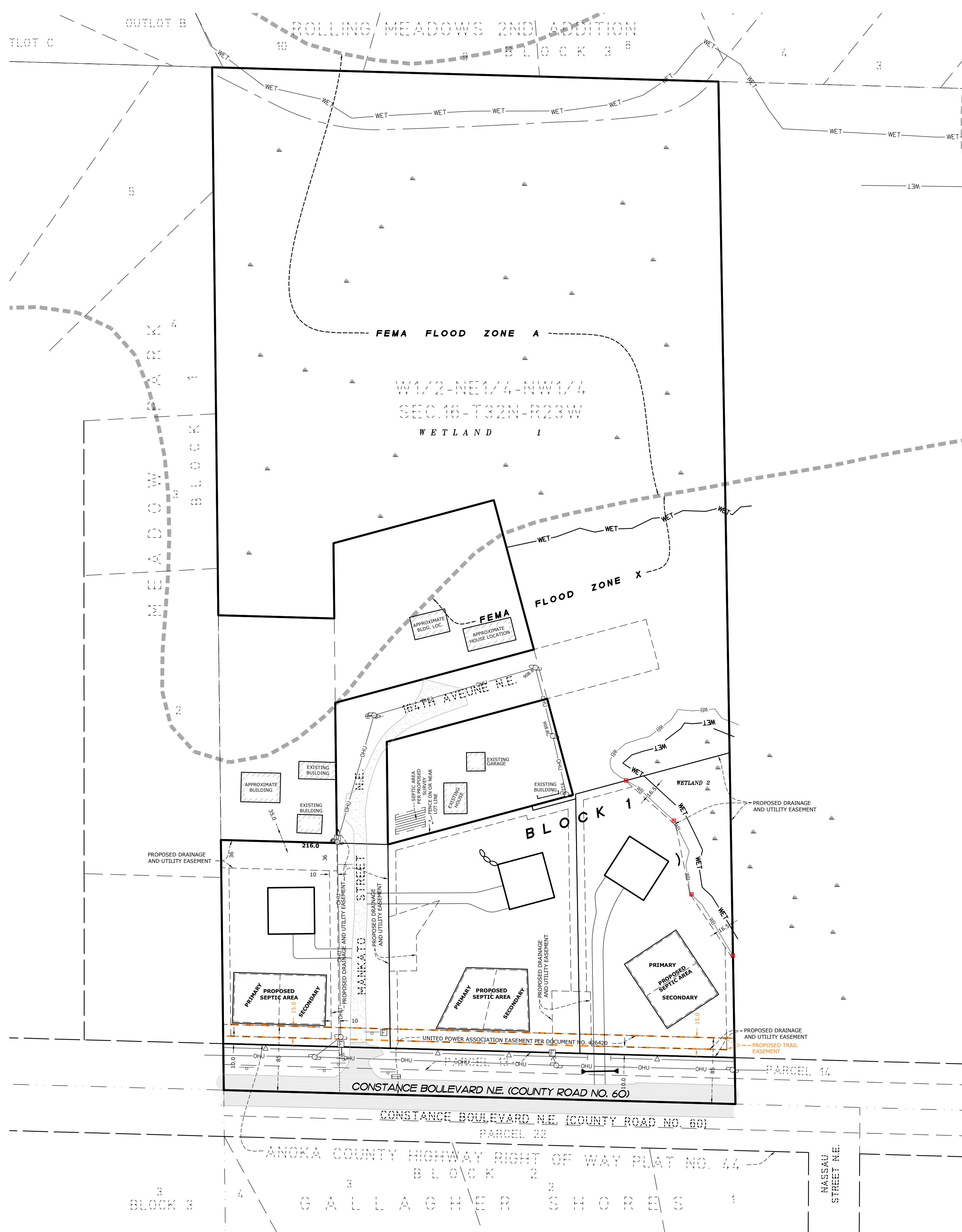


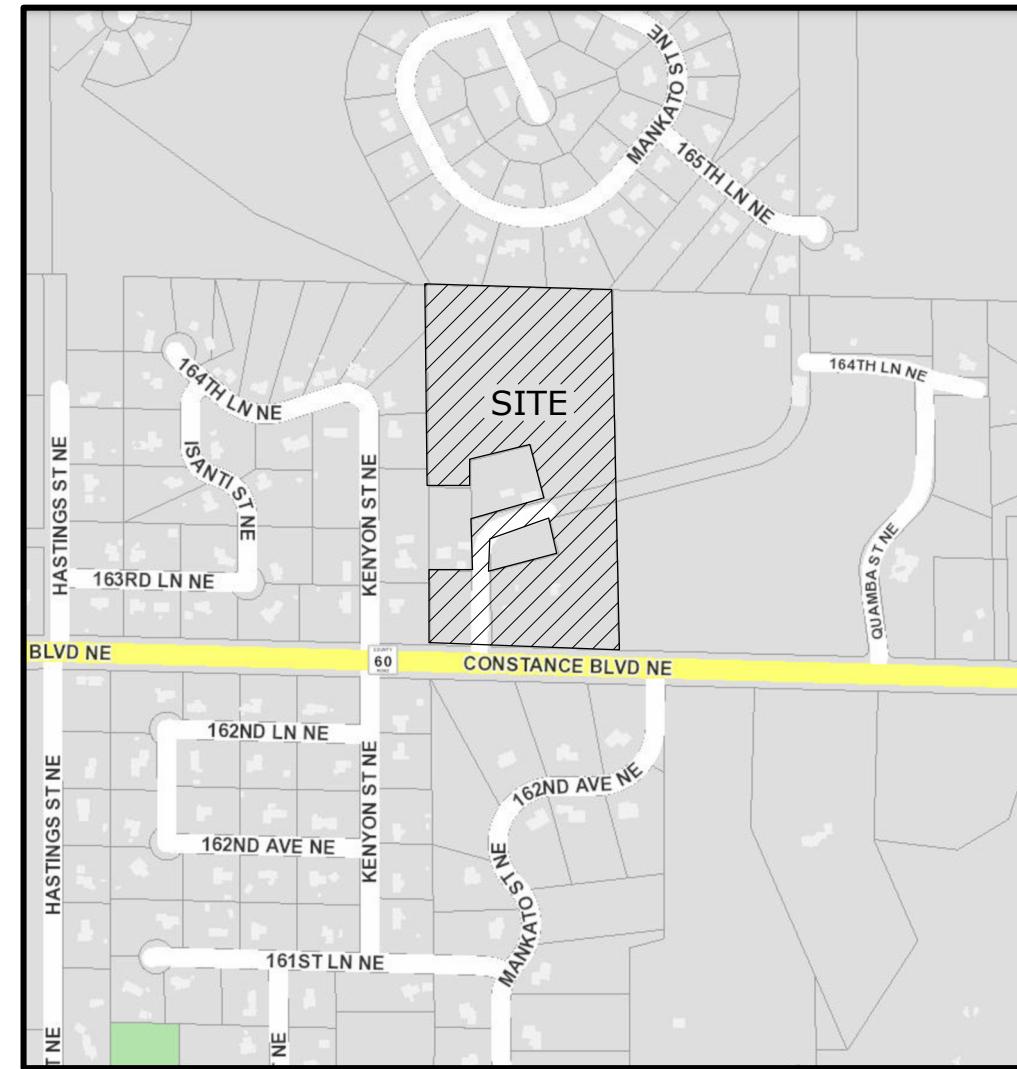
# ENTSMINGER ESTATES

## TITLE SHEET, NOTES & LEGEND

### HAM LAKE, MINNESOTA



VICINITY MAP (NOT TO SCALE)



**DEVELOPER**

ENTSMINGER ENTERPRISES  
14916 CENTRAL AVE NE  
HAM LAKE, MN 55304  
JEFF ENTSMINGER  
612-669-4004  
JEFF@ALLSEASONSERVICES.COM

**ENGINEER**

PLOWE ENGINEERING, INC.  
6776 LAKE DRIVE  
LINO LAKES, MN 55014  
ADAM CINKEL, P.E.  
651-361-8234  
ADAM@PLOWE.COM

**SURVEYOR**

E.G. RUD & SONS LAND  
SURVEYING, INC.  
6776 LAKE DRIVE  
LINO LAKES, MN 55014  
JASON RUD  
651-361-8225  
JRUD@EGRUD.COM

AN MPCA NPDES CONSTRUCTION PERMIT IS REQUIRED PRIOR  
TO THE START OF CONSTRUCTION

ALL PERMITS, INCLUDING BUT NOT LIMITED TO PERMITS  
FROM CITY OF HAM LAKE, MNDOT, AND THE MINNESOTA  
DEPARTMENT OF LABOR AND INDUSTRY, SHALL BE  
OBTAINED PRIOR TO ORDERING OF MATERIAL AND  
STARTING OF CONSTRUCTION. NO INSTALLATION OF  
UTILITIES SHALL BE PERMITTED UNTIL ALL APPLICABLE  
PERMITS ARE RECEIVED BY CONTRACTOR. INSTALLATION  
OF UTILITIES SHALL BE CONSTRUCTED TO MINNESOTA  
DEPARTMENT OF LABOR AND INDUSTRY STANDARDS AND  
CITY STANDARDS AS IDENTIFIED IN THE PUBLIC  
WORKS/ENGINEERING STANDARDS.

**SHEET INDEX**

C0	TITLE SHEET, NOTES & LEGEND GRADING, DRAINAGE, EROSION CONTROL AND LIVABILITY PLAN PRELIMINARY PLAT
C1.1	REMOVALS PLAN
C1.2	BASIN DETAILS & LOT 3 DRIVEWAY CULVERT
C1.3 - C1.4	SWPPP
C2.1	DETAILS

**TITLE SHEET, NOTES & LEGEND**  
PREPARED FOR: ENTSMINGER ENTERPRISES

**SHEET**  
**C0**

**PLOWE**  
ENGINEERING, INC.  
6776 LAKE DRIVE  
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SITE PLANNING  
& ENGINEERING

DRAWN BY:	AG
JOB NO.:	24-2159
CHECK BY:	MQA
DATE:	08/02/24
NO.	DESCRIPTION
1	10/28/24 CCWD & CITY COMMENTS
2	10/28/24
3	10/28/24
4	10/28/24
5	10/28/24
6	10/28/24
7	10/28/24
8	10/28/24

# GRADING, DRAINAGE, EROSION CONTROL AND INVAILABILITY PLAN for ~ ENTSMINGER ENTERPRISES ~of~ ENTSMINGER ESTATES

## LEGEND

- DETONES IRON MONUMENT FOUND
- DETONES FIBER OPTIC BOX
- DETONES GUY WIRE
- DETONES POWER POLE
- DETONES WELL
- DETONES EXISTING LIDAR CONTOURS
- DETONES PROPOSED CONTOURS
- DETONES BUTMINOUS SURFACE
- DETONES CONCRETE SURFACE
- DETONES GRAVEL SURFACE
- DETONES PROPOSED RESTRICTED ACCESS
- DETONES OVERHEAD BORING (BY TRADEWALL SOIL TESTING)
- DETONES PROPOSED BIOROLL
- DETONES SILT FENCE
- DETONES BUILDING SETBACK LINE
- DETONES 16.5' WETLAND BUFFER
- DETONES PROPOSED BUILDING PAD AREA
- DETONES PROPOSED YARD AREA
- DETONES SILT FENCE WITHIN 7' OF EXISTING
- DETONES AREA 1' ABOVE MOTTLES
- DETONES PROPOSED WELL LOCATION
- DETONES PROPOSED RETAINING WALL (BY TRADEWALL SOIL TESTING)
- DETONES BUTMINOUS SURFACE
- DETONES CONCRETE SURFACE
- DETONES GRAVEL SURFACE
- DETONES PROPOSED RESTRICTED ACCESS

## NORTH

### GRAPHIC SCALE

0 30 60 90 120

FEET

1 INCH = 60 FEET

## EROSION CONTROL / REVEGETATION SPECS.

- PAD CONTOURS SHOWN ARE FOR DEMONSTRATION PURPOSES, PLAN FIGURE A PLAN REVIEW BY THE CITY OF HAM LAKE
- PRIOR TO GRAVING, INSTALL SILT STOP BERM IN LOCATIONS SHOWN. ADDITIONAL SILT STOP FENCE WILL BE REQUIRED WHERE LOCAL CONDITIONS REQUIRE. ANY GRAVING SHALL PROCEED ON AN AREA BY AREA BASIS TO MINIMIZE UNCOMPLETED AREAS.
- AS EACH AREA OUTSIDE THE STREET IS GRADED, PROVIDE NATIVE TOPSOIL, SEED, AND MULCH, ANCHORED WITH A STRAIGHT SET OF DISCS WITHIN SEVEN DAYS AFTER GRAVING.
- MAINTAIN AND REPAIR SILT STOP FENCES (INCLUDING REMOVAL OF ACCUMULATED SILT) UNTIL AND REPAIR SILT STOP FENCES (INCLUDING REMOVAL OF ACCUMULATED SILT) UNTIL VEGETATION IS ESTABLISHED.
- IF DENEWATERING IS REQUIRED, PROVIDE DRAINAGE DENEWATERING PERMIT PRIOR TO CONSTRUCTION. IF A DNR PERMIT IS REQUIRED, PROVIDE WELL FIELD LOCATION, SCHEDULE, AND QUANTITIES PRIOR TO CONSTRUCTION.
- ROAD SURFACES TO BE CLEARED AND SEDIMENT TO BE TRANSPORTED BY THE END OF THE DAY.
- DISTURBED SOILS AND STOCKPILLS WILL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 24 HOURS AFTER CONSTRUCTION ACTIVITY IN THE AREAS THAT HAVE TEMPORARILY OR PERMANENTLY CEASED.

## TYPICAL LOT

1. TREE PROTECTION LIMITS TO BE MARKED IN FIELD PRIOR TO ANY TREE CLEARING ACTIVITY.

2. SILT FENCE TO BE INSTALLED AT CONSTRUCTION LIMIT LINE.

3. CARE IS TO BE TAKEN TO AVOID CONSTRUCTION ACTIVITY OR CONSTRUCTION VEHICLE TRAFFIC WITHIN THE DRO LINE OF TREES IN THE TREE PROTECTION ZONE.

4. MAINTAIN AND REPAIR SILT STOP FENCES (INCLUDING REMOVAL OF ACCUMULATED SILT) UNTIL VEGETATION IS ESTABLISHED.

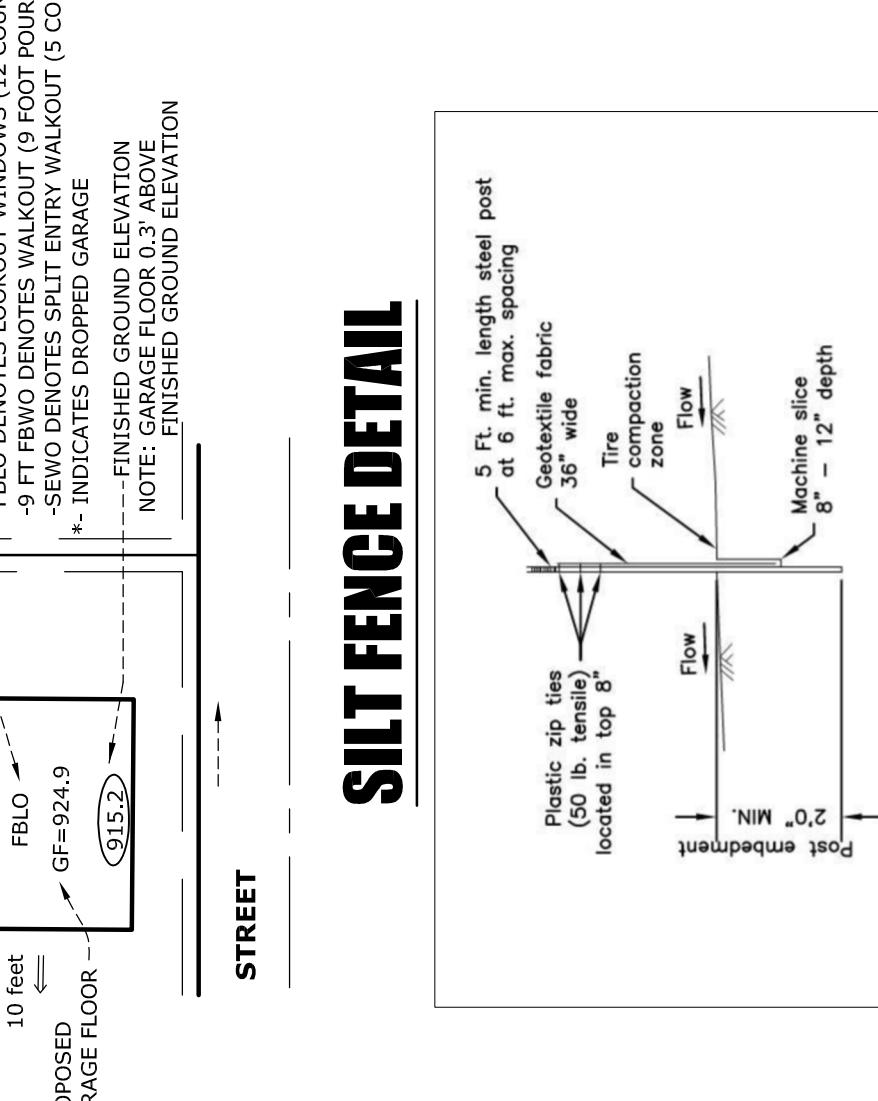
5. ROAD SURFACES TO BE CLEARED AND SEDIMENT TO BE TRANSPORTED BY THE END OF THE DAY.

6. DISTURBED SOILS AND STOCKPILLS WILL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 24 HOURS AFTER CONSTRUCTION ACTIVITY IN THE AREAS THAT HAVE TEMPORARILY OR PERMANENTLY CEASED.

## TREE PROTECTION NOTES

- PAD CONTOURS SHOWN ARE FOR DEMONSTRATION PURPOSES, PLAN FIGURE A PLAN REVIEW BY THE CITY OF HAM LAKE
- SILT FENCE TO BE INSTALLED BY BUILDER PRIOR TO HOUSE CONSTRUCTION.
- CARE IS TO BE TAKEN TO AVOID CONSTRUCTION ACTIVITY OR CONSTRUCTION VEHICLE TRAFFIC WITHIN THE DRO LINE OF TREES IN THE TREE PROTECTION ZONE.
- IF DENEWATERING IS REQUIRED, PROVIDE DRAINAGE DENEWATERING PERMIT PRIOR TO CONSTRUCTION. IF A DNR PERMIT IS REQUIRED, PROVIDE WELL FIELD LOCATION, SCHEDULE, AND QUANTITIES PRIOR TO CONSTRUCTION.

## SILT FENCE DETAIL



### GENERAL SILT FENCE NOTES:

Refer to Job# specs. 2573 & 3886  
Silt fence shall be installed along the contour (on a level horizontal plane)  
Cure the end of the silt fence up-gradient so that it contains the muddy water.  
Maximum contributing area shall be one acre.  
No single fencing unit should exceed 330 feet.

Follow slope grade/length guidelines:

SLICE GRADE	MAX LENGTH
LESS THAN 2%	100 FT
5% - 10%	50 FT
GREATER THAN 20%	15 FT

NOT TO SCALE

## LIVABILITY STANDARDS REQUIREMENT

All individual lots shall contain at least 20,500 square feet of land which lies above the 100 year flood contour. Of this 29,500 square feet, the following additional requirements must be present:

A. A residential lot must contain at least 7,500 square feet of contiguous land which is reserved for both the Eligible Building Area or the Yard Area, but the entire lot must contain at least one 100 year flood contour. The Eligible Building Area or the Yard Area, but the entire lot must contain Undisturbed Soils or soils which meet the requirements of Rule 7080 of the Minnesota Pollution Control Agency for ISTS construction standards. The ISTS Area may be irregular in shape, provided they do not encroach into areas reserved for Ists construction without the need for variances.

B. Eligible Building Area Each lot shall contain at least one 100 year flood contour of contiguous land which lies at elevation at least four feet above Undisturbed Soils. The Eligible Building Area may not be irregular in shape, and should be generally rectangular or ovoid, otherwise than narrow necks or peninsulas. Eligible Building Areas may not encroach into any other areas reserved for Ists construction or otherwise for road or drainage purposes, any may not encroach into any areas within the 100 year flood contour or into designated wetlands. Yard Areas may be irregular in shape, except within thirty feet of the locations where the Yard Area is contiguous to the Eligible Building Area, at which locations the Yard Areas shall be a logical extension or expansion of the generally rectangular or ovoid shape of the Eligible Building Area. Fill may be used to create Yard Area.

C. Lots above the 100 year flood contour, not less than one foot above unsuitable soils, as determined by the City's engineer.

D. Building Pad Areas The entire Building Pad must lie within the Eligible Building Area, and shall meet the separation requirements for the Eligible Building Area.

E. Low Floor Elevations

i) For walkout designs, the low floor elevation shall be at least one foot above the 100 year flood contour, but notwithstanding the year flood contour, not less than one foot above unsuitable soils, as determined by the City's engineer.

ii) For other designs, the low floor elevation shall be at least one foot above the 100 year flood contour, but notwithstanding the year flood contour, not less than one foot above unsuitable soils, as determined by the City's engineer.

## REMOVAL NOTES

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor of the State of Minnesota.

JASON E. RUD

Date: 10/28/24 License No. 41578

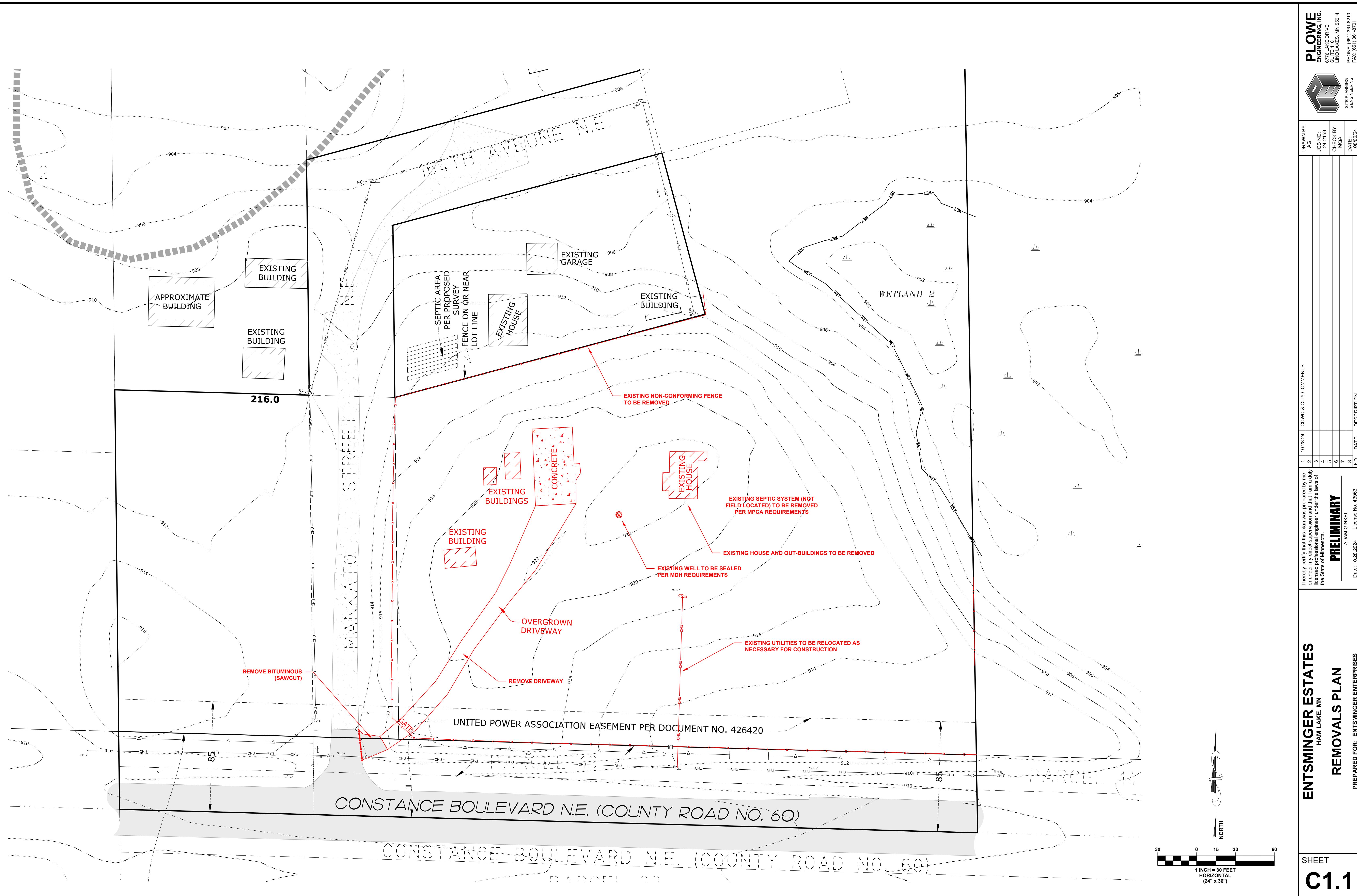
DRAWN BY: JEN JOHN NO: 23987875 DATE: 10/28/24  
CHECK BY: JER FIELD CREW: BH-BJ  
1  
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4  
NO. DATE DESCRIPTION BY

**E. G. RUD & SONS, INC.**  
1ST, 1ST Professional Land Surveyors  
6776 Lake Drive NE, Suite 110  
Lino Lakes, MN 55014  
Tel. (651) 361-8200 Fax (651) 361-8701  
www.egrud.com

## INVAILABILITY CHART

LOT	BLOCK	TOTAL LOT AREA (S.F.)	YARD AREA (S.F.)	SEPTIC AREA (S.F.)	BUILDING PAD AREA (S.F.)	PROPOSED BUILDING PAD 4 FT ABOVE UNSUITABLE (S.F.)	GARAGE FLOOR ELEVATION	PROPOSED LOW FLOOR ELEVATION	LOWEST FLOOR ELEVATION	DETERMINING FACTOR	BORING #	MOTTLES	BUILDING TYPE	CUSTOM GRADED NO
1	1	56,909	12,371	7,850	10,000	10,000	916.3	913.5	913.5	BASIN 1	SB2	915.2	905.4	
2	1	72,816	43,591	8,000	10,000	7,273	924.9	917.2	917.2	MOTTLED SOILS PER SB6	SB7	920.3	915.8	
3	1	73,004	32,910	8,000	10,000	9,252	920.0	911.7	911.7	MOTTLED SOILS PER SB1	SB1	918.0	914.5	913.3
											SB2	912.6	907.4	913.2
											SB3	912.5	910.3	
											SB4	915.4	911.4	
											SB5	920.9	916.2	912.4
											SB6	920.3	915.8	911.0
											SB7	918.0	914.5	910.1









## NPDES DEFINITIONS

### PROJECT TITLE

ENTSMINGER ESTATES

### PROJECT LOCATION

2045 CONSTANCE BLVD NE  
HAM LAKE, MN 55304  
ANOKA COUNTY

LATITUDE: 45.26636  
LONGITUDE: -93.20644

### DEVELOPER

ENTSMINGER ENTERPRISES LLC  
14916 CENTRAL AVE NE  
HAM LAKE, MN 55304

CONTACT NAME: JEFF ENTSINGER  
CONTACT PHONE: (612) 669-4004  
CONTACT E-MAIL: JEFF@ALLSEASONSERVICES.COM

### GENERAL CONTRACTOR

TBD

### NARRATIVE - PERMANENT STORMWATER TREATMENT SYSTEMS

PERMANENT STORMWATER MANAGEMENT FEATURES WILL INCLUDE INFILTRATION BASINS - SEE STORMWATER DRAINAGE REPORT FOR FURTHER DISCUSSION.

### SITE IMPERVIOUS AREAS

	BEFORE CONSTRUCTION	AFTER CONSTRUCTION
SITE AREA	16.29 ACRES	
TOTAL ESTIMATED IMPERVIOUS	0.16 ACRES	0.34 ACRES
TOTAL ESTIMATED PERVIOUS	16.13 ACRES	15.95 ACRES

### TOTAL DISTURBED AREA

-2.2 ACRES

### SITE MAP W/ EXISTING AND FINAL GRADES AND DESIGN CALCULATIONS

SEE "STORMWATER DRAINAGE REPORT" FOR EXISTING AND PROPOSED AREA MAPS, DENOTING DRAINAGE AREA BOUNDARIES, DIRECTIONS OF FLOW, AND DISCHARGE POINTS WHERE STORMWATER LEAVES THE SITE.

### RECEIVING WATERS WITHIN ONE MILE

NAME OF WATER BODY	TYPE OF WATER BODY	SPECIAL WATER	IMPAIRED WATER
PW 02072200	WETLAND	NO	NO
PW 02072300	WETLAND	NO	NO
COUNTY DITCH 58	DITCH	NO	NO
HAM LAKE	LAKE	NO	YES

### BUFFER TO SURFACE WATER

IF THE SITE DRAINS TO A SURFACE WATER, IS A 50-FT NATURAL BUFFER ADJACENT TO THE SURFACE WATER PRESERVED?

YES NO N/A NOTE: NATURAL BUFFERS ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STREAM DRAIN INLETS, AND SEDIMENT BASINS.

A) A 50-FT NATURAL BUFFER CANNOT BE PROVIDED FOR ALL WETLANDS; REDUNDANT SEDIMENT CONTROL MEASURES WILL BE PROVIDED FOR THOSE LOCATIONS.

### TEMPORARY SEDIMENTATION BASINS

IF TEN (10) OR MORE ACRES OF DISTURBED SOIL DRAIN TO A COMMON LOCATION, IS A TEMPORARY SEDIMENT BASIN PROVIDED FOR TREATMENT OF THE RUNOFF BEFORE IT LEAVES THE CONSTRUCTION SITE OR ENTERS SURFACE WATERS?

A) BECAUSE THIS SITE IS WITHIN ONE (1) MILE OF AN IMPAIRED WATER, THIS REQUIREMENT IS FIVE (5) ACRES OR MORE. HOWEVER, IT IS NOT ANTICIPATED THAT OVER FIVE (5) ACRES OF AREA WILL BE DISTURBED.

### INFILTRATION FEASIBILITY

ARE THERE ANY INFILTRATION RESTRICTIONS FOR THE SITE (SEE 16.14 THROUGH 16.21)?

A) THE SITE HAS ZIMMERMAN FINE SANDS IN UPLANDS, WHICH ARE WELL DRAINING HSG A SOILS. INFILTRATION APPEARS TO BE FEASIBLE.

### ADDITIONAL STORMWATER MITIGATION MEASURES

YES NO ARE THERE ANY STORMWATER MITIGATION MEASURES PER:

- ENVIRONMENTAL REVIEW DOCUMENT?
- ENDANGERED SPECIES REVIEW?
- ARCHAEOLOGICAL REVIEW?
- OTHER LOCAL, STATE OR FEDERAL REVIEW?

IF YES TO ANY OF THE ABOVE, DESCRIBE THE MITIGATION MEASURES. FOR PURPOSES OF THIS PERMIT, MITIGATION MEASURES MEANS ACTIONS NECESSARY TO AVOID, MINIMIZE, OR MITIGATE FOR IMPACTS RELATED TO EROSION PREVENTION, SEDIMENT CONTROL, THE PERMANENT STORMWATER TREATMENT SYSTEM, POLLUTION PREVENTION MANAGEMENT MEASURES AND DISCHARGES ASSOCIATED WITH THE PROJECT'S CONSTRUCTION ACTIVITY. [MINN. R. 7090]

### DOCUMENTATION OF TRAINED INDIVIDUALS

#### A. INDIVIDUAL WHO PREPARED THE SWPPP:

ADAM GINKEL  
PLOWE ENGINEERING, INC.  
6776 LAKE DRIVE  
LINO LAKES MN 55014  
(651) 361-8234  
adam@plowe.com

#### B. INDIVIDUAL(S) OVERSEEING IMPLEMENTATION OF, REVISING AND/OR AMENDING THE SWPPP AND INDIVIDUALS PERFORMING INSPECTIONS FOR THE PROJECT. ONE OF THESE INDIVIDUALS MUST BE AVAILABLE FOR AN ON SITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA. [MINN. R. 7090]

CONTACT NAME \_\_\_\_\_  
CONTACT PHONE \_\_\_\_\_  
CONTACT E-MAIL: \_\_\_\_\_

#### C. INDIVIDUAL(S) PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPs. [MINN. R. 7090]

CONTACT NAME \_\_\_\_\_  
CONTACT PHONE \_\_\_\_\_  
CONTACT E-MAIL: \_\_\_\_\_

### LONG TERM OPERATION AND MAINTENANCE OF PERMANENT STORMWATER FACILITIES

THE PROPOSED STORMWATER MANAGEMENT FEATURES FOR THIS SITE WILL BE PRIVATE AND WILL BE MAINTAINED BY LOW OWNERS.

### REVEGETATION SPECIFICATIONS

ITEM	MNDOT SPECIFICATION/NOTES
SOD	3878
SEED **	3876
* FOR TURF ESTABLISHMENT	
COMMERCIAL TURF	MNDOT MIX 25-131 (220 LBS/ACRE)
RESIDENTIAL TURF	MNDOT MIX 25-131 (120 LBS/ACRE)
TEMPORARY	
FALL COVER	MNDOT MIX 21-112 (100 LBS/ACRE)
SPRING/SUMMER	MNDOT MIX 21-111 (100 LBS/ACRE)
SOIL-BUILDING COVER	MNDOT MIX 21-113 (110 LBS/ACRE)
1-2 YEARS COVER	MNDOT MIX 22-111 (30.5 LBS/ACRE)
2-5 YEARS COVER	MNDOT MIX 22-112 (40 LBS/ACRE)
MULCH	3882 (TYPE 1 - DISC ANCHORED)
HYDROMULCH	3884
FERTILIZER	3881
WOOD FIBER BLANKET	3885 (CATEGORY 2)

\* MOW A MINIMUM OF:

RESIDENTIAL TURF - ONCE PER 2 WEEKS

COMMERCIAL TURF - ONCE PER 4 WEEKS

\*\* SEDED AREAS SHALL BE EITHER MULCHED OR COVERED BY FIBROUS BLANKETS TO PROTECT SEEDS AND LIMIT EROSION.

### QUANTITIES - ESTIMATED QUANTITIES FOR EROSION AND SEDIMENT CONTROL MEASURES

TYPE	QTY	UNIT
SILT FENCE	1,863	LINEAR FEET
BIO-ROLLS	619	EACH
RIP-RAP W. GEO-FABRIC	0	CUBIC YARDS
CATCH BASIN INLET PROTECTION	0	EACH
STABILIZED OVERFLOW (ENKAMAT)	3	EACH
EROSION CONTROL BLANKET	0	SQUARE YARDS
SEED & MULCH (GENERAL)	2.1	ACRE
ROCK CONSTRUCTION ENTRANCE *	0	EACH

\* MANKATO STREET TO ACT AS ROCK CONSTRUCTION ENTRANCE

### NARRATIVE - TIMING FOR INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES

ALL EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS OR IMPLEMENTED IN THE FIELD SHALL BE IN ACCORDANCE WITH THE CITY REQUIREMENTS.

#### PHASE I:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. PROVIDE TEMPORARY PARKING AND STORAGE AREA.
3. INSTALL SILT FENCE AS SHOWN ON PLAN.
- 3.1. ADDITIONAL SILT FENCE MAY BE NECESSARY IF LOCAL CONDITIONS REQUIRE.
- 3.2. THE CONTRACTOR SHALL MAINTAIN SILT FENCE, INCLUDING THE REMOVAL OF ACCUMULATED SEDIMENT, THROUGH COMPLETION OF THE CONSTRUCTION.
- 3.3. SILT FENCE WILL REMAIN IN PLACE UNTIL SITE HAS BEEN STABILIZED.
- 3.4. CONTRACTOR TO PROVIDE ADDITIONAL SILT FENCE, BIOROLLS, EROSION CONTROL BLANKET, OR OTHER APPROVED EQUAL FOR ANY SLOPES THAT APPEAR TO BE FAILING. (NOTE: EROSION CONTROL BLANKET MUST HAVE NON-FIXED JOINTS AND BE FULLY BIODEGRADABLE; ANY BLANKET NETTING MUST BE LOOSE-WEAVE.)
4. INSTALL INLET PROTECTION FOR ALL EXISTING STORM SEWER STRUCTURES.
5. INSTALL TREE PROTECTION FENCING AS APPLICABLE.
6. PERFORM SITE GRADING ON AN AREA-BY-AREA BASIS TO MINIMIZE UNSTABILIZED AREAS.
- 6.1. CONTRACTOR MUST IMMEDIATELY INITIATE STABILIZATION OF EXPOSED SOIL AREAS, AS DESCRIBED IN ITEM 8.4 OF THE PERMIT, AND COMPLETE THE STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE TEMPORARILY OR PERMANENTLY CEASES.
- 6.2. CONTRACTOR TO PROVIDE TEMPORARY SEDIMENTATION BASINS AS REQUIRED IN SECTION 14.1 THROUGH 14.10.
7. PAY SPECIAL ATTENTION TO ADJACENT PROPERTY LINES TO ENSURE THE EROSION CONTROL PRACTICES IN PLACE IN THOSE AREAS PREVENT MIGRATION OF SEDIMENT ONTO ADJACENT PROPERTIES.
8. STABILIZE SOIL LOCATIONS. STABILIZATION SHALL BE INITIATED IMMEDIATELY.
9. FINAL GRADE SWALE AREAS UPON STABILIZATION OF UPSTREAM AREAS.
10. CONTRACTOR SHALL BE RESPONSIBLE TO SWEEP/SCRAPE ADJACENT STREETS WHEN MATERIALS OR DEBRIS HAVE BEEN WASHED/LOWED ONTO ADJACENT STREETS OR AS DIRECTED BY CITY.

#### PHASE II:

1. PROVIDE TEMPORARY SEED FOR DISTURBED AREAS.
2. INSTALL RIP-RAP AT FLARED-END SECTIONS (AS APPLICABLE).
3. INSTALL TEMPORARY INLET PROTECTION FOR ALL STORM SEWER INLET STRUCTURES IN PAVING AREAS.
4. INSTALL UTILITIES INCLUDING SANITARY SEWER, WATER MAIN, STORM SEWER.
5. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND/OR SOD.
6. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ONLY AFTER SITE HAS BEEN STABILIZED.

"BEST MANAGEMENT PRACTICES (BMPs)" MEANS THE MOST EFFECTIVE AND PRACTICABLE MEANS OF EROSION PREVENTION AND SEDIMENT CONTROL, AND WATER QUALITY MANAGEMENT PRACTICES THAT ARE THE MOST EFFECTIVE AND PRACTICABLE MEANS OF TO CONTROL, PREVENT, AND MINIMIZE DEGRADATION OF SURFACE WATER, INCLUDING AVOIDANCE OF IMPACTS, CONSTRUCTION-PHASING, MINIMIZING THE LENGTH OF TIME SOIL AREAS ARE EXPOSED, PROHIBITIONS, POLLUTION PREVENTION THROUGH GOOD HOUSEKEEPING, AND OTHER MANAGEMENT PRACTICES PUBLISHED BY STATE OR DESIGNATED AREA-WIDE PLANNING AGENCIES. [MINN. R. 7090]

"CONSTRUCTION ACTIVITY" MEANS ACTIVITIES INCLUDING CLEARING, GRADING, AND EXCAVATING, THAT RESULT IN LAND DISTURBANCE OF EQUAL TO OR GREATER THAN ONE ACRE, INCLUDING THE DISTURBANCE OF LESS THAN ONE ACRE OF TOTAL LAND AREA THAT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE IF THE LARGER COMMON PLAN WILL ULTIMATELY DISTURB EQUAL TO OR GREATER THAN ONE ACRE. THIS INCLUDES A DISTURBANCE TO THE LAND THAT RESULTS IN A CHANGE IN THE TOPOGRAPHY, EXISTING SOIL COVER, BOTH VEGETATIVE AND NON-VEGETATIVE, OR THE EXISTING SOIL TOPOGRAPHY THAT MAY RESULT IN ACCELERATED STORMWATER RUNOFF THAT MAY LEAD TO SOIL EROSION AND MOVEMENT OF SEDIMENT. CONSTRUCTION ACTIVITY DOES NOT INCLUDE A DISTURBANCE TO THE LAND OF LESS THAN FIVE ACRES FOR THE PURPOSE OF ROUTINE MAINTENANCE PERFORMED TO MAINTAIN THE ORIGINAL LINE AND GRADE, HYDRAULIC CAPACITY, AND ORIGINAL PURPOSE OF THE FACILITY. ROUTINE MAINTENANCE DOES NOT INCLUDE ACTIVITIES SUCH AS REPAIRS, REPLACEMENT AND OTHER TYPES OF NON-ROUTINE MAINTENANCE. PAVEMENT REHABILITATION THAT DOES NOT DISTURB THE UNDERLYING SOILS (E.G., MILL AND OVERLAY PROJECTS) IS NOT CONSTRUCTION ACTIVITY. [MINN. R. 7090]

"DEWATERING" MEANS THE REMOVAL OF SURFACE OR GROUND WATER TO DRY AND/OR SOLIDIFY A CONSTRUCTION SITE TO ENABLE CONSTRUCTION ACTIVITY. DEWATERING MAY REQUIRE A MINNESOTA DEPARTMENT OF NATURAL RESOURCES WATER APPROPRIATION PERMIT AND, IF DEWATERING WATER IS CONTAMINATED, DISCHARGE OF SUCH WATER MAY REQUIRE AN INDIVIDUAL MPCA NPDES/SDS PERMIT. [MINN. R. 7090]

"EROSION PREVENTION" MEANS MEASURES EMPLOYED TO PREVENT EROSION SUCH AS SOIL STABILIZATION PRACTICES, PERMANENT COVER OR CONSTRUCTION PHASING. [MINN. R. 7090]

"GENERAL CONTRACTOR" MEANS THE PARTY WHO SIGNS THE CONSTRUCTION CONTRACT WITH THE OWNER TO CONSTRUCT THE ENTIRE PROJECT DESCRIBED IN THE FINAL PLANS AND SPECIFICATIONS, WHERE THE CONSTRUCTION PROJECT INVOLVES MORE THAN ONE CONTRACTOR, THE GENERAL CONTRACTOR IS THE PARTY RESPONSIBLE FOR MANAGING THE ENTIRE PROJECT ON BEHALF OF THE OWNER. IN SOME CASES, THE OWNER IS THE GENERAL CONTRACTOR. IN THESE CASES, THE OWNER SIGNS THE PERMIT APPLICATION AS THE OPERATOR AND BECOMES THE SOLE PERMITTEE. [MINN. R. 7090]

"GROUNDWATER" MEANS THE WATER CONTAINED BELOW THE SURFACE OF THE EARTH IN THE SATURATED ZONE INCLUDING, WITHOUT LIMITATION, ALL WATERS WHETHER UNDER CONFINED, UNCONFINED, OR PERCHED CONDITIONS, IN NEAR SURFACE UNCONSOLIDATED SEDIMENT OR REGOLITH, OR IN ROCK FORMATIONS DEEPER UNDERGROUND. [MINN. R. 7090]

"HOMEOWNER FACT SHEET" MEANS AN MPCA FACT SHEET AVAILABLE ON THE MPCA CONSTRUCTION STORMWATER WEBSITE FOR PERMITTees TO GIVE TO HOMEOWNERS AT THE TIME OF SALE. [MINN. R. 7090]

"INFEASIBLE" MEANS NOT TECHNOLOGICALLY POSSIBLE OR NOT ECONOMICALLY PRACTICABLE AND achievable IN LIGHT OF THE BEST INDUSTRY PRACTICES. [MINN. R. 7090]

"INITIATED IMMEDIATELY" MEANS TAKING AN ACTION TO COMMENCE SOIL STABILIZATION AS SOON AS PRACTICABLE, BUT NO LATER THAN THE END OF THE WORK DAY, FOLLOWING THE DAY WHEN THE LAND-DISTURBING ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE, IF THE PERMITTee KNOWS THAT CONSTRUCTION WORK ON THAT PORTION OF THE SITE WILL BE TEMPORARILY CEASED FOR 14 OR MORE ADDITIONAL CALENDAR DAYS OR 7 CALENDAR DAYS WHERE ITEM 2.3 APPLIES. PERMITTees CAN INITIATE STABILIZATION BY:

- A. PREPPING THE SOIL FOR VEGETATIVE OR NON-VEGETATIVE STABILIZATION; OR
- B. APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT TO THE EXPOSED SOIL AREA; OR
- C. SEEDING OR PLANTING THE EXPOSED AREA; OR
- D. STARTING ANY OF THE ACTIVITIES IN A - C ON A PORTION OF THE AREA TO BE STABILIZED, BUT NOT ON THE ENTIRE AREA; OR
- E. FINALIZING ARRANGEMENTS TO HAVE STABILIZATION PRODUCT FULLY INSTALLED IN COMPLIANCE WITH THE APPLICABLE DEADLINE FOR COMPLETING STABILIZATION. [MINN. R. 7090]

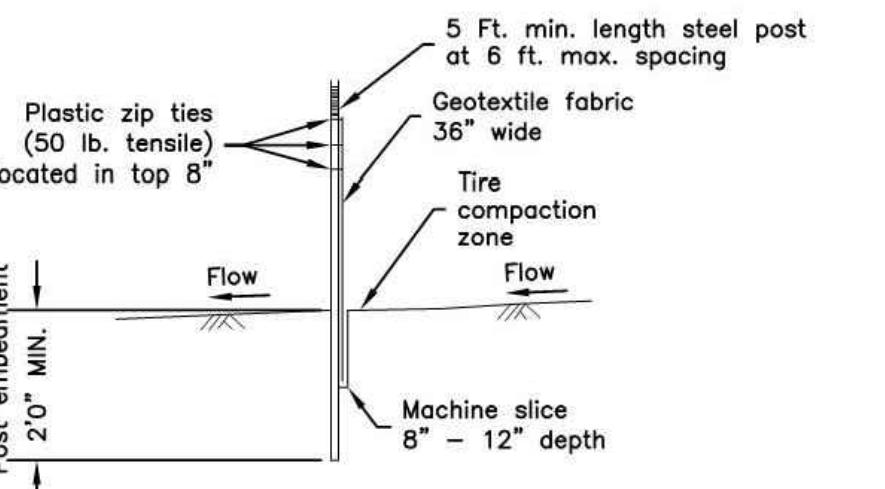
"IMPERVIOUS SURFACE" MEANS A CONSTRUCTED HARD SURFACE THAT EITHER PREVENTS OR RETARDS THE ENTRY OF WATER INTO THE SOIL, AND CAUSES WATER TO RUN OFF THE SURFACE IN GREATER QUANTITIES AND AT AN INCREASED RATE OF FLOW THAN PRIOR TO DEVELOPMENT. EXAMPLES INCLUDE RO

DRAWN BY:  
AG  
JOB NO.: 24-2159  
CHECK BY:  
MQA  
DATE: 08/02/24

I hereby certify that this plan was prepared by me  
or under my direct supervision and that I am duly  
licensed professionals engineer under the laws of  
the State of Minnesota.  
**PRELIMINARY**  
ADAM GINKEL License No. 43563  
Date: 10/28/2024

**ENTSMINGER ESTATES**  
HAM LAKE, MN  
DETAILS  
PREPARED FOR: ENTSMINGER ENTERPRISES

**SHEET**  
**C2.1**

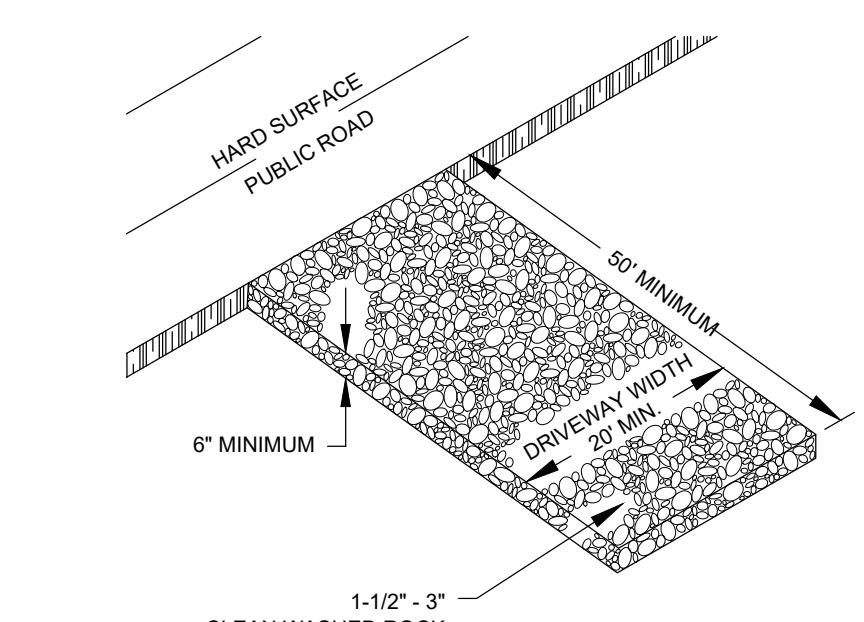


**GENERAL SILT FENCE NOTES:**

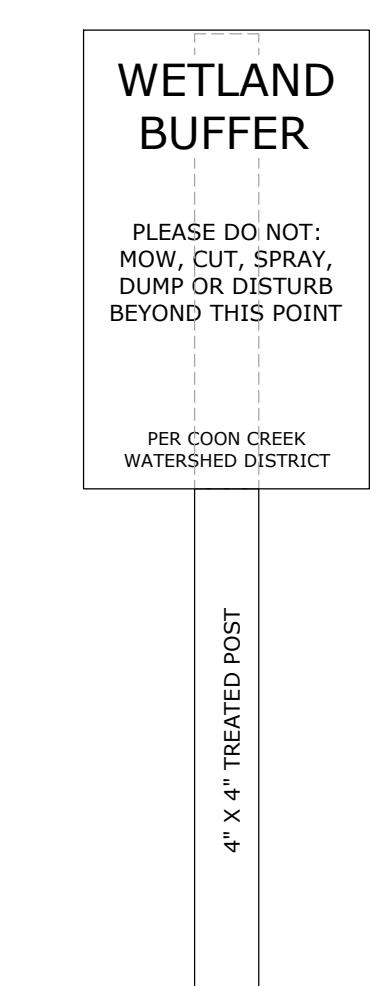
Refer to MnDOT specs. 2573 & 3886  
Silt fence shall be installed along the contour (on a level horizontal plane).  
Curve the end of the silt fence up-gradient so that it contains the muddy water.  
Maximum contributing area shall be one acre.  
No single fencing unit should exceed 330 feet.  
Follow slope grade/length guidelines:

SLOPE GRADE	MAX. LENGTH
LESS THAN 2%	100 FT.
2 - 5%	75 FT.
5 - 10%	50 FT.
10 - 20%	25 FT.
GREATER THAN 20%	15 FT.

**SILT FENCE: MACHINE SLICED HL-760A**  
NOT TO SCALE



**ROCK CONSTRUCTION  
EXIT**  
N.T.S.



**MONUMENT**  
1. CONSISTS OF A POST AND A SIGN

**WETLAND BUFFER SIGNS**

1. MOUNTED FLUSH WITH TOP OF POST
2. FASTENED WITH NON-REMOVABLE SCREWS OR RIVETS
3. SIZE: 12" H x 8" W ALUMINUM SHALL BE 5052-H38 R 6061-T6 ALLOY
4. GAUGE SHALL BE 0.080

**POST MATERIALS**

1. 4" X 4" SQUARE
2. TREATED WOOD OR OTHER CITY-APPROVED MATERIAL

**COLOR**

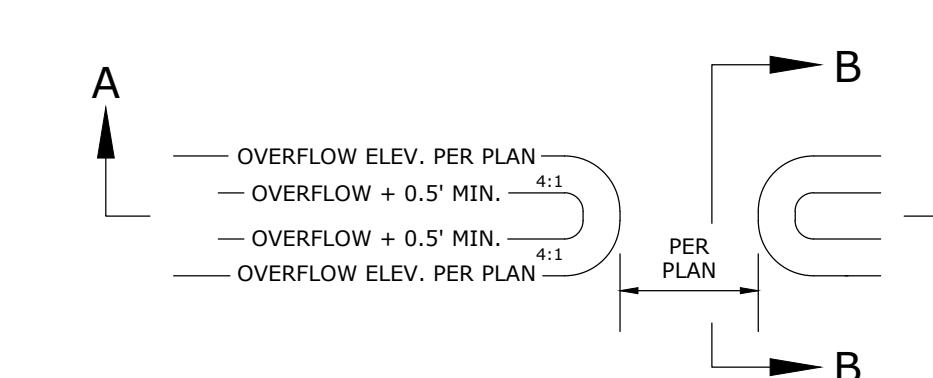
1. SHALL BE GREEN LETTERS ON WHITE BACKGROUND

**POST INSTALLATION**

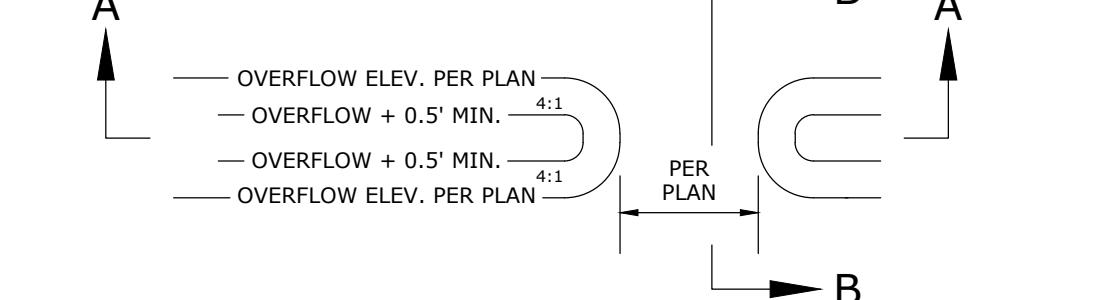
1. MOUNTED TO A HEIGHT OF FOUR FEET ABOVE GRADE
2. SET AT LEAST 4 INCHES INTO GROUND
3. DRAWS A HORIZONTAL LINE WHERE IT CROSSES A WETLAND BUFFER WITH A MAXIMUM SPACING OF 300 FEET BETWEEN SIGNS
4. PLACE ADDITIONAL POSTS/SIGNS AS NECESSARY TO FOLLOW BUFFER

EXAMPLE ONLY - TO BE APPROVED BY CITY OF HAM LAKE  
AND COON CREEK WATERSHED DISTRICT

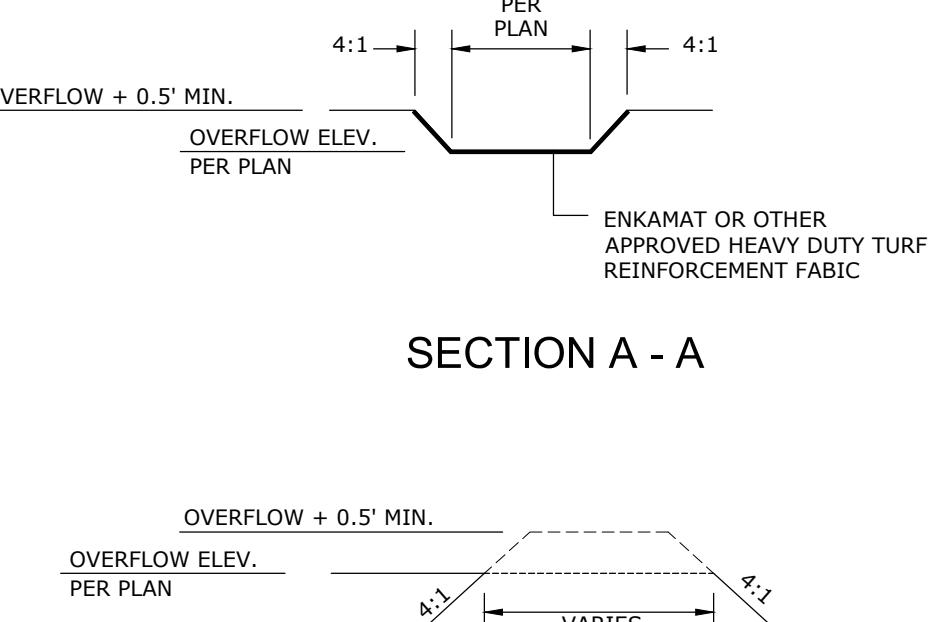
**WETLAND BUFFER SIGNAGE**  
N.T.S.



**SECTION A - A**



**SECTION B - B**



**BASIN OVERFLOWS**  
N.T.S.