Preliminary Plat Report

To: Committee on Planning and Development
Regarding: **Preliminary Plat of Firenze Estates**
Surveyor: Real Land Surveying
Owner/Agent: Highclere NP Properties LLC. / Real Land Surveying
Date: 2/20/2025
CC: Town of Washington/City of Eau Claire/Real Land Surveying

Committee Members:

The statutory time limit for the County to take action on this matter expires on April 1, 2025. The County must "Approve, Conditionally Approve or Deny" this submitted Preliminary Plat by this time or it automatically is deemed approved by statute. Committee may also, by majority vote, require the subdivider to submit other reasonable and pertinent information necessary to review the plat, as per 18.86.030 F 2 (a).

Staff has reviewed and recommends conditionally approving the (**January 31, 2025)** "Preliminary Plat of **Firenze Estates"**.

Recommended conditions for approval are as follows:

1) That the Town of Washington approves this preliminary plat.
   a) Town meeting is scheduled for February 20th. Staff will have an update regarding the Towns decision available at the Committee meeting scheduled for February 25, 2025.
2) That the City of Eau Claire conditionally approved this preliminary plat as it is located in the Extra-Territorial Jurisdictional area. -Approved by City Planning Commission on February 3, 2025.
3) That the storm water plans meet the approval of the Eau Claire County Land Conservation Department -lot configuration may be affected. The stormwater plan is currently under review by Graef, the contracted engineering firm.
4) That proper permitting and approval of the community septic systems is obtained.
5) That the Final Plat conforms to 18.78.060 Final Plat Submittal, 18.78.070 Final Plat Review and Approval, 18.78.080 Recording of the Final Plat, 18.80 Final Plat, 18.82 Design Standards, 18.83 Required Improvements, 18.84 Subdivision Improvement Guarantees and 18.85.030 Legal, Engineering and Inspection Fees which are requirements and procedures outlined within the Subdivision Control of the County Code that may not have specifically identified previously in detail. (i.e., vision corner easements at all road intersections and noted with restrictions in 18.22.025; etc.)
6) That the Final Plat complies with all applicable portions of A-E 7, s. 236 of the Wisconsin Statutes and that the Department of Administration has no objection to the final plat and certifies to this.
7) That in submitting for final plat approval, the owner will also furnish to the county an abstract of title or a policy of title insurance certified to date for examination as allowed in s. 236.21 (2) (b).

Notes:

1) The developer will need to meet with the USPS Postmaster to determine type and location of mailbox installation for this development for the final.
2) Ownership conditions for the Outlots must be stated on the face of the final plat. If a percentage interest divided amongst the lot owners is used, lot owner deeds must reflect the percentage of Outlot ownership interest.
3) The full Health Department report and recommendations are attached as part of this packet.
4) Subdivision name is acceptable for recording.
5) Three waivers are part of this request.
    a) Allowing flag lots.
    b) Allowing lots to exceed the 3:1 depth to width ratio for lots less than 5 acres.
    c) Allow side lot lines to deviate from right angles to street lines.

Respectfully submitted:

Ben Bublitz
Land Use Manager
Department of Planning and Development
Room 3344 - 721 Oxford Avenue
Eau Claire, WI 54703-5481
Voice: 715-839-4743
FAX 715-831-5802
E-mail: ben.bublitz@eauclairecounty.gov

Eau Claire City-County
Health Department

720 Second Ave, Eau Claire, WI 54703
www.echealthdepartment.org
P: 715-839-4718
F: 715-839-1674

Date: 2/20/2025

To: Ben Bublitz, Eau Claire County Land Use Manager

From: Elizabeth Paulson, REHS. Environmental Health Specialist

Re: Proposed plat of Firenze Estates

I have reviewed the Proposed Plat of Firenze Estates for compliance with sections 18.86.010 and 18.85.030 of Title 18, Eau Claire County Code. My comments are as follows:

1. The proposed site is described as 258 acres with 136 acres used as farmland, remaining acres are wooded with a large part delineated as wetland on the south and west boundaries. Areas that are wetland delineated are labeled Environmentally Sensitive Area (ESAs) and cannot be disturbed. Lowes Creek borders to the west of the development.

   The Health Department has reviewed available groundwater data in the area. Nitrate concentrations from available nearby wells suggest relatively low nitrate levels in the area. Therefore, nitrate contamination does not appear to be a widespread issue in the area, but higher levels are possible as nitrate levels can be variable. The proposed development will be comprised of three community systems that will service 126 lots that will be equally divided to be about 42 lots per community system. These lots are labeled as lots 1-66 and 69-128. Lot 67 and 68 will have individual septic systems and will not be connected to the development's community systems.

   Each lot will have its own individual well. The generalized flow map of Eau Claire County indicates the groundwater flow in the proposed plat likely flows to the west. All proposed well locations serving the individual lots shall meet the setback requirements for NR 812.

2. Soil borings are required to assure compliance with Chapter 8.12 Eau Claire County Code and SPS 383 Wisc. Adm. Code. Eau Claire County Code Section 8.12.240 C. prohibits the use of holding tanks for new construction. On 2/20/2025 borings were provided for Lot 67 and 68 which will have individual septic systems.

   It is the department's understanding that the proposed lots 1-66 and 69-128 are to be connected to community wastewater systems. In prior situations like this, developers have been required to have a minimum of one soil boring done on each of the remaining buildable lots to ensure that an alternative wastewater system may be installed if the proposed community wastewater system were not utilized in the future. The developer has requested a variance from this requirement. In lieu of individual soil borings on lots that are intended for connection to a community system, the developer must demonstrate that individual systems would never be necessary for these lots, by outlining the steps that will be in place to ensure that these lots remain connected to the clustered systems and that they will be maintained and suitably repaired in the event of any failure. The developer has explained the procedures and requirements that will be in place to ensure that these lots will remain connected to a functioning clustered POWTS system. These include such items as: ordinance restrictions as established by the Town of Washington, associated covenants and restrictions, the development of an HOA and corresponding operational and maintenance funds, a corresponding operational contract, and the establishment of a wastewater management plan, which includes strategies to detect issues and contingency plans to be enacted in the event of mechanical failures, system overload, or drain field degradation. Documentation of these strategies and procedures has been requested by the Health Department.

3. A POWTS serving a residential development is classified as a "large" POWTS if it serves more than 85 bedrooms (assumed 12,000 gpd design flow). These large systems are required to undergo a joint plan review by the Wisconsin Department of Natural Resources (DNR) and the Department of Safety and Professional Services (DSPS). By the Health Department's interpretation, the proposed plan for community systems appears to meet this threshold, which would also be subject to regulation under the Wisconsin Pollution Discharge Elimination System (WPDES). This includes additional restrictions and oversight by WDNR, including a requirement to comply with groundwater standards for nitrates, chlorides, BOD5 and fecal coliforms. However, the Department has received mixed feedback from various personnel at these State Agencies. The developer has recently assured the Health Department that they have consulted with both state agencies and have utilized an alternative method for determining flow that is allowed by code and would not require a WPDES permit. Documentation of this determination has been requested by the Health Department. For developers, it is desirable to remain below this threshold for these types of systems due to the increased upfront costs that would be associated with additional treatment and the long-term requirements and costs associated with permit administration, including monitoring and reporting. This does mean that these systems would be installed with fewer requirements and corresponding oversight by state agencies, meaning that would then fall on the operator and local agencies. This means that the wastewater effluent from these systems will include higher concentrations of some contaminants (e.g., nitrate) than if a permit were required. However, it is understood that the overall loading of contaminants into the nearby aquifer will be much lower than if individual systems were used on all lots due to the additional treatment processes that are used in these clustered systems. Another benefit of these clustered systems for this type of development is that the distribution of wastewater effluent is more confined, meaning fewer private wells will be located down gradient of a drain field. It must be noted that the Health Department has encountered issues in the implementation and oversight of prior systems of this type and of similar size that have raised concerns. These include issues like failure to follow the metering data submittal requirements, construction or repair activities not following the required notification or permitting procedures, homes being constructed with many more bedrooms than were included in sizing calculations, and even variations in the type of wastewater proposed for connection. The Health Department and Planning & Development have been working together to implement strategies to improve the oversight of these systems. These include additional inspections during construction, individual permits for each connected lot, and requiring metering data to be submitted monthly.

   https://dnr.wisconsin.gov/topic/Wastewater/DefineLargePOWTS.html

   https://dnr.wisconsin.gov/topic/Wastewater/LargePOWTS.html

   https://dnr.wisconsin.gov/topic/Wastewater/PrelimDesign.html

4. Eau Claire County does not have the authority to review plans for POWTS larger than 5,000 gallons per day. These proposed community wastewater treatment systems must be reviewed either by the DSPS, or jointly by the DNR and DSPS.

2025 Request for
Land Subdivision Plat Review
Eau Claire County Wisconsin
Effective January 1, 2025

Subdivision Name: Firenze Estates
Township Plat is in: Washington
Surveyor and Company Name: Pete Gartmann
Mailing Address: 1356 International Drive
Eau Claire, WI 54701

Phone: 715-514-4116
FAX:
E-mail: info@rlswi.com

Surveyor's Seal

WISCONSIN
Peter J. Gartmann S-2279 Knapp Wis.
LAND SURVEYOR

Surveyor's Signature

01/31/25
Date

*Note: **Plats are required** to be submitted a minimum of **25** calendar days prior to the governing meeting at which the plat is to be reviewed by the committee.*

Complete items 1 - 10 for Final Plats and 3 - 10 for Preliminary Plats.

I hereby certify that as the Wisconsin Land Surveyor responsible for the field survey and the preparation of this plat, that:

1	All monuments have been set per s. 236.15(1) ..... or All exterior boundary monuments have been set, but the town has temporarily waived placing interior monuments per s. 236.15(1)(h)		
2	Recordable documents will be on durable white paper		
3	Submitted Plat's Name: Firenze Estates		
4	Subdivider's name: address & phone: Cody Filipczak 715-456-0548		
5	Surveyor has submitted the Plat to DOA Plat Review	Yes_____ No X	
6	County to forward copies to local municipalities noted on plat	Yes X No _____	
7	Municipal certification of public sewer availability provided or Soil boring log forms provided for County Soil Analysis	N/A X Yes_____ No _____ N/A_____ Yes X No _____	
8	Ground Water Management Plan Provided	Yes_____ No _____	
9	Storm Water Management Permit Submitted	Yes_____ No _____	
10	Check #_____ or cash_____ covering County review fee of $ _____ Check #_____ or cash_____ covering Soil Analysis review fee of $ _____		

Note: Shaded areas are for County Use Only.

Fee Schedule

Guide to Calculate Fees Required by 4.35.110 of the Eau Claire County Code.

fill in or strike out any N/A

Submittal Fee of **$480.00** per plat
Payable with the submission of all preliminary plats — 480

Parcel Review Fee: **$95.00** per parcel x 138 parcels = — 13110

Final Plat Review Fee of **$270.00** per final plat
Payable with the submission of all final plats Mapping Review Fee: **$120.00** per _____ parcel x parcels = _____

Storm Water Management Permit Fees **$500+ $50/4,000 Sq. Ft. of Impervious Area** payable directly to the Land Conservation Division.

Total Review Fees Due - Payable to Eau Claire County Treasurer — 13590

Soil Analysis Fees - Payable to City/County Health Department
Health Department Soil Boring Fee Chart (Please include with Health Department Submission)

Attach payments here:

1st Check Payable to Eau Claire County Treasurer for review fees.

2nd Check Payable to Eau Claire County Health Department for soil analysis fees.

Office Use Only			
Logged in by:	P&D Staff	Date Logged in:	
Received from:	(Circle) Owner/Agent	(Circle) By Mail or in Person	(Circle) Preliminary or Final
Approximately 60 day county review time limit expires on: (time limit starts from when all required data is submitted to the county)			

Note: Shaded areas are for County Use Only.

Real Land Surveying
1356 International Drive
Eau Claire, WI 54701
(715) 514-4116

Preliminary Plat of *Firenze Estates*

This 258-acre subdivision plat comprises of 138 total lots; 128 residential/single-family lots and 10 outlots. Outlots 1, 4, 5, 6, 8 and 9 are designated for stormwater purposes. The ownership of these outlots will be taken over by the Town of Washington at a future date. Outlots 3, 7, and 10 contain community septic systems and will be proportionally owned by the lots it services. Lastly, outlot 2 will be conveyed to the adjoining landowner to the south.

The three community septic systems will serve lots 1-66 & 69-128, with each system having a specific number of lots. Lots 67 & 68 will contain their own private on-site septic system. Also, each of the 128 residential lots of this subdivision will contain its own well. All lots, including lot 1 that has frontage along Balsam Road, will be granted vehicular access to the newly created town road. Lot 1 will not be allowed access to Balsam Road. The entire 258 acres are zoned RL.

All lots greater than 1 acre contain a contiguous buildable area of at least ½ of an acre. The remaining lots that are less than 1 acre all conform to the required 55 percent of the lot area. All lots, except lot 67, possess the minimum required frontage onto a public street. The environmentally sensitive areas (ESAs) shown on the map are due to the wetland delineation that was completed in 2024. This site does not contain any steep slopes, as defined by Eau Claire County.

Mr. Peter J. Gartmann

Real Land Surveying
1356 International Drive
Eau Claire, WI 54701
715-514-4116
www.rlswi.com

Real Land Surveying
1356 International Drive
Eau Claire, WI 54701
(715) 514-4116

Subdivision Regulation Waivers of *Firenze Estates*

Given the complexity of this 258-acre site (highly variable topography, wooded areas, community septic areas and extensive wetlands) and the shear vastness of it as a whole, not all 128 lots were able to meet Eau Claire County subdivision regulations. With the desired location of future roads following winding ridgelines or attempting to follow a constant elevation, meanwhile attempting to avoid significant elevation changes, 100 percent conformity to lot development standards is difficult to achieve across this entire subdivision.

There are three main wooded areas within the bounds of *Firenze Estates*. In an attempt to avoid excessive tree removal for means of a new town road, we achieved over 90 percent of the roads shown preliminary plat could be installed without tree removal. As shown in the two Exhibit B below, the Roma Street bisects the approximately ±26-acre wooded section to provide connectivity onto Milano Avenue. Exhibit A shows the of Sicilia Drive positioned along the outer edge of the small tract of wood in the southeast corner of this development.

Exhibit A

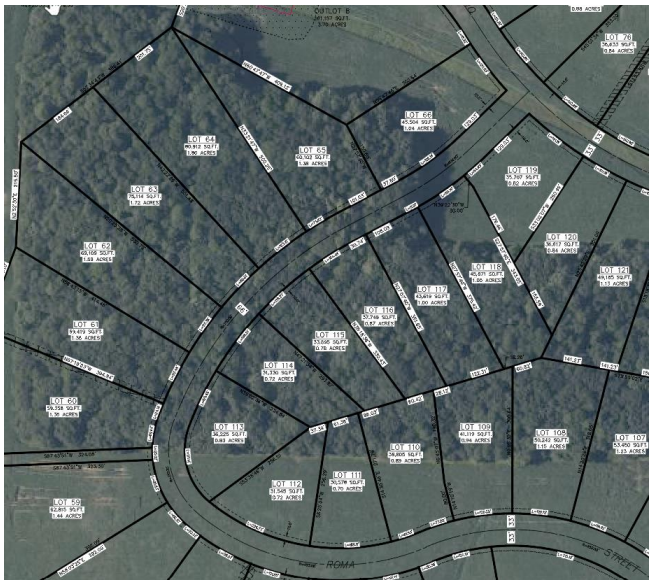


Exhibit B

Real Land Surveying
1356 International Drive
Eau Claire, WI 54701
(715) 514-4116

Along with minimizing tree clearing for road and lot layout, the nearly 150 feet of elevation change in *Firenze Estates* played a significant role. As mentioned earlier, the most logical and cost-effective location for a new road is to simply follow ridge lines. This allows for the flexibility of future owners to have either walk-out or look-out basements, since the topography decreases as you extend beyond the rights of way.

It was known that *Firenze Estates* contained a large wetland complex along its south and west boundaries. After the completed wetland delineation, along with the aforementioned areas, wetlands were also found in both of the large, grassed drainage swales. In total, the environmentally sensitive areas (ESAs) account for 54 percent of the total lands of *Firenze Estates*.

Lastly, the road and lot locations were heavily dependent on the three community septic locations. Attempting to have all lots gravity flow into the community septic was the primary objective. When factoring in sanitary manhole and piping depths, lot locations are very limited due to the gravity flow goal.

In short, it is clear why several of these lots were unable to meet Eau Claire County's subdivision regulations. In particular, there is one lot that would deemed a 'flag lot' while there are several others that do not meet the 4:1 depth to width ratio. Of the 258 acres, (± 139 acres) 54 percent was ESA and (± 30 acres) 12 percent was wooded. This leaves approximately 1/3 of the total land area to fit in the applicable stormwater facilities and community septic systems. In this particular subdivision, flexibility within the Eau Claire County subdivision regulations would result in a rural neighbor, that has a superior and balanced design.

Mr. Peter J. Gartmann

Real Land Surveying
1356 International Drive
Eau Claire, WI 54701
715-514-4116

www.rlswi.com

DETAIL OF OVERALL PLAT AND BOUNDARY

NOTES:
TOTAL AREA TO BE PLATTED = 258 ACRES

LANDS ZONED RL

LOTS 1–66 & 69–128 OF THIS SUBDIVISION WILL BE SERVED BY MULTIPLE PRIVATE SHARED SEPTIC SYSTEMS. EACH LOT WILL CONTAIN ITS OWN PRIVATE WELL. NO PUBLIC SEWER AND WATER IS AVAILABLE.

LOTS 67 & 68 WILL HAVE THEIR OWN SEPTIC SYSTEM AND WELL.

ALL LOTS MEET THE REQUIRED 1/2 ACRE NET BUILDABLE.

ALL STREETS 66' WIDE.

ENVIRONMENTALLY SENSITIVE AREAS SHOWN ARE AS DEFINED BY EAU CLAIRE COUNTY, SEE NOTE.

TOWN OF WASHINGTON HAS APPROVED THE STREET LOCATIONS.

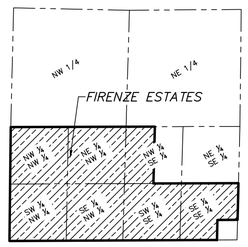
OUTLOTS 3, 7, AND 10 CONTAIN THE AFOREMENTIONED SHARED SEPTIC SYSTEMS. THE REMAINING OUTLOTS ARE FOR STORM WATER REQUIREMENTS. NO LAND USE OR SANITARY PERMITS FOR STRUCTURES WILL BE ISSUED FOR ANY OUTLOT SHOWN ON THIS SUBDIVISION PLAT UNTIL THESE LOTS MEET ALL OF THE CRITERIA FOR A BUILDING LOT AS DEFINED BY TITLES 8, 17 AND 18 OF THE EAU CLAIRE COUNTY CODE.

OUTLOTS 1, 4, 5, 6, 8 AND 9 ARE DESIGNATED FOR STORMWATER PURPOSES. THESE OUTLOTS WILL BE TAKEN OVER BY THE TOWN OF WASHINGTON AT A FUTURE DATE.

OUTLOT 2 WILL BE CONVEYED OVER TO THE ADJOINED LANDOWNER TO THE SOUTH.

ALL LOTS ARE SUBJECT TO A 10' UTILITY EASEMENT ALONG ALL STREET FRONTAGE.

LOCATION SKETCH
(NOT TO SCALE)



LANDOWNERS/SUBDIVIDER:
- HIGHCLERE NP PROPERTIES LLC
  6176 SANDSTONE RD,
  EAU CLAIRE, WI 54701

APPROVING AUTHORITIES:
- TOWN OF WASHINGTON
- EAU CLAIRE COUNTY
- CITY OF EAU CLAIRE

OBJECTING AUTHORITIES
- DEPARTMENT OF ADMINISTRATION

SURVEYOR
- PETER J. GARTMANN R.L.S. No. 2279
  REAL LAND SURVEYING
  1356 INTERNATIONAL DRIVE
  EAU CLAIRE, WI 54701

WEST ¼ CORNER SECTION 17
N89°51'33"E 3355.11'
EAST ¼ CORNER SECTION 17
N0°37'32"E 2651.14'
S1°28'08"W 1322.55'
N89°48'25"E 1979.99'
S1°28'17"W 864.41'
S89°45'19"W 467.00'
S1°28'17"W 466.40'
SOUTHWEST CORNER SECTION 17
S89°44'13"W 2638.48'
SOUTH ¼ CORNER SECTION 17
S89°45'24"W 2190.78'
SOUTHEAST CORNER SECTION 17
MILANO AVENUE
NAPOLI TRAIL
ROMA STREET
SICILIA DRIVE
BALSAM ROAD
OL 1
OL 2
OL 3
OL 4
OL 5
OL 6
OL 7
OL 8
OL 9
OL 10

0 100 200 400
SCALE: 1" = 200'

LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

ENVIRONMENTALLY SENSITIVE AREAS NOTE:
NO DEVELOPMENT OR LAND DISTURBANCE ACTIVITY SHALL BE ALLOWED WITHIN ANY ENVIRONMENTALLY SENSITIVE AREAS EXCEPT AFTER ISSUANCE OF A PERMIT FROM THE COUNTY, SUCH PERMIT ONLY TO BE ISSUED IF THE OWNER DEMONSTRATES THE PROPOSED DEVELOPMENT OR LAND DISTURBANCE ACTIVITY IS EXPRESSLY ALLOWED UNDER ANY OF THE FOLLOWING:
– TITLE 17
– TITLE 18

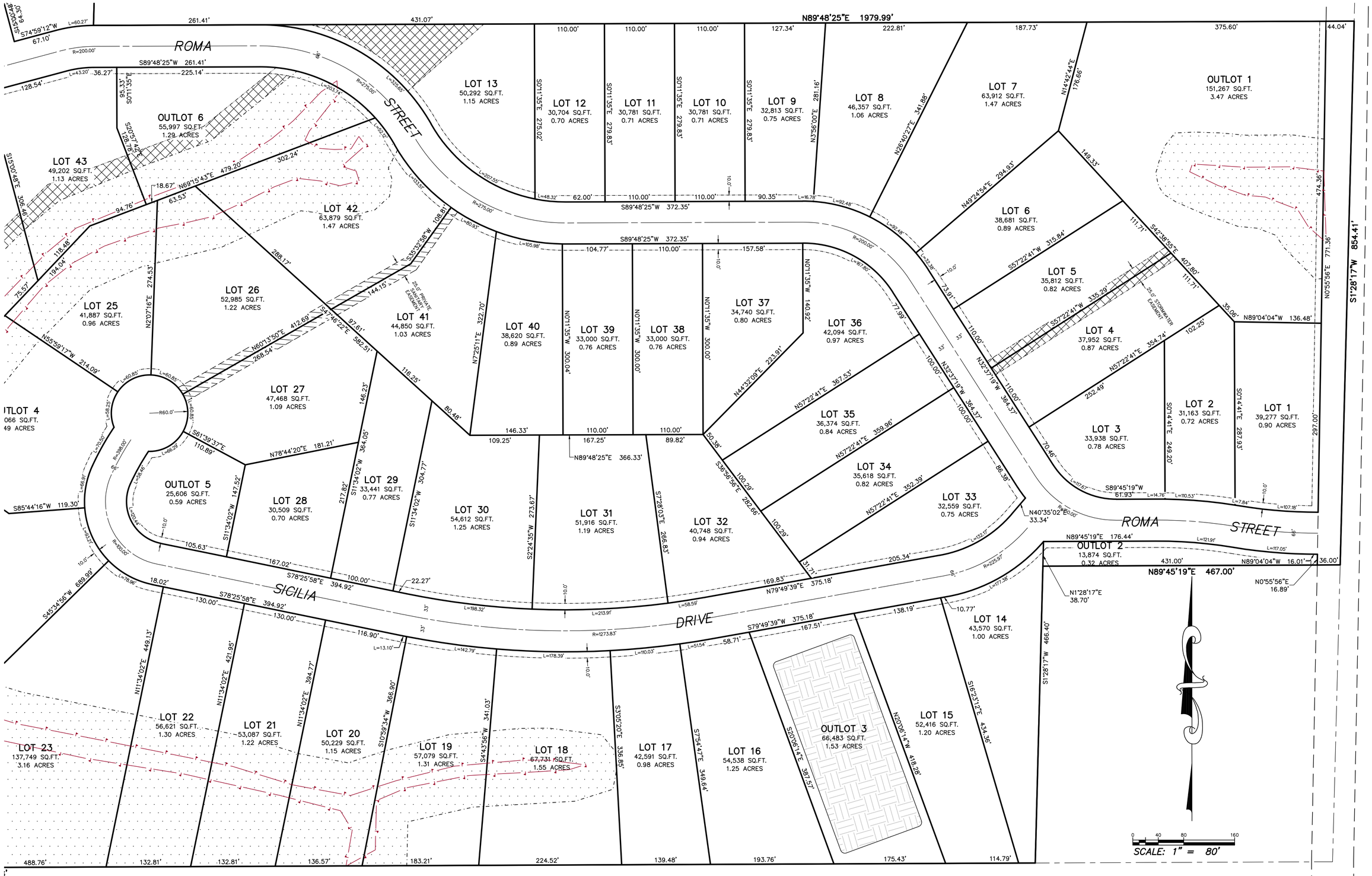
PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

REVISION DATE: 01/28/2025

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH — EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

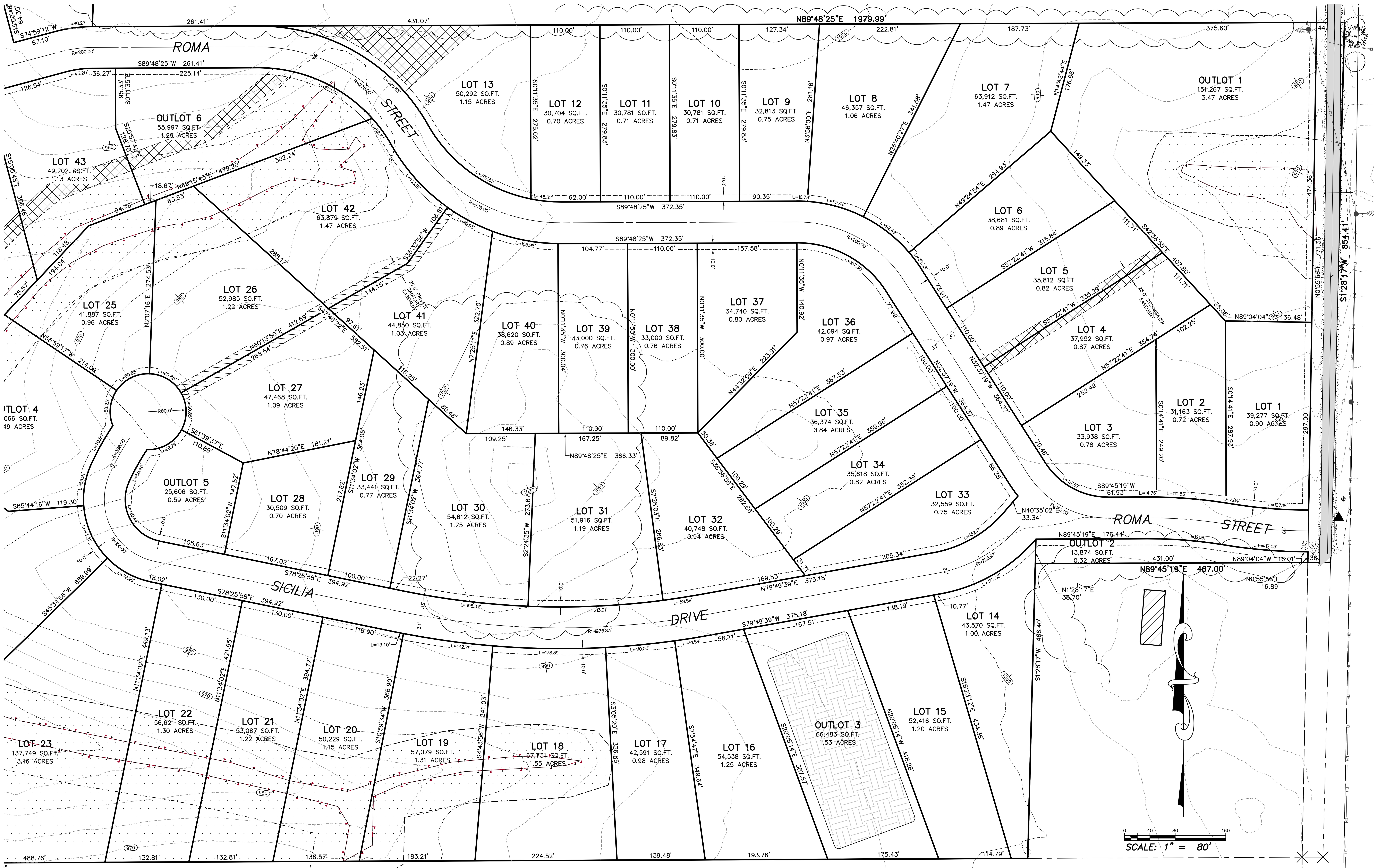
PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

REVISION DATE: 01/28/2025

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

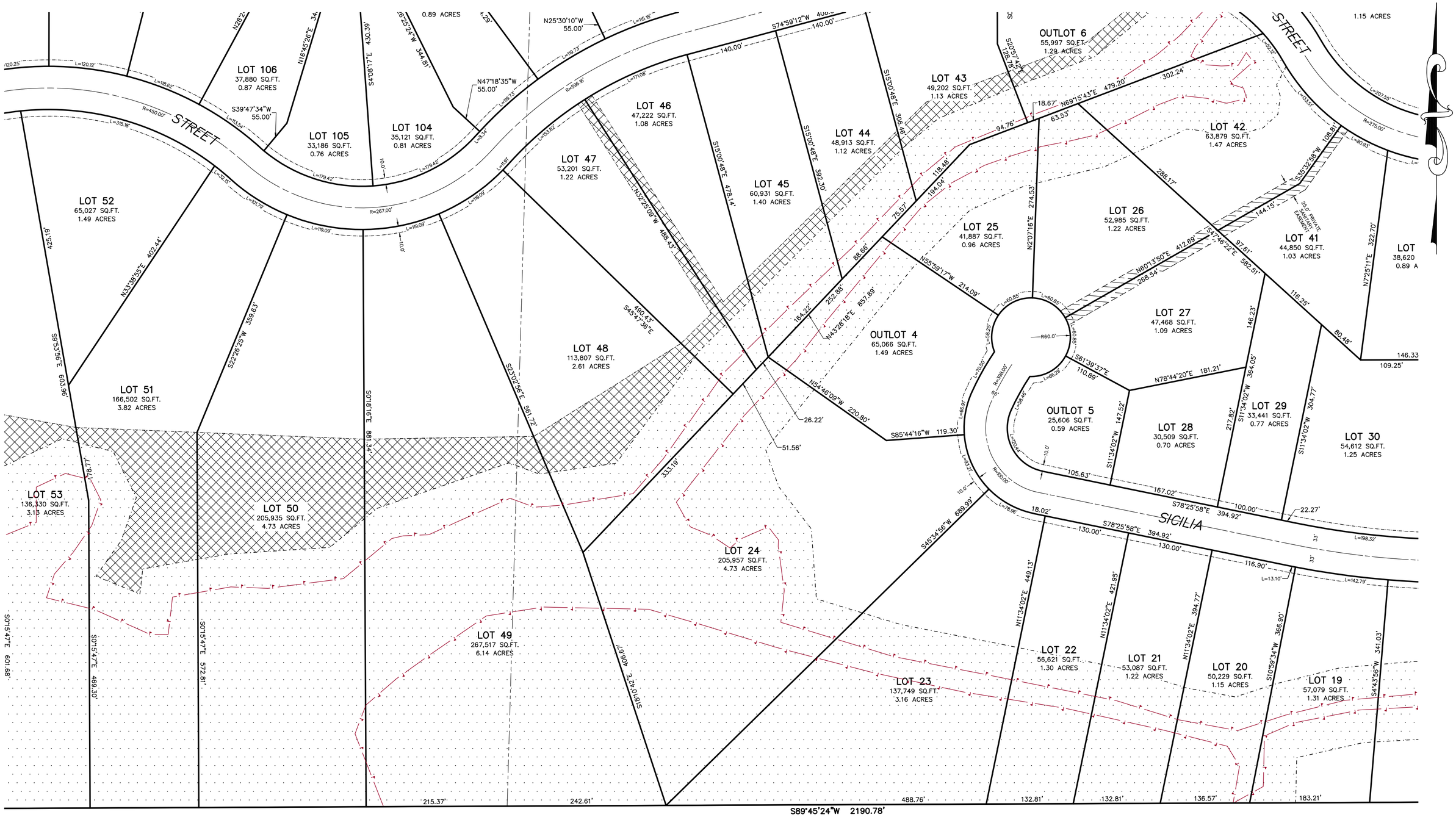
PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

REVISION DATE: 01/28/2025

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH — EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

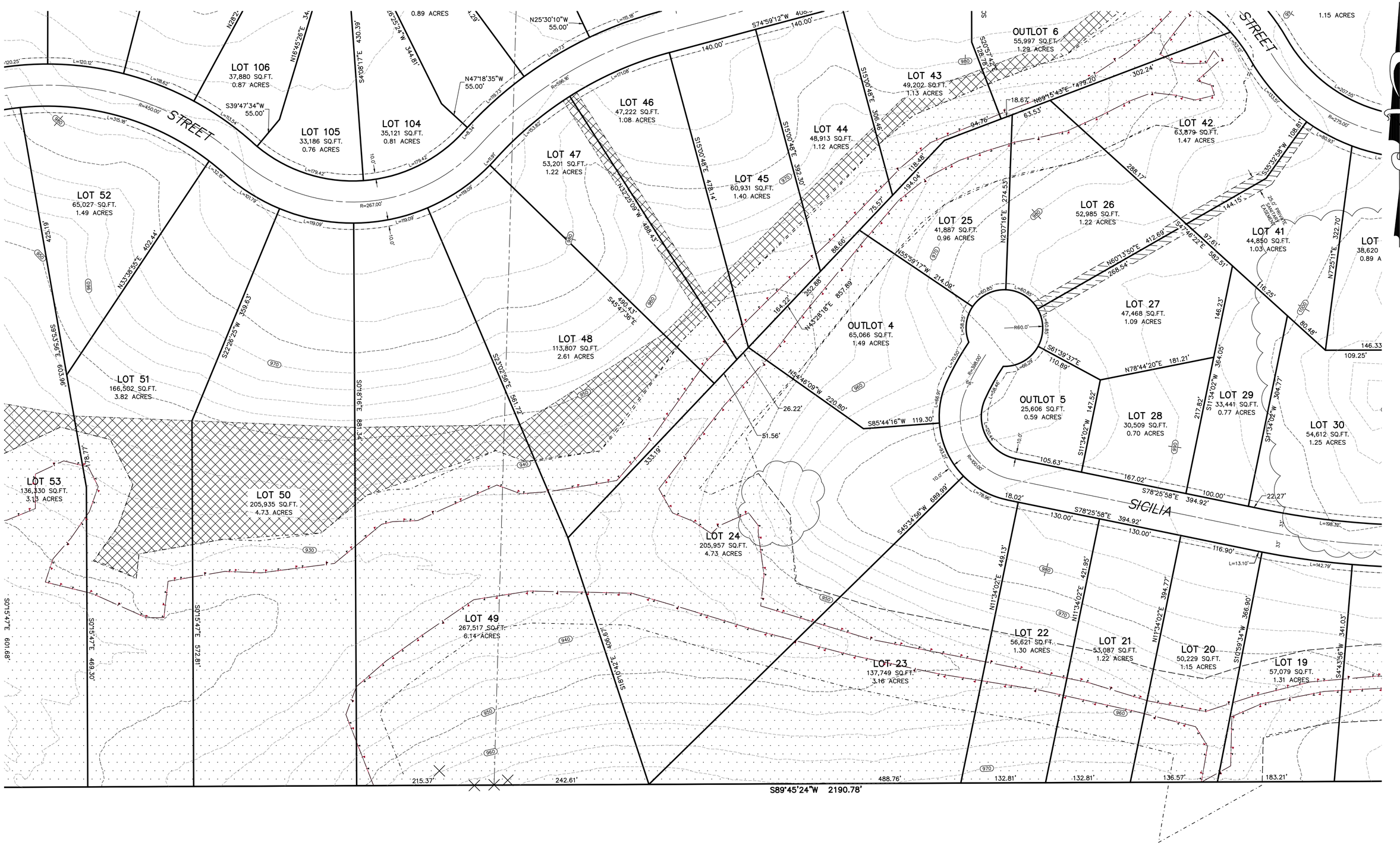
PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

REVISION DATE: 01/28/2025

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH — EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

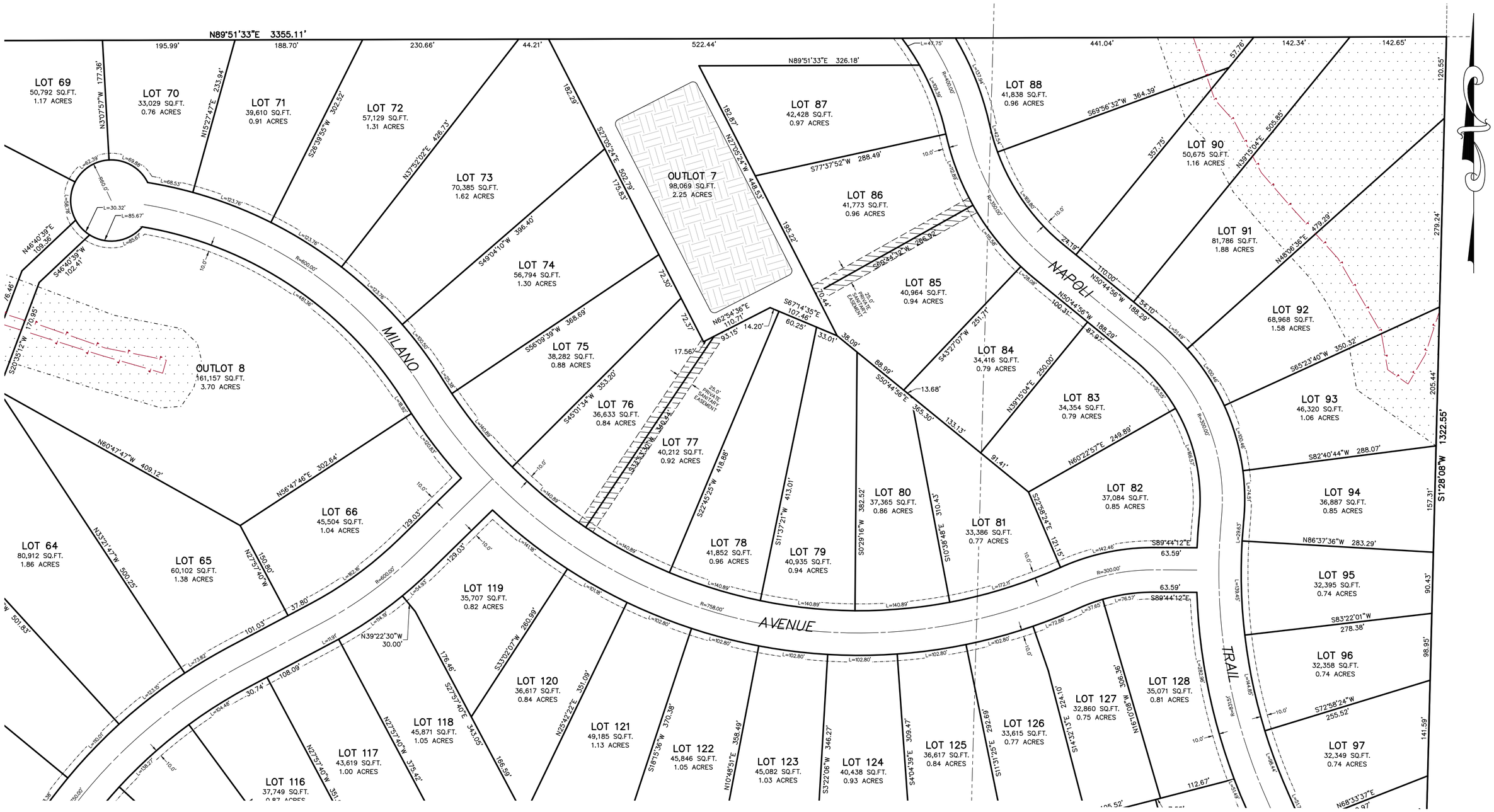
PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

REVISION DATE: 01/28/2025

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

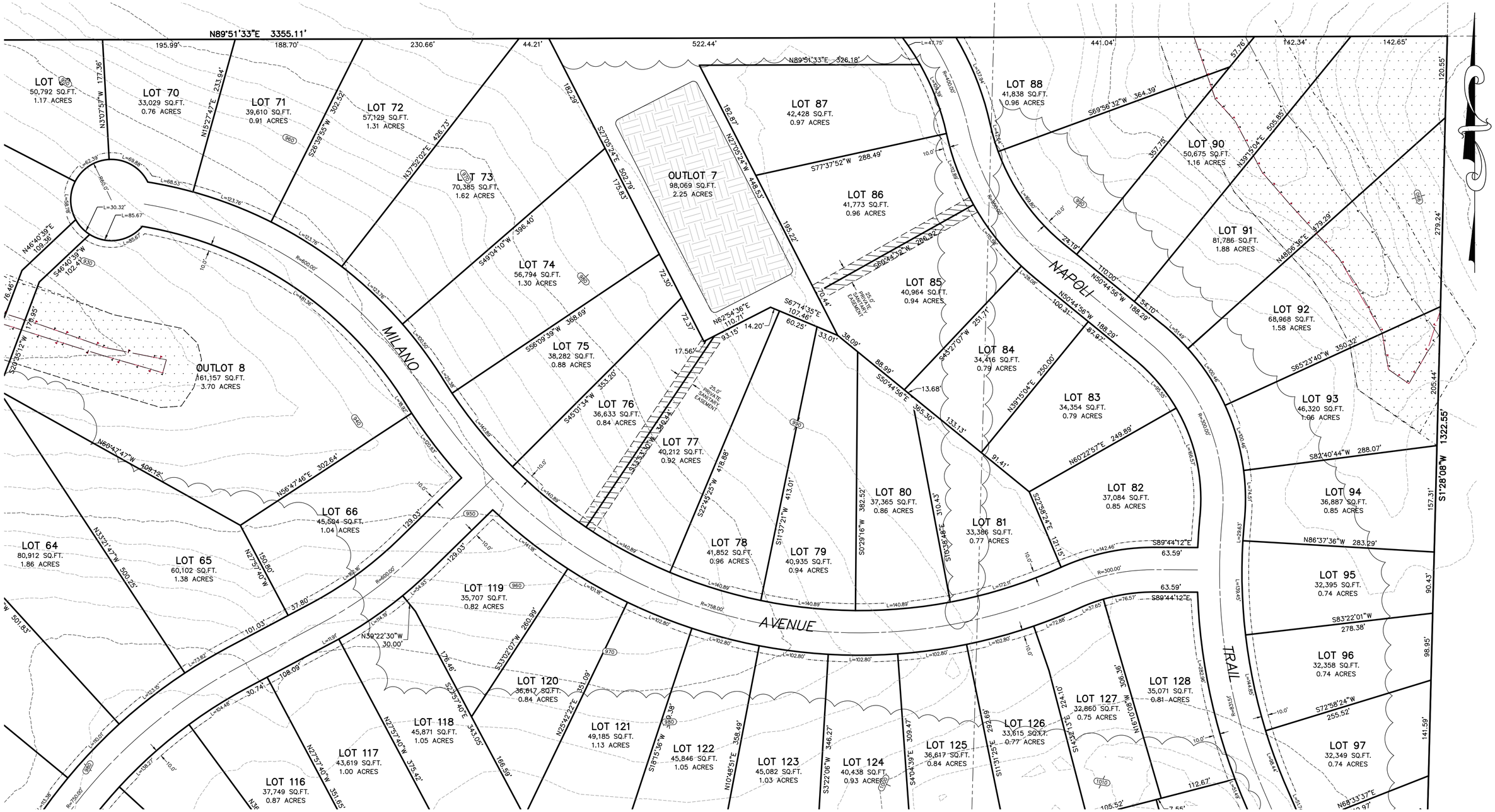
REVISION DATE: 01/28/2025

SHEET 4 OF 8 SHEETS

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

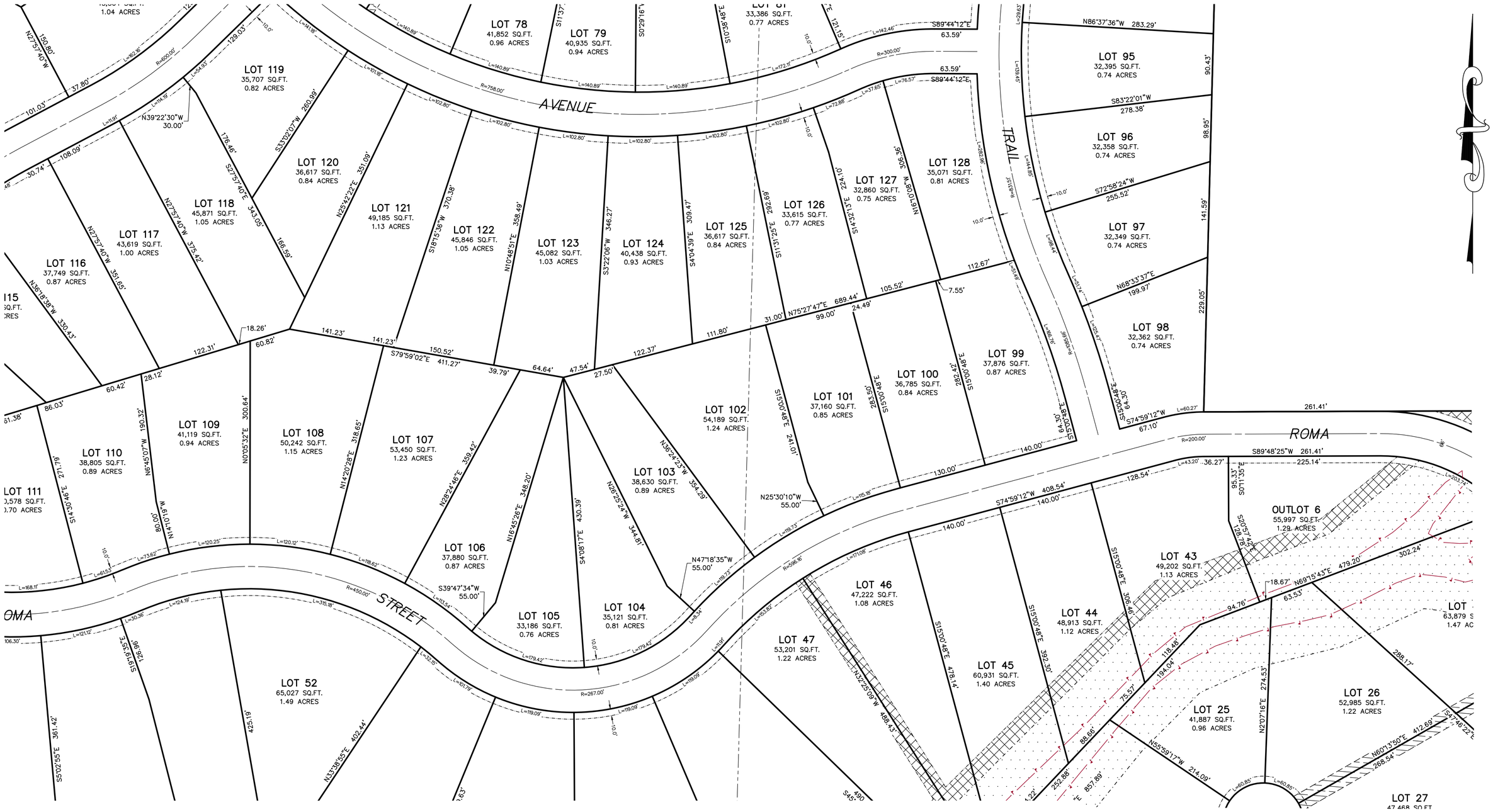
REVISION DATE: 01/28/2025

SHEET 4 OF 8 SHEETS

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH — EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

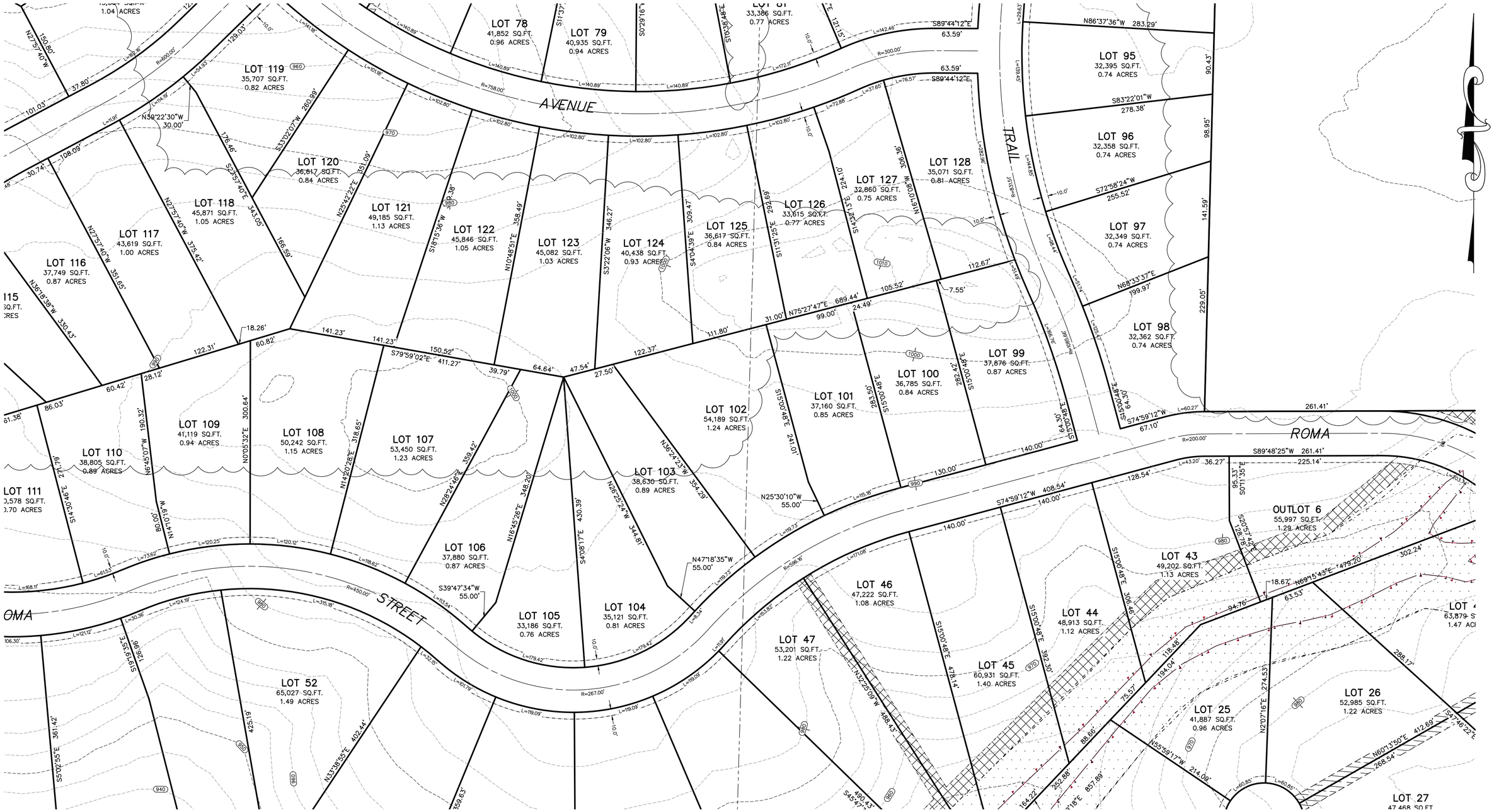
REVISION DATE: 01/28/2025

SHEET 5 OF 8 SHEETS

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH — EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

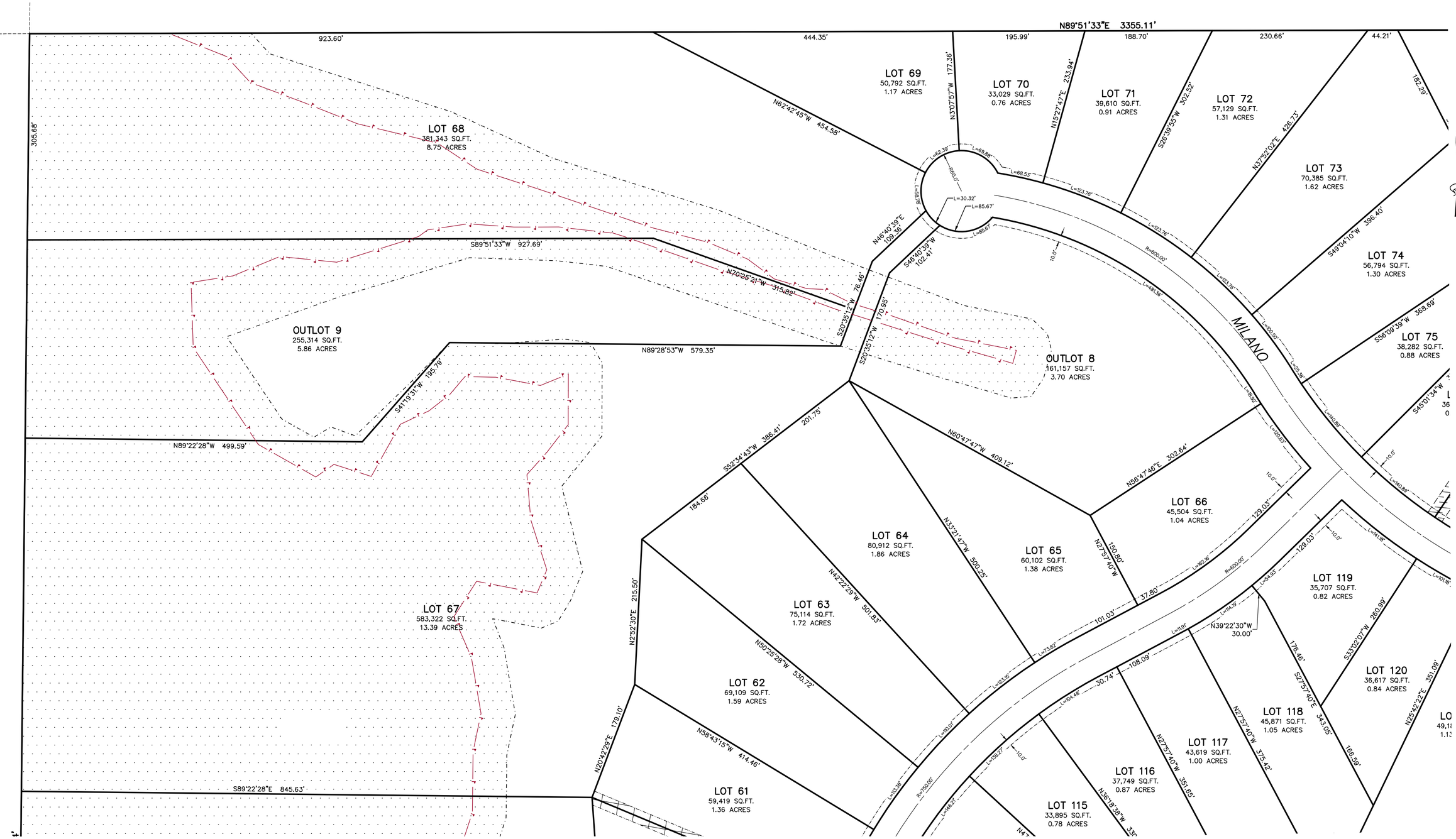
PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

REVISION DATE: 01/28/2025

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

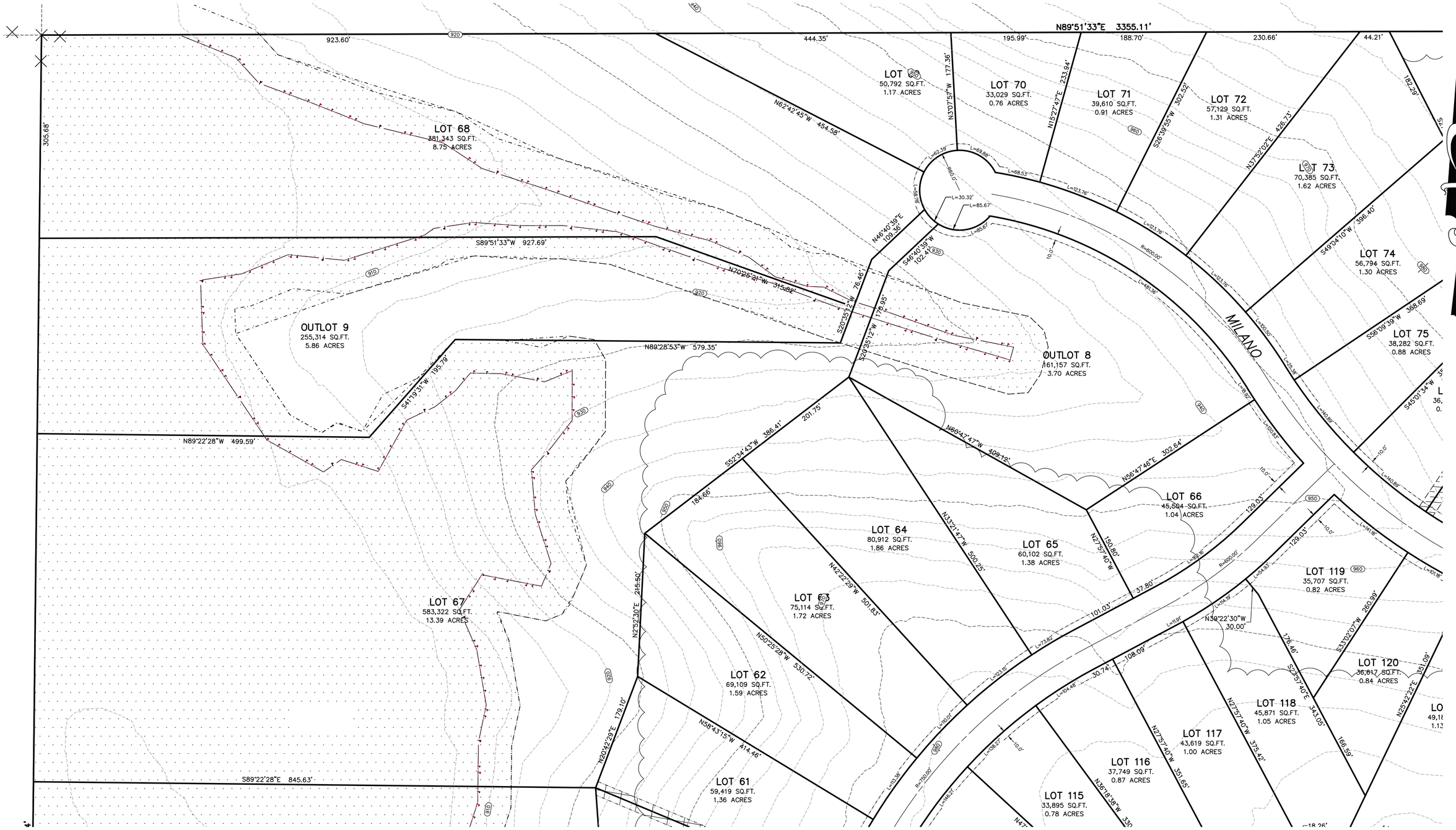
REVISION DATE: 01/28/2025

SHEET 6 OF 8 SHEETS

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

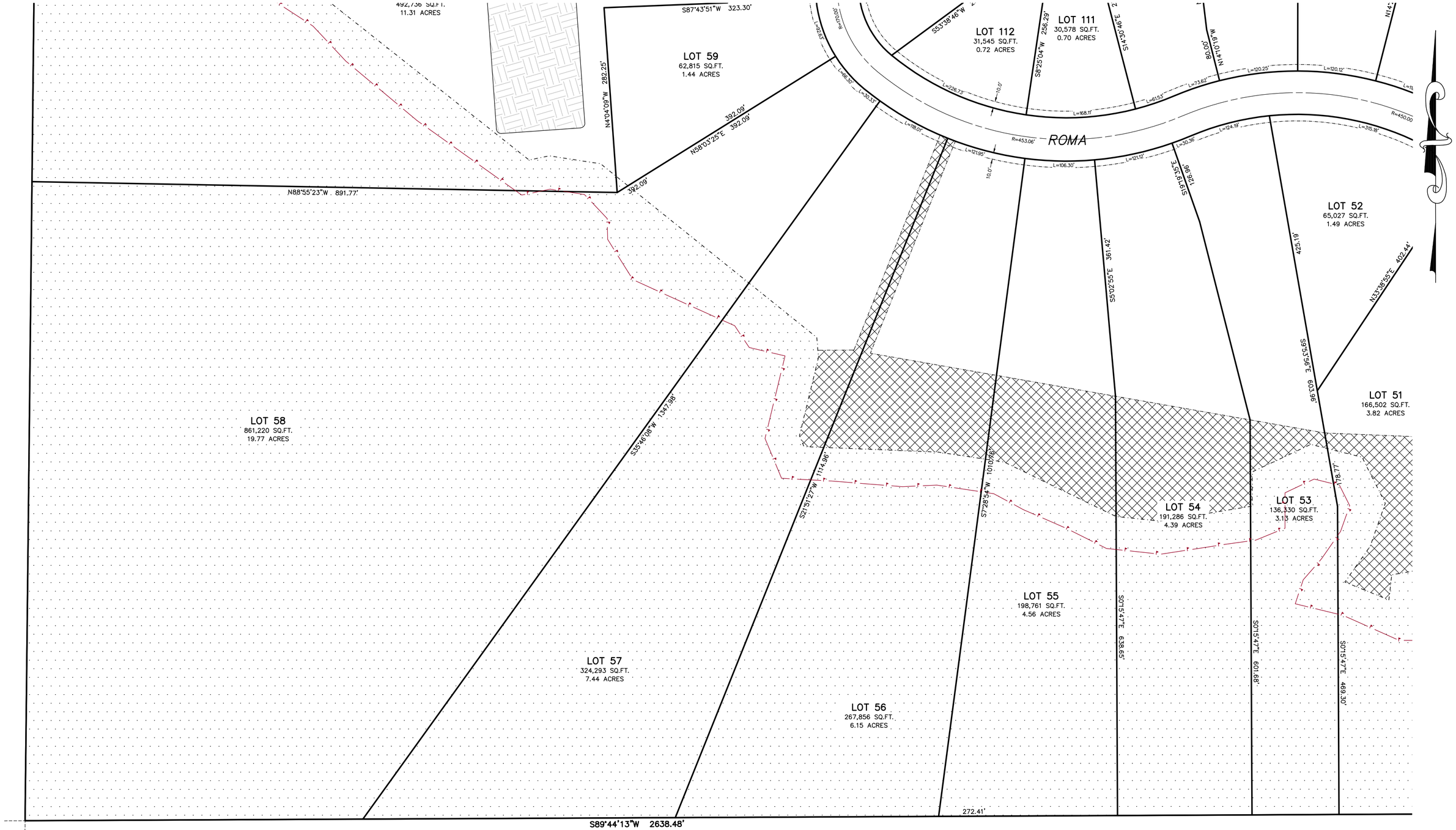
REVISION DATE: 01/28/2025

SHEET 6 OF 8 SHEETS

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH — EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

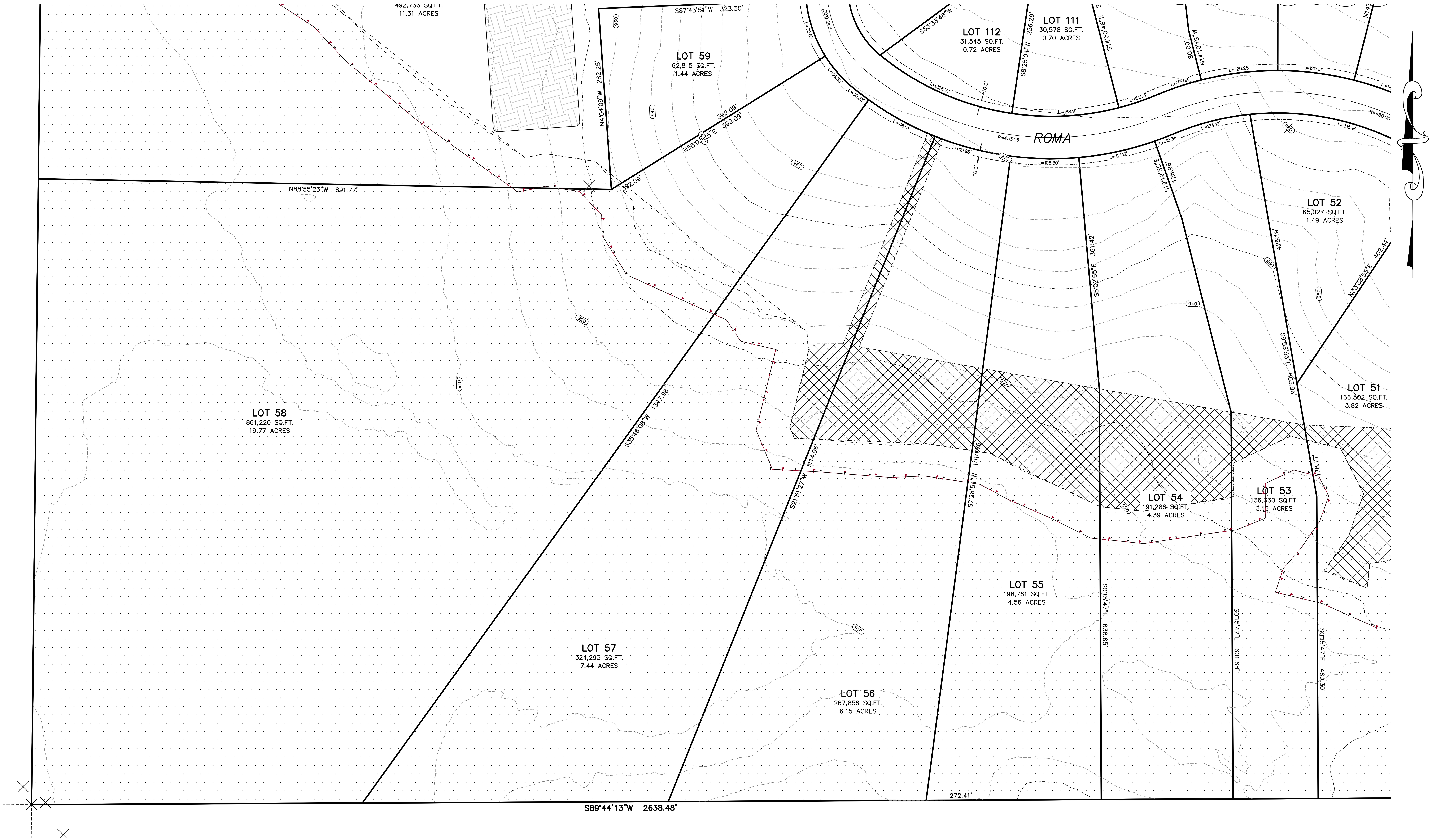
REVISION DATE: 01/28/2025

SHEET 7 OF 8 SHEETS

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

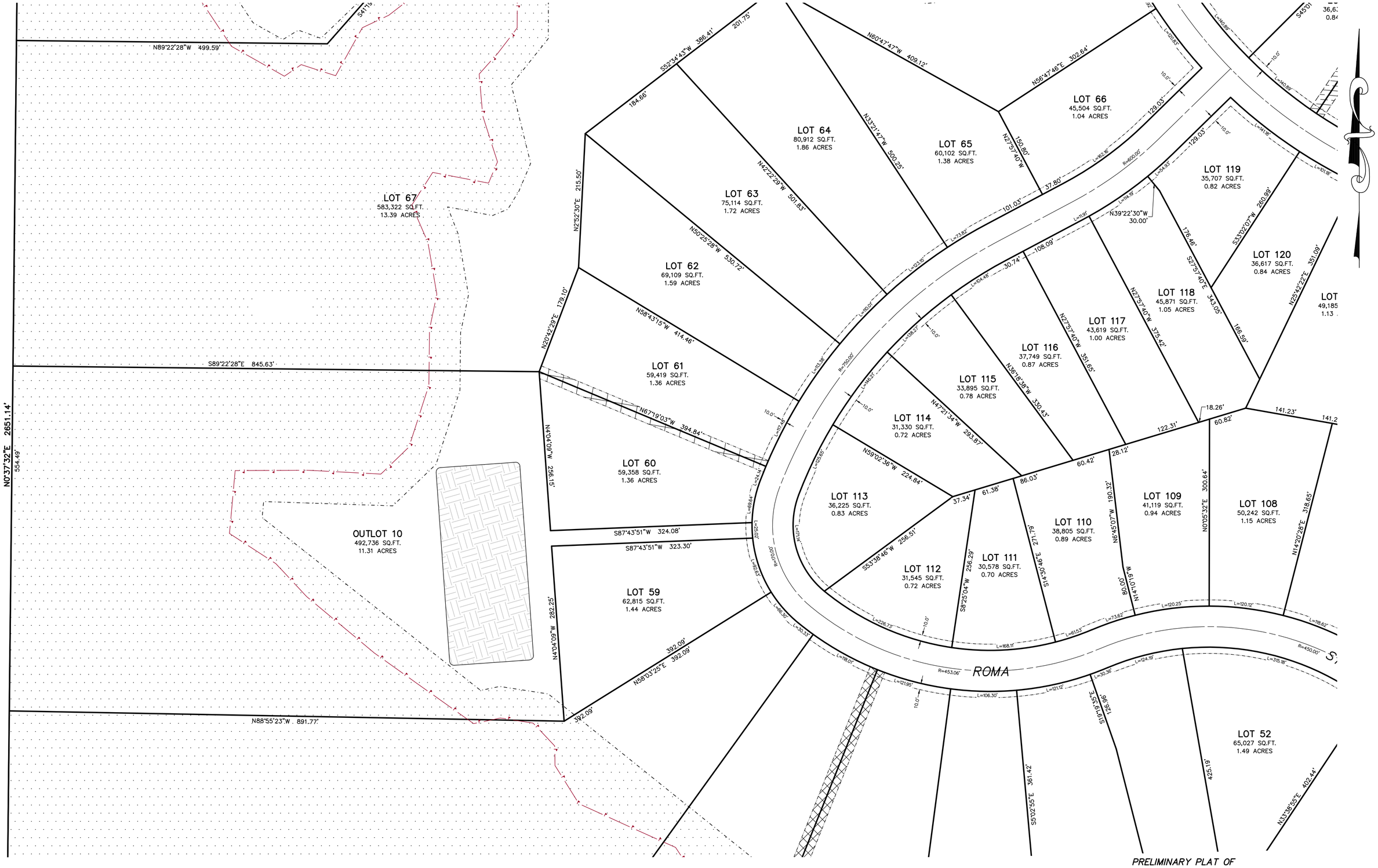
REVISION DATE: 01/28/2025

SHEET 7 OF 8 SHEETS

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH — EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

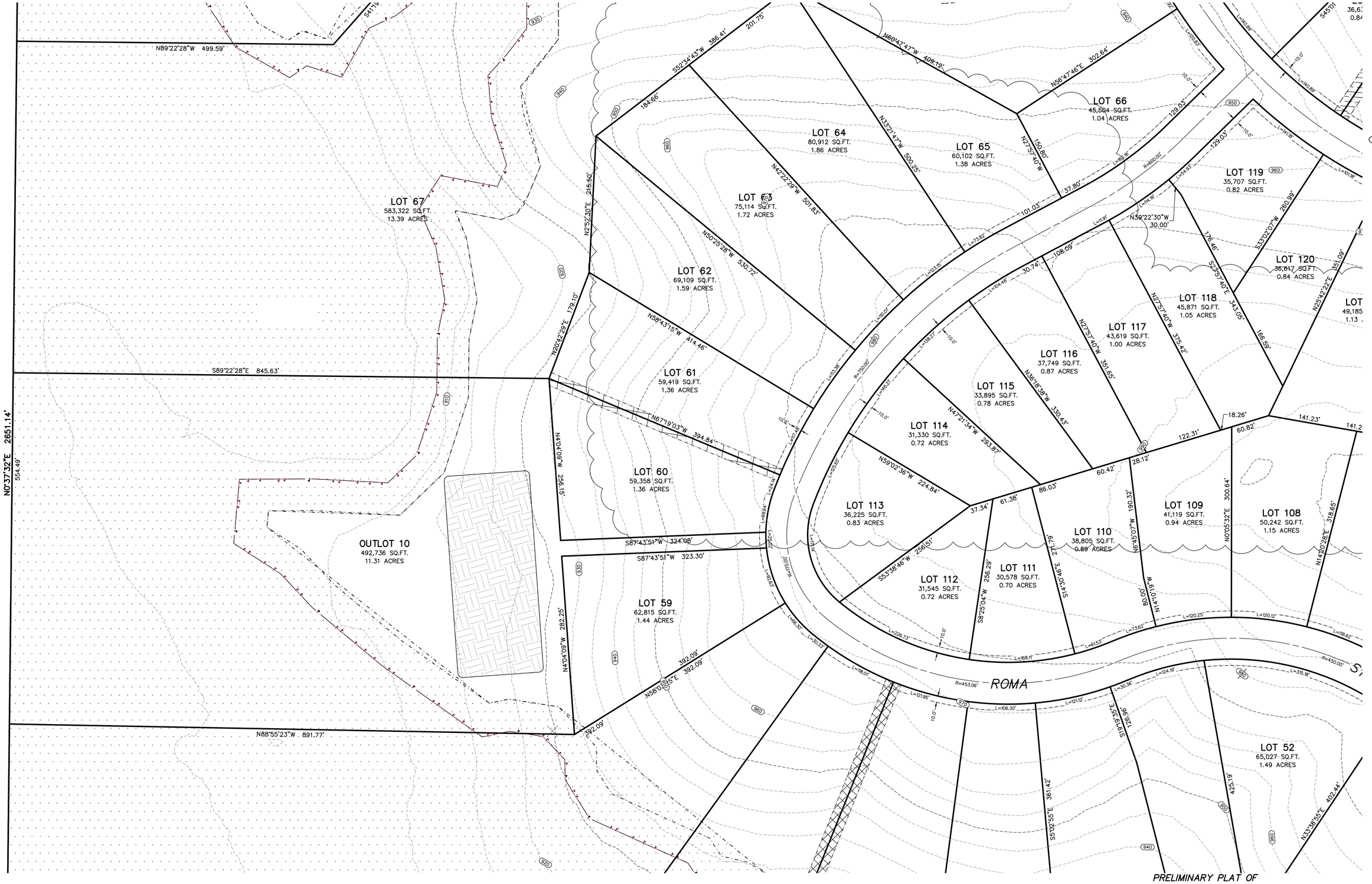
PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

REVISION DATE: 01/28/2025

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN



LEGEND

- COMMUNITY SEPTIC SYSTEM
- ENVIRONMENTALLY SENSITIVE AREAS
- STORM WATER EASEMENT
- SANITARY EASEMENT
- DELINEATED WETLANDS
- UTILITY EASEMENTS, WIDTH AS SHOWN UNLESS NOTED OTHERWISE
- EXISTING BITUMINOUS SURFACE
- OH — EXISTING OVERHEAD LINES
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING TREE LINE

0 40 80 160

SCALE: 1" = 80'

PREPARED BY REAL LAND SURVEYING
CADD No. 24200 PRELIM PLAT

REVISION DATE: 01/28/2025

SHEET 8 OF 8 SHEETS

PRELIMINARY PLAT OF

FIRENZE ESTATES

LOCATED IN THE SOUTHEAST ¼ – SOUTHEAST ¼,
SOUTHWEST ¼ – SOUTHEAST ¼, NORTHWEST ¼ – SOUTHEAST ¼,
NORTHEAST ¼ – SOUTHWEST ¼, NORTHWEST ¼ – SOUTHWEST ¼,
SOUTHWEST ¼ – SOUTHWEST ¼, SOUTHEAST ¼ – SOUTHWEST ¼,
SECTION 17, TOWNSHIP 26 NORTH, RANGE 9 WEST,
TOWN OF WASHINGTON, EAU CLAIRE COUNTY, WISCONSIN

Generalized Water-Table Elevation Map of Eau Claire County, Wisconsin

M.A. Muldoon
1992

Introduction

This map is part of the Eau Claire County Groundwater Resource Investigation, a joint project of the Wisconsin Geological and Natural History Survey and the Eau Claire County Board. The purpose of this project was to compile and interpret hydrogeologic data for Eau Claire County. The resulting information can be used by Eau Claire County's soil-and-water-resource and land-use planners.

The water cycle

Gravity and solar energy play active roles in a continuous water recycling process called the *water cycle* (fig. 1).

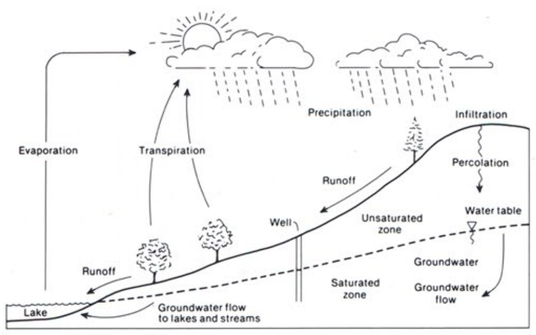


Figure 1. *The water cycle.*

Water falling on the land surface can flow downhill as overland runoff, evaporate, transpire through plants, or infiltrate into the ground. As this infiltrating water seeps downward through rock or soil, it travels through pore spaces and open cracks or fractures in the subsurface material. When these pores and cracks are completely filled with water, the material is said to be *saturated*.

The *water table* marks the top of this saturated zone, where hydraulic pressure in the pores is equal to atmospheric pressure. *Groundwater* is the water contained in the saturated zone below the water table. The amount of infiltrating precipitation partly determines the position, or elevation, of the water table, which fluctuates seasonally, and from one year to another. Above the water table, pores and cracks are partly or completely filled with air and partly filled with water, and the material is said to be *unsaturated*.

Gravity moves groundwater slowly through pore spaces; eventually, the groundwater discharges to a well, the land surface, or a water body where solar energy evaporates some of it into the atmosphere, thus continuing the water cycle.

In Wisconsin, the water cycle generally operates with 30 to 32 inches of precipitation during an average year, from which about 75 percent (22 to 26 inches) returns to the atmosphere by evapotranspiration. The remainder either flows over the land surface and collects in surface-water bodies or infiltrates into the ground as *recharge* to the groundwater system. The ratio of overland runoff to groundwater recharge varies considerably around the state, depending upon factors such as topography, soil type, vegetative cover, rainfall intensity, and individual farming and general land-use practices.

Movement of groundwater and surface water

A saturated subsurface material that yields sufficient water to a well is called an *aquifer*. *Permeability* is a measure of the relative ease with which water can flow through an aquifer; it is dependent on the nature of the materials through which the water is flowing. Large pores or fractures in the subsurface can hold more water than small ones, but in order for water to flow effectively, these pores or fractures must be interconnected.

Groundwater can move as rapidly as several feet per day in porous sands and sandstones, or as slowly as less than 1 inch per year in clay or in unfractured crystalline rock. For example, sandy soils and sandstones frequently have relatively large pore spaces that are well connected with each other, allowing water to move more easily than it can in clayey soils that have small, poorly connected pores. Rocks such as crystalline granite commonly have few fractures that are poorly connected; as a result they commonly have low permeability and transmit little water. However, no matter how rapidly or slowly the groundwater flows, its natural direction of movement is in response to gravity, from upland recharge areas (where water infiltrates into the subsurface) to lowland discharge areas (lakes, rivers, springs, and seeps). Discharge areas are often associated with surface-water bodies, so groundwater has a significant role in the development and environmental health of lakes, streams, and wetlands. Wells also function as groundwater-discharge points.

A *surface-water divide* is a line of separation, commonly a ridge or narrow tract of high ground that divides the surface waters that flow naturally into one basin from those that flow naturally into a different basin. It is a line across which no surface water flows. There is one major surface-water divide in Eau Claire County. North of the surface-water divide (which is located in southern Eau Claire County), the streams and rivers flow into the Eau Claire or Chippewa Rivers. These rivers come together near the city of Eau Claire and eventually flow into the Mississippi River. South of the surface-water divide, most streams flow into the Buffalo River, which is also a tributary of the Mississippi River.

A *groundwater divide* is similar to a surface-water divide, in that it is a ridge defined by contours of the water table. Shallow groundwater moves away from the divide in different (often opposite) directions. A groundwater divide does not necessarily coincide with a surface-water divide. The one major groundwater divide in Eau Claire County approximately coincides with the surface-water divide. Over much of central and southern Eau Claire County, discharge areas include north-flowing creeks that serve as tributaries to the Eau Claire River. In the northern part of the county, discharge areas include Fivemile, Sevenmile, Ninemile, Hay, and Muskrat Creeks and the North Fork of the Wolf River; these south-flowing streams are tributaries for the Eau Claire River. In the northwest corner of the county the Chippewa River and Dells Pond serve as groundwater discharge areas.

Contamination of groundwater

Because groundwater comes from precipitation that percolates down from the land surface, any water-soluble material or liquid that is put on or in the ground has the potential to be transported to the saturated zone. The unsaturated zone can be a good natural filter and may remove many harmful materials from the recharging water by a variety of physical and biological processes. In general, fine-grained materials are better able to attenuate contaminants; as a result, areas with thin or sandy soils over a rock aquifer or thin or sandy soils with a shallow water table are especially susceptible to groundwater contamination from land-use activities. Once a contaminant reaches the saturated zone, it has the potential to move with the groundwater and discharge to wells or surface-water bodies. Concentration of contaminants in the saturated zone can be reduced by the processes of dilution, adsorption onto fine-grained particles, and chemical breakdown.

Contamination that occurs today may not become evident for several or even hundreds of years because groundwater can move as slowly as a few inches per year. Once contaminated, groundwater is difficult to purify and may take many years, decades, or centuries to be cleaned by dilution, attenuation, and chemical breakdown of contaminants.

Data compilation and interpretation

Data were compiled by Julie Gassen, Lucy Buchan, Xiangxue Cheng, and David Johnson at a scale of 1:24,000, using U.S. Geological Survey quadrangles (7.5-minute series, topographic) as base maps. All available Wisconsin Geological and Natural History Survey geologic logs were plotted onto these base maps. The Wisconsin Department of Natural Resources well constructor's reports were examined and checked against each other, and the most representative, reliable, and useful data available for each section were plotted.

Data density varies considerably across Eau Claire County; the density ranges from few data points on county-owned lands (eastern part of the county and along the Eau Claire River) to at least one report per 1 to 2 square miles in inhabited parts of the county. A total of 1,028 well data points was used in constructing the water-table map.

Domestic wells are not ideal measuring points for determining water-table elevation. Most wells are open over long intervals and are completed far below the top of the saturated zone. Domestic wells provide good estimates of water-table elevation in areas where groundwater flow is more horizontal than vertical and poor estimates in areas where groundwater flow is more vertical than horizontal. To determine whether vertical groundwater flow was significant, water levels were compared for wells of different depths. Over much of Eau Claire County, wells completed at different depths had similar water levels; however, in some areas, vertical groundwater gradients seemed significant. In those areas, the wells with the shallower open intervals were assumed to provide the closest estimate of the elevation of the water table, and data from the deeper wells were not used.

Well constructor's reports provide measurements taken at different times of the year and in different years. Because of the seasonal variations in water levels as well as changes in water levels with depth, a water level determined from a well constructor's report was not used as an exact data point. Instead, the water level was considered to be part of a range of values. The elevations of springs, groundwater seepage areas (such as wetlands), lakes that intersect the water table, and rivers were used as data points in most areas.

The bedrock geology of Eau Claire County consists of Precambrian crystalline rock (commonly referred to as granite) overlain by a thick sequence of Cambrian sandstones with minor amounts of shale (Brown, 1988). Pleistocene deposits (thin in most places) consist of till deposited prior to the late Wisconsin; these deposits have been eroded from much of the county. Evidence of these early glaciations is sparse except in the northeast part of Eau Claire County (Cates and Madison, 1989). The latest advance of the glaciers terminated north and northeast of Eau Claire County; however, water from the melting ice followed the Chippewa River drainage and deposited thick sand and gravel sequences. Although the geology is complex, the water table closely mimics topography, suggesting good hydraulic connections between the Cambrian sandstone and the surficial deposits. The shallow groundwater system appears to be a single unconfined aquifer at the scale of this water-table map (1:100,000).

Many wells in Eau Claire County are completed in sandstone (71%) or a mixture of sandstone and shale (9%). The sand and gravel aquifer is used in places (17% of the wells), and a few wells are completed in granite or sandstone and granite (3%).

Limitations of the map

This map depicts, in a general way, the direction of shallow groundwater flow, which is primarily perpendicular to lines of equal water-table elevation. "Shallow" refers to depth below the water table, and not to depth below the land surface. The accuracy of the interpretation varies throughout the study area, increasing with greater data density and decreasing with greater hydrogeologic complexity. The water-table elevation lines are solid where enough data are available to locate the lines with a reasonable degree of confidence (within ±0.3 mile on the map). The lines are dashed where data are less abundant or where hydrologic conditions are more complex and their locations are considered to be accurate to within ±0.7 mile on the map. In the areas where a question mark appears on the map, such as the tops of hills, data are insufficient to interpret water-table elevation.

It was beyond the resources of this study to field-check the locations and water levels given on the Department of Natural Resources well constructor's reports that were used to construct this map. This map is a summary of available water-level data for Eau Claire County. It is intended for use at the published scale of 1:100,000 but should *not* be considered definitive for site-specific applications.

References

Brown, B.A., 1988, Bedrock geology of Wisconsin, west-central sheet: Wisconsin Geological and Natural History Survey Regional Map Series (Map 88-7), scale 1:250,000.

Cates, K.J., and Madison, F.M., 1989, Soils of Eau Claire County, Wisconsin, and their ability to attenuate contaminants: Wisconsin Geological and Natural History Survey, Soil Map 9 (Map 89-6), scale 1:100,000.

Base map from U.S. Geological Survey County Map Series (Topographic), 1985.

Scale 1:100,000

1 0 1 2 3 4 5 6 7 8 9 10
KILOMETERS

1 0 1 2 3 4 5
MILES

Explanation

- —1020— average elevation of water table in feet, solid where considered accurate within ±0.3 mile on the land surface; dashed where considered accurate within ±0.7 mile on the land surface; 20-ft contour interval. Datum is mean sea level.
- ? elevation of water table unknown; insufficient data
- surface-water divide
- groundwater divide, approximately located
- general direction of shallow groundwater flow
- county-owned land and Wisconsin Department of Natural Resources Wildlife Refuge

Geologic materials contributing water to well (All geologic information is taken from Department of Natural Resources Well Constructor's reports on file at the Wisconsin Geological and Natural History Survey.)

- ○ sandstone
- ◐ sandstone and shale
- ◒ sand and/or gravel
- ● granite or granite and sandstone

Data have not been field checked. Water-level elevation data were generalized from information collected over a period of approximately 50 years.

Sources of data

U.S. Geological Survey quadrangles (7.5-minute series, topographic; 1972-84) were used to determine surface-water and well-water elevations

Water-level observation wells from the Groundwater Level Monitoring Network operated and maintained by the U.S. Geological Survey and Wisconsin Geological and Natural History Survey

Wisconsin Department of Natural Resources well constructor's reports (1936-87)

Wisconsin Geological and Natural History Survey published and unpublished geologic logs (1896-1988)

UWEX University of Wisconsin-Extension
Published by and available from
Geological and Natural History Survey
Ronald Hennings, Acting Director and State Geologist
3817 Mineral Point Road, Madison, Wisconsin 53705

Cartography by K. Campbell Roushar

Miscellaneous Map 35

Boring Location Sketch

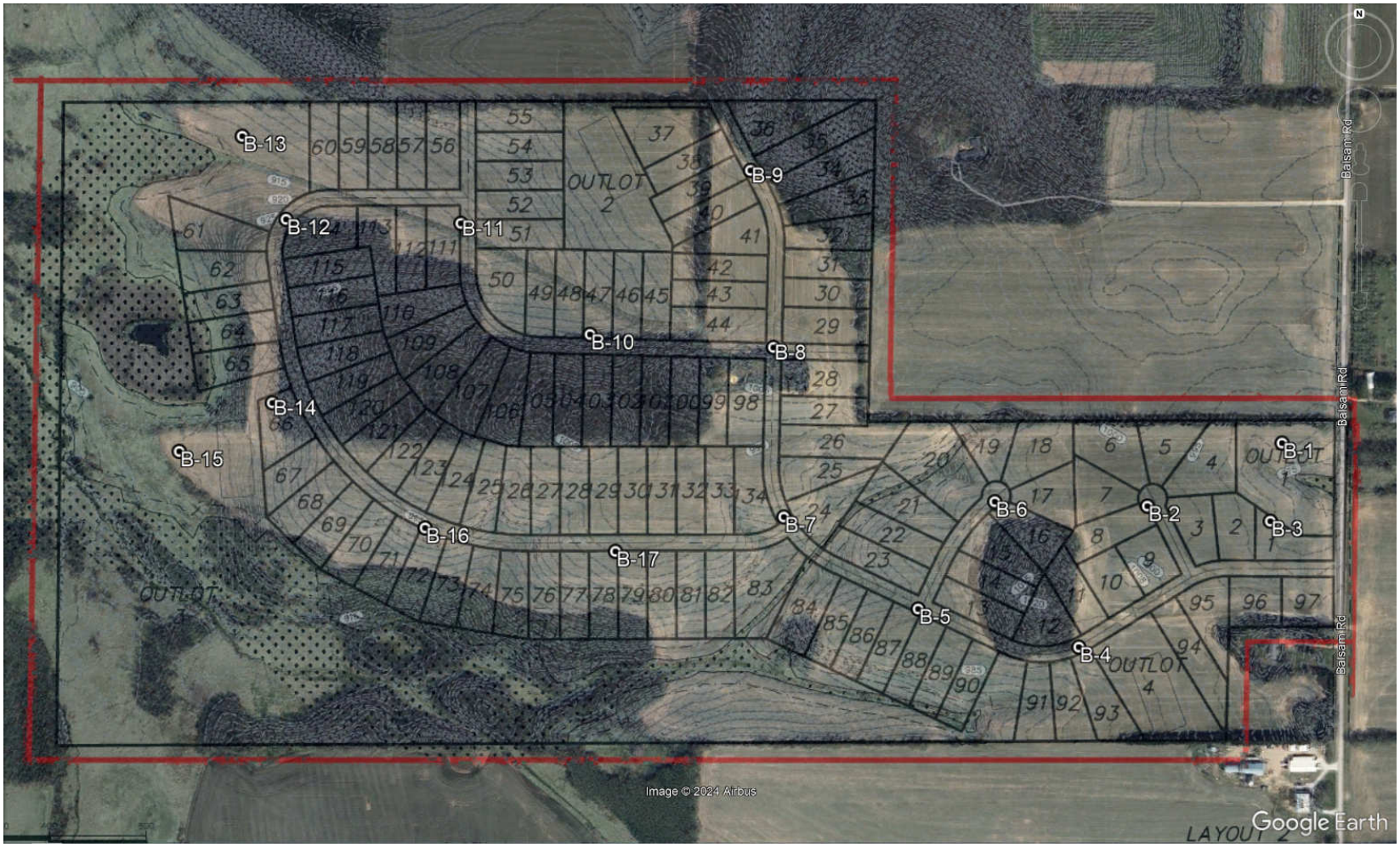
Proposed Balsam Road Development
Balsam Road
Eau Claire, Wisconsin
CVT #: 24256.24.WIL

Chosen Valley Testing, Inc.

Legend

Boring Location

N



PROJECT OVERVIEW

BALSUM RD
July 2, 2024

Owner: C&M BUILDERS

Location: Balsum Rd Eau Claire County

Parcel #: 024118802000 Site # 1
024118702000 and 024118709000 Site # 2
024118704000 Site # 3

RE: Preliminary Soil Borings for On-Site Treatment and Disposal Systems
Proposed Residential Subdivision

This work project is to determine on-site suitability for on-site wastewater treatment and disposal systems for a proposed residential subdivision. This portion of the project is for preliminary design purposes only. Additional soil borings will be required when the specific locations for the on-site disposal and treatment components have been determined.

The goal of this portion of the project is to determine if three large (<12,000 GPD design flow) on-site systems can be sited >1500' apart.

Soil borings were described and documented by Dan Vander Leest from Vander Leest Soil Testing. The backhoe was supplied by Ed Berg of Petersen On-site. Soil boring locations along with surrounding topography was supplied by .

Present during the on-site investigation on June 27,2024, were Dan Vander Leest along with Ed and Logan Berg all associated with Petersen On-site.

SOILS

Site #1 (borings # 1-6)

The soils are fine-loamy over sandy-skeletal Typic Hapludalfs formed in a thin loess deposit over alluvium and sandstone deposits. The specific site location is located on an upper backslope of a bedrock controlled rolling upland. Slopes are to the southwest at 2-3%.

Soil limitations included redoximorphic features were observed within the sandy alluvial deposit. These features were observed starting from 20-36". Weathered sandstone was noted starting from 15-55". Boring # 3 was dug to ~100" with rippable sandstone encountered from 48-100". Redoximorphic features were observed throughout this material. No soil saturation was observed.

Lamallae (1-2" in thickness) were observed in borings #3,5 and 6 starting at 28-36". These features appear to be depositional in formation rather than pedogenic. Sporadic and faint redoximorphic features were noted surrounding these features and are associated with changes in permeability with the surrounding sand to fine sand material.

Site #2 (borings # 11-18)

The soils are loamy Lithic Hapludalfs formed in a thin loess deposit over sandstone. The landscape position is mainly an upper backslope with slopes to the southwest at 3-6%.

The main limitation encountered was sandstone bedrock starting at 18-24". Boring # 14 was constructed down to 100" with weathered sandstone starting at 18". Soil saturation was noted at 48".

Site # 3 (borings # 21-27)

The soils are mainly fine-loamy over sandy-skeletal Typic Hapludalfs formed in a thin loess deposit over alluvium. Boring # 21 is a Lithic Dystrudept formed in residuum or sandstone. This area boring is located on a summit to shoulder landscape position and is extremely eroded. The specific area tested for borings # 22-27 varies from an upper backslope to a toeslope. Slopes are to the west at ~6%.

Redoximorphic features were encountered starting at 18-34" in borings # 22-27 within the sandy alluvial deposit. Soil boring # 25 was located down slope of a seep- where surface water was observed exiting the soil and flowing across the surface. Boring # 23 was dug to 100" with soil saturation encountered at ~80". This boring also revealed 11" of colluvium that has resulted in a buried surface (A) horizon. Redoximorphic features were encountered 12" below the original surface horizon.

Boring #25 should be avoided when siting a mound due to surface water flows.

CONCLUSIONS

The three preliminary sites tested are suitable for mound type treatment and disposal components. The size of the mounds will need to be determined from the estimated flow calculations (and subsequent design flow which is 1.5 times the estimated flow). The amount of sand required to achieve the necessary 36" of separation between the limiting layer will need to be determined by additional borings once the specific mound locations have been determined.

Pretreatment is recommended to reduce the BOD and TSS load on the dispersal component. With pretreated effluent the maximum ASTM C-33 sand loading rate is 2.0 gals/ft2/day. However, a 1.0 gals/ft2/day is recommended. The basal loading rate requirement for pretreated effluent (effluent # 2 in Table 383.44-2) is 0.6 gals/ft2. A basal loading rate of 0.4 gals/ft2/day is recommended.

Long narrow cells with five feet between cells are recommended. The final grade surrounding the components must divert surface waters away from the mounds. Once the locations of the mounds have been determined, these areas must be marked to keep all disturbance and traffic off of the mound areas to avoid compaction or any other disturbance.

Wisconsin DSPS
Division of Safety and Buildings

SOIL EVALUATION REPORT

in accordance with SPS 385, Wis. Adm. Code

Attach complete site plan on paper not less than 8 ½ x 11 inches in size. Plan must Include, but not limited to: vertical and horizontal reference point (BM), direction and Percent slope, scale or dimensions, north arrow, and location and distance to nearest road.

Please print all information.

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

County: Eau Claire	
Parcel I.D.: 024118802000	
Reviewed by:	Date:

Property Owner: C&M Builders				Property Location: ☒ E ☐ W Govt. Lot SE ¼ SE ¼ S 17 T 26 N – R 9	
Property Owner's Mailing Address: 6176 Sandstone Rd				Lot #	Block # / Subd. Name or CSM #
City: Eau Claire	State: WI	Zip Code: 54701	Phone Number: ( ) -	☐ City: ☐ Village: ☒ Town: Washington	Nearest Road: Balsum Rd

☒ New Construction ☐ Replacement

Use ☒ Residential / Number of bedrooms: unk ☐ Public or commercial – Describe:

Code derived design flow rate: TBD GPD

Parent material: Loess over Sandstone & Alluvium

Flood Plain elevation if applicable: NA ft.

General comments and recommendations: Site #1

Preliminary borings for planning purposes only. Additional borings will be required when the mound locations have been determined >16" of ASTM-C33 sand required between borings # 1-6

1 Boring # ☐ Boring ☒ Pit Ground surface elev. 997.8 ft. Depth to limiting factor >22 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-11	10YR3/3	-	L	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	11-16	10YR4/4	-	L	2-m-sbk	mfr	GW	1vf-f	0.6	0.8
Bt2	16-22	10YR3/4	-	L	2-f-sbk	mfr	CW	1vf-f	0.6	0.8
2BC	22-28	10YR4/4	C1D 10YR6/3	LvfS	mass	mvfr	CW	1f	0.4	0.6
2C	28-40	2.5YR5/4	C1D 10YR6/2 C1P 7.5YR6/8	GrfSL	mass	mfr	-	-	0.2	0.5

2 Boring # ☐ Boring ☒ Pit Ground surface elev. 1000.6 ft. Depth to limiting factor >20 in. Soil Applicatior

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-11	10YR3/3	-	L	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt	11-20	10YR3/4 and 4/4	-	L	2-m-sbk	mfr	CW	1vf-f	0.6	0.8
2CB	20-26	10YR5/4	C1D 10YR6/3	LvfS	mass	mfr	CW	1vf	0.4	0.6
2Cr	26-56	2.5YR5/4	C1D10YR5/8 C2D 10YR7/1	weathered sandstone	mass	mfi	-	-	0	0

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L * Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print): Dan Vander Leest	Signature:	CST Number: 221049
Address: 824 Egg Harbor Road Sturgeon Bay, WI 54235	Date Evaluation Conducted: 6-27-24	Telephone Number: (920) 743 - 4708

3 Boring # ☐ Boring ☒ Pit Ground surface elev. 994.4 ft. Depth to limiting factor >28 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-12	10YR3/2	-	L	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt	12-18	10YR3/4	-	SCL	2-f-sbk	mfr	CW	1vf-f	0.4	0.6
BC	18-28	10YR5/4	-	LfS	sg	lo	CW	1f	0.5	1.0
C	28-48	7.5YR6/4	F1F 7.5YR6/3	S *	sg	lo	AS	-	0.7	1.6
Cr	48-100	2.5YR6/3	C1D 10YR6/8 C2F 10YR6/2	Weatherd sandstone	mass	mfi		-	0	0
				* 1-2" Lamellae of LvfS						

4 Boring # ☐ Boring ☒ Pit Ground surface elev. 997.4 ft. Depth to limiting factor >30 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-12	10YR3/2	-	SIL	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	12-20	10YR4/3	-	SIL	2-f-sbk	mfr	GW	1vf-f	0.6	0.8
Bt2	20-30	10YR3/4	-	SICL/SCL	2-m-sbk	mfr	CW	1vf	0.4	0.6
BC	30-40	7.5YR4/4	F1D10YR6/4	LfS	sg	lo	AW	-	0.5	1.0
Cr	40-55	2.5YR5/4	C2D 10YR6/2 C1D 10YR6/6	GrSICL	mass	mfi	-	-	0	0

5 Boring # ☐ Boring ☒ Pit Ground surface elev. 997.5 ft. Depth to limiting factor >34 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-12	10YR3/3	-	L	2-m-gr	mvfr	AS	2vf-m	0.6	0.8
Bt	12-24	10YR3/4	-	fSL	2-f-sbk	mfr	AW	2vf-m	0.4	0.8
BC	24-34	7.5YR4/6	-	LfS	sg	lo	CW	1vf	0.5	1.0
C1	34-58	7.5YR4/4	C2F 10YR6/3 F1F 10YR6/6	fS *	sg	lo	DW	-	0.7	1.6
C2	58-66	7.5YR5/4	F1F 10YR6/3	fS *	sg	lo	-	-	0.7	1.6
				* with 7.5YR Lamallae 1-2						

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

The Department of Commerce is an equal opportunity service provider and employer. If you need assistance to access services or need material in an alternate format, please contact the department at 608-266-3151 or TTY 608-264-8777.

6 Boring #

☐ Boring

☒ Pit Ground surface elev. 992.8 ft. Depth to limiting factor >36 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-12	10YR3/3	-	L	2-m-gr	mvfr	AS	2vf-m	0.6	0.8
Bt	12-22	7.5YR4/4	-	SCL	2-f-sbk	mfr	CW	2vf-m	0.4	0.6
BC	24-36	7.5YR4/6	-	fs	sg	lo	DW	1vf	0.5	1.0
CB	36-55	7.5YR5/4 and 6/4	F1F 10YR6/3	fS *	sg	lo	AW	-	0.5	1.0
Cr	55-60	2.5YR5/4	C1D 10YR6/2	Weathered sandstone VGrLvfS	mass	mfi	-	-		
				*with 1-2" Lamallae						

7 Boring #

☐ Boring

☒ Pit Ground surface elev. ft. Depth to limiting factor in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
			-							
			-							
			-							
			-							

8 Boring #

☐ Boring

☐ Pit Ground surface elev. ft. Depth to limiting factor in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

The Department of Commerce is an equal opportunity service provider and employer. If you need assistance to access services or need material in an alternate format, please contact the department at 608-266-3151 or TTY 608-264-8777.

Wisconsin DSPS
Division of Safety and Buildings

SOIL EVALUATION REPORT

in accordance with SPS 385, Wis. Adm. Code

Attach complete site plan on paper not less than 8 ½ x 11 inches in size. Plan must Include, but not limited to: vertical and horizontal reference point (BM), direction and Percent slope, scale or dimensions, north arrow, and location and distance to nearest road.

Please print all information.

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

County: Eau Claire	
Parcel I.D.: 024118702000 and 024118709000	
Reviewed by:	Date:

Property Owner: C&M Builders				Property Location: ☒ E ☐ W Govt. Lot NE ¼ SW ¼ S 17 T 26 N – R 9 E (or) W	
Property Owner's Mailing Address: 6176 Sandstone Rd				Lot #	Block # / Subd. Name or CSM #
City: Eau Claire	State: WI	Zip Code: 54701	Phone Number: ( ) -	☐ City: ☐ Village: ☒ Town: Washington	Nearest Road: Balsum Rd

☒ New Construction ☐ Replacement	Use ☒ Residential / Number of bedrooms: unk ☐ Public or commercial – Describe:	Code derived design flow rate: TBD GPD
Parent material: Loess over Sandstone		Flood Plain elevation if applicable: NA ft.

General comments and recommendations: SITE # 2
Preliminary borings for planning purposes only. Additional borings will be required when the mound locations have been determined
>20" of ASTM-C33 sand required between borings # 1-8

Boring # 1 ☐ Boring ☒ Pit Ground surface elev. 999.6 ft. Depth to limiting factor >30 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-12	10YR3/2	-	L	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	12-21	10YR4/4	-	L	2-m-sbk	mfr	GW	1vf-f	0.6	0.8
Bt2	21-30	10YR3/4	-	SCL	2-f-sbk	mfr	AW	1vf-f	0.4	0.6
2Cr	30-48	2.5YR6/4	M1D 10YR6/1 M1D 10YR6/6	vfS	mass	mvfr	CW	1f	0	0
2R	48-55	10YR4/4	C1D 10YR6/2 C1P 7.5YR6/8 and 6/6	Weathered Sandstone VGrVfS	mass	mfr	-	-	0.0	0.0

Boring # 2 ☐ Boring ☒ Pit Ground surface elev. 997.7 ft. Depth to limiting factor >20 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-11	10YR4/2	-	SIL	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	11-16	10YR4/4	-	SIL	2-m-sbk	mfr	CW	1vf-f	0.6	0.8
Bt2	16-20	10YR3/4		SICL-	2-f-sbk	mfr	AW	1vf	0.4	0.6
2Cr	20-55	2.5YR5/4	C1D10YR6/6 C2D 10YR6/2	weathered sandstone	mass	mfi	-	-	0	0
2R	55	Sandstone								

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L * Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print): Dan Vander Leest	Signature:	CST Number: 221049
Address: 824 Egg Harbor Road Sturgeon Bay, WI 54235	Date Evaluation Conducted: 6-27-24	Telephone Number: (920) 743 - 4708

13 Boring #

☐ Boring

☒ Pit Ground surface elev. 993.0 ft. Depth to limiting factor @18 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-10	10YR3/2	-	SIL	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	10-14	10YR4/4	-	SIL	2-f-sbk	mfr	CW	1vf-f	0.6	0.8
Bt2	14-18	10YR3/4	-	SIL	2-m-sbk	mfr	AW	1f	0.6	0.8
2R	18-36	Rippable Bedrock		weathered sandstone	mass			-	0	0

14 Boring #

☐ Boring

☒ Pit Ground surface elev. 997.0 ft. Depth to limiting factor @18 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-8	10YR3/2	-	SIL	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	8-12	10YR4/3	-	SIL	2-f-sbk	mfr	GW	1vf-f	0.6	0.8
Bt2	12-18	10YR3/4	-	SICL	2-m-sbk	mfr	AW	1vf	0.4	0.6
2Cr	18-55	2.5YR6/4	M2D10YR6/2 M1D10YR6/8	weathered sandstone	mass	mfi	DW	-	0	0
2R	55-96	Rippable Bedrock	C2D 10YR6/2 C1D 10YR6/6	weathered sandstone	mass	mfi	-	-	0	0
			water @48"							

15 Boring #

☐ Boring

☒ Pit Ground surface elev. 997.2 ft. Depth to limiting factor @24 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-8	10YR3/2	-	SIL	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	8-12	10YR4/4	-	SIL	2-f-sbk	mfr	CW	1vf-f	0.6	0.8
Bt2	12-24	10YR3/4	-	SICL-	2-m-sbk	mfr	AW	1vf	0.4	0.6
2Cr	24-36	Rippable Bedrock		weathered sandstone				-	0	0
							-			

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

The Department of Commerce is an equal opportunity service provider and employer. If you need assistance to access services or need material in an alternate format, please contact the department at 608-266-3151 or TTY 608-264-8777.

16 Boring # ☐ Boring ☒ Pit Ground surface elev. 993.0 ft. Depth to limiting factor @18 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-10	10YR3/2	-	SIL	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	10-14	10YR4/4	-	SIL	2-f-sbk	mfr	CW	1vf-f	0.6	0.8
Bt2	14-18	10YR3/4	-	SICL-	2-m-sbk	mfr	AW	1vf	0.4	0.6
2Cr	18-36	Rippable Bedrock		weathered sandstone				-	0	0
							-	-		

17 Boring # ☐ Boring ☒ Pit Ground surface elev. 996.1 ft. Depth to limiting factor @16 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-9	10YR4/2	-	SIL	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	9-12	10YR4/4	-	SIL	2-f-sbk	mfr	CW	1vf-f	0.6	0.8
Bt2	12-16	10YR3/4	-	SICL-	2-m-sbk	mfr	AW	1vf	0.4	0.6
2Cr	16-36	Rippable Bedrock		weathered sandstone					0	0

18 Boring # ☐ Boring ☐ Pit Ground surface elev. 991.6 ft. Depth to limiting factor @20 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-8	10YR4/2	-	SIL	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	8-12	10YR4/4	-	SIL	2-f-sbk	mfr	CW	1vf-f	0.6	0.8
Bt2	12-20	10YR3/4	-	SICL-	2-m-sbk	mfr	AW	1vf	0.4	0.6
2Cr	20-40	Rippable Bedrock		weathered sandstone						

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

The Department of Commerce is an equal opportunity service provider and employer. If you need assistance to access services or need material in an alternate format, please contact the department at 608-266-3151 or TTY 608-264-8777.

Wisconsin DSPS
Division of Safety and Buildings

SOIL EVALUATION REPORT

in accordance with SPS 385, Wis. Adm. Code

Attach complete site plan on paper not less than 8 ½ x 11 inches in size. Plan must Include, but not limited to: vertical and horizontal reference point (BM), direction and Percent slope, scale or dimensions, north arrow, and location and distance to nearest road.

Please print all information.

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

County: Eau Claire	
Parcel I.D.: 024118704000	
Reviewed by:	Date:

Property Owner: C&M Builders				Property Location: ☒ ☐ Govt. Lot SW ¼ SW ¼ S 17 T 26 N – R 9 E (or) W			
Property Owner's Mailing Address: 6176 Sandstone Rd				Lot #	Block #	Subd. Name or CSM #	
City: Eau Claire	State: WI	Zip Code: 54701	Phone Number: ( ) -	☐ City: ☐ Village: ☒ Town: Washington			Nearest Road: Balsum Rd

☒ New Construction ☐ Replacement	Use ☒ Residential / Number of bedrooms: unk	Code derived design flow rate: TBD GPD
	☐ Public or commercial – Describe:	
Parent material: Risiduum/ Sandstone and Loess/alluvium		Flood Plain elevation if applicable: NA ft.

General comments
and recommendations: SITE # 3
Preliminary borings for planning purposes only. Additional borings will be required when the mound locations have been determined
>18" of ASTM-C33 sand required between borings # 1-4 and 6,7 Avoid B-5

21 Boring # ☐ Boring ☒ Pit Ground surface elev. 935.5 ft. Depth to limiting factor @15 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-8	10YR4/1	-	Channery vfSL	2-m-gr	mvfr	AS	1vf-f	0.4	0.8
Bw	8-15	10YR3/4	-	Channery LvfS	1-f-sbk	mvfr	CW	1vf-f	0.4	0.6
2Cr	15-48	2.5YYR5/4	C1D10YR6/3 C2D10YR6/6 and 6/8	weathered sandstone	mass	mfi			0	0
							-	-		

22 Boring # ☐ Boring ☒ Pit Ground surface elev. 919.3 ft. Depth to limiting factor >24 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-10	10YR4/1	-	L	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	10-24	10YR3/4	-	CL	2-m-sbk	mfr	AW	1vf-f	0.4	0.6
2C	24-60	7.5YR4/6	C1D10YR6/6 C1D10YR6/2	fS	sg	lo		1vf	0.5	1.0
							-	-		

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L * Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print): Dan Vander Leest	Signature:	CST Number: 221049
Address: 824 Egg Harbor Road Sturgeon Bay, WI 54235	Date Evaluation Conducted: 6-27-24	Telephone Number: (920) 743 - 4708

23 Boring # ☐ Boring

☒ Pit Ground surface elev. 912.5 ft. Depth to limiting factor >34 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap1	0-11	10YR3/2	-	L	2-m-gr	mvfr	CS	2vf-f	0.6	0.8
2Ap2	11-22	10YR4/4	-	fSL	2-m-sbk	mfr	CW	1vf-f	0.4	0.8
2Bt	22-34	10YR3/4	-	fSL	2-f-sbk	mfr	AW	1f	0.4	0.8
3C	34-60	7.5YR4/6	C1D10YR6/3 C1D10YR6/6	S	sg	lo		-	0.7	1.6
			Dug to 100" Saturated @80"							

24 Boring # ☐ Boring

☒ Pit Ground surface elev. 918.5 ft. Depth to limiting factor >28 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-10	10YR4/2	-	L	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	10-20	10YR3/4	-	fSL	2-f-sbk	mfr	CW	1vf-f	0.4	0.8
BC	20-28	10YR4/4	-	LfS	sg	lo	GW	1vf	0.5	1.0
2C	28-50	10YR4/4	C2D10YR6/2 C1D10YR6/8	fS	sg	lo		-	0.5	1.0
							-	-		

25 Boring # ☐ Boring

☒ Pit Ground surface elev. 919.2 ft. Depth to limiting factor >18 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-10	10YR2/1	-	L	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	10-18	10YR4/4	-	CL	2-f-sbk	mfr	CW	1vf-f	0.4	0.6
Bt2	18-24	10YR3/4	C1D10YR6/6	CL	1-m-sbk	mfr		1vf	0.4	0.6
								-		
		wet boring surface water running in hole	Avoid for mound							

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

The Department of Commerce is an equal opportunity service provider and employer. If you need assistance to access services or need material in an alternate format, please contact the department at 608-266-3151 or TTY 608-264-8777.

26 Boring # ☐ Boring ☒ Pit Ground surface elev. 912.8 ft. Depth to limiting factor >20 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-12	10YR3/2	-	L	1-m-sbk	mvfr	AS	1vf-f	0.6	0.8
Bt1	12-20	10YR3/4	-	fSL	2-f-sbk	mfr	CW	1vf-f	0.4	0.8
Bt2	20-28	10YR4/4	C1D10YR6/2 C1D10YR6/8	fSL-	1-m-sbk	mfr	AW	1vf	0.2	0.6
2C	28-42	7.5YR4/6	C1D10YR6/6 C2D10YR6/3	S	sg	lo		-	0.7	1.6
		saturated @36"					-	-		

27 Boring # ☐ Boring ☒ Pit Ground surface elev. 931.4 ft. Depth to limiting factor @20 in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
Ap	0-10	10YR4/2	-	L	2-m-gr	mvfr	AS	1vf-f	0.6	0.8
Bt1	10-20	10YR4/4	-	CL-	2-f-sbk	mfr	AW	1vf-f	0.4	0.6
2Cr	20-50	2.5YR6/4	M1D10YR6/6 M2D10YR6/2	weathered sandstone					0	0

8 Boring # ☐ Boring ☐ Pit Ground surface elev. ft. Depth to limiting factor in. Soil Application Rate

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft² Eff#1	GPD/ft² Eff#2
			-							
			-							
			-							

* Effluent # 1 = BOD_5>30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent # 2 = BOD_5≤ 30 mg/L and TSS ≤ 30 mg/L

The Department of Commerce is an equal opportunity service provider and employer. If you need assistance to access services or need material in an alternate format, please contact the department at 608-266-3151 or TTY 608-264-8777.

SITE #1

C&M BUILDERS

SE1/4 SE1/4 SEC.17
T26N–R9E
TOWN OF WASHINGTON
EAU CLAIRE COUNTY

~600' to Balsum Rd

Proposed Mound
(<12,000 gpd)
(15 Cells 300'x3')

Scale:1"=50'

100 Feet

~Property Line

N

SITE # 2

C&M BUILDERS

NW1/4 SE 1/4
AND
NE1/4 SW1/4

SEC 17
T26N R9W
TOWN OF WASHINGTON
EAU CLAIRE COUNTY

Scale:1"=80'

200 Feet

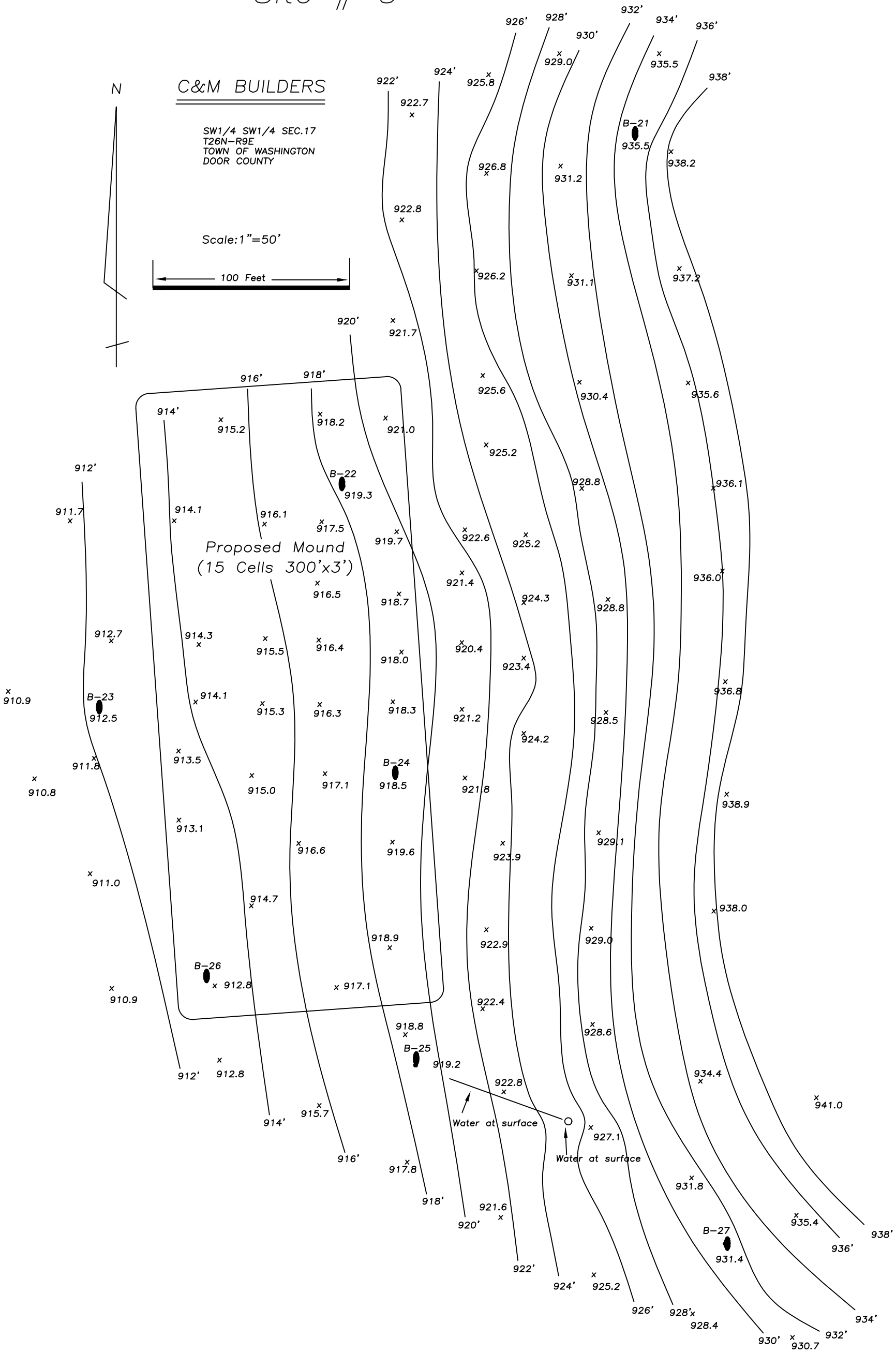
N

Proposed Mound
(<12,000 GPD)
(15 Cells 300'x3')

Tree Line

B-18
B-17
B-16
B-15
B-14
B-13
B-12
B-11

Site # 3


N
C&M BUILDERS
SW1/4 SW1/4 SEC.17
T26N–R9E
TOWN OF WASHINGTON
DOOR COUNTY
Scale:1"=50'
100 Feet
Proposed Mound
(15 Cells 300'x3')
B–21
B–22
B–23
B–24
B–25
B–26
B–27
Water at surface
Water at surface

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-01** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
896.6	0.0	SM	**Slightly Organic SILTY SAND** trace roots, dark brown. (Topsoil)	*		Elevations provided by AEC. * 2 / 2 / 2 / 3
895.1	1.5	SM	**SILTY SAND** trace gravel, fine grained, light brown, moist, medium dense. (Residuum)	*		* 6 / 8 / 10 / 12 Hard drilling below 3'.
891.1	5.5	GP	**WEATHERED SANDSTONE**, poorly graded gravel with silt and sand in sampler, light brown, moist, very dense.	*		* 6 / 7 / 25 / 50 = 1"
890.1	6.5		End of boring. Boring terminated due to auger refusal around 6.5'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-02** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
996.7	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
995.5	1.2	SM	**SILTY SAND** trace gravel, fine grained, brown, moist, dense. (Residuum)	35		
992.7	4.0	SM	**WEATHERED SANDSTONE**, silty sand in sampler, shale stringers, trace gravel, fine grained, light brown, moist, very dense.	*		Auger grinding below 4'. * 18 / 50 = 1"
990.7	6.0		End of boring. Boring terminated due to auger refusal around 6'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-03** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
895.1	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
893.8	1.3	SM	**SILTY SAND** trace gravel, fine grained, light brown, moist, medium dense to dense. (Residuum)	24		Hard drilling below 2.5'.
				33		
888.6	6.5		End of boring. Boring terminated due to auger refusal around 6.5', presumably on bedrock. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-04** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
995.8	0.0					
995.0	0.8	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
993.8	2.0	SM	**SILTY SAND** (Residuum)			
993.3	2.5	SM	**WEATHERED SANDSTONE**, silty sand in sampler, trace gravel, fine grained, light brown, moist, very dense.	*		* 50 = 6" (set) Auger grinding below 2'.
			End of boring. Boring terminated due to auger refusal around 2.5'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-05** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
982.6	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
981.3	1.3	SM	**SILTY SAND** trace gravel, fine grained, light brown, moist, medium dense to dense. (Residuum)	14		
				40		Hard drilling below 5.5'.
976.1	6.5		End of boring. Boring terminated due to auger refusal around 6.5', presumably on bedrock. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-06** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
986.4	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
984.4	2.0	SC	**CLAYEY SAND** fine grained, brown, moist, loose. (Alluvium)	9		
983.4	3.0	SP SM	**POORLY GRADED SAND with SILT** trace gravel, fine grained, brown, moist, loose. (Alluvium)			
982.4	4.0	SM	**SILTY SAND** trace gravel, fine grained, brown, moist, medium dense. (Residuum) Seams of lean clay around 5'.	19		
				20		Hard drilling below 9'.
				21		
974.9	11.5		End of boring. Boring terminated due to auger refusal around 11.5', presumably on bedrock. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-07** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
975.5	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
974.5	1.0	SP SM	**POORLY GRADED SAND with SILT** trace gravel, fine grained, light brown, moist, medium dense to dense. (Residuum)	26		Hard drilling below 2'.
				35		
969.0	6.5		End of boring. Boring terminated due to auger refusal around 6.5', presumably on bedrock. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-08** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
1004.2	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
1003.0	1.2	SM	**SILTY SAND** trace gravel, fine grained, light brown, moist, dense. (Residuum)	31		
				31		
997.2	7.0	SM	**WEATHERED SANDSTONE**, silty sand in sampler, shale stringers, trace gravel, fine grained, light brown, moist, very dense.	*		* 50 = 6" (set) Auger grinding below 7.5'.
996.2	8.0		End of boring. Boring terminated due to auger refusal around 8'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-09** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
992.3	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
991.1	1.2	SM	**SILTY SAND** seams of lean clay, trace gravel, fine grained, brown, moist, medium dense. (Residuum)	19		Auger grinding below 3'.
				27		
985.8	6.5		End of boring. Boring terminated due to auger refusal around 6.5', presumably on bedrock. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-10** LOCATION: See attached sketch DATE: 11/25/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
974.7	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
973.7	1.0	SM	**SILTY SAND with GRAVEL** light brown, moist, medium dense. (Residuum)	21		Hard drilling below 2.5'.
970.7	4.0	SM	**SILTY SAND** seams of lean clay, trace gravel, fine grained, brown, moist, medium dense. (Residuum)	26		
968.2	6.5		End of boring. Boring terminated due to auger refusal around 6.5', presumably on bedrock. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-11** LOCATION: See attached sketch DATE: 11/26/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
938.8	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
936.8	2.0	SM	**SILTY SAND** fine grained, brown, moist, medium dense. (Alluvium)	14		
933.8	5.0	SP SM	**POORLY GRADED SAND with SILT** fine grained, brown, moist, medium dense. (Alluvium)	12		
				10		
				11		
				17		
				18		
				25		
917.8	21.0		End of boring. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-12** LOCATION: See attached sketch DATE: 11/26/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
923.8	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
921.8	2.0	SM	**SILTY SAND** fine grained, brown, moist, loose. (Alluvium)	9		
920.8	3.0	SP SM	**POORLY GRADED SAND with SILT** seams of silty sand, fine grained, brown, moist to water bearing, loose to medium dense. (Alluvium)	10		
			No silty sand seams below 6.5'.	10		
				14		
				12		
				10		
			Water bearing below 20'.	9	▽	
902.8	21.0		End of boring. Water observed during drilling below around 20'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-13** LOCATION: See attached sketch DATE: 11/26/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
915.2	0.0	ML OL	**Slightly Organic SANDY SILT** dark brown. (Topsoil)	*		Elevations provided by AEC.
914.0	1.2	SM	**SILTY SAND** fine grained, brown, moist, loose to medium dense. (Alluvium)	*		* 2 / 2 / 3 / 3
				*		* 4 / 4 / 5 / 5
910.7	4.5	SP SM	**POORLY GRADED SAND with SILT** fine grained, brown, moist to water bearing, medium dense. (Alluvium)	*		* 4 / 5 / 7 / 7
				*		* 8 / 11 / 13 / 16
				*		* 4 / 5 / 5 / 10
				*		* 4 / 4 / 5 / 5
			Water bearing below 13'.	*	▽	* 7 / 8 / 7 / 7
				*		* 2 / 3 / 4 / 4
				*		* 3 / 4 / 4 / 5
				*		* 4 / 5 / 6 / 6
895.2	20.0		End of boring. Water observed during drilling below around 13'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-14** LOCATION: See attached sketch DATE: 11/26/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
936.0	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
934.0	2.0	SM	**SILTY SAND** trace gravel, fine grained, light brown, moist, medium dense. (Residuum)	10		
932.0	4.0	CL	**LEAN CLAY with GRAVEL** light brown, wet, very stiff. (Residuum)	18		
929.5	6.5		End of boring. Boring terminated due to auger refusal around 6.5', presumably on bedrock. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-15** LOCATION: See attached sketch DATE: 11/26/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
910.2	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)	*		Elevations provided by AEC. * 2 / 2 / 2 / 2
908.9	1.3	CL	**SANDY LEAN CLAY** brown, wet, rather soft. (Alluvium)			
907.7	2.5	SP SM	**POORLY GRADED SAND with SILT** trace gravel, fine grained, brown, moist, medium dense. (Alluvium)	*		* 4 / 4 / 5 / 5
				*		* 4 / 5 / 6 / 6
				*		* 5 / 6 / 6 / 6
900.7	9.5			*	▽	* 2 / 3 / 3 / 3
899.7	10.5	SM	**SILTY SAND** fine grained, brown, water bearing, loose. (Alluvium)			
		SP SM	**POORLY GRADED SAND with SILT** fine grained, brown, water bearing, loose to medium dense. (Alluvium)	*		* 2 / 2 / 4 / 4
				*		* 4 / 4 / 5 / 6
895.7	14.5	SM	**SILTY SAND** fine grained, brown, water bearing, loose. (Alluvium)	*		* 3 / 3 / 3 / 6
894.2	16.0	SC	**Slightly Organic CLAYEY SAND** trace roots, fine grained, dark gray, water bearing, very loose to loose. (Alluvium)	*		* 1 / 1 / 1 / 1
				*		* 1 / W / W / 1
890.2	20.0		End of boring. Water observed during drilling below around 9.5'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-16** LOCATION: See attached sketch DATE: 11/26/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
965.2	0.0					
964.9	0.3	CL OL	**Slightly Organic LEAN CLAY** **SILTY SAND**			Elevations provided by AEC.
		SM	(Residuum)			
963.2	2.0					
		SM	**WEATHERED SANDSTONE**, silty sand with gravel in sampler, fine grained, light brown, moist, very dense.	*		* 50 = 6" (set) Hard drilling below 2'.
962.2	3.0					
			End of boring. Boring terminated due to auger refusal around 3'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

LOG OF BORING

CHOSEN VALLEY TESTING CVT

PROJECT: 24256.24.WIL Design Phase Geotechnical Evaluation Proposed Balsam Road Development Balsam Road Eau Claire, Wisconsin	BORING: **B-17** LOCATION: See attached sketch DATE: 11/26/2024 SCALE: 1" = 3'

Elev.	Depth	USCS Symbol	Description of Materials (ASTM D 2487/2488)	BPF	WL	Tests and Notes
982.8	0.0	CL OL	**Slightly Organic LEAN CLAY** dark brown. (Topsoil)			Elevations provided by AEC.
981.6	1.2	SM	**SILTY SAND with GRAVEL** fine grained, gray, moist, dense. (Residuum)	41		Hard drilling below 2.5'.
977.3	5.5			*		* 18 / 25 / 50 = 1"
976.8	6.0	SM	**WEATHERED SANDSTONE**, silty sand with gravel in sampler, fine grained, gray, moist, very dense.			
			End of boring. Boring terminated due to auger refusal around 6'. Boring sealed upon completion.			

CVT STANDARD 24256.24.WIL (EAU CLAIRE BALSAM ROAD DEVELOPMENT).GPJ LOG A GNNN06.GDT 12/23/24

January 31, 2025

Elizabeth Paulson
Environmental Health Specialist
Eau Claire City / County Health Department

Dear Ms. Paulson,

Regarding the proposed Plat of "FIRENZE ESTATAES" located in Section 17, T26N, R9W Town of Washington, Eau Claire County, Wisconsin. This property's previous activity very limited; the site is 258 acres in size, with 136 acres being actively farmed while the remaining lands are wooded or wetlands. Our research concluded without observing any animal feed lots, manure storage, pesticide mixing sites, solid, sludge or industrial waste disposal sites, salvage yards, fertilizer plants or hazardous waste areas within 1200 feet of the proposed subdivision. The land area activity within the 1,200-foot radius is comprised of open and semi wooded areas, scattered rural residential lots north and west of this site. Lowes Creek borders this development to the west.

The depth of nearby wells having a wide range of depths, 100 feet to 160 feet. The water table is at an average from 895 to 900 feet above sea level for this site. We reviewed the UW Stevens Point for well contamination and found no wells exceeding the national standards for arsenic or nitrates of 2.1-5 part per million. We also reviewed the Wisconsin DNR databases and did not locate any mapped or recorded contamination in the proposed subdivision or surrounding areas.

Each lot of the subdivision will include its own well. Lots 67 & 68 will contain their own private onsite septic system, while the other 126 lots will be evenly distributed on three separate community septic systems. The well locations will be within the confines of each proposed lots, but the exact locations will depend upon the placement of the homes and septic systems.

Thank you,

Mr. Peter J. Gartmann
Real Land Surveying
1356 International Drive
Eau Claire, WI 54701
715-514-4116