



Village of Menomonee Falls  
W156 N8480 Pilgrim Road  
Menomonee Falls, WI 53051-3140  
Telephone: (262) 532-4200

## STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

|                        |         |                              |                       |
|------------------------|---------|------------------------------|-----------------------|
| Quarter Section        | 26 NE   | Name of Business/Subdivision | MILL RIDGE NO. 5 SUBD |
| Property Tax ID Number | 0101158 | Address of Property          | (INDEX NO. 01.15)     |
|                        |         |                              |                       |
|                        |         |                              |                       |

|          |   |
|----------|---|
| Dry Pond | X |
| Wet Pond |   |
| Other    |   |

|                               |             |                      |
|-------------------------------|-------------|----------------------|
| Description: <u>SWP26N002</u> | Location Of | WEST OF LILLY RD     |
| P-0144                        | Pond        | NORTH OF MANHARDT DR |
|                               |             |                      |
|                               |             |                      |

Year Pond Constructed 2001 Year of Last Certification 2018

| Compliance Verification                                      | Design<br>(Non-AsBuilt) | Actual<br>(GPS) | Compliant<br>Yes No |  | Comments<br>(Condition of Structure)                                     |
|--------------------------------------------------------------|-------------------------|-----------------|---------------------|--|--------------------------------------------------------------------------|
| <b>Primary Outlet Pipe</b><br>(ST012544-ST012543)            |                         |                 |                     |  | Outlet Pipe Material                                                     |
| Opening Diameter<br>(inches)                                 | 12" CMP                 | 12" CMP         | Y                   |  | ***REPAIR NEEDED***<br>12" CMP PARTIALLY CRUSHED AT<br>POND SIDE OF BERM |
| Upstream Invert<br>(ST012544)                                | 769.50                  | 769.57          | Y                   |  |                                                                          |
| Downstream Invert<br>(ST012543)                              | 769.25                  | 769.36          | Y                   |  |                                                                          |
| Length<br>(feet)                                             | 70.0 FT                 | 72.3 FT         | Y                   |  |                                                                          |
| Slope<br>(%)                                                 | 0.0036'/',              | 0.0029'/',      | Y                   |  |                                                                          |
| <b>Secondary Outlet Pipe (1 of 3)</b><br>(ST012500-ST012499) |                         |                 |                     |  | Outlet Pipe Material                                                     |
| Opening Diameter (inches)                                    | 12" CMP                 | 12" CMP         | Y                   |  | 12" CMP IN GOOD CONDITION                                                |
| Upstream Invert<br>(ST012500)                                | 769.50                  | 769.61          | Y                   |  |                                                                          |
| Downstream Invert<br>(ST012499)                              | 769.25                  | 769.26          | Y                   |  |                                                                          |
| Length<br>(feet)                                             | 70.0 FT                 | 72.3 FT         | Y                   |  |                                                                          |
| Slope<br>(%)                                                 | 0.0036'/',              | 0.0048'/',      | Y                   |  |                                                                          |
| <b>Secondary Outlet Pipe (2 of 3)</b><br>(ST012501-ST012502) |                         |                 |                     |  | Outlet Pipe Material                                                     |
| Opening Diameter (inches)                                    | 12" CMP                 | 12" CMP         | Y                   |  | 12" CMP IN GOOD CONDITION                                                |
| Upstream Invert<br>(ST012501)                                | 769.50                  | 769.69          | Y                   |  |                                                                          |
| Downstream Invert<br>(ST012502)                              | 769.25                  | 769.03          | Y                   |  |                                                                          |
| Length<br>(feet)                                             | 70.0 FT                 | 61.3 FT         | Y                   |  |                                                                          |
| Slope<br>(%)                                                 | 0.0036'/',              | 0.0107'/',      | Y                   |  |                                                                          |

| Compliance Verification                                      | Design<br>(Non-AsBuilt) | Actual<br>(GPS) | Compliant<br>Yes    No                                                     |  | Comments<br>(Condition of Structure)                        |
|--------------------------------------------------------------|-------------------------|-----------------|----------------------------------------------------------------------------|--|-------------------------------------------------------------|
| <b>Secondary Outlet Pipe (3 of 3)</b><br>(ST012503-ST012504) |                         |                 |                                                                            |  | Outlet Pipe Material                                        |
| Opening Diameter (inches)                                    | 12” CMP                 | 12” CMP         | Y                                                                          |  | ***REPAIR NEEDED***<br>12” CMP CRUSHED AT POND SIDE OF BERM |
| Upstream Invert<br>(ST012503)                                | 769.50                  | 769.91          | Y                                                                          |  |                                                             |
| Downstream Invert<br>(ST012504)                              | 769.25                  | 768.98          | Y                                                                          |  |                                                             |
| Length<br>(feet)                                             | 50.0 FT                 | 44.6 FT         | Y                                                                          |  |                                                             |
| Slope<br>(%)                                                 | 0.0050’/,               | 0.021’/,        | Y                                                                          |  |                                                             |
| <b>Riser</b>                                                 | N/A                     |                 |                                                                            |  | Riser Material                                              |
| Opening Diameter<br>(inches)                                 |                         |                 |                                                                            |  |                                                             |
| Elevation                                                    |                         |                 |                                                                            |  |                                                             |
| <b>Upper Discharge Control</b>                               | N/A                     |                 |                                                                            |  |                                                             |
| Opening Diameter<br>(inches)                                 |                         |                 |                                                                            |  |                                                             |
| Elevation                                                    |                         |                 |                                                                            |  |                                                             |
| <b>Lower Discharge Control</b>                               | N/A                     |                 |                                                                            |  |                                                             |
| Opening Diameter<br>(inches)                                 |                         |                 |                                                                            |  |                                                             |
| Elevation                                                    |                         |                 |                                                                            |  |                                                             |
| <b>Other (Description)</b>                                   | N/A                     |                 |                                                                            |  |                                                             |
| Opening Type and Size<br>(inches)                            |                         |                 |                                                                            |  |                                                             |
| Elevation                                                    |                         |                 |                                                                            |  |                                                             |
| <b>Emergency Spillway</b>                                    |                         |                 |                                                                            |  |                                                             |
| Elevation                                                    | 772.00                  | 772.00          | Y                                                                          |  |                                                             |
| Length of spillway<br>(feet)                                 | 45.0 FT                 | 78.7 FT         | Y                                                                          |  |                                                             |
| <b>Embankment</b>                                            | Present<br>Yes    No    |                 | Comments/Maintenance Requirements                                          |  |                                                             |
| Unauthorized Plantings, trees, or<br>woody vegetation        | Y                       | -               | CATTAILS PREVALENT THROUGH BASIN.<br>REMOVE INVASIVE GRASS IN S ¼ OF POND. |  |                                                             |
| Animal burrows or slope erosion<br>or hole                   | -                       | N               |                                                                            |  |                                                             |
| <b>Storm Sewer Outfalls</b>                                  | Type & Size             |                 | Location                                                                   |  | Comments                                                    |
| Outfall 1<br>(ST016420)                                      | 34”x53” RCP             |                 | SE OF POND AT<br>LILLY RD                                                  |  | OUTLET W/2018 LILLY<br>ROAD RECONSTRUCTION.                 |
| Outfall 2                                                    |                         |                 |                                                                            |  |                                                             |

| Storage Properties                                        | Design<br>(NON-<br>ASBUILT) | Actual<br>(GPS) | Compliant<br>Yes No |   | Not<br>Applicable | Equipment Used                                                                 |
|-----------------------------------------------------------|-----------------------------|-----------------|---------------------|---|-------------------|--------------------------------------------------------------------------------|
| Normal Water Elevation<br>(Wet Ponds)                     | -                           | 769.88          | -                   | - | N/A               |                                                                                |
| Design High Water Elevation                               | 773.00                      | 773.00          | Y                   | - | -                 |                                                                                |
| Area at Normal Water<br>Elevation (Ac) (Wet Ponds)        | -                           | -               | -                   | - | N/A               | GPS EQUIPMENT:<br>GEOMAX ZENITH35 &<br>CARLSON SURVEYOR2<br>WITH SURV CE v5.04 |
| Area at Design High Water<br>Elevation (Ac)               | 2.357<br>AC                 | 2.362<br>AC     | Y                   | - | -                 |                                                                                |
| Active Storage Available<br>(Ac-Ft)*                      | 5.160<br>ACFT               | 5.139<br>ACFT   | Y                   | - | -                 |                                                                                |
| Lowest Elevation at Top of<br>Embankment (If Applicable)  | 774.00                      | 773.41          | Y                   | - | -                 |                                                                                |
| Average Elevation at Top of<br>Embankment (If Applicable) | 774.00                      | 774.00          | Y                   | - | -                 |                                                                                |
| Maximum Bottom Elevation                                  | 770.00                      | 769.63          | -                   | - | -                 |                                                                                |
| Average Pond Bottom<br>Elevation                          | 770.00                      | 770.00          | -                   | - | -                 |                                                                                |
| Pond Bottom Area (Ac)                                     | 0.977<br>AC                 | 0.956<br>AC     | -                   | - | -                 |                                                                                |
| Maximum Pond Depth                                        | 3.0 FT                      | 3.37 FT         | -                   | - | -                 |                                                                                |
| Average Pond Depth                                        | 3.0 FT                      | 3.0 FT          | -                   | - | -                 |                                                                                |
| Average Permanent Pool Depth<br>(Wet Ponds)               | -                           | -               | -                   | - | N/A               |                                                                                |
|                                                           |                             |                 |                     |   |                   |                                                                                |

\*To Determine Active Storage  $V = \left( \left( \frac{H}{3} \right) \left( A1 + A2 + \left( \left( A1 + A2 \right)^{\frac{1}{2}} \right) \right) \right)$

Wet Ponds Use  $H$  = Height of Section ,  $A1$  = area at normal water elevation,  $A2$  = area at top section

Dry Ponds Use  $H$  = Height of Section,  $A1$  = pond bottom area,  $A2$  = area at top section

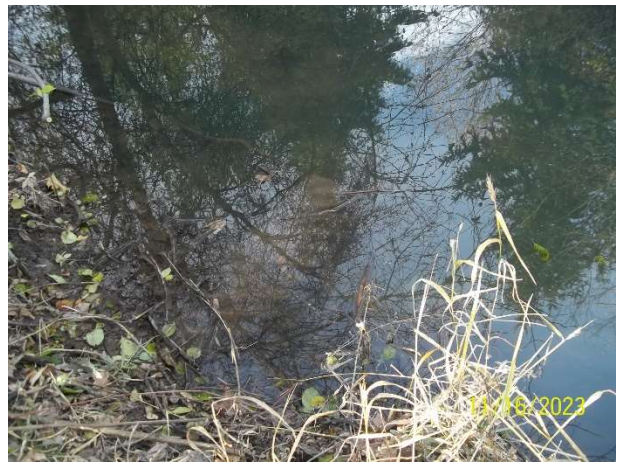
Mill Ridge No. 5 (Lilly Rd)  
Retention Pond – SWP26N002  
Overview



Four (4) 12" Culverts Service Pond  
Through Westerly Bank into stream.

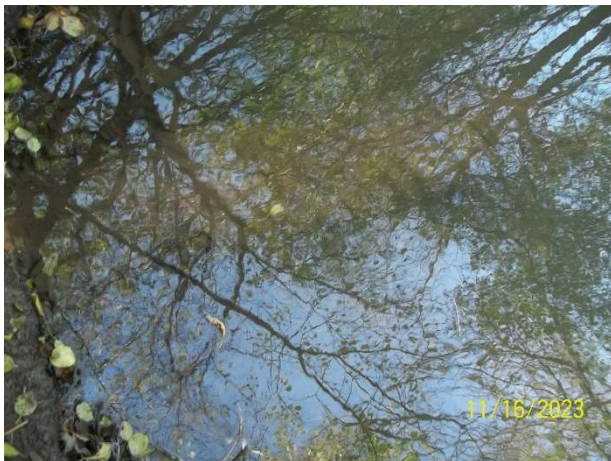


ST012544

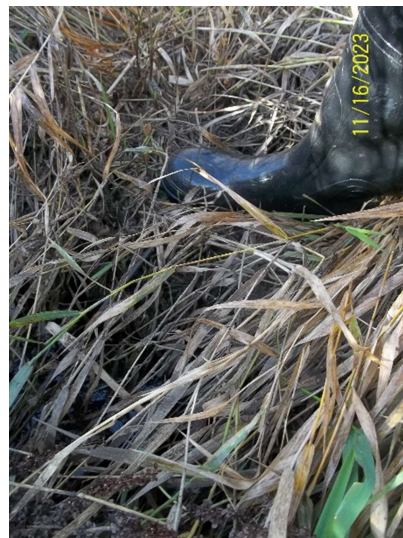


ST012543

Mill Ridge No. 5 (Lilly Rd)  
Retention Pond – SWP26N002



ST012499



ST012500



ST012501



ST012502

Mill Ridge No. 5 (Lilly Rd)  
Retention Pond – SWP26N002



ST012503



ST012504

SPILLWAY  
(North end of retention pond.)

Mill Ridge No. 5 (Lilly Rd)  
Retention Pond – SWP26N002

Repairs Needed (11/2023)

- 1) Fix crushed culvert ST012503 (northerly most) culvert end.
- 2) Fix crushed culvert ST012544 (southerly most) culvert end.
- 3) Remove invasive grass in south  $\frac{1}{4}$  of pond.

*Sketch Outlet*

*Place Photograph of Pond*

*Place Photograph of Pond*

Inspection Firm: VILLAGE OF  
MENOMONEE FALLS  
Phone Number: 262-532-4411  
Address: W156N8480 PILGRIM RD  
MENOMONEE FALLS, WI  
53051

Inspector Name : CHRISTOPHER M GARIEPY  
Inspection Date: 11/16/2023

Certifying  
Professional Name: THOMAS M. HOFFMAN, P.E.  
Phone Number: (262) 532-4415



Date:

2/26/2024

Signature:

[Handwritten Signature]

*Affix Seal Here*

Acre Feet pond storage volume calculations for:

**Mill Ridge #5 - Lilly Rd NW of Manhardt Dr**  
**SWP26N002**

= Entered Value  
 = Calculated Value  
 = Description of Elevations Calculated

Year of Inspection: **2023**

Example:  $H = H2 - H1$ , where  $H2 > H1$

|                 |                   |                                                                                                 |
|-----------------|-------------------|-------------------------------------------------------------------------------------------------|
| <b>H1 =</b>     | <b>770.00</b>     | Lower Height Elevation in Feet (Pond Bottom for Dry Pond <b>OR</b> Top of Observed Water Level) |
| <b>H2 =</b>     | <b>772.00</b>     | Height at Bottom of Spillway (Wet or Dry)                                                       |
| <b>H3 =</b>     | <b>773.00</b>     | Higher Height Elevation in Feet (Top of Bank Around Pond - Wet or Dry)                          |
| <b>H4 =</b>     | <b>0.00</b>       | Bottom of Wet Pond Elevation in Feet (Wet Ponds Only)                                           |
|                 | Sq.Ft.            | Acres                                                                                           |
| <b>Area 1 =</b> | <b>41,626.70</b>  | <b>0.9556</b> Area of H1                                                                        |
| <b>Area 2 =</b> | <b>102,897.60</b> | <b>2.3622</b> Area of H2                                                                        |
| <b>Area 3 =</b> | <b>102,897.60</b> | <b>2.3622</b> Area of H2                                                                        |
| <b>Area 4 =</b> | <b>-</b>          | <b>0.0000</b> Area of H3                                                                        |
|                 |                   | Area 1 = Area at Pond Bottom for Dry Pond <b>OR</b> Top of Observed Water Level                 |
|                 |                   | Area 2 = Area at Bottom of Spillway                                                             |
|                 |                   | Area 3 = Area at Top of Bank                                                                    |
|                 |                   | Area 4 = Area at Bottom of Pond (Wet Ponds Only)                                                |

Equation to determine Volume (AcFt) of pond storage capacity from  
**Bottom of Dry Pond to Bottom of Spillway:**

$$V = ( ((H2-H1)/3)(A1+A2 + (\sqrt{A1+A2})) )$$

|           |               |             |           |   |                |
|-----------|---------------|-------------|-----------|---|----------------|
|           | Feet          |             | Acres     |   | Acres          |
| V=        | $((H2-H1)/3)$ | x           | $(A1+A2)$ | + | $\sqrt{A1+A2}$ |
| V=        | 0.6667        | x           | 3.3178    | + | 1.8215         |
| V=        | 0.6667        | x           | 5.1393    |   |                |
| <b>V=</b> | <b>3.4262</b> | <b>AcFt</b> |           |   |                |

Equation to determine Volume (AcFt) of pond storage capacity from  
**Bottom of Dry Pond to Top of Bank at Spillway:**

$$V = ( ((H3-H1)/3)(A1+A3 + (\sqrt{A1+A3})) )$$

|           |               |             |           |   |                |
|-----------|---------------|-------------|-----------|---|----------------|
|           | Feet          |             | Acres     |   | Acres          |
| V=        | $((H3-H1)/3)$ | x           | $(A1+A3)$ | + | $\sqrt{A1+A3}$ |
| V=        | 1.0000        | x           | 3.3178    | + | 1.8215         |
| V=        | 1.0000        | x           | 5.1393    |   |                |
| <b>V=</b> | <b>5.1393</b> | <b>AcFt</b> |           |   |                |

Equation to determine Volume (AcFt) of pond storage capacity from  
**Bottom of Pond to Top of Water:**

$$V = ( ((H1-H4)/3)(A1+A4 + (\sqrt{A1+A4})) )$$

|           |                 |             |           |   |                |
|-----------|-----------------|-------------|-----------|---|----------------|
|           | Feet            |             | Acres     |   | Acres          |
| V=        | $((H4-H1)/3)$   | x           | $(A1+A4)$ | + | $\sqrt{A1+A4}$ |
| V=        | 256.6667        | x           | 0.9556    | + | 0.9776         |
| V=        | 256.6667        | x           | 1.9332    |   |                |
| <b>V=</b> | <b>496.1814</b> | <b>AcFt</b> |           |   |                |

Equation to determine Volume (AcFt) of pond storage capacity from  
**Bottom of Pond to Top of Bank at Spillway:**

$$V = ( ((H3-H4)/3)(A3+A4 + (\sqrt{A3+A4})) )$$

|           |                  |             |           |   |                |
|-----------|------------------|-------------|-----------|---|----------------|
|           | Feet             |             | Acres     |   | Acres          |
| V=        | $((H3-H4)/3)$    | x           | $(A3+A4)$ | + | $\sqrt{A3+A4}$ |
| V=        | 257.6667         | x           | 2.3622    | + | 1.5369         |
| V=        | 257.6667         | x           | 3.8992    |   |                |
| <b>V=</b> | <b>1004.6810</b> | <b>AcFt</b> |           |   |                |



0 510 20 30 40  
Feet  
1 inch = 750 feet

R 777.62' SN26N006

MNFV0098154  
LOT OWNERS OF  
WEYERHAVEN AND LOT  
OWNERS OF WEYERHAVEN  
ADDITION NO 1

ST013821 773.53  
ST013837 777.23  
ST013820 776.03  
8" 777.3

SN25N137  
R 777.96'

WEYERHAVEN BLVD

ST013819 776.21

ST013818 773.75

ST013816 773.76

R 778.85' SN26N007

778.76  
780.383

MNFV0098149  
LOT OWNERS OF  
WEYERHAVEN AND LOT  
OWNERS OF WEYERHAVEN  
ADDITION NO 1

ST016420 773.31  
ST002867 776.46  
ST016418 779.25  
ST016419 775.72  
ST002868 775.76  
781.13  
779.16

ST017587 774.75  
R 778.92' SN26N008

ST016413 778.89  
ST016414 778.55  
ST016415 778.54  
ST016416 778.53  
ST016417 778.57

MNFV0101157  
MICHAEL B DELVAUX  
W142N6142 MILL RIDGE DR

MNFV0101156  
JOSEPH M EBERHARDY AND ANGELA K EBERHARDY  
W142N6126 MILL RIDGE DR

Crushed CMP needs repair.

SWP26N002  
P-0144

MNFV0101155  
JONATHAN W JACKSON AND SHEILA JACKSON  
W142N6112 MILL RIDGE DR

ST012543 769.41  
ST012499 769.14  
ST012500 769.72  
ST012502 769.09

Crushed CMP needs repair.

Remove invasive grass.

MNFV0101005  
MARK PLUER  
N59W14176 KAUL AVE

MNFV0101011  
TIMOTHY L AND ANN M MILETTI TRUST  
W140N6035 LILLY RD

01-15

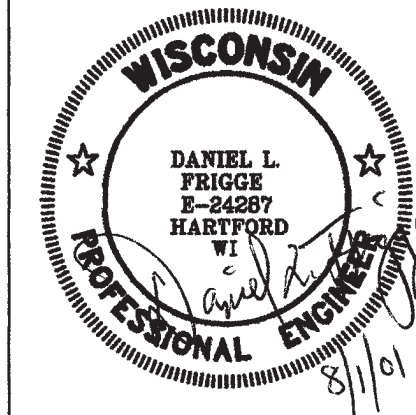
MILL RIDGE #5

VILLAGE OF MENOMONEE FALLS

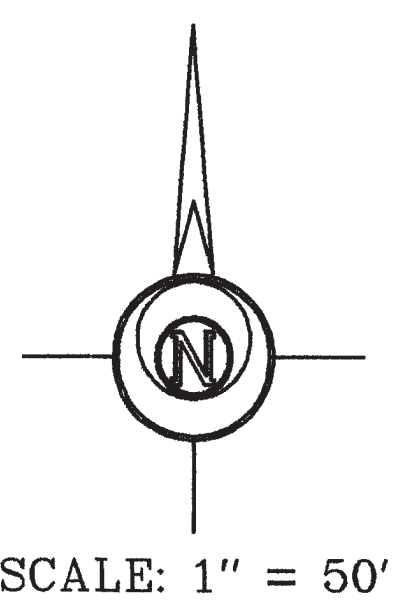
M.I.C. ENGINEERING, INC.  
6542 HAWTHORNE LANE, HARTFORD, WISCONSIN (262)673-4550

GRADING &  
EROSION CONTROL  
PLAN

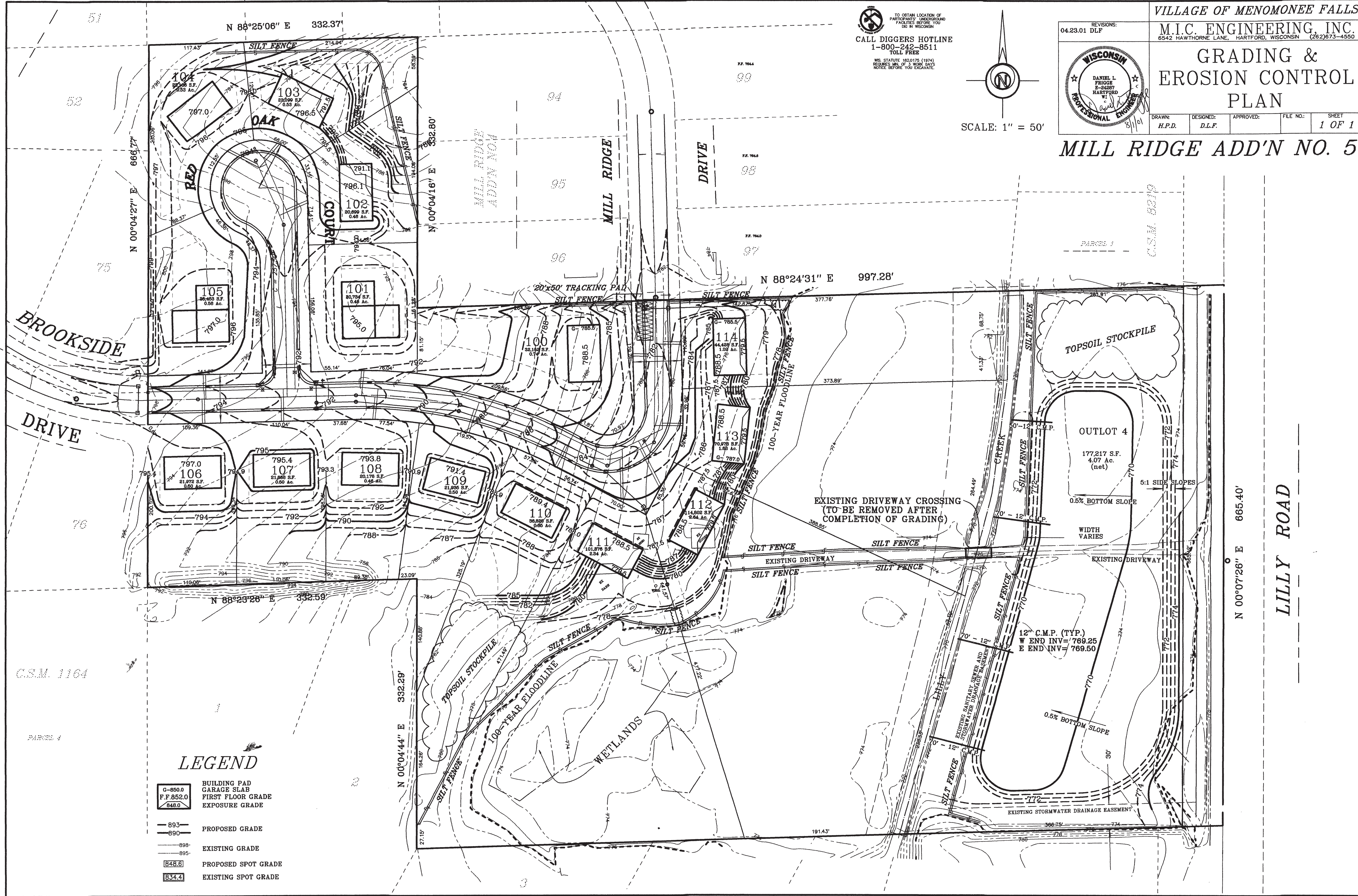
DRAWN: H.P.D. DESIGNED: D.L.F. APPROVED: FILE NO.: SHEET: 1 OF 1



TO OBTAIN LOCATION OF  
PARTICIPANTS' UNDERGROUND  
FACILITIES BEFORE YOU  
DIG IN WISCONSIN  
CALL DIGGERS HOTLINE  
1-800-242-8511  
TOLL FREE  
WIS. STATUTE 182.0175 (1974)  
REQUIRES MIN. OF 3 WORK DAYS  
NOTICE BEFORE YOU EXCAVATE.



MILL RIDGE ADD'N NO. 5



LEGEND

- G-850.0 BUILDING PAD
- F.F.852.0 GARAGE SLAB
- 848.0 FIRST FLOOR GRADE
- 848.0 EXPOSURE GRADE
- 893 PROPOSED GRADE
- 890 EXISTING GRADE
- 898 EXISTING GRADE
- 895 EXISTING GRADE
- 848.6 PROPOSED SPOT GRADE
- 834.4 EXISTING SPOT GRADE