBTOTAL				$	$83,640
SERVICE LATERALS						
1	BUILDING SERVICE LINES					
	Near side	39	lin. ft.	$ 55.00	$	$2,145
	Far side	159	lin. ft.	$ 55.00	$	$8,745
2	BUILDING SERVICE BRANCH FITTINGS					
	Near Side	3	each	$ 608.00	$	$1,824
	Far side	3	each	$ 749.00	$	$2,247
3	BUILDING SERVICE PLUG:	6	each	$ 228.00	$	$1,368
4	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod	143	sq.yd.	$ 15.00	$	$2,150
5	RESTORATION OF STREETS:					
	Bit. Concrete Street	48	sq.yd.	$ 69.00	$	$3,312
6	TRENCH BACKFILL					
	0-8 feet deep	72	lin. ft.	$ 68.00	$	$4,896
	SUBTOTAL				$	$26,687
	TOTAL ESTIMATE OF CONSTRUCTION COST				$	$110,300
		Contingencies	(20%)			$22,100
		Engineering	(20%)			$22,100
		Legal / Admin	(6%)			$9,300
	TOTAL OPINION OF PROBABLE COST				**$**	**$163,800**
				Cost per lot		$27,300

Table 4.5-17
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Lacey-Carol-Northcott
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Northcott Avenue					
SA-N-1-143	739.5	729.20	140	1.50%	10.3
UE-47	741.0	731.30			9.7

Table 4.5-18

Downers Grove Sanitary District April 2022

Proposed Special Assessment

Lacey-Carol-Northcott

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	40	lin. ft.	$ 82.00	$ 3,280
		8-12 feet deep	100	lin. ft.	$ 96.00	$ 9,600
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 3,500.00	$ 3,500
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	12-16 feet deep	15	lin. ft.	$ 150.00	$ 2,250
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ -
6	SEWER TELEVISING FOR FINAL INSPECTION		140	lin. ft.	$ 3.00	$ 420
7	SEWER TESTING FOR FINAL INSPECTION		140	lin. ft.	$ 3.00	$ 420
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ -
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		194	sq.yd.	$ 15.00	$ 2,917
10	RESTORATION OF STREETS					
	Bit. Concrete Street		20	sq.yd.	$ 70.00	$ 1,369
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		14	sq.yd.	$ 53.00	$ 754

Table 4.5-18
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Lacey-Carol-Northcott
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	REMOVE AND REPLACE AGGREGATE DITCH	78	sq.yd.	$ 22.00	$ 1,711
13	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 365
14	EROSION CONTROL			Lump Sum	$ 365
15	TRAFFIC CONTROL			Lump Sum	$ 1,460
	SUBTOTAL				$ 35,210
	SERVICE LATERALS				
1	BUILDING SERVICE LINES				
	Near side	0	lin. ft.	$ 55.00	$ -
	Far side	1	lin. ft.	$ 55.00	$ 55
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	0	each	$ 608.00	$ -
	Far side	1	each	$ 749.00	$ 749
3	BUILDING SERVICE PLUG:	1	each	$ 69.00	$ 69
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	73	sq.yd.	$ 15.00	$ 1,100
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	156	sq.yd.	$ 69.00	$ 10,764
6	TRENCH BACKFILL				
	0-8 feet deep	26	lin. ft.	$ 68.00	$ 1,768
	SUBTOTAL				$ 14,505
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 49,700
	Contingencies	(20%)			$ 9,900
	Engineering	(20%)			$ 9,900
	Legal / Admin	(6%)			$ 4,200
	TOTAL ESTIMATE OF COST				**$ 73,700**
				Cost per lot	$ 73,700

Table 4.5-19
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Lacey and Janet
Preliminary Design Layout

	Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Lacey Road						
(existing)	SA-N-1-134	724.3	711.86			12.4
Janet Street						
				400	1.20%	
	UE-55	730.0	716.66			13.3
				400	0.80%	
	UE-56	730.0	719.86			10.1

Table 4.5-20
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Lacey and Janet
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	40	lin. ft.	$ 96.00	$ $3,840
		12-16 feet deep	720	lin. ft.	$ 116.00	$ $83,520
		16-20 feet deep	40	lin. ft.	$ 139.00	$ $5,560
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	2	each	$ 7,000.00	$ $14,000
		12-16 feet deep	0	each	$ 8,500.00	$ $0
		16-20 feet deep	0	each	$ 11,300.00	$ $0
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	0	lin. ft.	$ 124.00	$ $0
		12-16 feet deep	128	lin. ft.	$ 150.00	$ $19,200
		16-20 feet deep	0	lin. ft.	$ 198.00	$ $0
5	TREE TUNNELING		22	lin. ft.	$ 211.00	$ $4,642
6	SEWER TELEVISING FOR FINAL INSPECTION		800	lin. ft.	$ 3.00	$ $2,400
7	SEWER TESTING FOR FINAL INSPECTION		800	lin. ft.	$ 3.00	$ $2,400
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ $0
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		107	sq.yd.	$ 15.00	$ $1,605
10	RESTORATION OF STREETS					
	Bit. Concrete Street		27	sq.yd.	$ 70.00	$ $1,890
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		98	sq.yd.	$ 53.00	$ $5,194
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $1,095

Table 4.5-20
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Lacey and Janet
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL:			Lump Sum	$ $730
14	TRAFFIC CONTROL:			Lump Sum	$ $5,110
	SUBTOTAL				$ $157,986
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	105	lin. ft.	$ 55.00	$ $5,775
	Far side	357	lin. ft.	$ 55.00	$ $19,635
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	7	each	$ 608.00	$ $4,256
	Far side	7	each	$ 749.00	$ $5,243
3	BUILDING SERVICE PLUG:	14	each	$ 228.00	$ $3,192
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	350	sq.yd.	$ 15.00	$ $5,250
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	103	sq.yd.	$ 69.00	$ $7,107
6	TRENCH BACKFILL				
	8-12 feet deep	175	lin. ft.	$ 91.00	$ $15,925
	SUBTOTAL				$ $66,383
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $224,400
	Contingencies		(20%)		$44,900
	Engineering		(20%)		$44,900
	Legal / Admin		(6%)		$18,900
	TOTAL OPINION OF PROBABLE COST				**$ $333,100**
				Cost per lot	$23,790

Table 4.5-21
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Ogden-Lacey-Grant-Lee (South)
Preliminary Design Layout

	Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Lacey Road						
(existing)	SA-N-1-135	728.0	713.37			14.6
Ogden Avenue						
				300	3.00%	
	UE-58	740.0	722.37			17.6
				215	3.00%	
	UE-59	740.0	719.82			20.2
(existing)	SA-N-1-136	730.3	713.83			16.4
				180	0.40%	
	UE-61	730.0	714.55			15.4
				250	0.50%	
	UE-65	739.0	715.80			23.2
Ogden Avenue Farms						
				300	1.00%	
	UE-62	730.0	717.55			12.4
				280	0.40%	
	UE-63	729.0	718.67			10.3
				350	2.50%	
	UE-66	736.0	727.42			8.6
				300	3.00%	
	UE-67	746.0	736.42			9.6
				400	0.40%	
	UE-68	731.0	720.27			10.7
				120	0.40%	
	UE-69	729.0	720.75			8.2
				260	3.00%	
	UE-70	740.0	728.55			11.4
				65	2.00%	
	UE-71	742.0	729.85			12.2
				400	2.50%	
	UE-72	749.0	739.85			9.1
				220	4.00%	
	UE-75	755.0	739.35			15.7
Lee Avenue						
				600	0.50%	
	UE-64	730.0	718.80			11.2

Table 4.5-22

Downers Grove Sanitary District April 2022
Proposed Special Assessment
Ogden-Lacey-Grant-Lee (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
	MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	0	lin. ft.	$ 82.00	$ $0
		8-12 feet deep	2,184	lin. ft.	$ 96.00	$ $209,664
		12-16 feet deep	1,184	lin. ft.	$ 116.00	$ $137,344
		16-20 feet deep	683	lin. ft.	$ 139.00	$ $94,937
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ $0
		8-12 feet deep	8	each	$ 7,000.00	$ $56,000
		12-16 feet deep	5	each	$ 8,500.00	$ $42,500
		16-20 feet deep	2	each	$ 11,300.00	$ $22,600
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		3	each	$ 6,800.00	$ $20,400
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	0	lin. ft.	$ 102.00	$ $0
		8-12 feet deep	2,184	lin. ft.	$ 124.00	$ $270,816
		12-16 feet deep	1,184	lin. ft.	$ 150.00	$ $177,600
		16-20 feet deep	683	lin. ft.	$ 198.00	$ $135,234
5	TREE TUNNELING		310	lin. ft.	$ 211.00	$ $65,410
6	SEWER TELEVISING FOR FINAL INSPECTION		4,051	lin. ft.	$ 3.00	$ $12,153
7	SEWER TESTING FOR FINAL INSPECTION		4,051	lin. ft.	$ 3.00	$ $12,153
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		105	lin. ft.	$ 89.00	$ $9,345
9	RESTORATION OF LAWNS AND PARKWAYS					
	Topsoil and sod		8,859	sq.yd.	$ 15.00	$ $132,885
10	RESTORATION OF WETLANDS AND BUFFERS					
	Wetland		708	sq.yd.	$ 30.00	$ 21,240
	Wetland Buffer		4,667	sq.yd.	$ 15.00	$ 70,005
11	RESTORATION OF STREETS					
	Bit. Concrete Street		787	sq.yd.	$ 70.00	$ $55,090
	PCC Sidewalk		1,500	sq. ft.	$ 14.00	$ $21,000
12	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		338	sq.yd.	$ 53.00	$ $17,914
	Concrete		100	sq.yd.	$ 89.00	$ $8,900
13	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $21,170

Table 4.5-22
Downers Grove Sanitary District April 2022
Proposed Special Assessment
Ogden-Lacey-Grant-Lee (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	EROSION CONTROL:			Lump Sum	$ $17,520
15	TRAFFIC CONTROL:			Lump Sum	$ $20,440
	SUBTOTAL				$ $1,652,320
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	180	lin. ft.	$ 55.00	$ $9,900
	Far side	306	lin. ft.	$ 55.00	$ $16,830
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	12	each	$ 608.00	$ $7,296
	Far side	6	each	$ 749.00	$ $4,494
3	BUILDING SERVICE PLUG:	18	each	$ 228.00	$ $4,104
4	RESTORATION OF LAWNS AND PARKWAYS				
	Topsoil and sod	400	sq.yd.	$ 15.00	$ $6,000
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	128	sq.yd.	$ 69.00	$ $8,832
6	TRENCH BACKFILL				
	8-12 feet deep	168	lin. ft.	$ 91.00	$ $15,288
7	REMOVE AND REPLACE DRIVEWAYS				
	Bituminous	0	sq. yd.	$ 52.00	$ $0
	SUBTOTAL				$ $72,744
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $1,725,100
	Contingencies (20%)				$345,000
	Engineering (20%)				$345,000
	Legal / Admin (6%)				$144,900
	Easement Acquisition				$133,600
	TOTAL OPINION OF PROBABLE COST				**$ $2,693,600**
				Cost per lot	$149,640

Table 4.5-23

Downers Grove Sanitary District April 2022

Proposed Special Assessments

Burlington Highlands Sub-Area

Cost Summary

Sub-Basin:	Near Services	Far Services	Cost	Cost per lot
Morton and Downers	20	19	$ 1,506,700	$ 38,630
40th and Seely (North)	9	12	$ 658,900	$ 31,380
40th and Northcott	5	9	$ 461,400	$ 32,960
Virginia-Seely-Janet-Downers	25	18	$ 1,245,900	$ 28,970
Belle Aire and Venard	15	6	$ 1,006,200	$ 47,910
Vernard Road (North)	4	6	$ 404,400	$ 40,440
Vernard Road (South) (completed)	*0*	*0*	*$ -*	*$ -*
Virginia Avenue (West)	3	3	$ 163,800	$ 27,300
Lacey-Carol-Northcott	0	1	$ 73,700	$ 73,700
Lacey and Janet	7	7	$ 333,100	$ 23,790
Ogden-Lacey-Grant-Lee (South)	12	6	$ 2,693,600	$ 149,640
TOTALS	100	87	$ 8,547,700	$ 45,710
		187		

4.6 Golf Addition

Golf Addition is a sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.6, the approximate limits of this sub-area are Warrenville Road to the north, Walnut Avenue to the west, Burlington Avenue to the south, and Belmont Road to the east. The proposed service area includes approximately 48 single-family residences with septic systems, commercial lots without gravity sewer service, Downers Grove Park District property, and several undeveloped residential and commercial parcels. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving unsewered properties within the Golf Addition sub-area.

A number of factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, easements, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The Golf Addition sub-area has four major drainage divides. Serving the subject properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divides. The study area can be divided into four smaller service areas. Properties to north of Indianapolis Avenue will be served by the existing sewers on Ogden Avenue. Properties on Drendel and Granville, south of Indianapolis Avenue, will be served by the existing sewer on Burlington Avenue. The Park District parcels at the northeast corner of Walnut and Burlington will be served by the trunk sewer on Walnut Avenue. Parcels on Puffer Road, north of Prairie Avenue, will be served by the sewer at the intersection of Belmont Road and Prairie Avenue.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The major road crossings that would significantly increase construction cost in this sub-area are Ogden Avenue and Belmont Road. Thus, alternatives were considered to minimize crossing of these routes with both the mainline sewer and building services.

The Village of Downers Grove owns and operates water mains on the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Golf Addition sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

The following are the proposed sub-basins:

Sub-basin	No. of Services	Layout	Cost Estimate
Drendel and Ogden	*(completed)*	*Table 4.6-1*	*Table 4.6-2*
Cross and Ogden (South)	*(completed)*	*Table 4.6-3*	*Table 4.6-4*
Cross and Ogden (North)	2	Table 4.6-5	Table 4.6-6
Drendel and Granville (South)	28	Table 4.6-7	Table 4.6-8
Burlington and Walnut (South)	2	Table 4.6-9	Table 4.6-10
Puffer North of Prairie	16	Table 4.6-11	Table 4.6-12

Table 4.6-13 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.6.

Sanitary sewers are available to all parcels in the Drendel and Ogden sub-basin and the Cross and Ogden (South) sub-basin as of March 2010. Approximately 3,150 feet of 8-inch sanitary sewer and 41 services were constructed for a total bid price of $603,700 by Archon Construction Co, Inc. in spring of 2010 with partial funding from ARRA of 2009. The average cost per lot was approximately $14,720.

The Cross and Ogden (North) sub-basin sewer plan follows the existing topography which falls southwest towards the manhole in front of the new Culver's Restaurant. This sewer will allow the private pump station and force main of the Max Madsen car dealership at 2438 Ogden (northeast corner of Cross and Ogden) and the private septic system on the west side of Cross Street (4340 Cross) to be abandoned. Easements will be required along both Cross and Ogden to construct this sewer. The cost per lot was not calculated because this sub-area is only comprised of the several large commercial parcels. Table 4.6-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.6-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $415,000, including contingency, engineering, easements, and legal/administrative costs.

The Drendel and Granville (South) sub-basin sewer plan follows the existing topography which falls from Drendel and Indianapolis south to the intersection of Granville and Burlington Avenue. The sewer will extend north from the existing sewer at Burlington and Granville. Easements will be required to cross the existing Downers Grove Park District property. The parcels on Drendel could also be served by the existing trunk sewer on Walnut, but additional sewer length and easements would be required. The sewer on Drendel should be placed in the west right-of-way, to avoid the water main, and in the east right-of-way on Granville to avoid the existing trees. This sub-basin is the third most costly per lot in the Golf Addition due to the sewer and easements required to cross the Park District property. Table 4.6-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.6-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $910,600, including contingency, engineering, easements, and legal/administrative costs.

The Burlington and Walnut (South) sub-basin sewer plan will flow west on Burlington Avenue from the Park District parcel west of Granville to the existing sanitary manhole at Walnut and Burlington. The sewer should be placed in the south right-way-way to avoid the existing water main and overhead electric. The cost per lot was not calculated because this sub-area only includes several large parcels owned by the Park District. Table 4.6-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.6-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $223,900, including contingency, engineering, and legal/administrative costs.

The Puffer North of Prairie sub-basin sewer plan will connect to the sewer on Belmont Road. Currently, the sewer does not have adequate cover to serve Puffer Road. The impending Metra-Belmont underpass project will include the replacement of the existing sewer on Belmont, from Burlington to Prairie, at a flatter slope to provide the additional depth required to allow sewer service on Puffer. This sub-basin is the most costly per lot in the Golf Addition due to the pavement restoration and tree tunneling required, in addition to the small number of lots associated with the project. Table 4.6-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.6-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $695,800, including contingency, engineering, easements, and legal/administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.6

GOLF ADDITION

POSSIBLE SEWER ALIGNMENT

APRIL 2022

LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWERS
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- CROSS AND OGDEN (NORTH);TABLES 4.6-5, 4.6-6
- DRENDEL AND GRANVILLE (SOUTH);TABLES 4.6-7, 4.6-8
- BURLINGTON AND WALNUT (SOUTH);TABLES 4.6-9, 4.6-10
- PUFFER NORTH OF PRAIRIE;TABLES 4.6-11, 4.6-12

N

0 500 1,000
Feet

BAXTER & WOODMAN
Consulting Engineers

I:\Crystal Lake\DGSD1\180305-2018 UAP\20-GIS\MapDocuments\
4-6 Golf Addition.mxd 563dks - 3/24/2020

Table 4.6-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Drendel and Ogden
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth

(Sanitary sewers are available as of March 2010.)

Table 4.6-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Drendel and Ogden
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity	Unit Price	Amount

(Sanitary sewers are available as of March 2010.)

Table 4.6-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Drendel and Ogden
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity	Unit Price	Amount

(Sanitary sewers are available as of March 2010.)

Table 4.6-3
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Cross and Ogden (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth

(Sanitary sewers are available as of March 2010.)

Table 4.6-4
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Cross and Ogden (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity	Unit Price	Amount

(Sanitary sewers are available as of March 2010.)

Table 4.6-4
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Cross and Ogden (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity	Unit Price	Amount

(Sanitary sewers are available as of March 2010.)

Table 4.6-5
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Cross and Ogden (North)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Ogden Avenue					
3-A-88 (existing)	741.9	725.00			16.9
			205	4.00%	
UF-13	748.0	733.20			14.8
			370	3.00%	
UF-14	756.0	744.30			11.7
Cross Street					
			370	2.50%	
UF-15	751.0	742.45			8.5

Table 4.6-6

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

Cross and Ogden (North)

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	240	lin. ft.	$ 96.00	$ 23,040
		12-16 feet deep	705	lin. ft.	$ 116.00	$ 81,780
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	2	each	$ 7,000.00	$ 14,000
		12-16 feet deep	1	each	$ 8,500.00	$ 8,500
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 3,500
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	240	lin. ft.	$ 124.00	$ 29,760
		12-16 feet deep	200	lin. ft.	$ 150.00	$ 30,000
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ 0
6	SEWER TELEVISING FOR FINAL INSPECTION		945	lin. ft.	$ 3.00	$ 2,835
7	SEWER TESTING FOR FINAL INSPECTION		945	lin. ft.	$ 3.00	$ 2,835
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ 0
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and Sod		1,342	sq.yd.	$ 15.00	$ 20,130
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		50	sq.yd.	$ 70.00	$ 3,500
	Curb & Gutter		40	lin. ft.	$ 45.00	$ 1,800
	PCC Sidewalk		200	sq. ft.	$ 14.00	$ 2,800
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		67	sq.yd.	$ 53.00	$ 3,551
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 0

Table 4.6-6

Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Cross and Ogden (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 0
14	TRAFFIC CONTROL:			Lump Sum	$ 21,900
	SUBTOTAL				$ 249,931
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	10	lin. ft.	$ 55.00	$ 550
	Far side	48	lin. ft.	$ 55.00	$ 2,640
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	1	each	$ 608.00	$ 608
	Far side	1	each	$ 749.00	$ 749
3	BUILDING SERVICE PLUG:	2	each	$ 228.00	$ 456
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	28	sq.yd.	$ 15.00	$ 420
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	21	sq.yd.	$ 69.00	$ 1,449
6	TRENCH BACKFILL				
	0-8 feet deep	35	lin. ft.	$ 68.00	$ 2,380
	SUBTOTAL				$ 9,252
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 259,200
	Contingencies (20%)				51,800
	Engineering (20%)				51,800
	Legal / Admin (6%)				21,800
	Easement Acquisition				30,400
	TOTAL OPINION OF PROBABLE COST				**$ 415,000**
				Cost per Lot	$207,500

Table 4.6-7
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Drendel and Granville (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Burlington Avenue					
3-B-3 (existing)	702.3	687.50			14.8
			110	2.00%	
UF-22	703.0	689.70			13.3
Granville Avenue					
			480	2.50%	
UF-21	714.0	701.70			12.3
			70	2.00%	
UF-20	715.0	703.10			11.9
Park District Easement					
			450	1.80%	
UF-19	722.0	711.20			10.8
Drendel Road					
			280	0.40%	
UF-18	722.0	712.32			9.7
			400	0.40%	
UF-17	722.0	713.92			8.1
			360	3.50%	
UF-16	735.0	726.52			8.5

Table 4.6-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Drendel and Granville (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	60	lin. ft.	$ 82.00	$ $4,920
		8-12 feet deep	1,850	lin. ft.	$ 96.00	$ $177,600
		12-16 feet deep	240	lin. ft.	$ 116.00	$ $27,840
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ $5,300
		8-12 feet deep	4	each	$ 7,000.00	$ $28,000
		12-16 feet deep	2	each	$ 8,500.00	$ $17,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $3,500
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	230	lin. ft.	$ 102.00	$ $23,460
		8-12 feet deep	185	lin. ft.	$ 124.00	$ $22,940
		12-16 feet deep	69	lin. ft.	$ 150.00	$ $10,350
5	TREE TUNNELING		345	lin. ft.	$ 211.00	$ $72,795
6	SEWER TELEVISING FOR FINAL INSPECTION		2,150	lin. ft.	$ 3.00	$ $6,450
7	SEWER TESTING FOR FINAL INSPECTION		2,150	lin. ft.	$ 3.00	$ $6,450
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		115	lin. ft.	$ 89.00	$ $10,235
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and Sod		3,158	sq.yd.	$ 15.00	$ $47,370
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		13	sq.yd.	$ 70.00	$ $910
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		231	sq.yd.	$ 53.00	$ $12,243
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ $9,855

Table 4.6-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Drendel and Granville (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ $2,555
14	TRAFFIC CONTROL:			Lump Sum	$ $4,380
	SUBTOTAL				$ $494,153
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	124	lin. ft.	$ 55.00	$ $6,820
	Far side	600	lin. ft.	$ 55.00	$ $33,000
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	18	each	$ 608.00	$ $10,944
	Far side	10	each	$ 749.00	$ $7,490
3	BUILDING SERVICE PLUG:	28	each	$ 228.00	$ $6,384
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	367	sq.yd.	$ 15.00	$ $5,505
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	189	sq.yd.	$ 69.00	$ $13,041
6	TRENCH BACKFILL				
	0-8 feet deep	350	lin. ft.	$ 68.00	$ $23,800
	SUBTOTAL				$ $106,984
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $601,100
	Contingencies (20%)				$120,200
	Engineering (20%)				$120,200
	Legal / Admin (6%)				$50,500
	Easement Acquisition				$18,600
	TOTAL OPINION OF PROBABLE COST				**$ $910,600**
				Cost per lot	$32,520

Table 4.6-9
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Burlington and Walnut (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Burlington Avenue					
3-A-34 (existing)	700.0	683.01			17.0
			300	3.00%	
UF-24	704.0	692.01			12.0
			300	2.68%	
UF-23	708.0	700.05			8.0

Table 4.6-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Burlington and Walnut (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	60	lin. ft.	$ 82.00	$ 4,920
		8-12 feet deep	500	lin. ft.	$ 96.00	$ 48,000
		12-16 feet deep	40	lin. ft.	$ 116.00	$ 4,640
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	1	each	$ 7,000.00	$ 7,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 3,500
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	60	lin. ft.	$ 102.00	$ 6,120
		8-12 feet deep	120	lin. ft.	$ 124.00	$ 14,880
5	TREE TUNNELING		50	lin. ft.	$ 211.00	$ 10,550
6	SEWER TELEVISING FOR FINAL INSPECTION		600	lin. ft.	$ 3.00	$ 1,800
7	SEWER TESTING FOR FINAL INSPECTION		600	lin. ft.	$ 3.00	$ 1,800
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		10	lin. ft.	$ 89.00	$ 890
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and Sod		833	sq.yd.	$ 15.00	$ 12,495
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		89	sq.yd.	$ 70.00	$ 6,230
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		0	sq.yd.	$ 53.00	$ 0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 2,190

Table 4.6-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Burlington and Walnut (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 2,920
	SUBTOTAL				$ 133,965
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	0	lin. ft.	$ 55.00	$ 0
	Far side	120	lin. ft.	$ 55.00	$ 6,600
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	0	each	$ 608.00	$ 0
	Far side	2	each	$ 749.00	$ 1,498
3	BUILDING SERVICE PLUG:	2	each	$ 228.00	$ 456
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	93	sq.yd.	$ 15.00	$ 1,395
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	37	sq.yd.	$ 69.00	$ 2,553
6	TRENCH BACKFILL				
	0-8 feet deep	64	lin. ft.	$ 68.00	$ 4,352
	SUBTOTAL				$ 16,854
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 150,800
	Contingencies (20%)				30,200
	Engineering (20%)				30,200
	Legal / Admin (6%)				12,700
	TOTAL OPINION OF PROBABLE COST				**$ 223,900**
				Cost per Lot	$111,950

Table 4.6-11
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Puffer North of Prairie
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Prairie Avenue					
3-A-12 (existing)[1]	735.2	724.00			11.2
			60	0.40%	
UF-25	734.0	724.24			9.8
			420	0.40%	
UF-26	736.0	725.92			10.1
Puffer Road					
			400	0.40%	
UF-27	735.0	727.52			7.5
			220	1.00%	
UF-28	738.0	729.72			8.3
			30	0.40%	
UF-29	738.0	729.84			8.2
			410	6.00%	
UF-30	766.0	754.44			11.6

Note 1: Proposed invert is after the replacement of the sewer on Belmont as part of the Metra project

Table 4.6-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Puffer North of Prairie
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	200	lin. ft.	$ 82.00	$ $16,400
		8-12 feet deep	1,280	lin. ft.	$ 96.00	$ $122,880
		12-16 feet deep	60	lin. ft.	$ 116.00	$ $6,960
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ $5,300
		8-12 feet deep	5	each	$ 7,000.00	$ $35,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $3,500
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	200	lin. ft.	$ 102.00	$ $20,400
		8-12 feet deep	410	lin. ft.	$ 124.00	$ $50,840
		12-16 feet deep	30	lin. ft.	$ 150.00	$ $4,500
5	TREE TUNNELING		165	lin. ft.	$ 211.00	$ $34,815
6	SEWER TELEVISING FOR FINAL INSPECTION					
			1,540	lin. ft.	$ 3.00	$ $4,620
7	SEWER TESTING FOR FINAL INSPECTION					
			1,540	lin. ft.	$ 3.00	$ $4,620
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		50	lin. ft.	$ 89.00	$ $4,450
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and Sod		1,533	sq.yd.	$ 15.00	$ $22,995
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		333	sq.yd.	$ 70.00	$ $23,310
	Curb & Gutter		0	lin. ft.	$ 45.00	$ $0
	PCC Sidewalk		50	sq. ft.	$ 14.00	$ $700
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		22	sq.yd.	$ 53.00	$ $1,166

Table 4.6-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Puffer North of Prairie
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ $2,920
13	EROSION CONTROL			Lump Sum	$ $730
14	TRAFFIC CONTROL:			Lump Sum	$ $2,920
	SUBTOTAL				$ $369,026
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	10	lin. ft.	$ 55.00	$ $550
	Far side	750	lin. ft.	$ 55.00	$ $41,250
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	1	each	$ 608.00	$ $608
	Far side	15	each	$ 749.00	$ $11,235
3	BUILDING SERVICE PLUG:	16	each	$ 228.00	$ $3,648
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	344	sq.yd.	$ 15.00	$ $5,160
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	158	sq.yd.	$ 69.00	$ $10,902
6	TRENCH BACKFILL				
	0-8 feet deep	285	lin. ft.	$ 68.00	$ $19,380
	SUBTOTAL				$ $92,733
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ $461,800
	Contingencies (20%)				$92,400
	Engineering (20%)				$92,400
	Legal / Admin (6%)				$38,800
	Easement Acquisition				$10,400
	TOTAL OPINION OF PROBABLE COST				**$ $695,800**
				Cost per lot	$43,490

Table 4.6-13

Downers Grove Sanitary District April 2022

Possible Special Assessments for Sanitary Sewer

Golf Addition Sub-Area

Cost Summary

Sub-Basin:	Near	Far		Cost		Cost per lot
Drendel and Ogden (completed)	*0*	*0*	*$*	*-*	*$*	*-*
Cross and Ogden (South) (completed)	*0*	*0*	*$*	*-*	*$*	*-*
Cross and Ogden (North)	1	1	$	415,000		N/A
Drendel and Granville (South)	18	10	$	910,600	$	32,520
Burlington and Walnut (South)	0	2	$	223,900		N/A
Puffer North of Prairie	1	15	$	695,800	$	43,490
TOTALS	20	28	$	2,245,300	$	36,510
		48				

4.7 Florence Avenue

Florence Avenue is a small service area located within the District's FPA boundary. Exhibit 4.7 shows the approximate limits of this service area which is located west of Fairview Avenue and north of Ogden Avenue. The proposed service area currently includes 11 lots that are either developed as single-family residences with septic systems or vacant. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving properties along Florence Avenue.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, tree protection, water main and existing utility location. In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Ogden Avenue. Thus, alternatives were considered to minimize crossing of this roadway. The Village of Downers Grove does not own any water mains within the subject area limits. The only utilities that would impact sewer construction are gas mains and overhead electric.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that the existing sewer has adequate capacity to receive the additional flow from Florence Avenue.

A map of the proposed sewer plan is included in Exhibit 4.7.

The topography along Florence Avenue is relatively flat, and thus, the direction of flow will be dictated by the available sewer depth and the most cost effective route. We identified one feasible connection point, the existing manhole in the northern westbound lane of Ogden Avenue (1-J-136).

We recommend the sewer be installed in the west right-of-way to avoid the existing power lines, gas mains, and major landscaping located in the east right-of-way. Table 4.7-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.7-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $267,800, including contingency, engineering, and legal/ administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.7

FLORENCE AVENUE

POSSIBLE SEWER ALIGNMENT

APRIL 2022

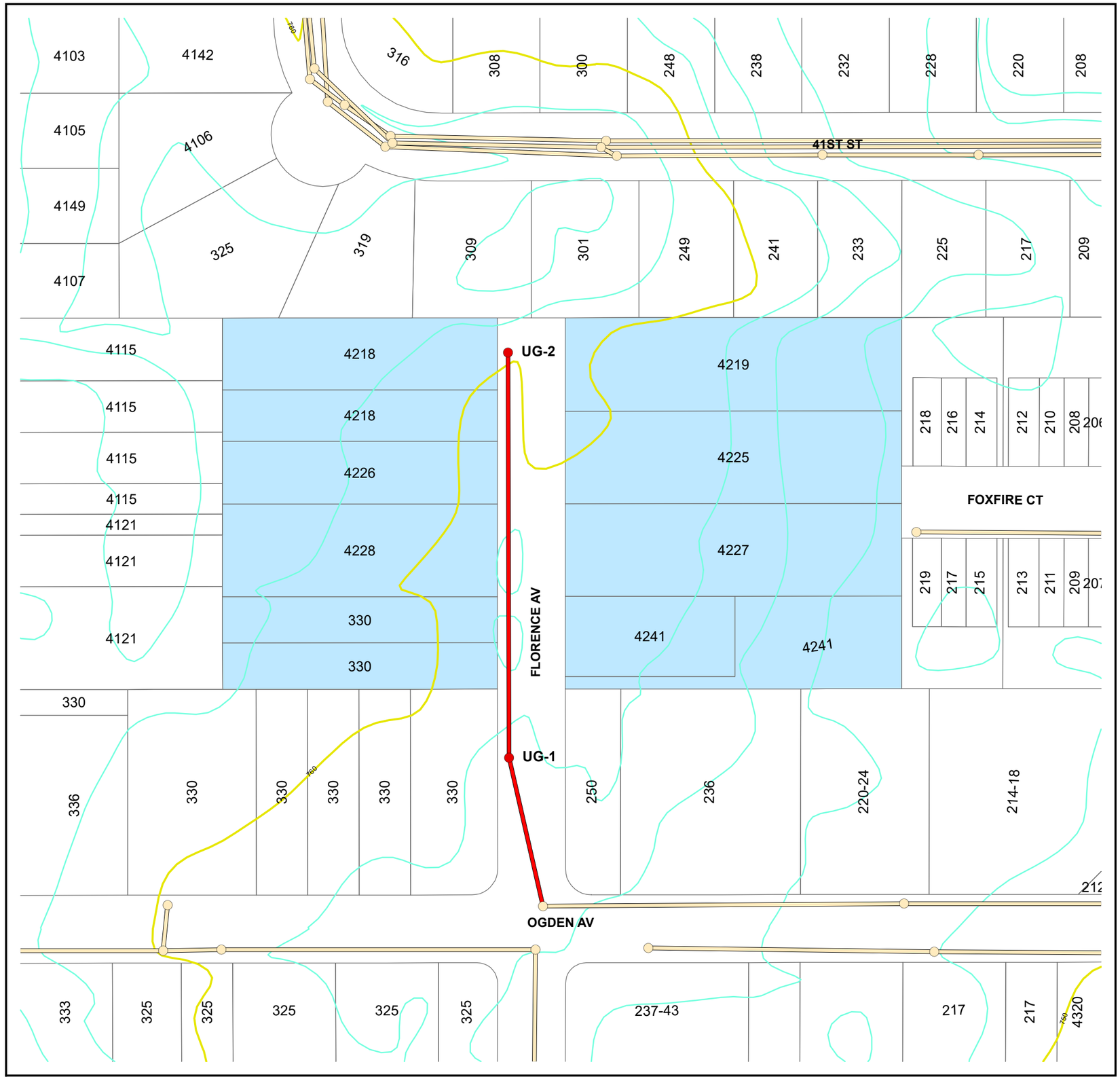
LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWER
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- FLORENCE AVENUE

N

0 100 200

Feet



BAXTER & WOODMAN Consulting Engineers

\\corp.baxwood.com\Projects\Crystal Lake\DGSD1\200407-2020 UAP\GIS\MXDs\4-7 FlorenceAve.mxd
563dks - 3/24/2020

State of Illinois - Professional Design Firm
License No. - 184-001121 - Expires 4-30-20

Table 4.7-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Florence Avenue
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Florence Avenue					
1-J-136 (existing)	756.0	748.54			7.5
			140	0.40%	
UG-1	757.5	749.10			8.4
			400	0.50%	
UG-2	761.0	751.10			9.9

Table 4.7-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Florence Avenue
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	40	lin. ft.	$ 82.00	$ $3,280
		8-12 feet deep	500	lin. ft.	$ 96.00	$ $48,000
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ $0
		8-12 feet deep	2	each	$ 7,000.00	$ $14,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ $6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	19	lin. ft.	$ 102.00	$ $1,938
		8-12 feet deep	177	lin. ft.	$ 124.00	$ $21,948
5	TREE TUNNELING		30	lin. ft.	$ 211.00	$ $6,330
6	SEWER TELEVISING FOR FINAL INSPECTION		540	lin. ft.	$ 2.50	$ $1,350
7	SEWER TESTING FOR FINAL INSPECTION		540	lin. ft.	$ 2.50	$ $1,350
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		20	lin. ft.	$ 89.00	$ $1,780
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		575	sq.yd.	$ 15.00	$ $8,625
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		89	sq.yd.	$ 70.00	$ $6,230
11	REMOVE AND REPLACE DRIVEWAYS					
	Concrete		13	sq.yd.	$ 89.00	$ $1,157
	Bituminous		65	sq.yd.	$ 53.00	$ $3,445
	Aggregate		13	sq.yd.	$ 22.00	$ $286

Table 4.7-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Florence Avenue
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$730
13	EROSION CONTROL			Lump Sum	$730
14	TRAFFIC CONTROL:			Lump Sum	$5,840
	SUBTOTAL				$133,819
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	90	lin. ft.	$ 55.00	$4,950
	Far side	255	lin. ft.	$ 55.00	$14,025
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	6	each	$ 608.00	$3,648
	Far side	5	each	$ 749.00	$3,745
3	BUILDING SERVICE PLUG:	11	each	$ 228.00	$2,508
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	158	sq.yd.	$ 15.00	$2,370
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	80	sq.yd.	$ 69.00	$5,520
6	TRENCH BACKFILL				
	0-8 feet deep	145	lin. ft.	$ 68.00	$9,860
	SUBTOTAL				$46,626
	TOTAL ESTIMATE OF CONSTRUCTION COST				$180,400
	Contingencies		(20%)		$36,100
	Engineering		(20%)		$36,100
	Legal / Admin		(6%)		$15,200
	TOTAL OPINION OF PROBABLE COST				**$267,800**
				Cost per lot	$24,350

4.8 Meyers and 31st

Meyers and 31st is a sub-area within the northeast corner of the District's planning area that is currently unsewered. Several lots are located outside of the District FPA, but can not be served by the adjacent Hinsdale Sanitary District in an economical manner. As shown on Exhibit 4.8, the approximate limits of this sub-area are White Oak Lane to the north, Meyers Road to the east, and 35th Street to the south. The proposed service area includes approximately 7 single-family residences with septic systems. The purpose of this analysis is to establish the recommended sanitary sewer plan for serving all unsewered properties within the Meyers and 31st sub-area.

A number of factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, easements, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. Please note that some of the parcels identified in these sub-basins may require a close evaluation of the legal issues and financial feasibility considerations associated with acquiring private easement or other land use rights from adjacent or nearby property owners in order to install a sanitary sewer service line from the parcel in question to the District's new sewer main. The Meyers and 31st sub-area has multiple drainage divides and low spots. The study area can be divided into two smaller service areas, properties between White Oak Lane and Heritage Oaks Lane and properties between 35th Street and Heritage Oaks Lane. Each of these two areas has centrally located low spots, which complicate serving each sub-basin in a cost effective manner.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Meyers Road. Thus, alternatives were considered to minimize construction in the right-of-way.

The DuPage Water Commission and Village of Oak Brook own and operate water mains and a transmission main on various streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the Meyers and 31st sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

The following are the proposed sub-basins:

Sub-basin	No. of Services	Property	Cost Estimate
Meyers Road (North)	1	3200 Meyers	Table 4.8-1
	1	3210 Meyers	Table 4.8-2
	1	3220 Meyers	Table 4.8-3
Meyers Road (South)	1	3400 Meyers	Table 4.8-4
	1	3404 Meyers	Table 4.8-5
	1	3408 Meyers	Table 4.8-6
	1	3412 Meyers	Table 4.8-7

Table 4.8-8 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.8.

The Meyers Road (North) sub-basin was thoroughly investigated and five feasible alternatives were identified. Each of the alternatives was described in detail in a letter report dated October 4, 2006. In summary, this sub-basin cannot be served by a conventional gravity sewer because of the topography or by a central lift station because minimum cleansing velocities cannot be accomplished in a force main. As a result, the three properties must be served by a low pressure sanitary sewer system. We examined two types of low pressures systems: individual grinder pumps discharging into a common force main (District owned) or individual grinder pumps discharging into individual force mains (privately owned). The common force main option was not recommended because the force mains would be placed in wooded, rear yard easements, which would be difficult to maintain by the District. Therefore, the recommended plan includes three, separate grinder pump and force main systems. Each system is costly due to the long, directional drilled force mains, multiple rear yard easements, and the existing creek within the project limits. Exhibit 4.8 shows the most cost effective route for serving each property. Tables 4.8-1, 4.8-2, and 4.8-3 include breakdowns of the unit quantities and unit prices used to prepare the opinion of probable cost for each individual low-pressure sanitary sewer system.

Multiple alternatives for the Meyers Road (South) sub-basin were also investigated and similar conclusions to the north sub-basin were arrived at. The four properties south of Heritage Oaks Lane cannot be served by gravity sewer, due to the topography adjacent to the pond north of the service area. The recommended plan includes four, separate grinder pump and force main systems. Exhibit 4.8 shows the most cost effective route for serving each property. As with the north sub-basin, the cost per lot is high due to the long, directional drilled force mains and multiple rear and side yard easements required. Tables 4.8-4, 4.8-5, 4.8-6, and 4.8-7 include breakdowns of the unit quantities and unit prices used to prepare the opinion of probable cost for each individual low-pressure sanitary sewer system.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.8

MEYERS ROAD AND 31ST STREET

POSSIBLE FORCE MAIN ALIGNMENT

APRIL 2022

LEGEND

- PRIVATE FORCE MAINS
- PARCEL BOUNDARIES
- MEYERS ROAD (NORTH)
- MEYERS ROAD (SOUTH)
- PROPOSED EASEMENT

N

0 300 600

Feet

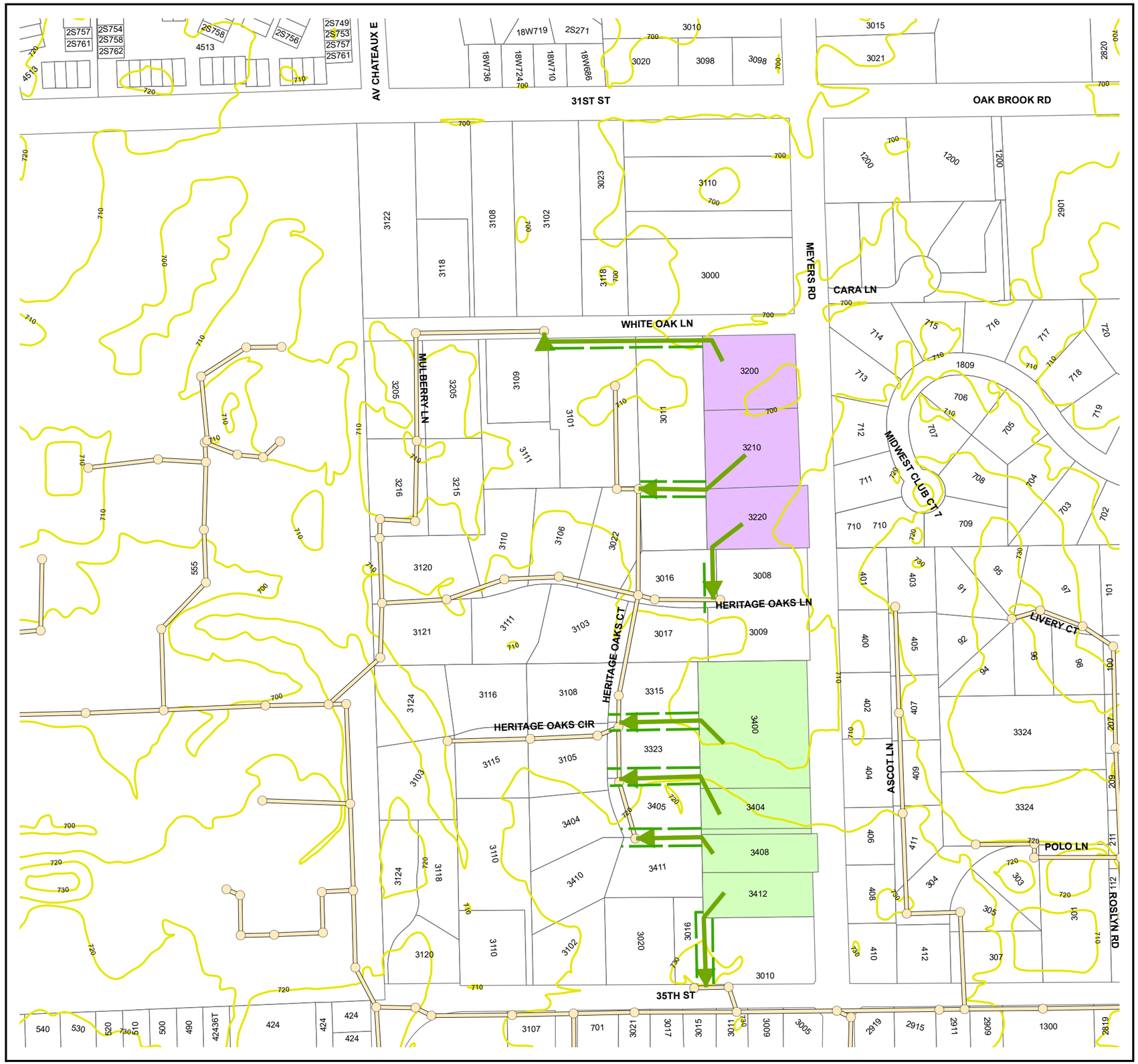


Table 4.8-1
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meyers Road (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
SERVICE LATERALS					
1	GRINDER PUMP SYSTEM:	1	each	$ 12,200.00	$ 12,200
2	BUILDING SERVICE LINES:				
	1-1/4" HDPE (OPEN CUT)	65	lin. ft.	$ 47.00	$ 3,055
	1-1/4" HDPE (DRILL)	472	lin. ft.	$ 61.00	$ 28,792
3	CONNECTION TO EXISTING MANHOLE:	1	each	$ 6,800.00	$ 6,800
4	CLEAN-OUTS:	2	each	$ 3,000.00	$ 6,000
5	AIR RELEASE VALVES:	1	each	$ 1,169.00	$ 1,169
6	BUILDING SERVICE FITTINGS:	0	each	$ 234.00	$ 0
7	BUILDING SERVICE PLUG:	1	each	$ 234.00	$ 234
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	117	sq.yd.	$ 15.00	$ 1,755
9	REMOVE AND REPLACE DRIVEWAYS:				
	Bituminous	10	sq.yd.	$ 52.00	$ 520
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	11	sq.yd.	$ 69.00	$ 759
11	TRENCH BACKFILL:				
	0-8 feet deep	15	lin. ft.	$ 68.00	$ 1,020
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 2,190
13	EROSION CONTROL:			Lump Sum	$ 365
14	TRAFFIC CONTROL:			Lump Sum	$ 730
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 65,600
	Contingencies (20%)				13,100
	Engineering (20%)				13,100
	Easement Acquisition				19,500
	TOTAL OPINION OF PROBABLE COST				**$ 111,300**

Table 4.8-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meyers Road (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
SERVICE LATERALS					
1	GRINDER PUMP SYSTEM:	1	each	$ 12,200.00	$ 12,200
2	BUILDING SERVICE LINES:				
	1-1/4" HDPE (OPEN CUT)	50	lin. ft.	$ 47.00	$ 2,350
	1-1/4" HDPE (DRILL)	300	lin. ft.	$ 61.00	$ 18,300
3	CONNECTION TO EXISTING MANHOLE:	1	each	$ 6,800.00	$ 6,800
4	CLEAN-OUTS:	1	each	$ 3,000.00	$ 3,000
5	AIR RELEASE VALVES:	1	each	$ 1,169.00	$ 1,169
6	BUILDING SERVICE FITTINGS:	0	each	$ 234.00	$ 0
7	BUILDING SERVICE PLUG:	1	each	$ 234.00	$ 234
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	106	sq.yd.	$ 15.00	$ 1,590
9	REMOVE AND REPLACE DRIVEWAYS:				
	Bituminous	0	sq.yd.	$ 52.00	$ 0
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
11	TRENCH BACKFILL:				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ 0
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 2,920
13	EROSION CONTROL:			Lump Sum	$ 1,095
14	TRAFFIC CONTROL:			Lump Sum	$ 0
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 49,700
	Contingencies (20%)				9,900
	Engineering (20%)				9,900
	Easement Acquisition				8,500
	TOTAL OPINION OF PROBABLE COST				**$ 78,000**

3210 Meyers Rd

Table 4.8-3
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meyers Road (North)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
SERVICE LATERALS					
1	GRINDER PUMP SYSTEM:	1	each	$ 12,200.00	$ 12,200
2	BUILDING SERVICE LINES:				
	1-1/4" HDPE (OPEN CUT)	150	lin. ft.	$ 47.00	$ 7,050
	1-1/4" HDPE (DRILL)	170	lin. ft.	$ 61.00	$ 10,370
3	CONNECTION TO EXISTING MANHOLE:	1	each	$ 6,800.00	$ 6,800
4	CLEAN-OUTS:	1	each	$ 3,000.00	$ 3,000
5	AIR RELEASE VALVES:	1	each	$ 1,169.00	$ 1,169
6	BUILDING SERVICE FITTINGS:	0	each	$ 234.00	$ 0
7	BUILDING SERVICE PLUG:	1	each	$ 234.00	$ 234
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	217	sq.yd.	$ 15.00	$ 3,255
9	REMOVE AND REPLACE DRIVEWAYS:				
	Bituminous	0	sq.yd.	$ 52.00	$ 0
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
11	TRENCH BACKFILL:				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ 0
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 2,190
13	EROSION CONTROL:			Lump Sum	$ 1,095
14	TRAFFIC CONTROL:			Lump Sum	$ 365
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 47,700
	Contingencies (20%)				9,500
	Engineering (20%)				9,500
	Easement Acquisition				6,900
	TOTAL OPINION OF PROBABLE COST				**$ 73,600**

3220 Meyers Rd

Table 4.8-4
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meyers Road (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
SERVICE LATERALS					
1	GRINDER PUMP SYSTEM:	1	each	$ 12,200.00	$ 12,200
2	BUILDING SERVICE LINES:				
	1-1/4" HDPE (OPEN CUT)	115	lin. ft.	$ 47.00	$ 5,405
	1-1/4" HDPE (DRILL)	250	lin. ft.	$ 61.00	$ 15,250
3	CONNECTION TO EXISTING MANHOLE:	1	each	$ 6,800.00	$ 6,800
4	CLEAN-OUTS:	1	each	$ 3,000.00	$ 3,000
5	AIR RELEASE VALVES:	1	each	$ 1,169.00	$ 1,169
6	BUILDING SERVICE FITTINGS:	0	each	$ 234.00	$ 0
7	BUILDING SERVICE PLUG:	1	each	$ 234.00	$ 234
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	178	sq.yd.	$ 15.00	$ 2,670
9	REMOVE AND REPLACE DRIVEWAYS:				
	Bituminous	0	sq.yd.	$ 52.00	$ 0
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	3	sq.yd.	$ 69.00	$ 207
11	TRENCH BACKFILL:				
	0-8 feet deep	10	lin. ft.	$ 68.00	$ 680
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 1,460
13	EROSION CONTROL:			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 730
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 50,500
	Contingencies (20%)				10,100
	Engineering (20%)				10,100
	Easement Acquisition				10,500
	TOTAL OPINION OF PROBABLE COST				**$ 81,200**

3400 Meyers Rd

Table 4.8-5
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meyers Road (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
SERVICE LATERALS					
1	GRINDER PUMP SYSTEM:	1	each	$ 12,200.00	$ 12,200
2	BUILDING SERVICE LINES:				
	1-1/4" HDPE (OPEN CUT)	105	lin. ft.	$ 47.00	$ 4,935
	1-1/4" HDPE (DRILL)	240	lin. ft.	$ 61.00	$ 14,640
3	CONNECTION TO EXISTING MANHOLE:	1	each	$ 6,800.00	$ 6,800
4	CLEAN-OUTS:	1	each	$ 3,000.00	$ 3,000
5	AIR RELEASE VALVES:	1	each	$ 1,169.00	$ 1,169
6	BUILDING SERVICE FITTINGS:	0	each	$ 234.00	$ 0
7	BUILDING SERVICE PLUG:	1	each	$ 234.00	$ 234
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	167	sq.yd.	$ 15.00	$ 2,505
9	REMOVE AND REPLACE DRIVEWAYS:				
	Bituminous	0	sq.yd.	$ 52.00	$ 0
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	3	sq.yd.	$ 69.00	$ 207
11	TRENCH BACKFILL:				
	0-8 feet deep	10	lin. ft.	$ 68.00	$ 680
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 1,460
13	EROSION CONTROL:			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 730
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 49,300
	Contingencies (20%)				9,900
	Engineering (20%)				9,900
	Easement Acquisition				10,300
	TOTAL OPINION OF PROBABLE COST				**$ 79,400**

3404 Meyers Rd

Table 4.8-6
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meyers Road (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
SERVICE LATERALS					
1	GRINDER PUMP SYSTEM:	1	each	$ 12,200.00	$ 12,200
2	BUILDING SERVICE LINES:				
	1-1/4" HDPE (OPEN CUT)	130	lin. ft.	$ 47.00	$ 6,110
	1-1/4" HDPE (DRILL)	210	lin. ft.	$ 61.00	$ 12,810
3	CONNECTION TO EXISTING MANHOLE:	1	each	$ 6,800.00	$ 6,800
4	CLEAN-OUTS:	1	each	$ 3,000.00	$ 3,000
5	AIR RELEASE VALVES:	1	each	$ 1,169.00	$ 1,169
6	BUILDING SERVICE FITTINGS:	0	each	$ 234.00	$ 0
7	BUILDING SERVICE PLUG:	1	each	$ 234.00	$ 234
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	194	sq.yd.	$ 15.00	$ 2,910
9	REMOVE AND REPLACE DRIVEWAYS:				
	Bituminous	0	sq.yd.	$ 52.00	$ 0
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	3	sq.yd.	$ 69.00	$ 207
11	TRENCH BACKFILL:				
	0-8 feet deep	10	lin. ft.	$ 68.00	$ 680
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 1,460
13	EROSION CONTROL:			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 730
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 49,000
	Contingencies (20%)				9,800
	Engineering (20%)				9,800
	Easement Acquisition				8,900
	TOTAL OPINION OF PROBABLE COST				**$ 77,500**

3408 Meyers Rd

Table 4.8-7
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meyers Road (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
SERVICE LATERALS					
1	GRINDER PUMP SYSTEM:	1	each	$ 12,200.00	$ 12,200
2	BUILDING SERVICE LINES:				
	1-1/4" HDPE (OPEN CUT)	140	lin. ft.	$ 47.00	$ 6,580
	1-1/4" HDPE (DRILL)	215	lin. ft.	$ 61.00	$ 13,115
3	CONNECTION TO EXISTING MANHOLE:	1	each	$ 6,800.00	$ 6,800
4	CLEAN-OUTS:	1	each	$ 3,000.00	$ 3,000
5	AIR RELEASE VALVES:	1	each	$ 1,169.00	$ 1,169
6	BUILDING SERVICE FITTINGS:	0	each	$ 234.00	$ 0
7	BUILDING SERVICE PLUG:	1	each	$ 234.00	$ 234
8	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and Sod	206	sq.yd.	$ 15.00	$ 3,090
9	REMOVE AND REPLACE DRIVEWAYS:				
	Bituminous	7	sq.yd.	$ 52.00	$ 364
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
11	TRENCH BACKFILL:				
	0-8 feet deep	10	lin. ft.	$ 68.00	$ 680
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 1,460
13	EROSION CONTROL:			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 2,190
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 51,600
	Contingencies (20%)				10,300
	Engineering (20%)				10,300
	Easement Acquisition				5,500
	TOTAL OPINION OF PROBABLE COST				**$ 77,700**

3412 Meyers Rd

4.9 57th and Grant

57th and Grant is a small service area located within the District's FPA boundary. Exhibit 4.9 shows the approximate limits of this service area which is located west of Cass Avenue on 57th Street. The District's collection system has been extended to all properties in this service area.

A map of the collection system is included in Exhibit 4.9.

Sanitary sewers are available to all parcels in the 57th and Grant sub-basin as of March 2015. Approximately 315 feet of 8-inch sanitary sewer, two manholes, and one service connection was constructed in 2014 by a developer for an estimated cost of $40,000, including engineering costs. The service connection was provided to the house being constructed by the developer. The Engineer's estimate for extending this sewer and installing four service connections was $169,000, including contingency, engineering, legal/administrative, and easement costs with the average cost per lot at approximately $28,320.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.9

57th & GRANT ST

POSSIBLE SEWER ALIGNMENT

APRIL 2022

LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWERS
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- EXISTING EASEMENT

N

0 50 100 150 200
Feet

Table 4.9-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
57th and Grant
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth

(Sanitary sewers are available as of March 2015.)

Table 4.9-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
57th and Grant
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity	Unit Price	Amount

(Sanitary sewers are available as of March 2015.)

Table 4.9-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
57th and Grant
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity	Unit Price	Amount

(Sanitary sewers are available as of March 2015.)

4.10 60th and Cumnor

60th and Cumnor is a sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.10, the approximate limits of this sub-area are Fairview Avenue to the west, 59th Street to the north, Williams Street to the east, and 61st Street to the south. The proposed service area includes approximately 57 single-family residences with septic systems or vacant lots. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving unsewered properties within the 60th and Cumnor sub-area.

A number of factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, easements, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The 60th and Cumnor sub-area has a high point near 60th and Cumnor and the topography generally falls to the north and east. However, there are multiple smaller drainage divides in the sub-area. Serving the subject properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divides. The study area can be divided into multiple smaller service areas in order to create the most cost effective plan.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The one major road crossing that would significantly increase construction cost in this sub-area is Fairview Avenue. Thus, alternatives were considered to minimize crossing of this route with both the mainline sewer and building services.

The Village of Westmont owns and operates water mains on the streets within the sub-area. Water main atlases were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the 60th and Cumnor sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

The following are the proposed sub-basins:

Sub-basin	No. of Services	Layout	Cost Estimate
59th (West)	15	Table 4.10-1	Table 4.10-2
59th (East)	4	Table 4.10-3	Table 4.10-4
60th (West)	11	Table 4.10-5	Table 4.10-6
60th and Cumnor	7	Table 4.10-7	Table 4.10-8
60th (East)	3	Table 4.10-9	Table 4.10-10
Cumnor (South)	2	Table 4.10-11	Table 4.10-12
61st and Cumnor	12	Table 4.10-13	Table 4.10-14
61st (East)	3	Table 4.10-15	Table 4.10-16

Table 4.10-17 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.10.

The 59th (West) sub-basin sewer plan follows the topography which falls from Fairview east to Raintree Lane. The sewer should be placed in the north right-of-way to avoid the water main and overhead power lines in the south right-of-way. In 2012 approximately 100 feet of 8-inch sanitary sewer and 1 service were constructed for a total price of $22,000. Table 4.10-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $396,400 including contingency, engineering, and legal/administrative costs.

The 59th (East) sub-basin sewer plan follows the topography east to Williams Street. The sewer must be placed in the pavement to avoid utilities and trees in both parkways. This is the most costly sub-basin because of the pavement restoration, trench backfill, and small number of serviceable lots. Table 4.10-3 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-4 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $344,500, including contingency, engineering, and legal/administrative costs.

The 60th (West) sub-basin sewer plan follows the existing topography which falls west towards Fairview Avenue. The sewer should be placed in the south parkway to match the alignment of the existing sewer and avoid a road crossing. Table 4.10-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $241,400, including contingency, engineering, and legal/administrative costs.

The 60th and Cumnor sub-basin sewer plan follows the existing topography which falls from 293 W. 60th Street east to 217 W. 60th Street. Similar to the previous sub-basin, this sewer should be placed in the south parkway to avoid the existing water main and overhead power lines in the north parkway. Table 4.10-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $163,900, including contingency, engineering, and legal/administrative costs.

The 60th (East) sub-basin sewer plan will flow east from 105 W. 60th Street to the existing sanitary manhole at 35 W. 60th Street. The sewer should be placed in the south right-of-way to match the existing sewer alignment and avoid a road crossing. Table 4.10-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $88,300, including contingency, engineering, and legal/ administrative costs.

The Cumnor (South) sub-basin sewer plan will connect to the sewer on 61st Street, west of the existing manhole W-1-41. The existing sewer that is south of the intersection of 60th and

Cumnor does not have adequate cover to serve the sub-basin. This sub-basin is the second most costly per lot in the 60th and Cumnor sub-basin due to the small number of lots associated with the project. Table 4.10-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $122,500, including contingency, engineering, and legal/administrative costs.

The 61st and Cumnor sub-basin sewer plan will connect to the sewer at the southeast corner of Cumnor and 61st. The sewer should be placed in the west-bound travel lane to avoid the water main in the south parkway and the power lines, underground communication, and wetlands in the north parkway. Table 4.10-13 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-14 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $425,000 including contingency, engineering, and legal/administrative costs.

The 61st (East) sub-basin sewer plan will connect to the manhole 200 feet west of the northwest intersection of Williams and 61st. Unlike the sewer to the west, this sewer can be placed in the north parkway despite the utilities. Table 4.10-15 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.10-16 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $94,200, including contingency, engineering, and legal/administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.10

60TH AND CUMNOR

POSSIBLE SEWER ALIGNMENT

APRIL 2022

LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWERS
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- 59TH (WEST);TABLES 4.10-1, 4.10-2
- 59TH (EAST);TABLES 4.10-3, 4.10-4
- 60TH (WEST);TABLES 4.10-5, 4.10-6
- 60TH AND CUMNOR;TABLES 4.10-7, 4.10-8
- 60TH (EAST);TABLES 4.10-9, 4.10-10
- CUMNOR (SOUTH);TABLES 4.10-11, 4.10-12
- 61ST AND CUMNOR;TABLES 4.10-13, 4.10-14
- 61ST (EAST);TABLES 4.10-15, 4.10-16

N

0 100 200 300 400

Feet

Table 4.10-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
59th (West)
Preliminary Design Layout

	Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
59th Street						
	G-5-093 (existing)	736.0	723.50			12.5
				230	1.39%	
	UJ-3	736.0	726.69			9.3
				300	1.10%	
	UJ-2	740.0	729.99			10.0
				300	1.00%	
	UJ-1	741.0	732.99			8.0

Table 4.10-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
59th (West)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	830	lin. ft.	$ 96.00	$ 79,680
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	3	each	$ 7,000.00	$ 21,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	140	lin. ft.	$ 124.00	$ 17,360
5	TREE TUNNELING		130	lin. ft.	$ 211.00	$ 27,430
6	SEWER TELEVISING FOR FINAL INSPECTION					
			830	lin. ft.	$ 3.00	$ 2,490
7	SEWER TESTING FOR FINAL INSPECTION					
			830	lin. ft.	$ 3.00	$ 2,490
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		90	lin. ft.	$ 89.00	$ 8,010
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		1,533	sq.yd.	$ 15.00	$ 22,995
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ 0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		160	sq.yd.	$ 53.00	$ 8,480
	Aggregate		18	sq.yd.	$ 22.00	$ 396

Table 4.10-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
59th (West)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 2,190
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 2,190
	SUBTOTAL				$ 202,241
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	80	lin. ft.	$ 55.00	$ 4,400
	Far side	350	lin. ft.	$ 55.00	$ 19,250
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	8	each	$ 608.00	$ 4,864
	Far side	7	each	$ 749.00	$ 5,243
3	BUILDING SERVICE PLUG:	15	each	$ 228.00	$ 3,420
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	400	sq.yd.	$ 15.00	$ 6,000
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	137	sq.yd.	$ 69.00	$ 9,453
6	TRENCH BACKFILL				
	0-8 feet deep	182	lin. ft.	$ 68.00	$ 12,376
	SUBTOTAL				$ 65,006
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 267,200
	Contingencies		(20%)	2.00	53,400
	Engineering		(20%)		53,400
	Legal / Admin		(6%)		22,400
	TOTAL OPINION OF PROBABLE COST				**$ 396,400**
				Cost per lot	26,430

Table 4.10-3
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
59th (East)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
59th Street					
W-1-13 (existing)	728.0	714.68			13.3
			56	5.00%	
UJ-7	728.0	717.48			10.5
			300	1.50%	
UJ-6	731.0	721.98			9.0
			280	1.50%	
UJ-5	737.0	726.18			10.8

Table 4.10-4
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
59th (East)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	620	lin. ft.	$ 96.00	$ 59,520
		12-16 feet deep	16	lin. ft.	$ 116.00	$ 1,856
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	3	each	$ 7,000.00	$ 21,000
		12-16 feet deep	0	each	$ 8,500.00	$ 0
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	620	lin. ft.	$ 124.00	$ 76,880
		12-16 feet deep	16	lin. ft.	$ 150.00	$ 2,400
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ 0
6	SEWER TELEVISING FOR FINAL INSPECTION		636	lin. ft.	$ 3.00	$ 1,908
7	SEWER TESTING FOR FINAL INSPECTION		636	lin. ft.	$ 3.00	$ 1,908
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ 0
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		50	sq.yd.	$ 15.00	$ 750
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		565	sq.yd.	$ 70.00	$ 39,550
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		0	sq.yd.	$ 53.00	$ 0

Table 4.10-4
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
59th (East)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	TRAFFIC CONTROL:			Lump Sum	$ 5,110
	SUBTOTAL				$ 217,682
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	100	lin. ft.	$ 55.00	$ 5,500
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	4	each	$ 608.00	$ 2,432
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	4	each	$ 228.00	$ 912
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	91	sq.yd.	$ 15.00	$ 1,365
5	RESTORATION OF STREETS:				
	PCC Curb & Gutter	40	lin. ft.	$ 40.00	$ 1,600
6	TRENCH BACKFILL				
	0-8 feet deep	40	lin. ft.	$ 68.00	$ 2,720
	SUBTOTAL				$ 14,529
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 232,200
	Contingencies		(20%)		46,400
	Engineering		(20%)		46,400
	Legal / Admin		(6%)		19,500
	TOTAL OPINION OF PROBABLE COST				**$ 344,500**
				Cost per lot	86,130

Table 4.10-5
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
60th (West)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
60th Street					
W-1-104-E (existing)	741.2	735.84	400	0.40%	5.3
UJ-8	746.0	737.44			8.6

Table 4.10-6
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
60th (West)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	150	lin. ft.	$ 82.00	$ 12,300
		8-12 feet deep	250	lin. ft.	$ 96.00	$ 24,000
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ 0
		8-12 feet deep	1	each	$ 7,000.00	$ 7,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	160	lin. ft.	$ 124.00	$ 19,840
5	TREE TUNNELING		100	lin. ft.	$ 211.00	$ 21,100
6	SEWER TELEVISING FOR FINAL INSPECTION		400	lin. ft.	$ 3.00	$ 1,200
7	SEWER TESTING FOR FINAL INSPECTION		400	lin. ft.	$ 3.00	$ 1,200
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		105	lin. ft.	$ 89.00	$ 9,345
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		733	sq.yd.	$ 15.00	$ 10,995
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ 0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		100	sq.yd.	$ 53.00	$ 5,300
	Aggregate		9	sq.yd.	$ 22.00	$ 198
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 2,555

Table 4.10-6
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
60th (West)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 2,190
	SUBTOTAL				$ 124,753
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	128	lin. ft.	$ 55.00	$ 7,040
	Far side	150	lin. ft.	$ 55.00	$ 8,250
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	8	each	$ 608.00	$ 4,864
	Far side	3	each	$ 749.00	$ 2,247
3	BUILDING SERVICE PLUG:	11	each	$ 228.00	$ 2,508
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	222	sq.yd.	$ 15.00	$ 3,330
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	61	sq.yd.	$ 69.00	$ 4,209
6	TRENCH BACKFILL				
	0-8 feet deep	81	lin. ft.	$ 68.00	$ 5,508
	SUBTOTAL				$ 37,956
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 162,700
	Contingencies		(20%)		32,500
	Engineering		(20%)		32,500
	Legal / Admin		(6%)		13,700
	TOTAL OPINION OF PROBABLE COST				**$ 241,400**
				Cost per lot	21,950

Table 4.10-7
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
60th and Cumnor
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
60th Street					
G-5-095 (existing)	747.0	735.10	267	0.40%	11.9
UJ-9	745.0	736.17			8.8

Table 4.10-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
60th and Cumnor
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	8-12 feet deep	267	lin. ft.	$ 96.00	$ 25,632
2	SANITARY MANHOLES					
	48-inch	8-12 feet deep	1	each	$ 7,000.00	$ 7,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	60	lin. ft.	$ 124.00	$ 7,440
5	TREE TUNNELING		50	lin. ft.	$ 211.00	$ 10,550
6	SEWER TELEVISING FOR FINAL INSPECTION					
			267	lin. ft.	$ 3.00	$ 801
7	SEWER TESTING FOR FINAL INSPECTION					
			267	lin. ft.	$ 3.00	$ 801
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		60	lin. ft.	$ 89.00	$ 5,340
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		378	sq.yd.	$ 15.00	$ 5,670
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ 0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		76	sq.yd.	$ 53.00	$ 4,028
	Aggregate		16	sq.yd.	$ 22.00	$ 352
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 2,190

Table 4.10-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
60th and Cumnor
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 2,190
	SUBTOTAL				$ 79,524
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	64	lin. ft.	$ 55.00	$ 3,520
	Far side	150	lin. ft.	$ 55.00	$ 8,250
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	4	each	$ 608.00	$ 2,432
	Far side	3	each	$ 749.00	$ 2,247
3	BUILDING SERVICE PLUG:	7	each	$ 228.00	$ 1,596
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	178	sq.yd.	$ 15.00	$ 2,670
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	64	sq.yd.	$ 69.00	$ 4,416
6	TRENCH BACKFILL				
	0-8 feet deep	84	lin. ft.	$ 68.00	$ 5,712
	SUBTOTAL				$ 30,843
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 110,400
	Contingencies		(20%)		22,100
	Engineering		(20%)		22,100
	Legal / Admin		(6%)		9,300
	TOTAL OPINION OF PROBABLE COST				**$ 163,900**
				Cost per lot	23,410

Table 4.10-9
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
60th (East)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
60th Street					
G-6-155 (existing)	739.0	731.19	120	2.00%	7.8
UJ-11	744.0	733.59			10.4

Table 4.10-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
60th & Cumnor
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	20	lin. ft.	$ 82.00	$ 1,640
		8-12 feet deep	100	lin. ft.	$ 96.00	$ 9,600
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ 0
		8-12 feet deep	1	each	$ 7,000.00	$ 7,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	8-12 feet deep	44	lin. ft.	$ 124.00	$ 5,456
5	TREE TUNNELING		30	lin. ft.	$ 211.00	$ 6,330
6	SEWER TELEVISING FOR FINAL INSPECTION		120	lin. ft.	$ 3.00	$ 360
7	SEWER TESTING FOR FINAL INSPECTION		120	lin. ft.	$ 3.00	$ 360
8	CULVERT REMOVAL AND REPLACEMENT					
	15-inch		30	lin. ft.	$ 113.00	$ 3,390
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		244	sq.yd.	$ 15.00	$ 3,660
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ 0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		30	sq.yd.	$ 53.00	$ 1,590
	Aggregate		0	sq.yd.	$ 22.00	$ 0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 730

Table 4.10-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
60th & Cumnor
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 365
14	TRAFFIC CONTROL:			Lump Sum	$ 730
	SUBTOTAL				$ 48,011
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	32	lin. ft.	$ 55.00	$ 1,760
	Far side	50	lin. ft.	$ 55.00	$ 2,750
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	2	each	$ 608.00	$ 1,216
	Far side	1	each	$ 749.00	$ 749
3	BUILDING SERVICE PLUG:	3	each	$ 228.00	$ 684
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	67	sq.yd.	$ 15.00	$ 1,005
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	21	sq.yd.	$ 69.00	$ 1,449
6	TRENCH BACKFILL				
	0-8 feet deep	28	lin. ft.	$ 68.00	$ 1,904
	SUBTOTAL				$ 11,517
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 59,500
	Contingencies	(20%)			11,900
	Engineering	(20%)			11,900
	Legal / Admin	(6%)			5,000
	TOTAL OPINION OF PROBABLE COST				**$ 88,300**
				Cost per lot	29,430

Table 4.10-11
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Cumnor (South)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Cumnor Road					
UJ-13	740.0	728.50	330	2.00%	11.5
UJ-12	746.0	735.10			10.9

Table 4.10-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Cumnor (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	80	lin. ft.	$ 82.00	$ 6,560
		8-12 feet deep	250	lin. ft.	$ 96.00	$ 24,000
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ 0
		8-12 feet deep	1	each	$ 7,000.00	$ 7,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	30	lin. ft.	$ 102.00	$ 3,060
		8-12 feet deep	50	lin. ft.	$ 124.00	$ 6,200
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ 0
6	SEWER TELEVISING FOR FINAL INSPECTION		330	lin. ft.	$ 3.00	$ 990
7	SEWER TESTING FOR FINAL INSPECTION		330	lin. ft.	$ 3.00	$ 990
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		19	lin. ft.	$ 89.00	$ 1,691
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		600	sq.yd.	$ 15.00	$ 9,000
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		36	sq.yd.	$ 70.00	$ 2,520
	PCC Curb & Gutter		10	lin. ft.	$ 45.00	$ 450
	PCC Sidewalk		50	sq. ft.	$ 14.00	$ 700
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		76	sq.yd.	$ 53.00	$ 4,028
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 730

Table 4.10-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Cumnor (South)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 365
14	TRAFFIC CONTROL:			Lump Sum	$ 3,285
	SUBTOTAL				$ 78,369
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	32	lin. ft.	$ 55.00	$ 1,760
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	2	each	$ 608.00	$ 1,216
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	2	each	$ 228.00	$ 456
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	50	sq.yd.	$ 15.00	$ 750
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
6	TRENCH BACKFILL				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ 0
	SUBTOTAL				$ 4,182
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 82,600
	Contingencies		(20%)		16,500
	Engineering		(20%)		16,500
	Legal / Admin		(6%)		6,900
	TOTAL OPINION OF PROBABLE COST				**$ 122,500**
				Cost per lot	61,250

Table 4.10-13
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
61st and Cumnor
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
61st Street					
W-1-41 (existing)	736.3	725.04			11.3
			50	0.40%	
UJ-14	734.0	725.24			8.8
			380	0.40%	
UJ-15	734.0	726.76			7.2
			310	0.60%	
UJ-16	741.0	728.62			12.4

Table 4.10-14

Downers Grove Sanitary District April 2022

Possible Special Assessment for Sanitary Sewers

61st and Cumnor

Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	80	lin. ft.	$ 82.00	$ 6,560
		8-12 feet deep	660	lin. ft.	$ 96.00	$ 63,360
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	2	each	$ 7,000.00	$ 14,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	80	lin. ft.	$ 102.00	$ 8,160
		8-12 feet deep	660	lin. ft.	$ 124.00	$ 81,840
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ 0
6	SEWER TELEVISING FOR FINAL INSPECTION		740	lin. ft.	$ 3.00	$ 2,220
7	SEWER TESTING FOR FINAL INSPECTION		740	lin. ft.	$ 3.00	$ 2,220
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ 0
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		33	sq.yd.	$ 15.00	$ 495
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		658	sq.yd.	$ 70.00	$ 46,060
	PCC Curb & Gutter		120	lin. ft.	$ 45.00	$ 5,400
	PCC Sidewalk		50	sq. ft.	$ 14.00	$ 700
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		0	sq.yd.	$ 53.00	$ 0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 730

Table 4.10-14
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
61st and Cumnor
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 2,190
14	TRAFFIC CONTROL:			Lump Sum	$ 7,300
	SUBTOTAL				$ 253,335
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	336	lin. ft.	$ 55.00	$ 18,480
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	12	each	$ 608.00	$ 7,296
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	12	each	$ 228.00	$ 2,736
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	300	sq.yd.	$ 15.00	$ 4,500
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
6	TRENCH BACKFILL				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ 0
	SUBTOTAL				$ 33,012
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 286,300
	Contingencies		(20%)		57,300
	Engineering		(20%)		57,300
	Legal / Admin		(6%)		24,100
	TOTAL OPINION OF PROBABLE COST				**$ 425,000**
				Cost per lot	35,420

Table 4.10-15
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
61st (East)
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
61st Street					
G-6-155 (existing)	739.0	731.19	230	2.00%	7.8
UJ-17	744.0	735.79			8.2

Table 4.10-16
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
61st (East)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	130	lin. ft.	$ 82.00	$ 10,660
		8-12 feet deep	100	lin. ft.	$ 96.00	$ 9,600
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	0	each	$ 7,000.00	$ 0
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	15	lin. ft.	$ 102.00	$ 1,530
		8-12 feet deep	15	lin. ft.	$ 124.00	$ 1,860
5	TREE TUNNELING		20	lin. ft.	$ 211.00	$ 4,220
6	SEWER TELEVISING FOR FINAL INSPECTION		230	lin. ft.	$ 3.00	$ 690
7	SEWER TESTING FOR FINAL INSPECTION		230	lin. ft.	$ 3.00	$ 690
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		20	lin. ft.	$ 89.00	$ 1,780
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		444	sq.yd.	$ 15.00	$ 6,660
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ 0
	PCC Curb & Gutter		0	lin. ft.	$ 45.00	$ 0
	PCC Sidewalk		0	sq. ft.	$ 14.00	$ 0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		13	sq.yd.	$ 53.00	$ 689
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 1,460

Table 4.10-16
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
61st (East)
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 365
14	TRAFFIC CONTROL:			Lump Sum	$ 2,920
	SUBTOTAL				$ 55,224
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	84	lin. ft.	$ 55.00	$ 4,620
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	3	each	$ 608.00	$ 1,824
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	3	each	$ 228.00	$ 684
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	75	sq.yd.	$ 15.00	$ 1,125
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
6	TRENCH BACKFILL				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ 0
	SUBTOTAL				$ 8,253
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 63,500
	Contingencies		(20%)		12,700
	Engineering		(20%)		12,700
	Legal / Admin		(6%)		5,300
	TOTAL OPINION OF PROBABLE COST				**$ 94,200**
				Cost per lot	31,400

Table 4.10-17

Downers Grove Sanitary District April 2022

Possible Special Assessments for Sanitary Sewers

60th and Cumnor Sub-Area

Cost Summary

Sub-Basin:	Near Services	Far Services	Total Project Cost	Cost per lot
59th (West)	8	7	$ 396,400	$ 26,430
59th (East)	4	0	$ 344,500	$ 86,130
60th (West)	8	3	$ 241,400	$ 21,950
60th and Cumnor	4	3	$ 163,900	$ 23,410
60th (East)	2	1	$ 88,300	$ 29,430
Cumnor (South)	2	0	$ 122,500	$ 61,250
61st and Cumnor	12	0	$ 425,000	$ 35,420
61st (East)	3	0	$ 94,200	$ 31,400
TOTALS	43	14	$ 1,876,200	$ 32,920

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4.11 63rd Corridor

The 63rd Corridor is a sub-area within the District's FPA that is currently unsewered. As shown on Exhibit 4.11, the approximate limits of this sub-area are Carpenter Street to the west, 62nd Street to the north, Florence Avenue to the east, and 65th Street to the south. The proposed service area includes approximately 76 single-family residences with septic systems or vacant lots. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving all unsewered properties within the 63rd Corridor sub-area.

A number of factors were considered when determining the most cost-effective sewer layout. These factors include topography, major road crossings, easements, wetlands, tree protection, water main and existing utility location, and existing downstream sewer capacity. The 63rd Corridor sub-area contains a number of small pockets of unsewered lots that have multiple drainage divides. Serving the subject properties by following the ground contours will avoid deep cuts through the higher elevations along drainage divides. The study area can be divided into multiple smaller service areas in order to create the most cost effective plan.

In addition to following the ground contours, the low-cost sewer layout also needs to consider avoiding major road crossings. The three major road crossings that would significantly increase construction cost in this sub-area are 63rd Street, Main Street, and Fairview Avenue. Thus, alternatives were considered to minimize crossing of this route with both the mainline sewer and building services.

The Villages of Downers Grove and Westmont own and operate water mains on the streets within the sub-area. The water main design drawings were reviewed and field investigations of the sewer routes were completed to reduce the potential for utility conflicts and to ensure that the required ten feet of separation from water mains can be achieved.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that all of the existing sewers have adequate capacity to receive the additional flow from the 63rd Corridor sub-area.

For this analysis, the subject area was subdivided into smaller, more manageable sub-basins. The sub-basins were created using topography and projected sewer connection points.

The following are the proposed sub-basins:

Sub-basin	No. of Services	Layout	Cost Estimate
Carpenter and 63rd	8	Table 4.11-1	Table 4.11-2
Norfolk and Carpenter	8	Table 4.11-3	Table 4.11-4
Meadowlawn and Washington	28	Table 4.11-5	Table 4.11-6
63rd and Lyman	7	Table 4.11-7	Table 4.11-8
Fairmount and 63rd	9	Table 4.11-9	Table 4.11-10
Blodgett and 62nd	1	Table 4.11-11	Table 4.11-12
63rd and Osage	7	Table 4.11-13	Table 4.11-14
Grand Avenue	8	Table 4.11-15	Table 4.11-16

Table 4.11-17 is a summary table of opinions of probable cost. A map of the proposed sewer plan is included in Exhibit 4.11.

The Carpenter and 63rd sub-basin sewer plan follows the topography which falls west and south from Main Street and 63rd to Adelia and Carpenter. The existing sewers on the north side of 63rd and west side of Main Street are too shallow to serve this area. Thus, the sewer should be placed in the existing alley south of 63rd Street and on the east side of Carpenter to avoid the multiple existing utilities. Table 4.11-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $226,900, including contingency, engineering, and legal/administrative costs.

The Norfolk and Carpenter sub-basin topography falls from the ridge east of Carpenter, west along Norfolk and the sewer will need to flow west to the existing manhole on southwest corner of Carpenter and Norfolk. The sewer should match the alignment of the existing sewer in the south parkway. Table 4.11-3 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-4 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $177,200, including contingency, engineering, and legal/administrative costs.

The Meadowlawn and Washington sub-basin sewer plan follows the existing topography southeast to the existing manhole on Washington Street. The sewer should be placed in the south parkway of Meadowlawn, the east right-of-way of Washington, and an easement on 63rd to avoid the existing water main, IBC ducts, and power poles. The existing sewers to the west on 63rd and Meadowlawn are too shallow to serve this area. Table 4.11-5 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-6 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $922,600, including contingency, engineering, easements, and legal/administrative costs.

The 63rd and Lyman sub-basin sewer plan follows the topography east from 912 W. 63rd Street to the existing sewer on Lyman Avenue. This sewer will be parallel to a sewer on the south side of 63rd to avoid a large number of service crossings. This sewer should be placed in an easement to avoid the existing utilities in the parkway. This is the second most costly sub-basin because of the easements and the small number of serviceable lots. Table 4.11-7 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-8 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $390,400, including contingency, engineering, easements, and legal/administrative costs.

The Fairmount and 63rd sub-basin sewer plan will flow towards the existing manhole on the northeast corner of Fairmount and 63rd Street. The sewer on the south side of 63rd should be placed in easements, while the sewer on Fairmount will be placed in the pavement to avoid existing utilities. The existing sewer to the south on Fairmount is too shallow to serve this area. This sub-basin is the most costly because of augering under 63rd, the multiple easements, and the

low density of serviceable lots. Table 4.11-9 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-10 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $519,200, including contingency, engineering, easements, and legal/administrative costs.

The Blodgett and 62nd sub-basin sewer plan consists of a sewer extending east from Blodgett to serve only 535 W. 62nd Street. The existing sewer on Grand Avenue is not a possible connection point because the sewer is not deep enough. Table 4.11-11 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-12 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $51,200, including contingency, engineering, easements, and legal/administrative costs.

The 63rd and Osage sub-basin sewer plan will flow along the north side of 63rd Street from Blodgett to east of Osage Avenue. These properties along 63rd could not be served by the possible sewer on Grand Avenue or the existing sewer on Osage Avenue because of lack of adequate cover. This sewer should also be placed in an easement. The property at 630 W. 63rd Street is a lot that could be redeveloped at a later time and served by this sewer extension. Table 4.11-13 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-14 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $316,600, including contingency, engineering, easements, and legal/administrative costs.

The Grand Avenue sub-basin sewer plan will connect to the proposed 63rd and Osage sewer at 63rd and Grand. The existing sewer north of the intersection of Grand and 62nd is too shallow to adequately serve this area. The sewer should be placed in the east parkway between the sidewalk and pavement. Table 4.11-15 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.11-16 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $198,900, including contingency, engineering, and legal/administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.11

63rd CORRIDOR

POSSIBLE SEWER ALIGNMENT

MARCH 2021

LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWERS
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- CARPENTER AND 63RD;TABLES 4.11-1, 4.11-2
- NORFOLK AND CARPENTER;TABLES 4.11-3, 4.11-4
- MEADOWLAWN AND WASHINGTON;TABLES 4.11-5, 4.11-6
- 63RD AND LYMAN;TABLES 4.11-7, 4.11-8
- FAIRMOUNT AND 63RD;TABLES 4.11-9, 4.11-10
- BLODGETT AND 62ND;TABLES 4.11-11, 4.11-12
- 63RD AND OSAGE;TABLES 4.11-13, 4.11-14
- GRAND AVENUE;TABLES 4.11-15, 4.11-16

N

0 250 500 750 1,000

Feet

BAXTER & WOODMAN Consulting Engineers

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4-11 63corr.mxd 563dks - 3/24/2020

Table 4.11-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Carpenter and 63rd
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Carpenter Street					
UK-1	745.9	740.75			5.1
			223	0.40%	
UK-2	750.0	741.64			8.4
63rd Street					
			430	3.10%	
UK-3	767.0	754.97			12.0

Table 4.11-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Carpenter and 63rd
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	223	lin. ft.	$ 82.00	$ 18,286
		8-12 feet deep	430	lin. ft.	$ 96.00	$ 41,280
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	1	each	$ 7,000.00	$ 7,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	60	lin. ft.	$ 102.00	$ 6,120
		8-12 feet deep	76	lin. ft.	$ 124.00	$ 9,424
5	TREE TUNNELING		60	lin. ft.	$ 211.00	$ 12,660
6	SEWER TELEVISING FOR FINAL INSPECTION		653	lin. ft.	$ 3.00	$ 1,959
7	SEWER TESTING FOR FINAL INSPECTION		653	lin. ft.	$ 3.00	$ 1,959
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ 0
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		1,384	sq.yd.	$ 15.00	$ 20,767
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		27	sq.yd.	$ 70.00	$ 1,867
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		14	sq.yd.	$ 53.00	$ 754
	Aggregate		4	sq.yd.	$ 22.00	$ 98
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 2,920

Table 4.11-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Carpenter and 63rd
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 1,460
15	SPECIAL RESTORATION:			Lump Sum	$ 2,190
	SUBTOTAL				$ 141,573
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	60	lin. ft.	$ 55.00	$ 3,300
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	8	each	$ 608.00	$ 4,864
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	8	each	$ 228.00	$ 1,824
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	89	sq.yd.	$ 15.00	$ 1,333
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
6	TRENCH BACKFILL				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ 0
	SUBTOTAL				$ 11,321
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 152,900
	Contingencies	(20%)			30,600
	Engineering	(20%)			30,600
	Legal / Admin	(6%)			12,800
	TOTAL OPINION OF PROBABLE COST				**$ 226,900**
				Cost per lot	28,360

Table 4.11-3
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Norfolk and Carpenter
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Carpenter Street					
H-3-67-4 (existing)	745.6	738.50	230	0.40%	7.1
UK-4	748.0	739.42			8.6

Table 4.11-4
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Norfolk and Carpenter
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	60	lin. ft.	$ 82.00	$ 4,920
		8-12 feet deep	170	lin. ft.	$ 96.00	$ 16,320
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	0	each	$ 7,000.00	$ 0
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	65	lin. ft.	$ 102.00	$ 6,630
		8-12 feet deep	15	lin. ft.	$ 124.00	$ 1,860
5	TREE TUNNELING		50	lin. ft.	$ 211.00	$ 10,550
6	SEWER TELEVISING FOR FINAL INSPECTION					
			230	lin. ft.	$ 3.00	$ 690
7	SEWER TESTING FOR FINAL INSPECTION					
			230	lin. ft.	$ 3.00	$ 690
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		70	lin. ft.	$ 89.00	$ 6,230
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		373	sq.yd.	$ 15.00	$ 5,595
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		31	sq.yd.	$ 70.00	$ 2,170
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		16	sq.yd.	$ 53.00	$ 848
	Aggregate		0	sq.yd.	$ 22.00	$ 0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 1,460

Table 4.11-4
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Norfolk and Carpenter
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 365
14	TRAFFIC CONTROL:			Lump Sum	$ 2,190
15	SPECIAL RESTORATION:			Lump Sum	$ 1,095
16	WATER MAIN RELOCATION:	1	each	$ 7,800.00	$ 7,800
	SUBTOTAL				$ 81,513
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	60	lin ft.	$ 55.00	$ 3,300
	Far side	204	lin ft.	$ 55.00	$ 11,220
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	4	each	$ 608.00	$ 2,432
	Far side	4	each	$ 749.00	$ 2,996
3	BUILDING SERVICE PLUG:	8	each	$ 228.00	$ 1,824
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	222	sq.yd.	$ 15.00	$ 3,330
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	75	sq.yd.	$ 69.00	$ 5,175
6	TRENCH BACKFILL				
	0-8 feet deep	112	lin. ft.	$ 68.00	$ 7,616
	SUBTOTAL				$ 37,893
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 119,400
	Contingencies	(20%)			23,900
	Engineering	(20%)			23,900
	Legal / Admin	(6%)			10,000
	TOTAL OPINION OF PROBABLE COST				**$ 177,200**
				Cost per lot	22,150

Table 4.11-5
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Meadowlawn and Washington
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Washington Street					
H-6-55 (existing)	754.1	746.44			7.7
			40	0.40%	
UK-7	755.0	746.60			8.4
			210	0.40%	
UK-8	755.5	747.44			8.1
			140	0.80%	
UK-9	760.0	748.56			11.4
			265	1.60%	
UK-10	766.0	752.80			13.2
			40	1.60%	
UK-11	768.0	753.44			14.6
Meadowlawn Avenue					
			400	1.50%	
UK-6	764.0	753.44			10.6
			375	1.50%	
UK-5	770.0	759.07			10.9
63rd Street					
			400	1.50%	
UK-12	772.0	759.44			12.6
			270	0.40%	
UK-13	763.0	754.52			8.5

Table 4.11-6
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meadowlawn and Washington
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	40	lin. ft.	$ 82.00	$ 3,280
		8-12 feet deep	1,810	lin. ft.	$ 96.00	$ 173,760
		12-16 feet deep	290	lin. ft.	$ 116.00	$ 33,640
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	6	each	$ 7,000.00	$ 42,000
		12-16 feet deep	2	each	$ 8,500.00	$ 17,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	25	lin. ft.	$ 102.00	$ 2,550
		8-12 feet deep	520	lin. ft.	$ 124.00	$ 64,480
		12-16 feet deep	100	lin. ft.	$ 150.00	$ 15,000
5	TREE TUNNELING		210	lin. ft.	$ 211.00	$ 44,310
6	SEWER TELEVISING FOR FINAL INSPECTION					
			2,140	lin. ft.	$ 3.00	$ 6,420
7	SEWER TESTING FOR FINAL INSPECTION					
			2,140	lin. ft.	$ 3.00	$ 6,420
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		80	lin. ft.	$ 89.00	$ 7,120
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		3,422	sq.yd.	$ 15.00	$ 51,330
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		93	sq.yd.	$ 70.00	$ 6,510
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		144	sq.yd.	$ 53.00	$ 7,632
	Aggregate		10	sq.yd.	$ 22.00	$ 220

Table 4.11-6
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Meadowlawn and Washington
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 2,920
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 5,840
15	SPECIAL RESTORATION:			Lump Sum	$ 3,650
	SUBTOTAL				$ 506,912
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	300	lin. ft.	$ 55.00	$ 16,500
	Far side	408	lin. ft.	$ 55.00	$ 22,440
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	20	each	$ 608.00	$ 12,160
	Far side	8	each	$ 749.00	$ 5,992
3	BUILDING SERVICE PLUG:	28	each	$ 228.00	$ 6,384
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	578	sq.yd.	$ 15.00	$ 8,670
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	156	sq.yd.	$ 69.00	$ 10,764
6	TRENCH BACKFILL				
	0-8 feet deep	224	lin. ft.	$ 68.00	$ 15,232
	SUBTOTAL				$ 98,142
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 605,100
	Contingencies (20%)				121,000
	Engineering (20%)				121,000
	Legal / Admin (6%)				50,800
	Easement Acquisition				24,700
	TOTAL OPINION OF PROBABLE COST				**$ 922,600**
				Cost per lot	32,950

Table 4.11-7
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
63rd and Lyman
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
63rd Street					
G-3-76A (existing)	762.0	754.60			7.4
			50	0.40%	
UK-17	763.0	754.80			8.2
			250	0.40%	
UK-16	764.0	755.80			8.2
			300	1.20%	
UK-15	769.0	759.40			9.6
			250	1.20%	
UK-14	771.0	762.40			8.6

Table 4.11-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
63rd and Lyman
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	30	lin. ft.	$ 82.00	$ 2,460
		8-12 feet deep	820	lin. ft.	$ 96.00	$ 78,720
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	0	each	$ 5,300.00	$ 0
		8-12 feet deep	4	each	$ 7,000.00	$ 28,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	10	lin. ft.	$ 102.00	$ 1,020
		8-12 feet deep	215	lin. ft.	$ 124.00	$ 26,660
5	TREE TUNNELING		145	lin. ft.	$ 211.00	$ 30,595
6	SEWER TELEVISING FOR FINAL INSPECTION					
			850	lin. ft.	$ 3.00	$ 2,550
7	SEWER TESTING FOR FINAL INSPECTION					
			850	lin. ft.	$ 3.00	$ 2,550
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		30	lin. ft.	$ 89.00	$ 2,670
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		1,656	sq.yd.	$ 15.00	$ 24,840
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		28	sq.yd.	$ 70.00	$ 1,960
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		106	sq.yd.	$ 53.00	$ 5,618
	Aggregate		8	sq.yd.	$ 22.00	$ 176
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 3,650

Table 4.11-8
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
63rd and Lyman
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 5,840
15	SPECIAL RESTORATION:			Lump Sum	$ 2,190
	SUBTOTAL				$ 227,029
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	70	lin. ft.	$ 55.00	$ 3,850
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	7	each	$ 608.00	$ 4,256
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	7	each	$ 228.00	$ 1,596
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	78	sq.yd.	$ 15.00	$ 1,170
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
6	TRENCH BACKFILL				
	0-8 feet deep	10	lin. ft.	$ 68.00	$ 680
	SUBTOTAL				$ 11,552
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 238,600
	Contingencies (20%)				47,700
	Engineering (20%)				47,700
	Legal / Admin (6%)				20,000
	Easement Acquisition				36,400
	TOTAL OPINION OF PROBABLE COST				**$ 390,400**
				Cost per lot	55,770

Table 4.11-9
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Fairmount and 63rd
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Fairmount Avenue					
G-3-20 (existing)	763.0	752.70			10.3
			110	0.40%	
UK-19	765.0	753.14			11.9
			330	0.40%	
UK-21	764.0	754.46			9.5
63rd Street					
			400	0.40%	
UK-18	763.0	754.74			8.3
			370	0.40%	
UK-20	762.0	754.62			7.4

Table 4.11-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Fairmount and 63rd
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	20	lin. ft.	$ 82.00	$ 1,640
		8-12 feet deep	1,110	lin. ft.	$ 96.00	$ 106,560
2	SANITARY SEWER (AUGER):		80	lin. ft.	$ 302.00	$ 24,160
3	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	3	each	$ 7,000.00	$ 21,000
4	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
5	TRENCH BACKFILL					
	8-inch	0-8 feet deep	0	lin. ft.	$ 102.00	$ 0
		8-12 feet deep	419	lin. ft.	$ 124.00	$ 51,956
6	TREE TUNNELING		110	lin. ft.	$ 211.00	$ 23,210
7	SEWER TELEVISING FOR FINAL INSPECTION		1,210	lin. ft.	$ 3.00	$ 3,630
8	SEWER TESTING FOR FINAL INSPECTION		1,210	lin. ft.	$ 3.00	$ 3,630
9	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ 0
10	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		1,578	sq.yd.	$ 15.00	$ 23,670
11	RESTORATION OF STREETS:					
	Bit. Concrete Street		267	sq.yd.	$ 70.00	$ 18,690
12	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		91	sq.yd.	$ 53.00	$ 4,823
	Aggregate		5	sq.yd.	$ 22.00	$ 110
13	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 2,920

Table 4.11-10
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Fairmount and 63rd
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
14	EROSION CONTROL			Lump Sum	$ 730
15	TRAFFIC CONTROL:			Lump Sum	$ 5,840
16	SPECIAL RESTORATION:			Lump Sum	$ 1,825
	SUBTOTAL				$ 306,494
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	80	lin. ft.	$ 55.00	$ 4,400
	Far side	51	lin. ft.	$ 55.00	$ 2,805
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	8	each	$ 608.00	$ 4,864
	Far side	1	each	$ 749.00	$ 749
3	BUILDING SERVICE PLUG:	9	each	$ 228.00	$ 2,052
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	133	sq.yd.	$ 15.00	$ 1,995
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	20	sq.yd.	$ 69.00	$ 1,380
6	TRENCH BACKFILL				
	0-8 feet deep	22	lin. ft.	$ 68.00	$ 1,496
	SUBTOTAL				$ 19,741
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 326,200
	Contingencies (20%)				65,200
	Engineering (20%)				65,200
	Legal / Admin (6%)				27,400
	Easement Acquisition				35,200
	TOTAL OPINION OF PROBABLE COST				**$ 519,200**
				Cost per lot	57,690

Table 4.11-11
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Blodgett and 62nd
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
62nd Street					
G-3-54 (existing)	762.0	753.64	150	0.40%	8.4
UK-22	761.0	754.24			6.8

Table 4.11-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Blodgett and 62nd
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	85	lin. ft.	$ 82.00	$ 6,970
		8-12 feet deep	65	lin. ft.	$ 96.00	$ 6,240
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	0	each	$ 7,000.00	$ 0
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	10	lin. ft.	$ 102.00	$ 1,020
		8-12 feet deep	0	lin. ft.	$ 124.00	$ 0
5	TREE TUNNELING		0	lin. ft.	$ 211.00	$ 0
6	SEWER TELEVISING FOR FINAL INSPECTION					
			150	lin. ft.	$ 3.00	$ 450
7	SEWER TESTING FOR FINAL INSPECTION					
			150	lin. ft.	$ 3.00	$ 450
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		0	lin. ft.	$ 89.00	$ 0
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		217	sq.yd.	$ 15.00	$ 3,255
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ 0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		0	sq.yd.	$ 53.00	$ 0
	Aggregate		0	sq.yd.	$ 22.00	$ 0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 730

Table 4.11-12
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Blodgett and 62nd
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 0
14	TRAFFIC CONTROL:			Lump Sum	$ 730
15	SPECIAL RESTORATION:			Lump Sum	$ 730
	SUBTOTAL				$ 32,675
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	15	lin. ft.	$ 55.00	$ 825
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	1	each	$ 608.00	$ 608
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	1	each	$ 228.00	$ 228
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	11	sq.yd.	$ 15.00	$ 165
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
6	TRENCH BACKFILL				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ 0
	SUBTOTAL				$ 1,826
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 34,500
	Contingencies	(20%)			6,900
	Engineering	(20%)			6,900
	Legal / Admin	(6%)			2,900
	TOTAL OPINION OF PROBABLE COST				**$ 51,200**
				Cost per lot	51,200

Table 4.11-13
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
63rd and Osage
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
63rd Street					
W-1-105-4 (existing)	758.1	749.50			8.6
			320	0.40%	
UK-26	759.0	750.78			8.2
			300	0.40%	
UK-25	761.0	751.98			9.0
			280	0.40%	
UK-24	762.0	753.10			8.9

Table 4.11-14
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
63rd and Osage
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	400	lin. ft.	$ 82.00	$ 32,800
		8-12 feet deep	500	lin. ft.	$ 96.00	$ 48,000
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
		8-12 feet deep	2	each	$ 7,000.00	$ 14,000
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	76	lin. ft.	$ 102.00	$ 7,752
		8-12 feet deep	72	lin. ft.	$ 124.00	$ 8,928
5	TREE TUNNELING		40	lin. ft.	$ 211.00	$ 8,440
6	SEWER TELEVISING FOR FINAL INSPECTION					
			900	lin. ft.	$ 3.00	$ 2,700
7	SEWER TESTING FOR FINAL INSPECTION					
			900	lin. ft.	$ 3.00	$ 2,700
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		56	lin. ft.	$ 89.00	$ 4,984
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		1,300	sq.yd.	$ 15.00	$ 19,500
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		43	sq.yd.	$ 70.00	$ 3,010
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		57	sq.yd.	$ 53.00	$ 3,021
	Aggregate		0	sq.yd.	$ 22.00	$ 0
12	TREE REMOVAL AND TRIMMING:				Lump Sum	$ 1,460

Table 4.11-14
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
63rd and Osage
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 5,110
	SUBTOTAL				$ 175,235
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	105	lin. ft.	$ 55.00	$ 5,775
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	7	each	$ 608.00	$ 4,256
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	7	each	$ 228.00	$ 1,596
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	78	sq.yd.	$ 15.00	$ 1,170
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	0	sq.yd.	$ 69.00	$ 0
6	TRENCH BACKFILL				
	0-8 feet deep	0	lin. ft.	$ 68.00	$ 0
	SUBTOTAL				$ 12,797
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 188,000
	Contingencies (20%)				37,600
	Engineering (20%)				37,600
	Legal / Admin (6%)				15,800
	Easement Acquisition				37,600
	TOTAL OPINION OF PROBABLE COST				**$ 316,600**
				Cost per lot	45,230

Table 4.11-15
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Grand Avenue
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Grand Avenue					
UK-25	761	751.98	480	0.40%	9.0
UK-23	760.0	753.90			6.1

Table 4.11-16
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Grand Avenue
Engineer's Opinion of Probable Construction Cost

No.	Pay Item		Approximate Quantity		Unit Price	Amount
MAINLINE SEWER						
1	SANITARY SEWER (OPEN CUT)					
	8-inch	0-8 feet deep	480	lin. ft.	$ 82.00	$ 39,360
2	SANITARY MANHOLES					
	48-inch	0-8 feet deep	1	each	$ 5,300.00	$ 5,300
3	CONNECTION TO EXISTING MANHOLE					
	8-inch		1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL					
	8-inch	0-8 feet deep	138	lin. ft.	$ 102.00	$ 14,076
		8-12 feet deep	0	lin. ft.	$ 124.00	$ 0
5	TREE TUNNELING		20	lin. ft.	$ 211.00	$ 4,220
6	SEWER TELEVISING FOR FINAL INSPECTION		480	lin. ft.	$ 3.00	$ 1,440
7	SEWER TESTING FOR FINAL INSPECTION		480	lin. ft.	$ 3.00	$ 1,440
8	CULVERT REMOVAL AND REPLACEMENT					
	12-inch		40	lin. ft.	$ 89.00	$ 3,560
9	RESTORATION OF LAWNS AND PARKWAYS:					
	Topsoil and sod		713	sq.yd.	$ 15.00	$ 10,695
10	RESTORATION OF STREETS:					
	Bit. Concrete Street		0	sq.yd.	$ 70.00	$ 0
11	REMOVE AND REPLACE DRIVEWAYS					
	Bituminous		57	sq.yd.	$ 53.00	$ 3,021
	Aggregate		0	sq.yd.	$ 22.00	$ 0

Table 4.11-16
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Grand Avenue
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
12	TREE REMOVAL AND TRIMMING:			Lump Sum	$ 730
13	EROSION CONTROL			Lump Sum	$ 730
14	TRAFFIC CONTROL:			Lump Sum	$ 2,555
	SUBTOTAL				$ 93,927
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	60	lin. ft.	$ 55.00	$ 3,300
	Far side	204	lin. ft.	$ 55.00	$ 11,220
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	4	each	$ 608.00	$ 2,432
	Far side	4	each	$ 749.00	$ 2,996
3	BUILDING SERVICE PLUG:	8	each	$ 228.00	$ 1,824
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	222	sq.yd.	$ 15.00	$ 3,330
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	78	sq.yd.	$ 69.00	$ 5,382
	PCC Sidewalk	200	sq.ft.	$ 14.00	$ 2,800
6	TRENCH BACKFILL				
	0-8 feet deep	100	lin. ft.	$ 68.00	$ 6,800
	SUBTOTAL				$ 40,084
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 134,000
	Contingencies	(20%)			26,800
	Engineering	(20%)			26,800
	Legal / Admin	(6%)			11,300
	TOTAL OPINION OF PROBABLE COST				**$ 198,900**
				Cost per lot	24,860

Table 4.11-17

Downers Grove Sanitary District April 2022

Possible Special Assessments for Sanitary Sewers

63rd Corridor Sub-Area

Cost Summary

Sub-Basin:	Near Services	Far Services	Total Project Cost	Cost per lot
Carpenter and 63rd	8	0	$ 226,900	$ 28,360
Norfolk and Carpenter	4	4	$ 177,200	$ 22,150
Meadowlawn & Washington	20	8	$ 922,600	$ 32,950
63rd and Lyman	7	0	$ 390,400	$ 55,770
Fairmount and 63rd	8	1	$ 519,200	$ 57,690
Blodgett and 62nd	1	0	$ 51,200	$ 51,200
63rd and Osage	7	0	$ 316,600	$ 45,230
Grand Avenue	4	4	$ 198,900	$ 24,860
TOTALS	59	17	$ 2,803,000	$ 36,880
	76			

4.12 Gilbert and Lee

Gilbert and Lee is a small service area located within the District's FPA boundary. Exhibit 4.12 shows the approximate limits of this service area which is located south of Gilbert Street between Cornell Avenue and Lee Avenue. The proposed service area currently includes three lots that are developed as single-family residences. One property is on septic while the other two are currently connected to the sewer on Cornell Avenue with a private sewer. The purpose of this analysis is to establish the most cost-effective sanitary sewer plan for serving the three properties along Gilbert Street with a public sewer.

Several factors were considered when determining the most cost-effective sewer layout. These factors include topography, tree protection, water main and existing utility location. The Village of Downers Grove owns and operates water mains within the subject area limits. The only utilities of that could effect sewer construction are gas mains, overhead electric, and communication.

The final component of this analysis was to evaluate the downstream capacity of the existing sewers. Our analysis determined that the existing trunk sewer capacity on Cornell Avenue will not be affected by the marginal additional flow produced by the three lots on Gilbert Street.

A map of the proposed sewer plan is included in Exhibit 4.12.

The topography falls westerly from Lee Avenue to Cornell Avenue, and thus, the direction of flow will follow the same route. We identified one feasible connection point, the existing manhole north of the intersection of Cornell and Gilbert. This manhole is on the existing 42-inch trunk sewer that flows south on Cornell. The planned sewer will connect to the sewer two feet above the crown of the existing trunk sewer.

We recommend the sewer be installed in the north right-of-way to avoid the existing water main, gas mains, and landscaping located in the south right-of-way. The north parkway does have overhead power line, but adequate room is available for sewer installation. Table 4.12-1 is the proposed layout of the sewer size, length, and slope and manhole invert and depth. Table 4.12-2 includes a breakdown of the unit quantities and unit prices used to prepare the opinion of probable cost. The total opinion of project cost is $160,900, including contingency, engineering, and legal/administrative costs.

DOWNERS GROVE SANITARY DISTRICT UNSEWERED AREA PLAN

EXHIBIT 4.12

GILBERT AND LEE

POSSIBLE SEWER ALIGNMENT

APRIL 2022

LEGEND

- PROPOSED MANHOLES
- PROPOSED SEWERS
- EXISTING MANHOLES
- EXISTING SEWERS
- PARCEL BOUNDARIES
- GILBERT AND LEE

* CURRENTLY SERVED BY A PRIVATE SEWER

N

0 50 100 150 200
Feet

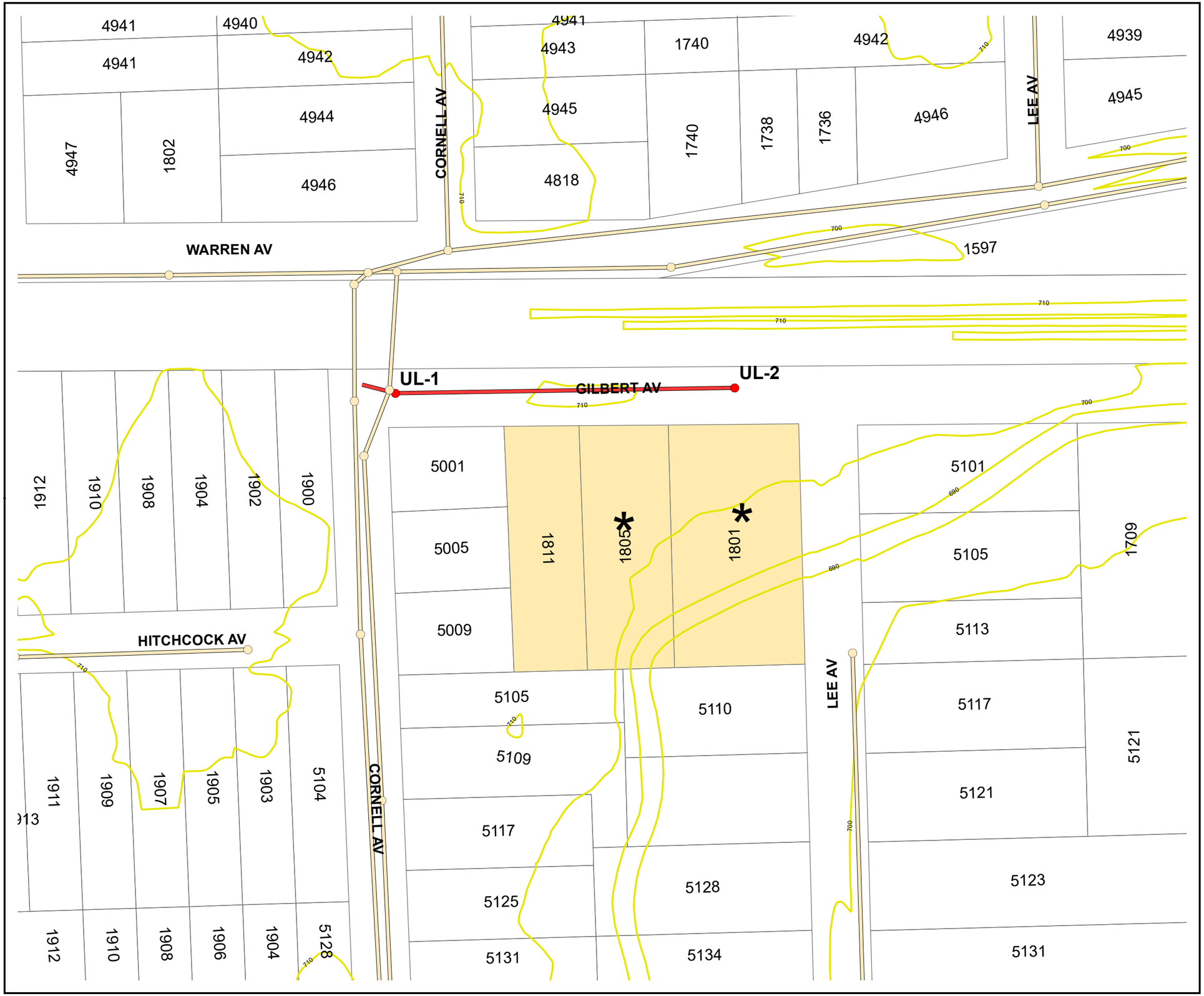

Table 4.12-1
Downers Grove Sanitary District
Possible Special Assessment for Sanitary Sewers
Gilbert & Lee
Preliminary Design Layout

Manhole Number	Rim	Invert	Length (ft)	Slope	Manhole Depth
Gilbert Street					
2-A-14-B-S (existing)	706.0	694.42	380	0.80%	11.6
UL-2	707.0	697.46			9.5

Table 4.12-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Gilbert & Lee
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
MAINLINE SEWER					
1	SANITARY SEWER (OPEN CUT)				
	8-inch 8-12 feet deep	380	lin. ft.	$ 96.00	$ 36,480
2	SANITARY MANHOLES				
	48-inch 8-12 feet deep	1	each	$ 7,000.00	$ 7,000
3	CONNECTION TO EXISTING MANHOLE				
	8-inch	1	each	$ 6,800.00	$ 6,800
4	TRENCH BACKFILL				
	8-inch 8-12 feet deep	25	lin. ft.	$ 124.00	$ 3,100
5	TREE TUNNELING	30	lin. ft.	$ 211.00	$ 6,330
6	SEWER TELEVISING FOR FINAL INSPECTION	380	lin. ft.	$ 3.00	$ 1,140
7	SEWER TESTING FOR FINAL INSPECTION	380	lin. ft.	$ 3.00	$ 1,140
8	CULVERT REMOVAL AND REPLACEMENT				
	12-inch	0	lin. ft.	$ 89.00	$ 0
9	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	1,056	sq.yd.	$ 15.00	$ 15,840
10	RESTORATION OF STREETS:				
	Bit. Concrete Street	9	sq.yd.	$ 70.00	$ 630

Table 4.12-2
Downers Grove Sanitary District April 2022
Possible Special Assessment for Sanitary Sewers
Gilbert & Lee
Engineer's Opinion of Probable Construction Cost

No.	Pay Item	Approximate Quantity		Unit Price	Amount
11	EROSION CONTROL			Lump Sum	$ 1,095
12	TRAFFIC CONTROL:			Lump Sum	$ 6,570
	SUBTOTAL				$ 86,980
SERVICE LATERALS					
1	BUILDING SERVICE LINES				
	Near side	90	lin. ft.	$ 55.00	$ 4,950
	Far side	0	lin. ft.	$ 55.00	$ 0
2	BUILDING SERVICE BRANCH FITTINGS				
	Near Side	3	each	$ 608.00	$ 1,824
	Far side	0	each	$ 749.00	$ 0
3	BUILDING SERVICE PLUG:	3	each	$ 228.00	$ 684
4	RESTORATION OF LAWNS AND PARKWAYS:				
	Topsoil and sod	17	sq.yd.	$ 15.00	$ 255
5	RESTORATION OF STREETS:				
	Bit. Concrete Street	50	sq.yd.	$ 69.00	$ 3,450
	PCC Sidewalk	150	sq.ft.	$ 14.00	$ 2,100
6	TRENCH BACKFILL				
	0-8 feet deep	120	lin. ft.	$ 68.00	$ 8,160
	SUBTOTAL				$ 21,423
	TOTAL ESTIMATE OF CONSTRUCTION COST				$ 108,400
	Contingencies	(20%)			21,700
	Engineering	(20%)			21,700
	Legal / Admin	(6%)			9,100
	TOTAL OPINION OF PROBABLE COST				**$ 160,900**
				Cost per lot	53,630

Table 4.13-1
Downers Grove Sanitary District
Unsewered Area Plan
Summary of Estimated Costs for Unsewered Areas

April 2022

	Tables		Page	Construction	Contingency	Engineering	Legal/Admin	Easements	Total	Number of Services	Cost per Service
4.1 73rd and Webster			***11***								
73rd and Webster	4.1-1	4.1-2	13-15	$ 647,300	$ 129,500	$ 129,500	$ 54,400	$ 39,800	$ 1,000,500	25	$ 40,020
4.2 Downers Grove Park			***16***								
Katrine-Maple (North)	4.2-1	4.2-2	20-22	$ 614,400	$ 122,900	$ 122,900	$ 51,600	$ 34,400	$ 946,200	25	$ 37,850
Inverness-Lomond-Elinor-Maple (North)	4.2-3	4.2-4	23-26	$ 1,954,000	$ 390,800	$ 390,800	$ 164,100	$ 112,100	$ 3,011,800	72	$ 41,830
Inverness-Belmont (North)	4.2-5	4.2-6	27-29	$ 133,000	$ 26,600	$ 26,600	$ 11,200	$ -	$ 197,400	6	$ 32,900
Katrine-College (South)	4.2-7	4.2-8	30-32	$ 441,500	$ 88,300	$ 88,300	$ 37,100	$ -	$ 655,200	27	$ 24,270
Lomond-College (South)	4.2-9	4.2-10	33-35	$ 663,800	$ 132,800	$ 132,800	$ 55,800	$ -	$ 985,200	29	$ 33,970
Elinor-College (South)	4.2-11	4.2-12	36-38	$ 281,100	$ 56,200	$ 56,200	$ 23,600	$ -	$ 417,100	9	$ 46,340
Janes-College (South)	4.2-13	4.2-14	39-41	$ 299,700	$ 59,900	$ 59,900	$ 25,200	$ -	$ 444,700	13	$ 34,210
Chase-Hobson-Belmont (South)	4.2-15	4.2-16	42-44	$ 481,000	$ 96,200	$ 96,200	$ 40,400	$ -	$ 713,800	15	$ 47,590
4.3 Downers Grove Gardens			***46***								
Janes-Leonard-Chase-Puffer (North)	4.3-1	4.3-2	52-54	$ 957,700	$ 191,500	$ 191,500	$ 80,400	$ -	$ 1,421,100	68	$ 20,900
Janes-Leonard-Chase-Puffer (South)	4.3-3	4.3-4	55-57	$ 1,804,100	$ 360,800	$ 360,800	$ 151,500	$ -	$ 2,677,200	129	$ 20,750
Belmont Road (Southwest)	4.3-5	4.3-6	58-60	$ 414,800	$ 83,000	$ 83,000	$ 34,800	$ 64,700	$ 680,300	25	$ 27,210
Belmont Road (East)	4.3-7	4.3-8	61-63	$ 799,400	$ 159,900	$ 159,900	$ 67,200	$ 149,000	$ 1,335,400	52	$ 25,680
Pershing Avneue (South)	4.3-9	4.3-10	64-66	$ 871,300	$ 174,300	$ 174,300	$ 73,200	$ -	$ 1,293,100	64	$ 20,200
Woodward and 63rd Street	4.3-11	4.3-12	67-69	$ 180,100	$ 36,000	$ 36,000	$ 15,100	$ 18,100	$ 285,300	17	$ 16,780
Lee and Boundry (South)	4.3-13	4.3-14	70-72	$ 546,600	$ 109,300	$ 109,300	$ 45,900	$ -	$ 811,100	39	$ 20,800
Springside Avenue (South)	4.3-15	4.3-16	73-75	$ 230,400	$ 46,100	$ 46,100	$ 19,400	$ -	$ 342,000	14	$ 24,430
Springside-Jefferson-Downers (North)	4.3-17	4.3-18	76-78	$ 1,079,700	$ 215,900	$ 215,900	$ 90,700	$ -	$ 1,602,200	52	$ 30,810
Pershing-Woodward-Maple (North)	4.3-19	4.3-20	79-81	$ 2,043,800	$ 408,800	$ 408,800	$ 171,700	$ 42,800	$ 3,075,900	104	$ 29,580
Sherman Avenue (North)	4.3-21	4.3-22	82-84	$ 922,400	$ 184,500	$ 184,500	$ 77,500	$ -	$ 1,368,900	54	$ 25,350
Lee Avenue (North)	4.3-23	4.3-24	85-87	$ 1,061,900	$ 212,400	$ 212,400	$ 89,200	$ 14,600	$ 1,590,500	54	$ 29,450
4.4 Fairhaven Court			***89***								
Fairhaven Court	4.4-1	4.4-2	91	$ 253,700	$ 50,700	$ 50,700	$ 21,300	$ 43,700	$ 420,100	10	$ 42,010
4.5 Burlington Highlands			***94***								
Morton and Downers	4.5-1	4.5-2	99-101	$ 1,004,200	$ 200,800	$ 200,800	$ 84,300	$ 16,600	$ 1,506,700	39	$ 38,630
40th and Seely (North)	4.5-3	4.5-4	102-104	$ 444,000	$ 88,800	$ 88,800	$ 37,300	$ -	$ 658,900	21	$ 31,380
40th and Northcott	4.5-5	4.5-6	105-107	$ 310,900	$ 62,200	$ 62,200	$ 26,100	$ -	$ 461,400	14	$ 32,960
Virginia-Seely-Janet-Downers	4.5-7	4.5-8	108-110	$ 839,600	$ 167,900	$ 167,900	$ 70,500	$ -	$ 1,245,900	43	$ 28,970
Belle Aire and Venard	4.5-9	4.5-10	111-113	$ 661,300	$ 132,300	$ 132,300	$ 55,600	$ 24,700	$ 1,006,200	21	$ 47,910
Vernard Road (North)	4.5-11	4.5-12	114-116	$ 272,500	$ 54,500	$ 54,500	$ 22,900	$ -	$ 404,400	10	$ 40,440
Vernard Road (South) (completed)	*4.5-13*	*4.5-14*	*117-119*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*0*	*$ -*
Virginia Avenue (West)	4.5-15	4.5-16	120-122	$ 110,300	$ 22,100	$ 22,100	$ 9,300	$ -	$ 163,800	6	$ 27,300
Lacey-Carol-Northcott	4.5-17	4.5-18	123-125	$ 49,700	$ 9,900	$ 9,900	$ 4,200	$ -	$ 73,700	1	$ 73,700
Lacey and Janet	4.5-19	4.5-20	126-128	$ 224,400	$ 44,900	$ 44,900	$ 18,900	$ -	$ 333,100	14	$ 23,790
Ogden-Lacey-Grant-Lee (South)	4.5-21	4.5-22	129-131	$ 1,725,100	$ 345,000	$ 345,000	$ 144,900	$ 133,600	$ 2,693,600	18	$ 149,640

Table 4.13-1
Downers Grove Sanitary District
Unsewered Area Plan
Summary of Estimated Costs for Unsewered Areas

April 2022

	Tables		Page	Construction	Contingency	Engineering	Legal/Admin	Easements	Total	Number of Services	Cost per Service
4.6 Golf Addition			***133***								
Drendel and Ogden (completed)	*4.6-1*	*4.6-2*	*137-139*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*0*	*$ -*
Cross and Ogden (South) (completed)	*4.6-3*	*4.6-4*	*140-142*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*0*	*$ -*
Cross and Ogden (North)	4.6-5	4.6-6	143-145	$ 259,200	$ 51,800	$ 51,800	$ 21,800	$ 30,400	$ 415,000	2	N/A
Drendel and Granville (South)	4.6-7	4.6-8	146-148	$ 601,100	$ 120,200	$ 120,200	$ 50,500	$ 18,600	$ 910,600	28	$ 32,520
Burlington and Walnut (South)	4.6-9	4.6-10	149-151	$ 150,800	$ 30,200	$ 30,200	$ 12,700	$ -	$ 223,900	2	N/A
Puffer North of Prairie	4.6-11	4.6-12	152-154	$ 461,800	$ 92,400	$ 92,400	$ 38,800	$ 10,400	$ 695,800	16	$ 43,490
4.7 Florence Avenue			***156***								
Florence Avenue	4.7-1	4.7-2	158-160	$ 180,400	$ 36,100	$ 36,100	$ 15,200	$ -	$ 267,800	11	$ 24,350
4.8 Meyers Road and 31st Street			***161***								
Meyers Road (North)	4.8-1	4.8-2	164-166	$ 163,000	$ 32,500	$ 32,500	$ -	$ 34,900	$ 262,900	3	N/A
Meyers Road (South)	4.8-3	4.8-4	167-170	$ 200,400	$ 40,100	$ 40,100	$ -	$ 35,200	$ 315,800	4	N/A
4.9 57th and Grant			***171***								
57th and Grant (completed)	*4.9-1*	*4.9-2*	*173-175*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*0*	*$ -*
4.10 60th and Cumnor			***176***								
59th (West)	4.10-1	4.10-2	180-182	$ 267,200	$ 53,400	$ 53,400	$ 22,400	$ -	$ 396,400	15	$ 26,430
59th (East)	4.10-3	4.10-4	183-185	$ 232,200	$ 46,400	$ 46,400	$ 19,500	$ -	$ 344,500	4	$ 86,130
60th (West)	4.10-5	4.10-6	186-188	$ 162,700	$ 32,500	$ 32,500	$ 13,700	$ -	$ 241,400	11	$ 21,950
60th and Cumnor	4.10-7	4.10-8	189-191	$ 110,400	$ 22,100	$ 22,100	$ 9,300	$ -	$ 163,900	7	$ 23,410
60th (East)	4.10-9	4.10-10	192-194	$ 59,500	$ 11,900	$ 11,900	$ 5,000	$ -	$ 88,300	3	$ 29,430
Cumnor (South)	4.10-11	4.10-12	195-197	$ 82,600	$ 16,500	$ 16,500	$ 6,900	$ -	$ 122,500	2	$ 61,250
61st and Cumnor	4.10-13	4.10-14	198-200	$ 286,300	$ 57,300	$ 57,300	$ 24,100	$ -	$ 425,000	12	$ 35,420
61st (East)	4.10-15	4.10-16	201-203	$ 63,500	$ 12,700	$ 12,700	$ 5,300	$ -	$ 94,200	3	$ 31,400
4.11 63rd Corridor			***205***								
Carpenter and 63rd	4.11-1	4.11-2	209-211	$ 152,900	$ 30,600	$ 30,600	$ 12,800	$ -	$ 226,900	8	$ 28,360
Norfolk and Carpenter	4.11-3	4.11-4	212-214	$ 119,400	$ 23,900	$ 23,900	$ 10,000	$ -	$ 177,200	8	$ 22,150
Meadowlawn and Washington	4.11-5	4.11-6	215-217	$ 605,100	$ 121,000	$ 121,000	$ 50,800	$ 24,700	$ 922,600	28	$ 32,950
63rd and Lyman	4.11-7	4.11-8	218-220	$ 238,600	$ 47,700	$ 47,700	$ 20,000	$ 36,400	$ 390,400	7	$ 55,770
Fairmount and 63rd	4.11-9	4.11-10	221-223	$ 326,200	$ 65,200	$ 65,200	$ 27,400	$ 35,200	$ 519,200	9	$ 57,690
Blodgett and 62nd	4.11-11	4.11-12	224-226	$ 34,500	$ 6,900	$ 6,900	$ 2,900	$ -	$ 51,200	1	$ 51,200
63rd and Osage	4.11-13	4.11-14	227-229	$ 188,000	$ 37,600	$ 37,600	$ 15,800	$ 37,600	$ 316,600	7	$ 45,230
Grand Avenue	4.11-15	4.11-16	230-232	$ 134,000	$ 26,800	$ 26,800	$ 11,300	$ -	$ 198,900	8	$ 24,860
4.12 Gilbert and Lee			***234***								
Gilbert and Lee	4.12-1	4.12-2	236-238	$ 108,400	$ 21,700	$ 21,700	$ 9,100	$ -	$ 160,900	3	$ 53,630
Totals				***$ 27,511,900***	***$ 5,502,300***	***$ 5,502,300***	***$ 2,280,600***	***$ 957,500***	***$ 41,754,600***	***1,292***	***$ 32,318***