

## **Engineer's Report**

2024 Alley Reconstruction Project

City Project No. 24-02

July 26, 2024

**CERTIFICATION**

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



*Erin McPhee Anderson* Date: 07/26/2024  
Erin McPhee Anderson, PE

**STATEMENT OF BENEFIT**

This project benefits the properties proposed to be assessed. According to Wisconsin State Statutes 66.0703, the City of Hudson intends to exercise its police power to collect special assessments for this project. Attached to this report in Appendix A is the schedule of proposed assessments.

# Introduction

The City of Hudson is planning to reconstruct two alleys within the downtown area in 2024. The alleys are located between 4<sup>th</sup> St / 5<sup>th</sup> St / Locust St / Walnut St (Alley #1) and 5<sup>th</sup> St / 6<sup>th</sup> St / Locust St / Vine St (Alley #2). The proposed improvements are needed due to the deteriorating pavement along each alley and steep cross slopes on alley #2 making it difficult to traverse in the icy winter. The project will consist of fully replacing the existing bituminous pavement and base aggregate material, reconstructing the concrete curb along alley #2, and reconstructing the entrances to alley #1.

# Recommendations

## Alley Improvements

Both alleys serve a residential neighborhood in downtown Hudson. Low traffic volumes are expected due to the residential location. Truck traffic will be considered minimal as the refuse and recycling companies do not like using them for weekly pick up.

Both alleys were visually inspected, and the pavement is in poor condition with rutting, deterioration, and settlement apparent. No additional subsurface investigation has occurred to determine existing base depth or subgrade composition. The project will consist of removing the existing alley surface and reconstructing it with an adequate pavement section of aggregate base and bituminous pavement that will last many years to come. By removing the existing base material, the cross slopes can be fixed and the subgrade soils can be evaluated for further soil correction needs, if any. The curb and gutter along the northern half of Alley #2 will be removed and replaced due to the severe settlement.

This project will also address a failing retaining wall along alley #1, which is falling into the alley creating a hazard for vehicles. The existing retaining wall will be removed, and the slope will be graded back to a reasonably maintainable grass area.

# Funding

## Capital Improvement Program

Alley improvement funds are included in the City’s Infrastructure Capital Improvement Plan (CIP) each year. This project will use the funds identified in the 2023 and 2024 CIP.

## Special Assessments

The City of Hudson’s special assessment policy applies to the project activities according to the following schedule:

- Alleys – 50% of the total cost of all work involved in alley improvements.
- Alley properties without vehicular access – 25% of the cost of the alley improvement.

Vehicular access shall mean having a driveway, driveway approach, loading area or parking pad adjacent to the alley.

The assessments include the material and labor costs of the construction of each assessable item. Additionally, Planning and Administration Fees are collected to offset the time spent by city staff to prepare project-related work, such as project accounting, project correspondence, public

hearings, and other work not directly related to the engineering tasks associated with the project. The Planning and Administration Fees are calculated as follows:

- 1.5% on first \$250,000 of total assessable costs
- 1.3% on next \$750,000
- 1.1% on next \$1,000,000
- 1.0% on next \$1,000,000
- 0.8% on next \$1,000,000
- 0.6% on remainder

Since this project has an estimated assessable cost of under \$250,000, the rate used to calculate the Planning and Administration Fees is 1.5%.

The City of Hudson believes that the reconstruction of the alleys constitutes a benefit to the fronting properties.

A detailed breakdown of the preliminary assessment calculations is provided in **Appendix A**. The assessment amounts utilize the engineers estimate of the project costs. The preliminary assessment quantities and unit prices may change based on field conditions during construction and Contractor bid prices. Final project costs and assessments will be determined at the time of project close-out.

The estimated overall project costs for each alley are shown in **Appendix B**.

A summary of the project funding is as follows:

**Expenses:**

Construction Costs (Engineers Estimate)	\$114,120.00
Estimated Engineering Costs:	\$40,000.00
<b>Total Project Costs:</b>	<b>\$154,120.00</b>

**Funding:**

Special Assessments	\$61,460
Infrastructure CIP Funds	\$100,000.00
<b>Total Project Funding:</b>	<b>\$161,460.00</b>

## Summary

The recommended project improvements include the following along Alley #1 (4<sup>th</sup> St / 5<sup>th</sup> St / Locust St / Walnut St)

- Removal of the existing alley pavement section.
- New base aggregate and bituminous paving.
- Retaining wall removal.
- Reconstruction of the alley entrances along Locust St and Walnut St.

The recommended project improvements include the following along Alley #1 (4<sup>th</sup> St / 5<sup>th</sup> St / Locust St / Walnut St)

- Removal of the existing alley pavement section.
- New base aggregate and bituminous paving.
- Replacement of the concrete curb and gutter.
- Cross slope improvements along the north end.

The plans for the project can be seen in **Appendix C**.

APPENDIX A  
Preliminary Assessment Calculations

**PRELIMINARY ASSESSMENT CALCULATIONS**

PROJECT NAME: 2024 Alley Reconstruction

PROJECT NUMBER: 24-02

RATES USED: Engineer's Estimate

Assessment Policy Version: 3/18/2024

ALLEY NO. 1 ASSESSABLE CONSTRUCTION TOTAL COST \$ 33,720.00

ALLEY NO. 2 ASSESSABLE CONSTRUCTION TOTAL COST \$ 27,740.00

SPECIAL ASSESSMENT ADMINISTRATIVE RATE 1.5%

ALLEY NO.	PROPERTY NO.	PROPERTY OWNER NAME	PROPERTY ADDRESS	PARCEL ID	ITEM	UNIT	UNIT PRICE	QUANTITY	TOTAL COST	COST SHARE	TOTAL ASSESSABLE COST	NOTES		
1	1	J & K Schmitt Properties LLC	410 Locust Street	236-0044-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00			
											PLANNING AND ADMINISTRATION FEE	\$ 25.29		
											<b>TOTAL ASSESSMENT</b>	\$ 1,711.29		
	2	Bridget M Omeara	522 4th Street	236-0045-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00			
											PLANNING AND ADMINISTRATION FEE	\$ 25.29		
											<b>TOTAL ASSESSMENT</b>	\$ 1,711.29		
	3	Madison Rohde	516 4th Street	236-0046-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00			
											PLANNING AND ADMINISTRATION FEE	\$ 25.29		
											<b>TOTAL ASSESSMENT</b>	\$ 1,711.29		
	4	Andrew J Janetski & Kelsey E Janetski	512 4th Street	236-0518-01-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00			
										PLANNING AND ADMINISTRATION FEE	\$ 25.29			
										<b>TOTAL ASSESSMENT</b>	\$ 1,711.29			
5	Steven A/Evelyn C Johnson	508 4th Street	236-0518-02-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00				
										PLANNING AND ADMINISTRATION FEE	\$ 25.29			
										<b>TOTAL ASSESSMENT</b>	\$ 1,711.29			
6	Francis J Tutor & Stephanie A Tutor	502 4th Street	236-1475-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00				
										PLANNING AND ADMINISTRATION FEE	\$ 25.29			
										<b>TOTAL ASSESSMENT</b>	\$ 1,711.29			
7	Elaine G Albus & Rebcca J Albus	416 Locust Street	236-0049-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00				
										PLANNING AND ADMINISTRATION FEE	\$ 25.29			
										<b>TOTAL ASSESSMENT</b>	\$ 1,711.29			
8	Rhonda Rae Leslie	517 5th Street	236-0048-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00				
										PLANNING AND ADMINISTRATION FEE	\$ 25.29			
										<b>TOTAL ASSESSMENT</b>	\$ 1,711.29			
9	Jennifer A Wagner	509 5th Street	236-0519-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00				
										PLANNING AND ADMINISTRATION FEE	\$ 25.29			
										<b>TOTAL ASSESSMENT</b>	\$ 1,711.29			
10	Sarah A Bruch & Brian P Burbach	507 5th Street	236-0520-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 33,720.00	0.10	\$ 3,372.00	50%	\$ 1,686.00				
										PLANNING AND ADMINISTRATION FEE	\$ 25.29			
										<b>TOTAL ASSESSMENT</b>	\$ 1,711.29			
2	1	Darryl Sivek	514 Vine Street	236-1457-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 27,740.00	0.14	\$ 3,962.86	25%	\$ 990.71	Property driveway does not utilize alley. Assessment reduced per policy.		
											PLANNING AND ADMINISTRATION FEE		\$ 14.86	
											<b>TOTAL ASSESSMENT</b>		\$ 1,005.58	
	2	James Chad/Carol A Trainor	517 Locust Street	236-1458-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 27,740.00	0.14	\$ 3,962.86	50%	\$ 1,981.43			
											PLANNING AND ADMINISTRATION FEE	\$ 29.72		
											<b>TOTAL ASSESSMENT</b>	\$ 2,011.15		
	3	Kyle Schaffer & Alyssa A Schaffer	617 6th Street	236-1069-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 27,740.00	0.14	\$ 3,962.86	50%	\$ 1,981.43			
										PLANNING AND ADMINISTRATION FEE	\$ 29.72			
										<b>TOTAL ASSESSMENT</b>	\$ 2,011.15			
4	Nathan Hildebrant & Mallory Hildebrant	615 6th Street	236-1070-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 27,740.00	0.14	\$ 3,962.86	50%	\$ 1,981.43				
										PLANNING AND ADMINISTRATION FEE	\$ 29.72			
										<b>TOTAL ASSESSMENT</b>	\$ 2,011.15			
5	Mary K McCabe & Ryan P McCabe	611 6th Street	236-1071-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 27,740.00	0.14	\$ 3,962.86	50%	\$ 1,981.43				
										PLANNING AND ADMINISTRATION FEE	\$ 29.72			
										<b>TOTAL ASSESSMENT</b>	\$ 2,011.15			
6	James/Vicki Mayer	609 6th Street	236-1072-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 27,740.00	0.14	\$ 3,962.86	50%	\$ 1,981.43				
										PLANNING AND ADMINISTRATION FEE	\$ 29.72			
										<b>TOTAL ASSESSMENT</b>	\$ 2,011.15			
7	Clayton & Julie Duncan	525 Locust Street	236-1073-00-000	ALLEY RECONSTRUCTION	LUMP SUM	\$ 27,740.00	0.14	\$ 3,962.86	50%	\$ 1,981.43				
										PLANNING AND ADMINISTRATION FEE	\$ 29.72			
										<b>TOTAL ASSESSMENT</b>	\$ 2,011.15			

APPENDIX B  
Opinion of Probable Cost

**OPINION OF PROBABLE COST**  
 PROJECT NAME: 2024 Alley Reconstruction  
 PROJECT NUMBER: 24-02  
 DATE: July 26, 2024

No.	DESCRIPTION	UNIT	UNIT PRICE	TOTAL QUANTITY	TOTAL COST	ALLEY #1 (4TH/5TH/LOCUST/WALNUT)				ALLEY #2 (5TH/6TH/LOCUST/VINE)			
						PROJECT COST		ASSESSABLE COST		PROJECT COST		ASSESSABLE COST	
						QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
1	MOBILIZATION	LUMP SUM	\$ 20,000.00	1	\$ 20,000.00	0.5	\$ 10,000.00		\$ -	0.5	\$ 10,000.00		\$ -
2	TRAFFIC CONTROL	LUMP SUM	\$ 4,000.00	1	\$ 4,000.00	0.5	\$ 2,000.00		\$ -	0.5	\$ 2,000.00		\$ -
3	REMOVE ASPHALT PAVEMENT	SQ YD	\$ 10.00	772	\$ 7,720.00	470	\$ 4,700.00	470	\$ 4,700.00	302	\$ 3,020.00	302	\$ 3,020.00
4	REMOVE CONCRETE CURB AND GUTTER	LF	\$ 10.00	275	\$ 2,750.00	90	\$ 900.00		\$ -	185	\$ 1,850.00	185	\$ 1,850.00
5	REMOVE CONCRETE SURFACE	SQ YD	\$ 15.00	59	\$ 885.00	58	\$ 870.00		\$ -	1	\$ 15.00		\$ -
6	REMOVE CONCRETE RETAINING WALL	LIN FT	\$ 100.00	37	\$ 3,700.00	37	\$ 3,700.00		\$ -		\$ -		\$ -
7	COMMON EXCAVATION (EV)	CU YD	\$ 50.00	230	\$ 11,500.00	150	\$ 7,500.00	150	\$ 7,500.00	80	\$ 4,000.00	80	\$ 4,000.00
8	BASE AGGREGATE DENSE 1 1/4-INCH	TON	\$ 50.00	290	\$ 14,500.00	160	\$ 8,000.00	160	\$ 8,000.00	130	\$ 6,500.00	130	\$ 6,500.00
9	SUBGRADE PREPARATION	SQ YD	\$ 2.00	775	\$ 1,550.00	425	\$ 850.00	425	\$ 850.00	350	\$ 700.00		\$ -
10	HMA WEAR COURSE (5LT-58-34 H)	TON	\$ 120.00	145	\$ 17,400.00	80	\$ 9,600.00	80	\$ 9,600.00	65	\$ 7,800.00	65	\$ 7,800.00
11	PATCH ASPHALT STREET	SQ YD	\$ 50.00	25	\$ 1,250.00	25	\$ 1,250.00		\$ -		\$ -		\$ -
12	CONCRETE CURB - V10	LIN FT	\$ 40.00	185	\$ 7,400.00		\$ -		\$ -	185	\$ 7,400.00		\$ -
13	CONCRETE CURB AND GUTTER (D24 HAND PLACED)	LIN FT	\$ 50.00	75	\$ 3,750.00	75	\$ 3,750.00		\$ -		\$ -		\$ -
14	CONCRETE SIDEWALK - 4 INCH	SQ FT	\$ 8.00	80	\$ 640.00	80	\$ 640.00		\$ -		\$ -		\$ -
15	CONCRETE DRIVEWAY APRON - 7 INCH	SQ FT	\$ 12.00	232	\$ 2,784.00	222	\$ 2,664.00		\$ -	10	\$ 120.00		\$ -
16	DRILLED TIE BARS (2-FT, #4)	EACH	\$ 15.00	18	\$ 270.00	12	\$ 180.00		\$ -	6	\$ -		\$ -
17	STORM DRAIN INLET PROTECTION	EACH	\$ 400.00	1	\$ 400.00		\$ -		\$ -	1	\$ 400.00	1	\$ 400.00
18	SEDIMENT CONTROL LOG - BIOROLL	LIN FT	\$ 20.00	20	\$ 400.00	20	\$ 400.00		\$ -		\$ -		\$ -
19	TOPSOIL BORROW - 6-INCH	CU YD	\$ 50.00	22	\$ 1,100.00	10	\$ 500.00		\$ -	12	\$ 600.00	12	\$ 600.00
20	WISDOT SEED MIX NO.40	LB	\$ 150.00	5	\$ 750.00	2	\$ 300.00		\$ -	3	\$ 450.00	3	\$ 450.00
21	SOIL STABILIZER, TYPE A	SQ YD	\$ 10.00	100	\$ 1,000.00	40	\$ 400.00		\$ -	60	\$ 600.00	60	\$ 600.00
<b>SUBTOTAL</b>					<b>\$ 103,749.00</b>		<b>\$ 58,204.00</b>		<b>\$ 30,650.00</b>		<b>\$ 45,455.00</b>		<b>\$ 25,220.00</b>
CONTINGENCY 10%					\$ 10,374.90		\$ 5,820.40		\$ 3,065.00		\$ 4,545.50		\$ 2,522.00
<b>TOTAL CONSTRUCTION COST</b>					<b>\$ 114,120.00</b>		<b>\$ 64,020.00</b>		<b>\$ 33,720.00</b>		<b>\$ 50,000.00</b>		<b>\$ 27,740.00</b>

APPENDIX C  
Preliminary Plans

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City Project	24-01
Drawn By	MP
Designed By	MP
Checked By	EMA

Rev.#	Revision Issue Description	Date

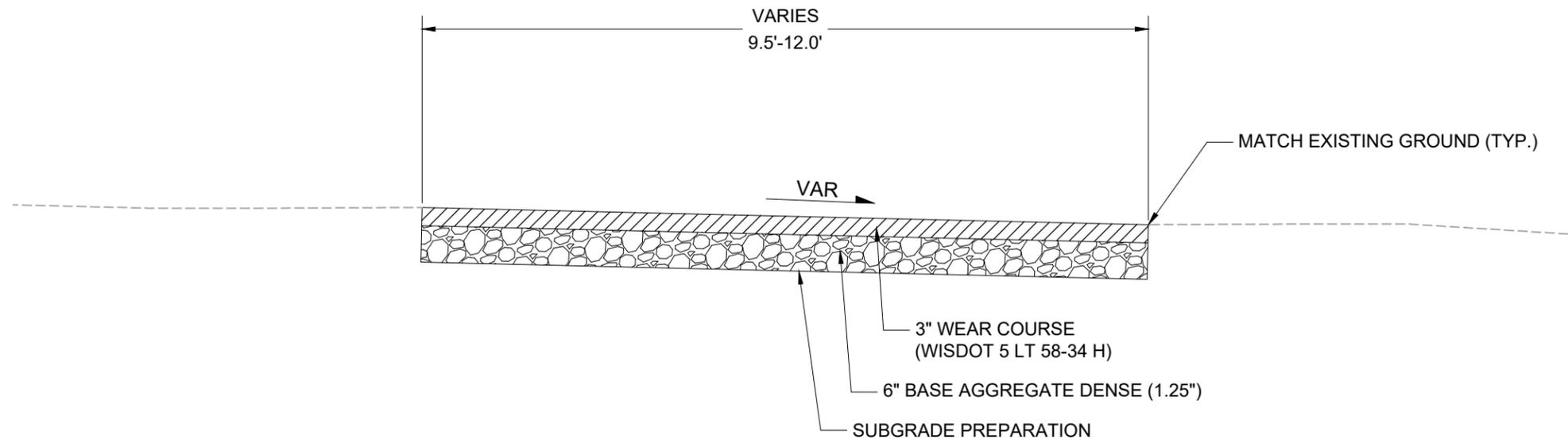
Rev.#	Revision Issue Description	Date



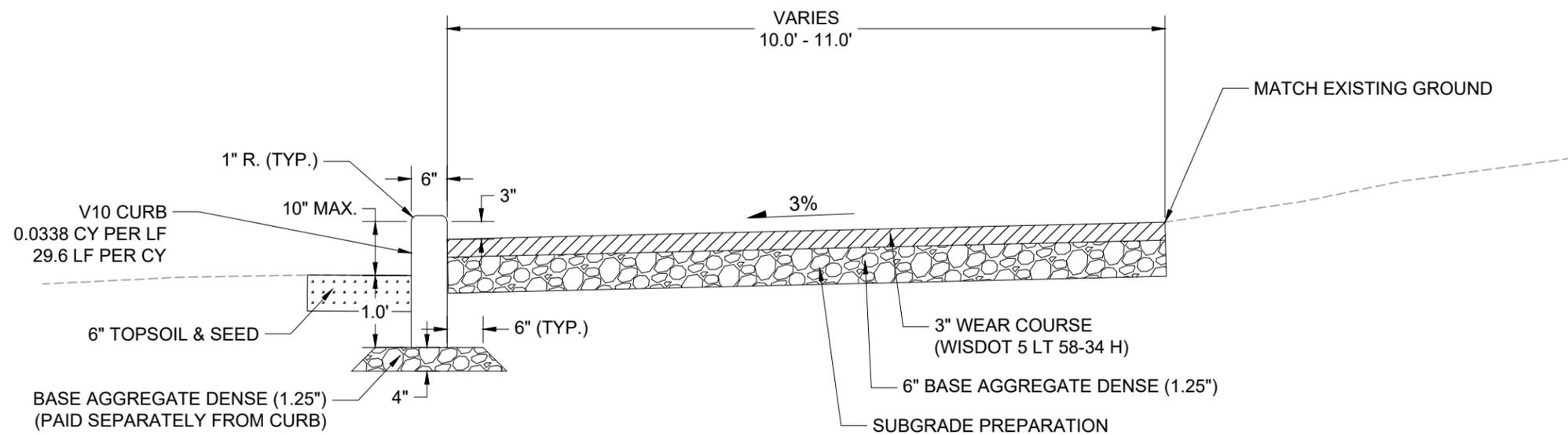
**2024 STREET IMPROVEMENTS**  
HUDSON, WI

**ALLEYS  
GENERAL LAYOUT**

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**TYPICAL SECTION**  
**4TH/5TH/LOCUST/WALNUT (ALLEY #1)**  
**5TH/6TH/LOCUST/VINE (ALLEY #2) - STA. 0+13.00 TO 1+39.50**

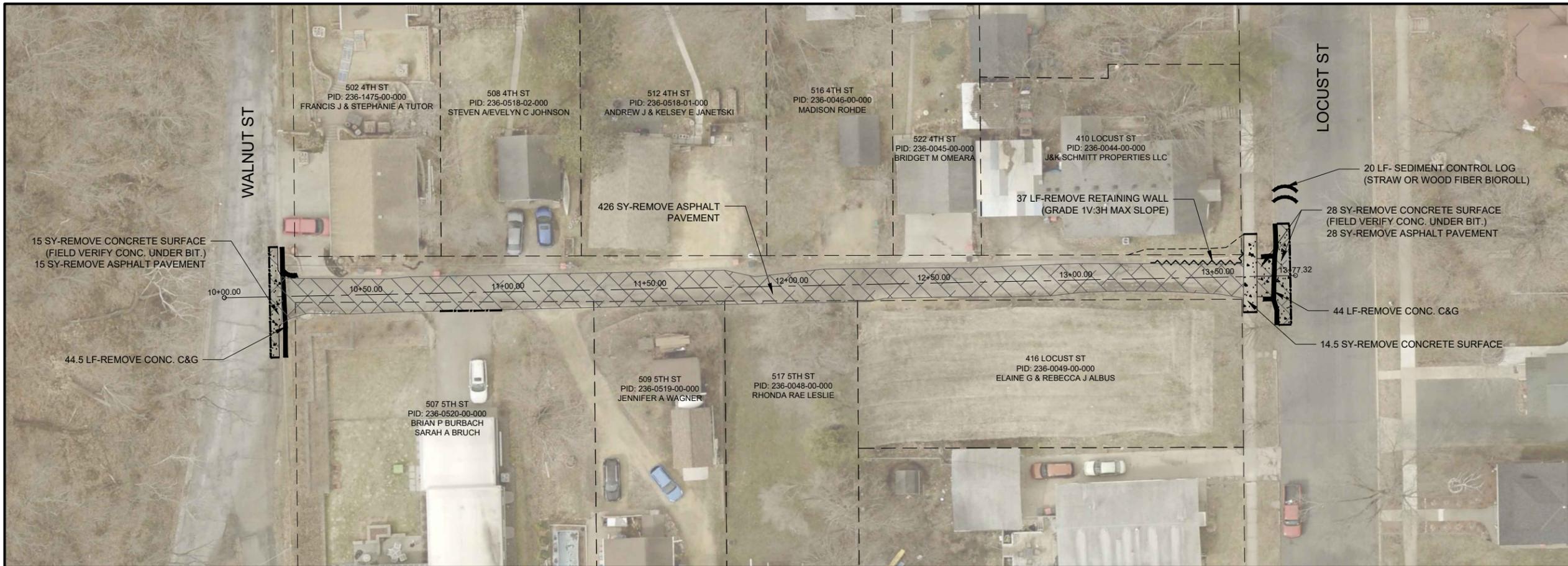


**TYPICAL SECTION**  
**5TH/6TH/LOCUST/VINE (ALLEY #2) - STA. 1+39.50 TO 3+24.50**

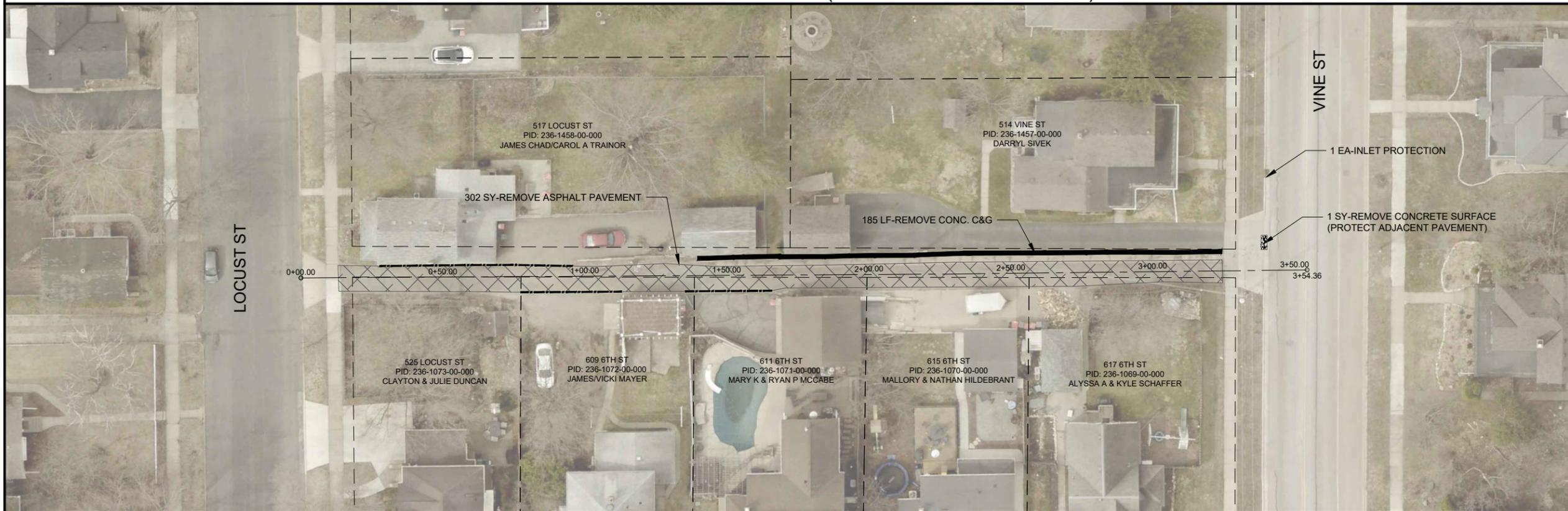
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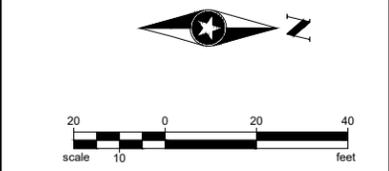
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**ALLEY #1 (4TH/5TH/LOCUST/WALNUT)**



**ALLEY #2 (5TH/6TH/LOCUST/VINE)**



- LEGEND**
- REMOVE ASPHALT PAVEMENT
  - REMOVE CONCRETE SURFACE
  - SLOPE INTERCEPT
  - SAWCUT (INCIDENTAL)
  - REMOVE CONCRETE CURB & GUTTER

- NOTES:**
1. THE CONTRACTOR SHALL CALL THE WISCONSIN ONE CALL SYSTEM AT 811 BEFORE COMMENCING REMOVALS AND EXCAVATION.
  2. ACCESS TO DRIVEWAYS TO BE MAINTAINED AT ALL TIMES. RAMP DRIVEWAY AS NEEDED TO MAINTAIN REASONABLE ACCESS (INCIDENTAL).
  3. THE AERIAL BACKGROUND IS FROM 2022 AND MAY NOT REPRESENT CURRENT CONDITIONS.
  4. PROVIDE FOUR (4) TYPE 3 BARRICADES ON-SITE WITH "ROAD CLOSED" SIGN. ENGINEER TO DIRECT LOCATION IN THE FIELD.

City Project	24-01
Drawn By	MP
Designed By	MP
Checked By	EMA

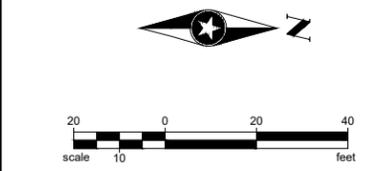
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**2024 STREET IMPROVEMENTS**  
HUDSON, WI

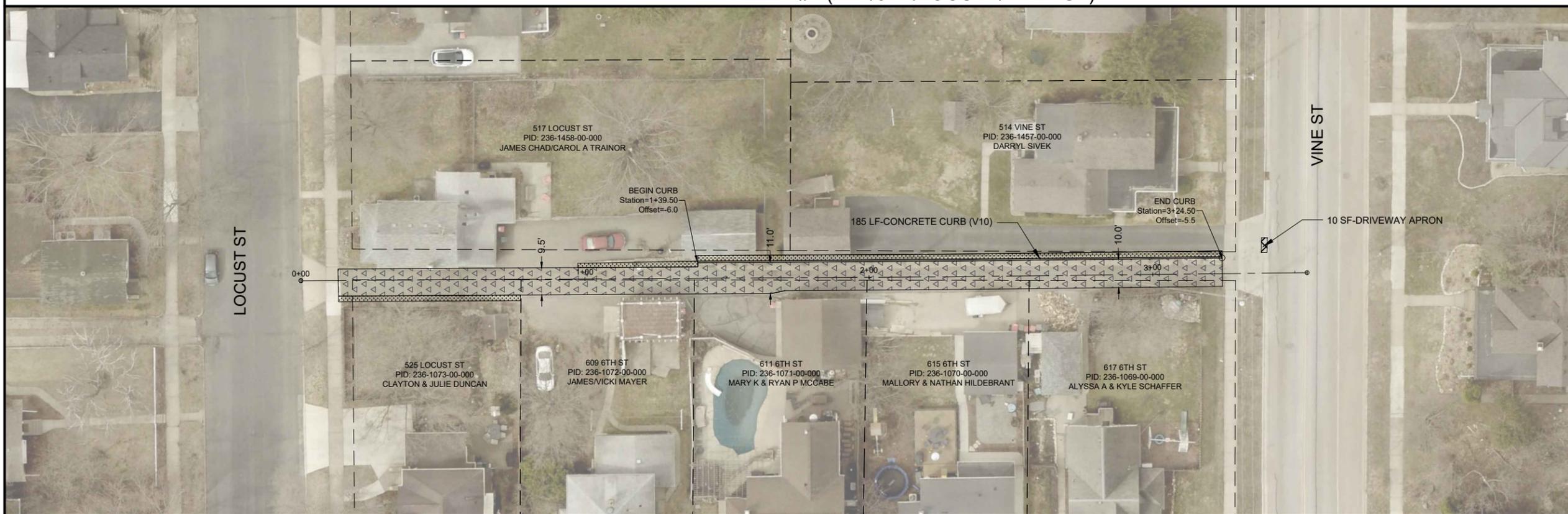
**ALLEYS REMOVALS**

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- LEGEND**
- HMA PAVEMENT (SEE TYPICAL SECTIONS)
  - PATCH ASPHALT STREET
  - CONCRETE DRIVEWAY APRON - 7-INCH
  - CONCRETE SIDEWALK - 4-INCH
  - 6" TOPSOIL AND SEED

- NOTES:**
1. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT. DIMENSIONS MAY VARY BASED ON FIELD CONDITIONS.



City Project	24-01	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	MP	.	.	.	.	.	.
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**2024 STREET IMPROVEMENTS**  
HUDSON, WI

**ALLEYS CONSTRUCTION PLAN**