



Public Facilities Needs Assessment

**For the
Bear Claw Way Drainage Improvement Impact Fee Zone
and the
Mineral Point Road Drainage Impact Fee Zone
of the
Westside Drainage Improvement Impact Fee District**

June 15th, 2018

Introduction

Pursuant to the requirements of Wis. Stat Sec. 66.0617(4), the City of Madison has prepared this public facilities needs assessment for certain stormwater management improvements for which impact fees may be imposed. Stormwater management improvements are and will be necessary to accommodate land development on the far west side of Madison. This work will serve the area identified as the Westside Drainage Improvement (WDI) Impact Fee District (the “District”).

The District is located on the far west side of Madison, and includes portions of land within the City of Madison and the Town of Middleton. With future development, the portion within the City of Madison is expected to expand. Per intermunicipal agreement with the Town of Middleton, Pioneer Road (extended north and south) shall be Madison’s ultimate boundary to the west. The District generally includes those lands west of Pleasant View Road and east of Pioneer Road (extended north and south), and north of McKee Road and south of Blackhawk Road. It is anticipated that this area will continue to experience steady development, necessitating stormwater management planning and improvements to accommodate the land development.

The District is being created as a large stormwater improvement impact fee district that will consist of smaller impact fee zones established over time to address stormwater needs created by planned and future development within the District. Initially, with this needs assessment and the creation of the District, two impact fee zones are being established within the District to address specific development needs: the Bear Claw Way Drainage Improvement Impact Fee Zone and the Mineral Point Road Drainage Impact Fee Zone. As the District develops, other areas within the District may require establishment of additional impact fee zones, depending on timing, location, and specific improvements needed for each development. Rather than funding these specific improvements over the entire District or even for a more regionalized watershed, they shall be funded by the specific properties served by those localized improvements. Public facilities needs assessments will need to be separately prepared for any future zones created within this District. Future regional improvements to be funded by impact fees will require the creation of an entirely separate impact fee.

With this needs assessment, the City of Madison is proposing to construct drainage improvements to serve two small subdrainage areas within the District. These areas will have problematic drainage patterns as they develop if these storm sewer improvements proposed with this impact fee district are not constructed.

The Bear Claw Way Drainage Improvement Impact Fee Zone and the Mineral Point Road Drainage Impact Fee Zone within the District are being created to help finance these improvements in the specific watersheds, improvements which are necessary to accommodate land development within each Zone. Differential fees for these two zones are justified based on the unique and specific stormwater needs of each watershed.

Location and Description of Impact Fee District

The District shall generally include the following:

Any and all parcels (platted and/or metes and bounds), or portions thereof, that are located within, or that are altered or pumped to discharge sewer outflow within the Westside Drainage Improvement service area, generally defined as those lands lying west of Pleasant View Road and east of Pioneer Road (extended north and south), and north of McKee Road and south of Blackhawk Road, located in the Town of Middleton, the Town of Verona and the City of Madison. (See Exhibit A, attached.)

The District shall only include those lands that are within the future boundaries of the City of Madison, as established by the City of Madison and Town of Middleton Cooperative Plan and, with regard to lands in the Town of Verona, as annexed into the City of Madison or as otherwise agreed to by and between the Town of Verona and/or the City of Verona.

Location and Description of Impact Fee Zones

Bear Claw Way Drainage Improvement Impact Fee Zone

The Bear Claw Way Drainage Improvement Impact Fee Zone shall include the following:

Any and all parcels (platted and/or metes and bounds), or portions thereof, that are located within, or that are altered to discharge stormwater within the Bear Claw Way Drainage Improvement Impact Fee Zone Watershed. These lands are located within the City of Madison and Town of Middleton as follows:

Parts of the SE $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 21 within Town 7 North, Range 8 East, located in the Town of Middleton and the City of Madison. (See Exhibit A, attached.)

Mineral Point Road Drainage Impact Fee Zone

The Mineral Point Road Drainage Impact Fee Zone shall include the following:

Any and all parcels (platted and/or metes and bounds), or portions thereof, that are located within, or that are altered to discharge stormwater within the Mineral Point Road Drainage Impact Fee Zone Watershed. These lands are located within the City of Madison and Town of Middleton as follows:

Parts of the NE $\frac{1}{4}$ of Section 28, parts of the SE $\frac{1}{4}$ of Section 21, part of the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 21, and part of the NW $\frac{1}{4}$ of Section 28 all within Town 7 North, Range 8 East, located in the Town of Middleton and the City of Madison. (See Exhibit A, attached.)

Existing Public Facilities

Regional Stormwater Infrastructure

In early 2001, the City of Madison contracted with Earth Tech, Inc. to develop a stormwater management plan for the LBMC watershed which encompasses this entire area. The Lower Badger Mill Creek Stormwater Management Plan (SWMP) was developed to address stormwater quality and quantity issues associated with large-scale development in the region. Implementation of the SWMP as proposed will result in the peak discharge (at Mid Town Road) remaining at the existing rate. For a more detailed description of existing conditions, refer to the SWMP produced by Earth Tech, Inc. titled *Lower Badger Mill Creek Stormwater Management Analyses*¹ on file at City of Madison Engineering. This report was completed in June 2003.

The stormwater improvements included in the LBMC Impact Fee district addressed regional stormwater infrastructure. The WDI Impact Fee overlaps the LBMC impact fee, yet is needed to improve localized drainage for development. Development within the Mineral Point Road Drainage Impact Fee Zone and the Bear Claw Way Drainage Improvement Impact Fee Zone that overlap the LBMC Stormwater Impact Fee Zone will be charged impact fees for the WDI Impact Fee in addition to the existing LBMC Stormwater Impact Fees.

Stormwater at Bear Claw

Within the Bear Claw Way Drainage Improvement Impact Fee Zone, approximately 31.0 acres are undeveloped. It is assumed that 60% of this area (18.6 acres) shall be developed and will be assessed impact fees.

There are no existing public stormwater facilities with the Bear Claw Way Drainage Improvement Impact Fee Zone. However, the existing stormwater infrastructure in developed areas adjacent to the impact fee zone adequately conveys stormwater for existing development, detaining peak flows. The existing stormwater infrastructure adjacent to the Zone is shown on Exhibit B.

Stormwater at Mineral Point

Within the Mineral Point Road Drainage Impact Fee Zone, approximately 64.7 acres are undeveloped. It is assumed that 60% of this area (38.8 acres) shall be developed and will be assessed impact fees. In addition, the existing developed area within the watershed (19.6 acres) is included within the in the impact fee zone as these properties will benefit from the improvements as well.

The existing stormwater infrastructure in developed areas within and adjacent to the impact fee zone adequately conveys stormwater for existing development, and detains peak flows. This existing infrastructure is show on Exhibit D.

New Public Facilities Required for Land Development

Stormwater Improvements Within the Bear Claw Way Zone

Currently, portions of this area drain to an enclosed depression that has discharge limitations that exceed those required under MGO Chapter 37. The Bear Claw Way Drainage Improvement proposes to construct infrastructure to convey the runoff of the Bear Claw Way Drainage Improvement Impact Fee Zone to the anticipated regional greenway system draining south and outside of the watershed draining to the enclosed depression. In order to provide adequate drainage infrastructure to support the development of the area, the City proposes to construct a 36-inch storm sewer interceptor that will begin at the southwest corner of the Impact Fee Zone and flow west along Elderberry Road to the anticipated North/South greenway system.

Developers shall be required to construct “local” improvements consisting of detention basins, wet ponds, and greenways with their respective developments within the watershed. These local improvements shall be in compliance with City, County, and Wisconsin Department of Natural Resources stormwater management standards.

The proposed improvement is shown on Exhibit B. It will be necessary to secure land interests (a 30-ft wide sanitary sewer easement) in order to construct the storm sewer interceptor. Easement acquisition costs, including temporary construction easements, shall be included in the Impact Fee. The estimated capital costs associated with designing and constructing the storm sewer facilities that are necessary to accommodate land development in the Zone are set forth in Exhibit C. These costs do not include expenses for operation or maintenance of the improvements following construction.

Stormwater Improvements Within the at Mineral Point Road Zone

The City of Madison proposes to construct a storm sewer interceptor to convey stormwater for the future development north of Mineral Point Road and east of Redan Drive. The existing drainage system downstream of this area is not equipped to accept runoff from lands in a developed condition. The proposed 27-inch and 36-inch storm sewer will convey the runoff from the watershed into a greenway system. In general, the new storm sewer main shall follow proposed or existing roads in order to ensure the storm sewer can be easily serviced. In areas where road design is conceptual, the location is subject to change as plat plans are developed. In areas where the storm sewer will be installed before the road is built, the sewer will be built in a 30-ft wide easement. Easement acquisition costs, including temporary construction easements, are included in the Impact Fee.

Developers shall be required to construct “local” improvements consisting of detention basins, wet ponds, and greenways with their respective developments within the watershed. These local improvements shall be in compliance with City, County, and Wisconsin Department of Natural Resources stormwater management standards.

The proposed improvement is shown on Exhibit D. It will be necessary to secure land interests (a 30-ft wide sanitary sewer easement) in order to construct the storm sewer improvements. Easement acquisition costs, including temporary construction easements, shall be included in the Impact Fee. The estimated capital costs associated with designing and constructing the storm sewer facilities that are necessary to accommodate land

development in the Zone are set forth in Exhibit E. These costs do not include expenses for operation or maintenance of the improvements following construction.

Project Funding

To finance these stormwater improvements, the City of Madison, pursuant to Wis. Stats. Sec. 66.0617(2), is proposing to amend Sec. 20.08 of the Madison General Ordinances to create an impact fee and two smaller impact fee zones that will require developers to pay for the capital costs incurred by the City to make the stormwater improvements needed to accommodate land development within the zones. In the Westside Drainage Improvement District, including the zones established hereunder and those established separately in the future, these costs would be associated with the installation of localized storm sewer improvements, including costs for easement or fee acquisition, surveying, planning, design, permitting, and construction.

Of note, because the improvements in the Mineral Point Road Drainage Impact Fee Zone will also benefit developed lands within the Zone, roughly 34% of the projected project costs of the improvements will not be funded by the impact fee and will be funded separately by the City. The impact fee will not be used to pay for that portion of the project that benefits the developed parcels within the zone.

Impact Fee

The impact fees shall be based on the *net developable* area of the proposed development. The net developable area is the area of a proposed development, exclusive of street rights of ways and drainage areas or Park areas. The rate will be the same for all land uses and zoning districts. It was assumed for this impact fee that 60% of the total undeveloped lands in each Zone would be included in the net developable areas. It is assumed that the remaining 40% will not be developed due to the use of lands for public purposes such as street rights of ways, public parks, public drainage land, and other public natural areas. Net acres of developed lands are the total area of land, excluding the street rights of way, that are already developed.

Properties that are undeveloped shall pay an impact fee at the time of development in accord with State Statutes and City Ordinance. Lands within the impact fee zones that are developed at the time of creation of the zones shall not be charged an impact fee.

To calculate the impact fees within the Bear Claw Way Drainage Improvement Impact Fee Zone, the City of Madison first estimated the total cost to complete the stormwater components of the project to be \$316,261.45 (2018 dollars). The estimated total cost was divided by the net developable area (18.6 acres) within the watershed. This rate is calculated on a 'per acre' basis but also established as a rate 'per 1000 square feet net area'. The fee rate is calculated to be \$16,990.36 per acre, or \$390.04 per 1,000 square feet of Net Developed Area.

To calculate the impact fees within the Mineral Point Road Drainage Impact Fee Zone, the City of Madison first estimated the total cost to complete the stormwater components of the project to be \$432,203.01 (2018 dollars). The estimated total cost was divided by the net developable and previously developed area (58.4 acres) within the watershed. This rate is calculated on a 'per acre' basis but is also established as a rate 'per 1000 square feet net

area'. The fee rate is calculated to be \$7,401.21 per acre, or \$169.91 per 1,000 square feet of Net Developed Area. That portion of the project attributable to developed lands will not be paid for by impact fees.

For both the Bear Claw Way and Mineral Point Road stormwater impact fees, the City of Madison will use the Stormwater Utility to assume the pro-rated cost for developed areas in the City of Madison. Refer to the attached tables (Exhibit C and Exhibit E) for a detailed cost analysis for each segment of the project.

Adjustments to Impact Fee

The Westside Drainage Improvement Impact Fee District, and those impact fee zones created within it, including both the Bear Claw Way Drainage Improvement Impact Fee Zone and the Mineral Point Road Drainage Impact Fee Zone, shall be adjusted annually for inflation, based on the Construction Cost Index as published in the *Engineering News Record*. The base month/year for calculating such adjustment shall be the month/year of final Common Council adoption of this Impact Fee Ordinance, and future amendments thereto that establish new impact fee zones within the District.

Effect of Storm Impact Fees on Housing Costs

Depending on where a parcel is located on within the Westside Drainage Improvement Impact Fee District, fees may include any of the following: stormwater interceptor/land acquisition impact fees/assessments at Bear Claw Way or Mineral Point Road. The fees were estimated to be \$7,401.21 per net acre for stormwater at Mineral Point Road (\$169.91 per 1,000 square feet of Net Developed Area), and \$16,990.36 per net acre for stormwater at Bear Claw Way (\$390.04 per 1,000 square feet of Net Developed Area). The effect on housing costs was also calculated, based on anticipated lot size and average housing densities for a variety of residential zones, including the two examples that follow. The current (2018) minimum lot size for TR-C3, single-family housing, is 3,000 square feet whereas the average city lot size is 0.25 acre (10,890 square feet). The City anticipates development in the Bear Claw Way and Mineral Point Road Zones will average 6,000 square feet. The additional cost incurred by new dwelling units in the District would be as follows:

	Stormwater at Bear Claw Way		Stormwater at Mineral Point Road	
Size of Lot	6000 ft ²	.25 acre	6000 ft ²	.25 acre
Additional Cost for New Dwelling Unit	\$2,340.27	\$4,247.59	\$1,019.45	\$1,850.30

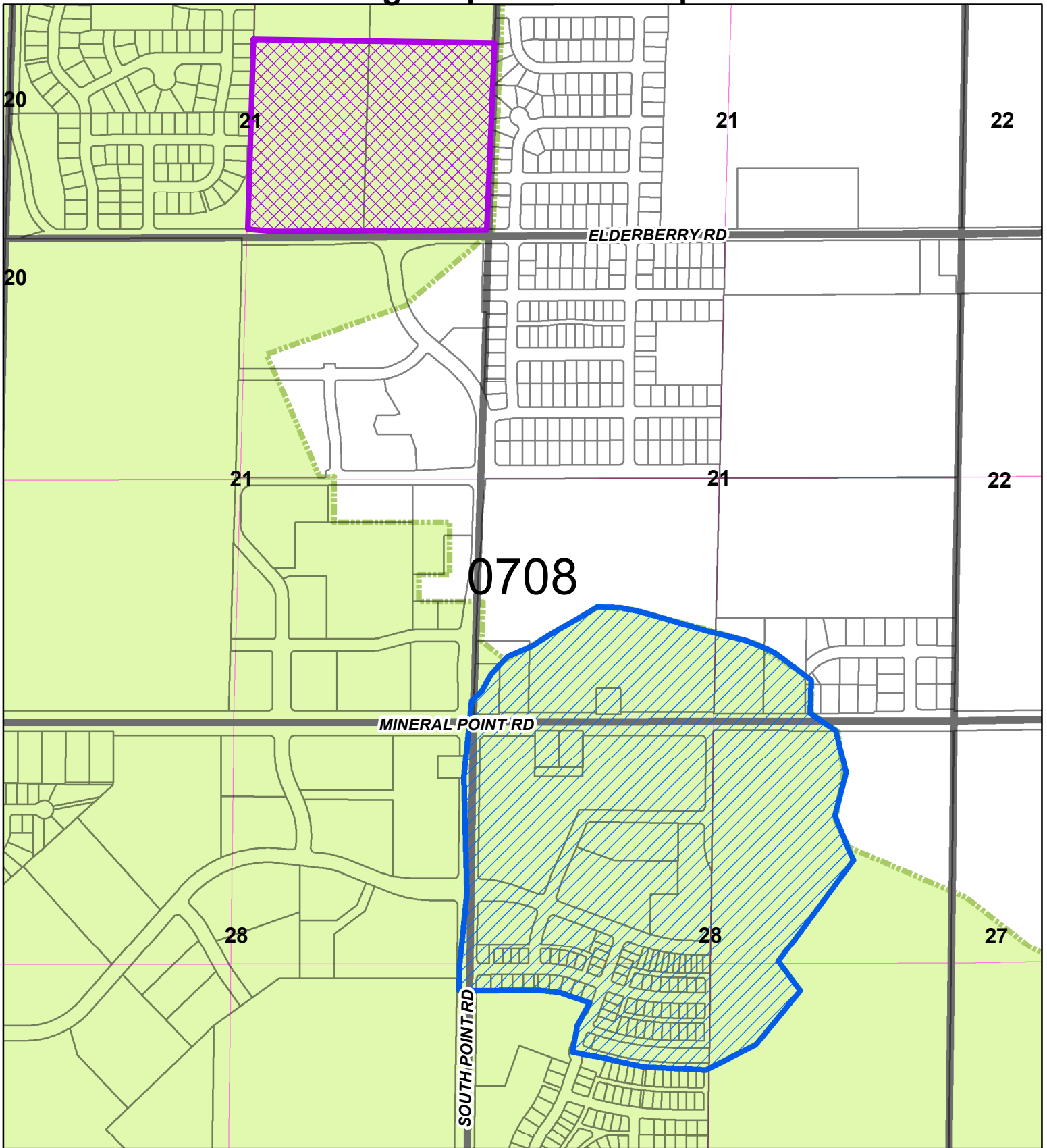
The City of Madison has over 119,196 existing dwelling units, many of which are affordable to a wide range of households. The City has prepared a Comprehensive Plan which includes objectives and policies to increase housing affordability within the City. This Plan builds on plans targeted specifically at providing affordable housing including the Comprehensive Housing Affordability Strategy, the Five Year Housing and Community Development (Consolidated) Plan and the Madison Community Development Authority's Public Housing Plans. The City has also worked to preserve the quality of its





existing housing stock and to provide new housing and higher relative densities as one way to reduce the per unit cost of land and to increase the efficiency of service provided to housing which is built. Impact fees charged for new development in the City cover the provision of basic infrastructure and capital facilities that are a prerequisite for development in the areas covered by the fees. The amount of the fees is directly related to the need to provide capital facilities which are necessitated by and attributable to the benefitting development. These fees represent a small proportion of the total costs to provide housing when considering the cost of land, other infrastructure requirements, the cost to construct housing and financing. Hence, the cumulative effect of all the Impact Fees already imposed by the City of Madison, as well as the effect of the Westside Drainage Improvement Impact Fee District, should not have a significant negative impact on the availability of affordable housing within the community.

¹ From a report by Earth Tech, Inc. *Lower Badger Mill Creek Stormwater Management Analyses*. June 2003.

EXHIBIT A

Westside Drainage Improvement Impact Fee District



-  Bear Claw Way Drainage Improvement Impact Fee Zone
-  Mineral Point Road Drainage Impact Fee Zone
-  Parcel Boundaries
-  LBMC Storm Impact Fee (Regional, Existing)

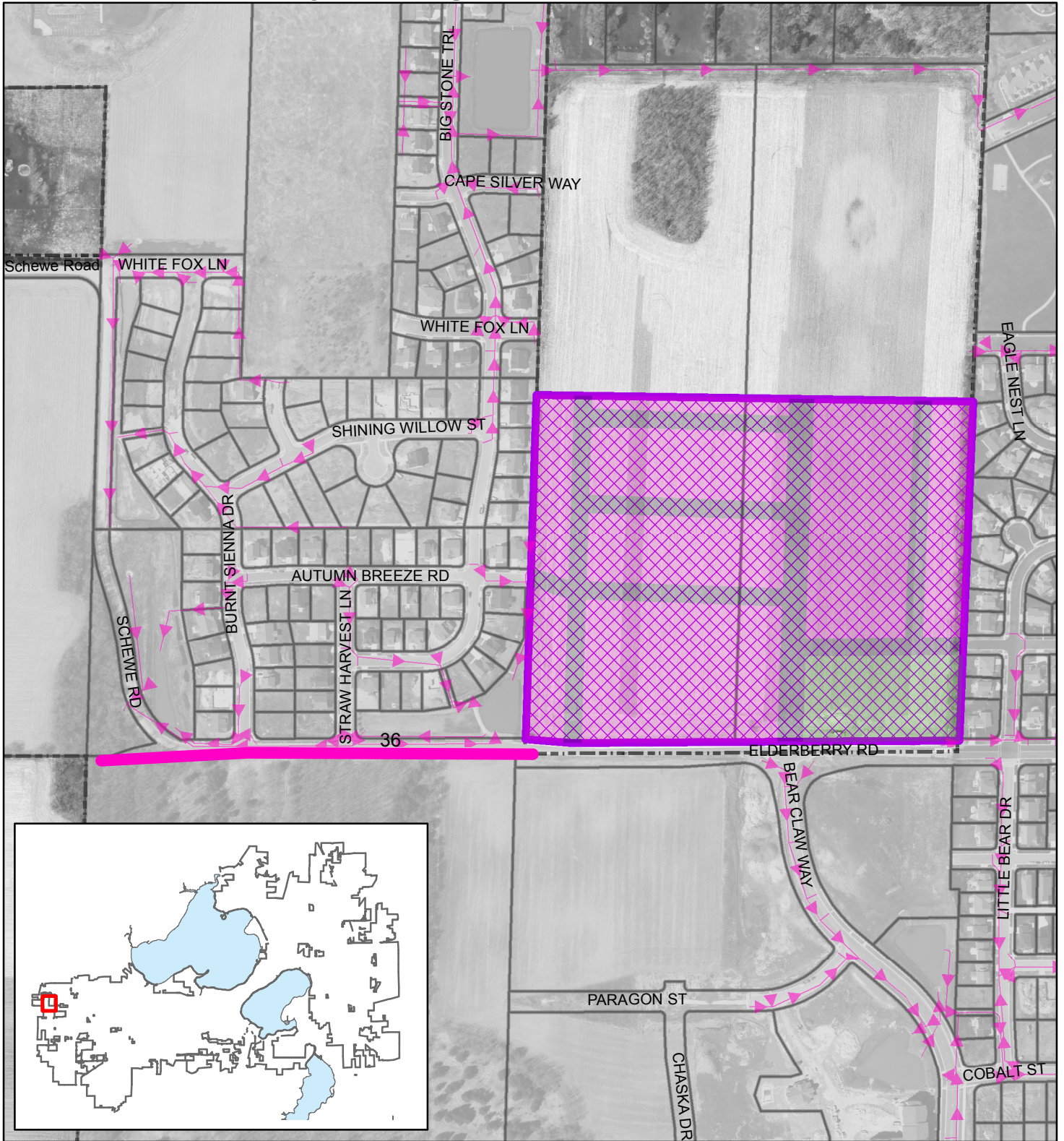
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EXHIBIT B

Bear Claw Way Drainage Improvement Impact Fee Zone



Planned Landuse

- Developable
- Proposed Open Space
- Right of Way
- Utilities

Proposed Storm Sewer

- 36" Diameter
- Existing Storm Sewer
- Bear Claw Way Drainage Improvement Impact Fee Zone
- Parcel Boundaries
- City of Madison

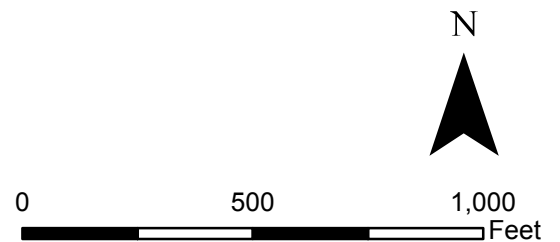


EXHIBIT C

Bear Claw Way Drainage Improvement Impact Fee Zone Cost

Item	Quantity	Unit	Unit Cost	Total Cost
36" RCP Storm Sewer Pipe	1,298	LF	\$160.00	\$207,680.00
Subtotal				\$207,680.00
Engineering & Contingencies (20%)				\$41,536.00
Total				\$249,216.00

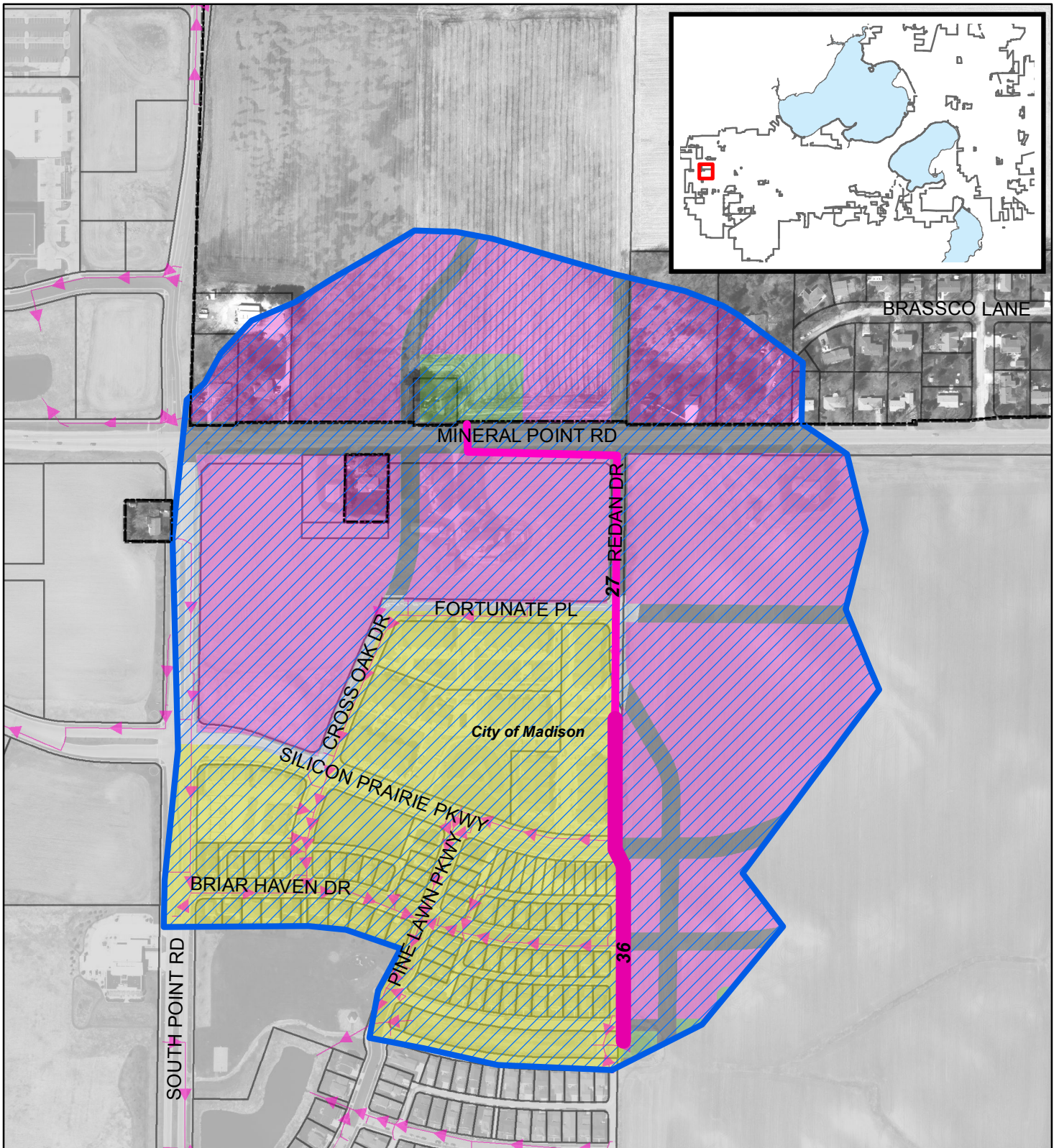
<u>STORM LAND COST</u>					
	Length (ft)	Width (ft)	Total Acres	Cost/Acre	Total Cost
Easement Acquisition	1,298	30	0.89	\$75,000.00	\$67,045.45
Total Land Costs					\$67,045.45

<i>Total Storm Costs</i>	\$316,261.45
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Area Benefitting	31.0	Acres
Developable Are (60%)	18.6	Acres
Cost/ Acre	\$16,990.36	/Acre
Cost/ 1000 sf	\$390.04	/1000 sf

EXHIBIT D

Mineral Point Road Drainage Impact Fee Zone



Planned Landuse

- Developable
- Proposed Open Space
- Right of Way
- Utilities

- Mineral Point Road Drainage Impact Fee Zone
- Existing Storm Sewer
- Existing Development
- Parcel Boundaries
- City of Madison

Proposed Stom Sewer

- 27" Diameter
- 36" Diameter

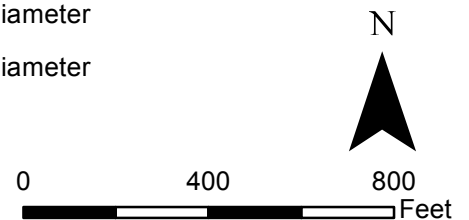


EXHIBIT E

Mineral Point Road Drainage Impact Fee Zone Cost

Item	Quantity	Unit	Unit Cost	Total Cost
27" RCP Storm Sewer Pipe	1,321	LF	\$130.00	\$171,730.00
36" RCP Storm Sewer Pipe	974	LF	\$160.00	\$155,840.00
Mill and Overlay	222	SY	\$30.00	\$6,666.67
Type III Trench Patch	40	TF	\$50.00	\$2,000.00
Subtotal				\$336,236.67
Engineering & Contingencies (20%)				\$67,247.33
Total				\$403,484.00

<i>STORM LAND COST</i>					
	Length (ft)	Width (ft)	Total Acres	Cost/Acre	Total Cost
Easement Acquisition	556	30	0.38	\$75,000.00	\$28,719.01
Total Land Costs					\$28,719.01

Total Storm Costs

\$432,203.01

Area Benefitting	95.3	Acres
Developed Area	19.6	Acres
Undeveloped Area	64.7	Acres
Developable Area (60% of Undeveloped)	38.8	Acres
Developed + Developable Area	58.4	Acres
Cost/ Acre (Developed + Developable)	\$7,401.21	/Acre
Cost/ 1000 SF (Developed + Developable)	\$169.91	/1000 sf